THE INFLUENCE OF IDEAS ON THE
PRACTICE OF WORKER PARTICIPATION

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of the Ohio State University

By

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* * * * *

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CHAPTER I
Ideologies and Idea Systems

Points of Departure and Objectives

At the beginning and end of the decade of the 1970s, symposia appeared in *Industrial Relations* arguing that, in spite of the worldwide increase in worker participation schemes, little has changed with regard to the state of the art for research in this area.¹ On the one hand, researchers are still struggling with the problem of identifying a taxonomy of participation schemes. On the other, there remains the problem of operationally defining the outcomes against which various forms of participation are to be evaluated. Dependent variables continue to fall into one of three categories: economic (e.g., productivity); psychological (e.g., reported job satisfaction); and institutional (e.g., impact on collective bargaining).

Falling somewhat outside of conventional definitions of research, lie discussions about the role of ideology in attempts to create worker participation in management. For the most part, these discussions tend to treat ideology as a residual category, i.e., the failure of researchers to produce convincing evidence that substantive outcomes result from increased participation has lead some to conclude that "participation has been more (concerned with)
reconciling ideological contradictions in a symbolic fashion than... solving practical on-the-job problems". Strauss and Rosenstein contend that ideology "may have increased the difficulty of making it (participation) work at the plant level." In contrast, the framework that guides this research is that ideology is not an obstacle but a ubiquitous fact of industrial life. However, the impact of ideology on participation has been overstated due to researchers uncritically labeling diverse patterns of thought as ideologies, thus adding to the confusion surrounding the concept.

An ideology consists of a set of ideas that are patterned in a specific manner. In this study a set of ideas with an overall focal point, i.e., a worker participation project, is called an idea system. A participation project may be based on an idea system that does not theoretically qualify as an ideology; all idea systems are not necessarily ideologies. A typology exists that assists in differentiating between types of idea systems based on the pattern of thought (ideas) contained within a particular participation project. The often expressed question about the ideological implications of worker participation in management obscures more than clarifies the role of idea systems in industrial relations practice. Rather than focus on the implications participation creates for ideology, this dissertation poses the question of the impact of ideas on worker participation. The main theme of this research is to empirically examine the extent to which ideas about worker participation affect the form and meaning of worker participation. In other words, how do the ideas regarding worker participation affect the individual participants both in terms of their own behavior and values. In this research the role of ideas regarding worker participation (an idea system) is not treated as a
residual category but examined in-depth. In this research an idea system will be treated as an independent variable.

The significance of focusing on idea systems directly—first to differentiate among different types of idea systems and then to trace the impact that different types have on the practice of participation—can be illustrated by considering the fundamental paradox involved in worker participation endeavors. To the extent that workers become involved in determining the conditions of work, the work context becomes more democratic. But work itself, in its day-to-day routine, is fundamentally autocratic. Do ideas regarding worker participation serve to temper the harsh reality of subordination in industrial life?

Perhaps, but there are possibly other functions served as well. Ideas that stress the importance of participation may mask the use of unilateral authority but they may also open up "authority" to interpretation and reconstruction. Ideas about participation may promote the illusion of democracy at work or they may lead to concrete actions whereby a "collective will" becomes identified and provides a framework for action in addition to (or in competition with) that stemming from economic authority.

We begin with the assumption that, under certain conditions, ideas can and do affect behavior. The first objective of this dissertation is to examine what differences can be discovered between the idea systems of participation projects. By differentiating between types of ideas, this dissertation attempts to relate ideas about worker participation to the actual process of participation. Different types of ideas may be associated with different types of participation. If this can be empirically established, the foundation has been laid for the formulation of a theory of industrial democracy that joins the
paradox referred to earlier (the fundamentally autocratic nature of work and the involvement of workers in making the workplace more democratic) in its full force. Work must involve subordination; ideas may contribute toward masking this reality or engaging it in collective, democratic ways. By comparing the relations between idea systems and the behavior and values of participants within and between two distinct participation projects, I hope to contribute to an understanding of the role of ideas in the practice of participation.

The second objective of this study will be to establish and utilize a specific set of criteria that will differentiate the idea system of the Quality Circle (QC) and the Quality of Work Life (QWL) participation projects. By applying these criteria to the projects' idea system, a typology of worker participation can be established that categorizes how ideas about participation and what ideas concerning participation are translated, by project participants, into action. Specific attention will be given to the adherence and desired control a project specifies concerning the behavior of participants.

The typology of participation projects will emphasize and be arranged according to behavioral expectations of participants ranging from closed systems requiring complete adherence, to open systems which place little emphasis on "proper" behavior. If it is demonstrated that one project is more dogmatic in its emphasis on behavioral adherence by participants; then that project, if properly instituted, should have participants exhibiting behavior more congruent with the stated behavior desired by the project than a project with a more open system.

In order to examine the relation between the idea system of a participation project and participant behavior, an observation method is needed that
will permit independent codification of ideas and behavior which can then be compared. A research method and theory developed by Bales and Cohen known as SYMLOG, an acronym for the SYstem for the Multi-Level Observation of Groups, will be adapted to gather data on the types of behavior exhibited by participants in their face-to-face interaction of the project.

By categorizing a project's idea system according to its stated emphasis for behavioral adherence by participants and utilizing a reliable and valid observation method for coding behavior, an estimate can be made of the extent to which differences in participant behavior in a QC and QWL project are a result of differences in the underlying idea system of the respective project.

SYMLOG also allows for the coding of value statements in written or verbal form. A participation project's idea system, by defining the roles and relationships among its various components, contains values associated with those components. Participants' values toward the components of the project's idea system may or may not be congruent with the values contained in that project's idea systems. Thus, behavioral discrepancies with those ideas may be due to value differences among participants. Therefore, a part of this study will examine the relative impact of discrepancies between a participation project's idea system and participants' values on observed behavior. Included in this examination of values will be the relationship of participant and idea system values with stated levels of participant satisfaction.

With the information gained in examining the impact of ideas on the practice of participation, a preliminary theory of worker participation will be developed at the micro level that takes into account the role of ideas on the form and consequences of participation.
Components of Worker Participation Idea Systems

All worker participation projects are based on a set of beliefs about the purpose and value of participation and the relationship between participation and other aspects of the work environment. This set of beliefs, the idea system, helps legitimize the fact that in any worker participation project time is taken away from doing work to allow participants to talk about work.5

Ideas, by definition, are abstractions about some referent object. Table 1.1 lists the classes of objects that may be addressed by a worker participation project's idea system. Any such set of ideas will necessarily identify the role and relationship among these classes of objects, if only implicitly. Column I specifies the groups who are involved in the participation project, the actors. Included are: workers, managers, and in most cases, third party facilitator roles. These groups define the participants of a worker participation project. The institutional affiliation of the actors are listed in Column II, and follow from the division of labor in the workplace. The Objectives, Column III, specifies the reasons for the actors to come together and talk about work. In this class are the definition of the project, a purpose for its existence and the task which the actors are to undertake. Column IV are the rules and procedures which govern the interaction of the actors and identify how interaction will transpire. Included are the responsibilities and authority vested in a chairperson and what may or may not be discussed.

The role of and relationship among these four classes of objects constitute the idea system of a worker participation project. They define the necessary and sufficient components of a participation project. The idea system specifies what should happen within the project and provides answers to questions
Table 1.1

Significant Objects Found In Participation
Idea Systems Listed By Class

<table>
<thead>
<tr>
<th>OBJECT CLASS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I ACTORS</td>
</tr>
<tr>
<td>Workers</td>
</tr>
<tr>
<td>Managers</td>
</tr>
<tr>
<td>Facilitator</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
concerning how the project works, i.e., who participates, how information is shared, what is discussed, how decisions are made, etc.

Of course, the fact that idea systems contain what should happen within worker participation programs does not mean that they will. Ideas usually exert less than complete control over behavior as many contingencies intervene between plans and actions. Yet in most spheres of life one can observe at least partial correspondence between patterns of thought and behavior. The underlying problem that this dissertation addresses is the extent to which idea systems affect the form and meaning of worker participation projects. This will be accomplished by analyzing the congruency between the project's idea system and the behavior exhibited by participants in face-to-face interaction, participant's values and the level of satisfaction held by the participants toward the project. This is not a question of linear causality; ideas affect the interpretations that people make of their circumstances and these interpretations, in turn, affect their actions. The idea system of a worker participation project is a model of what participation is all about, which if accepted by the project's participants, increases the probability that those involved will behave in accordance with the model. The issue is more complex than merely one of whether the "rules" of worker participation will be followed. As we have seen, rules are only one class of objects identified in a worker participation idea system. The roles of different actors and institutions and desired outcomes are also defined. Together these definitions create a framework of meaning, a world view, against which specific events are projected and understood.
Quality Circles and Quality of Work Life: The Core Comparison

To estimate the extent of influence certain idea systems exercise over the practice of participation, this study will explore the relationship between idea systems and the values and behavior of participants in two worker participation schemes, i.e., a Quality Circle (QC) and Quality of Working Life (QWL) project. While on the surface there are striking similarities, e.g., both schemes involve the formation of small face-to-face groups which are given time off from work to discuss work-related issues, there are important differences. Consider the following example taken from my observation of two such projects.

A group of seven workers are taking an hour away from their production work in Department #20 at Bigley Manufacturing to discuss with their supervisor a problem concerning the drill presses. Each drill press is of industrial quality weighing four tons and set-up to bore metal at an accuracy of .001 of an inch. Coolant automatically flows over the work area of the press to prevent the drill bits from overheating and breaking. The coolant travels from the work area into a drain in the back of the press. The drains have been clogging. Because wages are determined by a group incentive formula, when the clogging occurs the workers lose pay since the press must be shutdown and the drain cleaned. This is a procedure that can take up to an hour. The meeting with the supervisor is part of a structured worker participation project called the Quality Circle (QC). The supervisor is the Quality Circle Leader for Department #20 and has been meeting weekly with his group to arrive at a solution to the clogged drain problem.
Department #20's QC has been trained, as a part of the total QC project, to use a variety of problem solving techniques--brainstorming, cause and effect modeling, data collection, problem verification and diagramming--to identify and solve problems. When the Circle is finished identifying, verifying, collecting data, and developing a solution to the problem, the members make a presentation to management covering the procedures they have gone through to reach a solution to the problem, and request permission from management to implement their solution.

In Warrenstown, at the Water Distribution Shop of the Water Department, a group of city employees, consisting of both labor and management are also meeting. They are a working level committee of the City's Quality of Working Life Project (QWL). While all the QWL participants work in the Water Distribution Shop they do not represent a single job or area as in the QC project. Their scope of responsibility is the entire shop. The participants all represent specific subgroups of employees. They are members of the QWL committee because of their position in the union, in the management hierarchy, or were elected by their peers.

Instead of discussing one problem, as in the QC meeting, this group is covering a variety of topics, including obtaining vending machines for the shop; protective clothing; a food collection for a local low-income food pantry; a new insurance program; and future election procedures for the committee to insure fair and equal representation.

From these brief descriptions, some differences between QC and QWL are apparent. The discussion in the QC group is focused on one topic which is directly related to the productivity of the group members' department. In
QWL, the discussion does not fall into a single category or even remain entirely on work-related issues. What constitutes the membership of the participation project also differs between QC and QWL. Members of QC are from one work area within the organization and they volunteer for membership. In QWL membership is either based on the individuals' position in the hierarchy of union or management, or a peer-group election. Members of the QWL committee have a responsibility to present issues from others in the work unit.

Do these differences result from basic distinctions in the idea systems that underlie QC and QWL projects generally or are they merely idiosyncrasies of the particular groups observed? The answer to this question lies in systematic observation of these and other groups formed under the respective idea systems of Quality Circles and Quality of Working Life and in the degree of correspondence between what is observed and what is proscribed.

**Ideologies and Other Patterns of Thought**

From its inception into the world of thought to its present day usage, confusion has surrounded the concept of ideology. This confusion has become so widespread that many scholars either apologize for using the term or use another term such as "belief system." This problem is aggravated by the fact that researchers seldom differentiate ideologies from other types of thought patterns.
Shils has taken an approach to ideology that clarifies and separates ideology from other "comprehensive patterns of cognitive and moral beliefs about man, society, and the universe in relation to man and society." Besides ideology, other types of comprehensive patterns include outlooks, creeds, movements of thoughts and programs. According to Shils, each of these comprehensive patterns can be differentiated from the others on the basis of their degree of: 1) explicitness of formulation; 2) intended systematic integration around a particular moral or cognitive belief; 3) acknowledged affinity with other past and contemporaneous patterns; 4) closure to variations; 5) imperativeness of manifestation in conduct; 6) accompanying affects; 7) consensus demanded of exponents; 8) authoritativeness of promulgation; and 9) association with a corporate body intended to realize the pattern of beliefs. Instead of explicitly defining each comprehensive pattern, Shils identifies the characteristics of each according to the above criteria. Table 1.2 is a summary of the different patterns of thought and their adherence to each criteria.

Ideologies have a high degree of explicitness of formulation over the objects with which they deal; there is an authoritative and explicit promulgation of obligations for its followers. To accept an ideology it is necessary for an individual to be completely subservient to its ideals to the extent that one's conduct is totally permeated by it. Consensus among those who hold an ideology is absolutely essential.

Outlooks are pluralistic and lack explicit and authoritative promulgation. They are more open to interpretation; behavior is not controlled by an outlook. A subcomponent of an outlook is a creed. An outlook may contain a variety of creeds which are differentiated by their emphasis on different elements within the outlook. Conflict may arise between different creeds over particular issues
<table>
<thead>
<tr>
<th>Degree of:</th>
<th>Ideologies</th>
<th>Programs</th>
<th>Creeds</th>
<th>Systems Movements of Thoughts</th>
<th>Outlooks</th>
</tr>
</thead>
<tbody>
<tr>
<td>explicitness of formulation</td>
<td>High</td>
<td>Yes; high</td>
<td>Moderate</td>
<td>Yes</td>
<td>Lacking; pluralistic</td>
</tr>
<tr>
<td>Integration around a particular cognitive or moral belief</td>
<td>Yes; limited &amp; explicit</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Acknowledged affinity with other pattern</td>
<td>None</td>
<td>Yes</td>
<td>Yes, but less than outlooks</td>
<td>None</td>
<td>Yes</td>
</tr>
<tr>
<td>Closure</td>
<td>Yes</td>
<td>Moderate</td>
<td>Possible but not necessary</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Imperativeness in conduct</td>
<td>High</td>
<td>High</td>
<td>Moderate</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Accompanying affect</td>
<td>High &amp; intense</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td>Consensus of those who accept Demanded</td>
<td>Yes</td>
<td>Occasionally, fragmented</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Authoritiveness of promulgation</td>
<td>High</td>
<td>Yes</td>
<td>Moderate</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Association with a body intended to Standard mode realize the pattern of operation</td>
<td>Yes, but may be more than one</td>
<td>Possible but not necessary or consistently used</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>
while simultaneously accepting the total outlook within which both exist. Outlooks and creeds do not have the normative precision found in an ideology and therefore consensus on some issues among individuals holding different outlooks is possible.

Systems and movements of thought are elaborate and internally integrated patterns that are developed in the process of generally undirected intellectual collaboration. They do not demand a strong impact on behavior or consensus. While Shils is less specific about this particular comprehensive pattern, it seems that he is characterizing certain types of philosophical approaches to reality that are usually found among intellectuals.

A program is the narrowing of particular interest that is found in an outlook, creed, or movement of thought and originates from one of them. It contains a specific and limited objective. It will usually contain an elaborate and explicit relationship to a general cognitive and moral principals.

Shils has emphasized the influence that ideologies can have over action by characterizing them as having a high degree of explicitness of formulation over a wide range of objects with which they deal. Shils emphasizes that for one to accept an ideology it is essential and imperative that his conduct be completely permeated by it. This "control over behavior" is what gives an ideology its great power and influence.9

As pointed out by Apter, ideology links particular actions and mundane practices with a wider set of meanings, and by doing so, lends a more honorable and dignified complexion to social conduct.10 The emphasis is on the behavior of individuals in relation to principle even if the behavior is ostensibly mundane (e.g., stuffing by hand, thousands of envelopes for a political candidate).
The Shils' typology can be viewed as a hierarchy of dogmatism. The thought patterns vary in their anticipated control over an adherent's behavior. An ideology demands that an individual's conduct be completely permeated by it. Ideologies are closed systems that do not allow for variation. Similarly, a program demands a high degree of control over behavior but not in all phases of the adherent's life. Rather, a program's control over behavior is directed toward a specific issue or moral belief. Control over activity outside the boundaries of the program is not explicitly set forth for the individual.

Creeds have a moderate influence on conduct and are in the middle range between the closed (ideologies) and open (outlooks) system patterns. The amount of control exerted by a creed on adherents is dependent on the emphasis and importance of the issues that the pattern is confronting. System and movements of thought express implicit control over behavior due to their use as a basis for understanding reality by their followers. Outlooks exert no control over individual behavior. They are pluralistic and invite variation from their adherents.

**Ideology and Industrial Relations**

The definition of Shils and the insight of Apter help set criteria for labeling a body of ideas as an ideology. However, confusion concerning the existence and role of ideology in industrial relations still exists. Dunlop, in *Industrial Relations Systems*, defines ideology generally as a "set of ideas and beliefs held by the actors that helps to bind or to integrate a system together as an entity."11 He specifically states that the ideology of an industrial relations system is a "body of common ideas that define the role and place of each actor and that defines the ideas which each actor holds toward the place
and functions of the others in the system." For clarity of the concept, Dunlop moves from the general (ideology) to the specific (ideology of an industrial relations system) with the latter defining a distinct position for the role and place of each type of industrial actor. Instead of actors merely holding a "set of ideas or beliefs," Dunlop has ideas defining "the role and place of each actor" and "the place and function of others in the system." However, this definition of industrial relations ideology loses its potential explanatory power because Dunlop defines ideology generally—according to ideas each actor has instead of the ideas each actor should have according to a general pattern of shared beliefs. Dunlop views ideology as internally constructed by the individual actors as opposed to Shils who sees ideology as being socially constructed and located in the external environment. Dunlop’s view of ideology is psychological and individualistic; Shils' view is sociological and collectivistic.

In the field of industrial relations, it is common to read about the ideology of management and the ideology of labor. Ideology is conceptually utilized to explain and often justify the actions of the industrial relations parties, including, but not limited to, the various political, economic and social positions that either party may hold. Scholars in the field continue to research and analyze how these ideas translate into the practices of labor and management. This type of research usually takes the form of historical accounts centering on the conflicts and practices of both labor and management. Rather than following a historical approach this dissertation is concerned with a theoretical and empirical account about how ideas in the larger society, concerning how labor and management should work together, find their way into observable practices.
Most notable in the historical tradition is *Work and Authority in Industry* by Rienholt Bendix. The purpose of Bendix's book is to trace the ideologies utilized by management in the course of industrialization. For this research, what is important in the Bendix work is his insightful analysis of the legitimation of ideas about authority. Specifically, the evolution of ideas that management uses that allow them to continually gain and retain, over time and within different historical periods, authority and control over subordinates. These managerial ideas seek to "justify the subordination of large masses of men to the discipline of factory work and to the authority of employers."

Chapter Seven of *Work and Authority in Industry* is a review of these "ideological" changes. What John Stuart Mill called the "theory of dependence" was the prevailing "ideology" at the inception of the industrial revolution. Workers were viewed as children and were to be treated as such. They must be governed, perform assigned tasks obediently, show respect to their supervisors, and, in turn, be protected from the uncertainties of life.

Next came the ideology of laissez-faire. During this epoch, management rejected the responsibility for protecting labor and gave rise to the acceptance of Social Darwinism. According to this ideology, wealth and poverty are reflections of ability and effort. The employer's material success was evidence enough for him to justify absolute authority over the enterprise. As pointed out by Bendix, the idea of absolute authority occurred at the same time as the rise of scientific management which sought to give the employer advice on what to do with his authority. The final ideology discussed by Bendix is the human relations school which viewed workers as individuals whose productivity can be maximized by the organization at the same time that it meets certain psychological needs of each individual worker.
According to Bendix, this collection of ideas allowed for a few to command and many to obey; and had an "appeal to men of action." It is through the use of ideologies of management that leaders of enterprises justify their own privilege of voluntary action and association among and for themselves, while at the same time, imposing upon their subordinates the duty of obedience and the obligation to serve their employers to the best of their ability.

Figure 1.1 is a model of the process that Bendix is concerned with—the use of ideas for control of subordination in the workplace. Ideas are depicted in the model as independent of the individual. In other words, in a societal context ideas can and do undergo a more or less autonomous development. They exist independent of any individual actor. At some point, however, an individual or group of individuals (in the case of Bendix's work, industrial leaders) shape certain ideas to meet the authority needs of their organization. Within the firm, some type of action must be taken in order for a new idea to be put into practice. Thus, certain practices are altered in the workplace in order for the new idea to be put into action. The practices altered in the workplace will, in turn, alter the individual's behavior at work. Over time, this new practice if successful, will have an effect on the individual values of the subordinates toward their own role as a subordinate and their commitment to the firm. In addition, this value change will assist management in justifying to subordinates and society at large the discipline and authority within the firm.

Work and Authority in Industry was published in 1956. Bendix's discussion of the ideologies of management in the United States went from the writings of John Stuart Mill in the middle of the 19th century to the works of Elton Mayo in 1945. If Bendix were writing today, he might add a new
Figure 1.1
The Effect of Ideas on Subordinates from Abstraction to Action
management ideology to his list—the worker participation school. Worker participation is an approach to management that allows worker involvement in decision-making within the organization.

As stated previously, the main theme of this research is the extent to which idea systems affect the form and meaning of worker participation. The insights gained by a critical assessment and differentiation of idea systems into subsets necessitates a re-evaluation of how the concept "ideology" is used in industrial relations research. Rather than relegate ideology to a residual category implying non-scientific conjecture, the differentiation of idea systems into a hierarchy of classes following Shils' insightful analysis is viewed as the first step toward advancing the study of the role of ideas in industrial relations practice in the tradition of positive, empirical science.

Model and Hypothesis

Bales and Cohen and Bales have made two fundamental contributions to the integration of social psychology: the differentiation of levels of social-psychological variables and the identification of the types of social-psychological fields. The levels of variables are: behavior (including both verbal and non-verbal components); content—the meaning or semantic properties of objects as expressed through speech or other symbols; and values—the emotional charge or valence that individuals attach to objects.

The distinction among social-psychological fields is based on the observation that a) each individual has, at any given moment, a psychological representation, or image about various aspects of his lifespaces. This internal
worldview is called the **individual field**. In addition to the individual field, one can observe b) the nature of the interaction among individuals in a face-to-face situation. This is the **group field** and is independent of the image held by any one or more of the participants themselves. Finally, one can observe the ideas, images, or beliefs that seem to be widespread in a society at a given time. Donald Schon has used the term "ideas in good currency" to refer to the theses that have widespread influence on behavior in a given sector of society during a certain period. For example, several types of worker participation projects enjoy "good currency" at this particular period in American industrial history. This level of societal image shall be referred to as the **social field**.

With these distinctions in mind, it is now possible to define a general model (see Figure 1.2) of the relationships among the classes of variables discussed earlier: the **idea system** of a worker participation project, the **values** held by the participants, and the **behavior** that is produced under the context of participation. The solid lines show the principal, direct relationship examined in this study. Line $r^1$ indicates that the idea systems (which is part of the social field in that it can be found in collective, cultural expressions) affects the type of behavior one is likely to observe in a worker participation project. More specifically, a particular idea system for a worker participation project contains some conventions that define what may or may not occur (or at least the relative probabilities of various behaviors occurring) under the auspices of that particular worker participation project.
Figure 1.2
Model of Relationships among the Levels of Variables and Fields of Phenomena Involved in Worker Participation
The second principal relationship, designated by line $r^2$, suggests that the values held by individual participants link with the idea system. The net of their direct effects, the combination, interaction or "correspondence" of the externally presented idea systems and individual values will have an effect upon observed behavior. The broken line $r^3$ indicates that the idea systems indirectly bear upon the values expressed by individual participants. This is to say that the ideas held in the wider society, to some extent, eventually find their way into the "hearts and minds" of individuals via the various socialization practices whereby individuals come to learn their "place" in that society. Finally, the two lines moving to the left in the model ($r^2'$ and $r^3'$) indicate that, over time, behavior itself affects individual values ($r^2'$) and, likewise, individual values feedback and affect the larger societal ideas ($r^3'$). With this model as background, it is now possible to state the hypotheses of this research.
1) There is a difference in the types of pattern of thought embodied in the idea systems that legitimates the Quality Circle and Quality of Work Life participation projects according to the hierarchy presented by Shils. By utilizing SYMLOG, the hypothesized differences in the participation project's idea system objects (e.g., the role of the union, the role of management, etc.) will contain different values and fall within different locations of the SYMLOG space.

2) The \( r^1 \) relationship within the model specifies that the qualitative differences in the two distinct project's idea systems will have a different impact on behavior. The prescriptions contained in an idea system classified closer to the "ideology" end of the Shils' typology will be shown to produce greater behavioral adherence to it than the prescriptions from a project's idea system classified farther from "ideology" in the Shils' system.

3) There is a differential selection process for the participation projects. Self-selection is more likely to exist in QC projects since there is a strong prescription on voluntary membership in the Circles. Self-selection is necessarily limited in QWL projects because: a) some positions are fixed or automatically allocated to certain union and management officers, and b) other committee members are elected and undergo a group, rather than self, selection process. Therefore, the \( r^3 \) relationship for QC will have a high degree of congruency between individual values toward the project and the prescriptions of the idea system. On the other hand, there will be more diversity among the values expressed by participants toward the QWL project and the prescriptions of the QWL idea system.

4) The \( r^2 \) relationship is expected to have the following effect. Individuals who hold values consistent with the prescriptions of a given participation project will: a) behave in a way that is more consistent with the prescriptions of the idea system than those whose personal values diverge from those present in the project, and b) they will view the project as more positive and be more satisfied with their participation than individuals with values different than those expressed by the prescriptions of the idea system of the project.
Plan of the Dissertation

In this chapter, the issue of the relationship between ideas about and the practice of worker participation has been joined. Specifically, the tendency to treat all idea systems as "ideologies" was criticized in light of the work of Edward Shils differentiating among patterns of thought. Shils' typology can be construed as a hierarchy ranging from relatively closed systems (ideologies) exercising significant behavioral and attitudinal control over those who align themselves with this system to relatively open frameworks (outlooks) that allow for considerable diversity of beliefs among adherents. Two popular worker participation projects—Quality Circles and Quality of Work Life—were selected for specific analysis and were hypothesized to fall within different categories of the Shils' hierarchy. In other words, the problem framework of this dissertation as articulated in the first chapter involves an analysis of the relationship between idea types and the practice of worker participation through two specific participation projects.

The second chapter presents the methodology which contains four distinct parts. The first part consists of an analysis of QC and QWL idea system as representative of two of the ideal types in the Shils' typology. The second part of the methodology involves defining the idea system of each project (QC and QWL) according to criteria that can also be used to assess the pattern of actual behavior found to occur within those projects. Such an analytic framework must be applicable at two different levels—that of the idea system and that of observed behavior. Thirdly, a quantitative analysis is defined that will test the prediction of differential relationship between the idea system and behavior in the two projects. Also, a methodological control is introduced for taking into
account the degree to which the personal values of participants are consistent with the idea systems with which they are involved. Finally, the relationship between individual values and the characteristics of a worker participation idea system is used to predict satisfaction with participation.

The third chapter presents an historical overview of Quality Circles and Quality of Work Life projects. This background information is necessary as a context for the actual analysis of the two projects according to idea system types. This analysis is contained in Chapter IV.

Chapter V contains the results of the quantitative analysis of the relationships between project idea systems and actual behavior. Participant's satisfaction data is also presented.

The results of the various analyses are interpreted and discussed in Chapter VI. An outline for a theory of the role of ideas on the practice of participation is presented. The argument is made that idea systems can be arrayed according to their degree of facilitation or inhibition of democracy in the workplace.
Notes

1 *Industrial Relations* 9, (February 1970) no. 2; *Industrial Relations* 18, (Fall 1979) no. 3.


3 Ibid., p. 200.


12 Ibid., p. 16.


14 Ibid., p. ix.

15 Ibid., p. xxii.

16 Ibid., p. xxiii.
17 Bales and Cohen, *Symlog*.


CHAPTER II
Methodology

Definitions of the Participation Projects

QWL is a "jointly owned" project whose main function is to provide labor and management an arena for discussion and interaction over topics of mutual interest and concern. The specific objectives of QWL are defined by the industrial relations parties. It is up to labor and management to jointly define what problems, ideas or concerns will be discussed and/or settled. It is a process for each of the parties to gain a better understanding of the other's interpretation of what is actually happening in the workplace.¹

A Quality Circle (QC) is a group of employees who meet regularly to solve problems affecting their work area. The emphasis in the project is to improve productivity and/or quality. Typically, a Quality Circle is composed of five to twelve workers from the same work area who have volunteered to be Circle members. Training is given in problem-solving techniques, statistics, and group processes. Quality Circles recommend solutions to management who then may authorize implementation.²
Site Selection

The QWL project in Warrenstown is widely regarded as a model of Quality Working Life projects as a genre of worker participation schemes. Individuals involved with the Warrenstown QWL project routinely receive requests for information from individuals in other organizations who wish to adopt the Warrenstown model. Various managers, unionists, and third parties from Warrenstown have made presentations about their project at national and international conferences on worker participation. A number of widely circulated articles have been published on the Warrenstown project.3

The QC project at Bigley Manufacturing was selected for study on the basis of conversations with several consultants who specialized in QC projects in the same metropolitan area as Warrenstown. The following criteria were used in the selection of the QC site: 1) according to "expert" opinion, the site must be representative of QC projects; 2) the organization must be relatively large, employing more than 500 individuals; and 3) at least three QC groups must be in operation and meet regularly. This last criterion was included in order to be able to assess the degree of consistency among QC (as well as QWL) groups. Since worker participation occurs in a small group setting, it is important to determine if there are consistencies among groups operating within a given participation project and if these consistencies can be attributed to the idea systems that legitimize project.

Bigley Manufacturing is a publicly held manufacturer of auto parts for the Big Three auto companies. It has been in business since 1912 and normally employs 815 people (pre-recession total). Of the total of 815 employees, 715 are hourly and represented by two unions, the United Auto Workers (UAW)
with 672 members and the International Association of Machinists (IAM) with 43 members. The UAW local at Bigley was organized in 1935 with the IAM being organized shortly thereafter in 1936. Sales peaked for the company in 1978. The recession of the late 1970's and early 1980's reduced sales in 1980 and 1981 to approximately 35% from the 1978 level. Layoffs reached a high of 309 people in December of 1979, 43.2% of the Bigley workforce. Since the December 1979 layoff period, employees have been sporadically called back with the Bigley work force now at 750 employees, 635 being unionized hourly employees. The QC program was started at Bigley in November of 1981 and training for the first Circles was initiated in February of 1982.

The training for the QC members consisted of ten one-hour sessions held over a ten week period. These training sessions are found in the Quality Circle Handbook by Donald L. Dewar, the consultant for the total QC project implemented at Bigley Manufacturing. The content of the training sessions were (in order of presentation): 1) "Case Study and Problem Prevention;" 2) "Brainstorming;" 3) "Data Collection;" 4) "Data Collection Formats and Graphs;" 5) "Decision Analysis Using Pareto;" 6) "Basic Cause and Effect Problem Analysis;" 7) "Process Cause and Effect Problem Analysis;" 8) "The Management Presentation;" 9) "A review session;" 10) "On-Going Activity."

The three Circles that were utilized for this study constituted the total number of Circles in operation at Bigley during the study period; they were located in a second shift assembly department and a first and second shift quality control department. Each Circle was constituted of a leader, who was the foreman of the department, and from 4-7 hourly employees.
Membership in Circle was on a voluntary basis. In one Circle more employees volunteered than places available. Names were drawn from a hat for membership in the Circle. Each Circle met for one hour per week, on work time, with the company Director of Training serving as facilitator.

Warrenstown is a city of 565,000 located in a highly industrialized midwestern state. It employs approximately 6200 people in eight departments. Warrenstown's form of government is the "strong mayor" approach. At the time of this study the mayor had served eleven years and was noted for his innovations in City services and fiscal management. The QWL project in Warrenstown involves three divisions in the Public Service Department, Sewers and Drains, Water, and Sanitation. The QWL project started in the first two divisions in 1977 with sanitation beginning its involvement in late 1981. Each division employs approximately 400 employees with the American Federation of State, County, and Municipal Employees, AFL-CIO, (AFSCME) representing the hourly workers. QWL was initiated as a joint participation project between the City and AFSCME with assistance from experts in labor relations at a local major university.

In-depth observation of the actual worker participation process was undertaken for three groups in each of the field sites for a total of six groups. At Bigley, observed QC groups were 1) Department 25, second shift, a production unit, 2) Department 32, first shift and 3) Department 32, second shift. Numbers 2) and 3) were each quality control unit. Over a period of approximately two months the author observed four meetings for each QC group.

In the Warrenstown QWL project, three groups were observed; 1) the Office committee and two sewage treatment plant committees; 2) Scott and 3)
Jefferson. Two meetings were observed for both the Office and Jefferson committees and three meetings at Scott.

All participants, including facilitators, from the observed QC and QWL projects were interviewed by the researcher with the exception of the QWL Office committee where six out of twelve participants were chosen at random. In all, forty-seven interviews were conducted to assess the values held by the participants toward the project's idea system objects.

Table 2.1 shows the delineation of the units of interest in this study. Namely, the projects (QC or QWL), the groups within the projects (three for each project) and the total number of participants interviewed (47 participants).

Conceptual Understanding of the Variables

As indicated in Chapter I, this study is designed to explore empirically the extent to which idea systems affect the form and meaning of worker participation projects. To achieve this goal, it is necessary to examine four major classes of phenomena that comprise a worker participation project: 1) the idea system, i.e., the explicit formal statements that define and legitimatize the project; 2) behavior, i.e., the interpersonal actions that carry out the project, and the performance of which is observed in face-to-face contexts that are the forums for participation, 3) values, i.e., the beliefs relevant to participation held by the participants which includes 4) the level of satisfaction the participants have toward the project.

To empirically explore the effect of a project's idea system on the practice of participation, it is necessary to explicitly state how each of the
Table 2.1

Units of Interest

<table>
<thead>
<tr>
<th>Project</th>
<th>Number of Meetings Observed</th>
<th>Number Interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of Work Life</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(QWL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jefferson</td>
<td>XX</td>
<td>6</td>
</tr>
<tr>
<td>Scott</td>
<td>XXX</td>
<td>11</td>
</tr>
<tr>
<td>Office</td>
<td>XX</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quality Circle (QC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>32-1</td>
</tr>
<tr>
<td>32-2</td>
</tr>
<tr>
<td>25-2</td>
</tr>
</tbody>
</table>

Facilitators 3
Total 47

The phenomena outlined above will be operationalized. The project’s idea system is defined as the prescriptions--normative statements about what should happen and how participants should behave--expressed by the formal written statements that define and legitimize the project. A project’s idea system is the main independent variable.
Two phenomena are treated as dependent variables. One is the relationship between the prescriptions of the idea system and the behavior exhibited by the participants in face-to-face interaction within the project. The second is the participant's stated level of satisfaction with their participation project.

Values are assumed to have an effect on behavior. The higher the correspondence between individual values and the prescriptions of the project's idea system, the greater the impact of those values on behavior. Therefore, the congruency between individual values and project idea system characteristics is treated as a moderating variable.

Quality Circles and Quality of Work Life projects are popular approaches to worker participation. Within the framework of this dissertation, the prescriptions of characteristics of the idea system of each project is considered to represent an "ideal-type" in the tradition of Max Weber.

Ideal-types are abstract models--conceptual instruments--whose value for research is in comparison(s) with and as a framework for classifying reality. The goal of the ideal-typical concept is always to make clearly explicit not the class or average character but the unique individual character of cultural phenomena.5

According to Weber, an ideal-type is formed by:

the one-sided accentuation of one or more points of view and by the synthesis of a great many diffuse, discrete, more or less present and occasionally absent concrete individual phenomena, which are arranged according to those one-sidedly emphasized
viewpoints into a unified analytical construct (emphasis in the original).  

The ideal-type for Quality Circle and Quality of Work Life projects are not the concrete observable projects as found in the sites utilized in this study. Rather, the ideal types are configurations of prescriptions expressed by the ideal systems for each project as found in the documents that explain and define what the project is and how it should work. The documents convey the ideal-type for action within the confines of the project. The behavior exhibited by participants and their values expressed toward the projects are used as measurements and comparisons to the ideal.

To analyze the idea system of a worker participation project and evaluate its relationship to participants' behavior and values is the goal of this research but the comparison of three logically distinct classes of variables presents an unusual methodological challenge. One approach for categorizing the idea system of worker participation projects would be to analyze statements about the classes of objects that make up the idea system, i.e., actors, institutions, objectives, and rules. The final product would be a descriptive analysis of objects in the projects' idea system. While this approach would add to the body of knowledge about worker participation, it may be biased by the researcher's attitudes toward the objects being analyzed. As stated previously, the goal of this research is to treat idea systems as objectively as possible. Therefore, a systematic approach is needed that would permit the mapping of objects as defined by the prescriptions of the idea systems onto a set of coordinates making possible objective classification and comparison among systems. Also, it will be necessary to use the same method of measurement to analyze the values and behavior of individual participants.
In other words, to make comparisons across the levels of ideas, values and behavior, information regarding each level must be transformed into a common form or metric. There are not a host of research tools that can meet this challenge. However, there is one research method available that permits the measurement of the variables under study within the same metric format. The collection and transformation of data in this study has been made possible through a research system developed by Robert Freed Bales known as SYMLOG. The SYMLOG research method permits the researcher to codify the semantic properties or "meanings" of various types of symbolic entities—in this case, elements of an idea system, individual values and group behavior.

**SYMLOG: An Introduction**

SYMLOG is an acronym for "a System for the Multiple Level Observation of Groups". It is a set of research tools based on an eclectic social-psychological theory of interaction that can be used separately or in combination. Originally, SYMLOG was developed to aid in the recording and analysis of group interaction, but its value to social science research goes beyond the study of group process. In its entirety, SYMLOG is complex, but it has great flexibility in application for its users. Only certain portions of the system need be utilized in a given research setting to obtain reliable data that can be used to study a variety of social situations.

Of the theoretical traditions that have gone into the development of SYMLOG most significant are: the psychoanalytic theory of motivation; Lewinian field theory; the cognitive social psychological theories of balance,
congruity, dissonance, consistency and attribution; symbolic interactionism; and small group interaction theory. SYMLOG methods are better described as extensive rather than intensive in theoretical orientation: they do not require strict theoretical adherence but rather invite the researcher to combine constructs from different theoretical perspectives in order to increase interpretive insight. SYMLOG may be best described as a multi-faceted heuristic device that stops short of drawing conclusions for the researcher.

The Spatial Model

In the SYMLOG system, behavior, content, and values are described by reference to a three-dimensional space. The three dimensions define the quality of behavior of the members or the images presented in the content of what they say. Each dimension has two ends, qualitatively the opposite of each other. The dimensions are labeled in terms of behavioral descriptions; they are: 1) Dominant vs. Submissive; 2) Friendly vs. Unfriendly; and 3) Instrumentally Controlled vs. Emotionally Expressive. Each dimension may also be thought of as having a zero point in the center, or origin of the dimension.

The dimensions of the SYMLOG system have been empirically derived from factor analytic studies of behavior and perceptions of small interacting groups. SYMLOG dimensions are closely related to those discovered independently by other researchers. Bales has recently shown that the SYMLOG space is a universal semantic framework which has been found repeatedly in social-psychological and linguistics research.

Figure 2.1 is a perspective drawing of the SYMLOG space. The labels on the space indicate how the behavioral names are translated into names
Figure 2.1
SYMLOG Three-Dimensional Space
descriptive of directions in the physical space model. The spatial names of the dimensions are Upward-Downward (U-D) for Dominant - Submissive, Positive - Negative (P-N) for Friendly - Unfriendly, and Forward - Backward (F-B) for Instrumentally Controlled - Emotionally Expressive. The letters on the smaller cubes, made up of various combinations of the directional names, U, D, P, N, F, and B are the names for the remaining twenty directions defined by the SYMLOG system. In all, the three-dimensional SYMLOG model defines twenty-six directions. These twenty-six directions make up the SYMLOG space which provides a general framework for meaning -- the individual defined spaces within the SYMLOG model provide a general semantic meaning for understanding what type of behavior is meant by reference to that particular SYMLOG space. If a group is the object of study, the end-product of the SYMLOG system is the placement of each individual within the SYMLOG three-dimensional space based on behavior and/or values exhibited in group interaction.

**SYMLOG: The Anchor Measure**

The point of departure for SYMLOG is what happens when two or more individuals interact in relation to objects (images) of common orientation. The interaction process adds and subtracts meaning to what each individual perceives and how each acts toward common images. The additional understanding or meaning produced through interaction becomes a part of each actor's individual field.
SYMLOG methods take account of: 1) each individual's perceptual field; 2) the behavior of each individual, i.e., verbal and nonverbal; 3) the process of interaction between individuals over time; 4) the developing relations among individuals in the group; 5) the social interaction field during a given time period; and 6) the changes, over time, of the social interaction field.

The individual field refers to the set of images perceived by an actor at any given time. The individual field includes the actor's feelings as well as cognitions about objects to which his attention is focused. The "social interaction field" is a more abstract construct which:

theoretically includes all the individual perceptual fields and all the images in the individual perceptual fields, although the actual total of all these elements is never known by any one person or observer... It can be described in enough detail, however, to serve many practical purposes.12

In this research, the social field will be used somewhat more narrowly than in Bales' original work. Here the term "social field" will refer to the prescriptions of the idea system of a worker participation project. These prescription are not "localized" in any individual or even found in the "sum" of images held by a group. Rather, the social field of a worker participation project is operationalized as the formal statements found within the "official" documentation that legitimizes that project to its participants.

The quantifying of group behavior utilizing SYMLOG consists of either SYMLOG Rating or SYMLOG Interaction Scoring. With the Rating method, each member of a group is rated separately using an adjective checklist. There are Rating forms for general behavior descriptions, specific behavior descriptions, and value descriptions. Figure 2.2 is the General Behavior Description form. The rater makes judgments about the target individual on
<table>
<thead>
<tr>
<th>(0)</th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U</td>
<td>active, dominant, talks a lot</td>
<td>not often</td>
</tr>
<tr>
<td>UP</td>
<td>extroverted, outgoing, positive</td>
<td>not often</td>
</tr>
<tr>
<td>UPF</td>
<td>a purposeful democratic task leader</td>
<td>not often</td>
</tr>
<tr>
<td>UF</td>
<td>an assertive business-like manager</td>
<td>not often</td>
</tr>
<tr>
<td>UN</td>
<td>authoritarian, controlling, disapproving</td>
<td>not often</td>
</tr>
<tr>
<td>UNB</td>
<td>domineering, tough-minded, powerful</td>
<td>not often</td>
</tr>
<tr>
<td>UNB</td>
<td>provocative, egocentric, shows off</td>
<td>not often</td>
</tr>
<tr>
<td>UB</td>
<td>jokes around, expressive, dramatic</td>
<td>not often</td>
</tr>
<tr>
<td>UPB</td>
<td>entertaining, sociable, smiling, warm</td>
<td>not often</td>
</tr>
<tr>
<td>P</td>
<td>friendly, egalitarian</td>
<td>not often</td>
</tr>
<tr>
<td>PF</td>
<td>works cooperatively with others</td>
<td>not often</td>
</tr>
<tr>
<td>F</td>
<td>analytical, task-oriented, problem-solving</td>
<td>not often</td>
</tr>
<tr>
<td>NF</td>
<td>legalistic, has to be right</td>
<td>not often</td>
</tr>
<tr>
<td>N</td>
<td>unfriendly, negativistic</td>
<td>not often</td>
</tr>
<tr>
<td>NB</td>
<td>irritable, cynical, won't cooperate</td>
<td>not often</td>
</tr>
<tr>
<td>B</td>
<td>shows feelings and emotions</td>
<td>not often</td>
</tr>
<tr>
<td>PB</td>
<td>affectionate, likeable, fun to be with</td>
<td>not often</td>
</tr>
<tr>
<td>DP</td>
<td>looks up to others, appreciative, trustful</td>
<td>not often</td>
</tr>
<tr>
<td>DPF</td>
<td>gentle, willing to accept responsibility</td>
<td>not often</td>
</tr>
<tr>
<td>DF</td>
<td>obedient, works submissively</td>
<td>not often</td>
</tr>
<tr>
<td>DNF</td>
<td>self-punishing, works too hard</td>
<td>not often</td>
</tr>
<tr>
<td>DN</td>
<td>depressed, sad, resentful, rejecting</td>
<td>not often</td>
</tr>
<tr>
<td>DNB</td>
<td>alienated, quits, withdraws</td>
<td>not often</td>
</tr>
<tr>
<td>DB</td>
<td>afraid to try, doubts own ability</td>
<td>not often</td>
</tr>
<tr>
<td>DFB</td>
<td>quietly happy just to be with others</td>
<td>not often</td>
</tr>
<tr>
<td>D</td>
<td>passive, introverted, says little</td>
<td>not often</td>
</tr>
</tbody>
</table>

Figure 2.2
SYMLOG General Behavioral Description Form
each of 26 behavioral dimensions. The ratings describe how the individual has generally been viewed by the rater.

SYMLOG Interaction Scoring differs from Rating in that it is a method for making detailed observations of acts in the course of interaction, at the time each act occurs or from a transcript or voice recording. Rating is retrospective; scoring requires that the researcher (or self-reflective actor) write down observations of actual behavior (or artificially recorded behavior) while watching and listening to the interaction of the group members. When working from video or sound, capturing information about the behavior of individuals, also allows for the collection of data about the content of what one says and the values that are expressed. Hence the "Multiple Level Observation" in the acronym SYMLOG: behavior, content, and values can each be scored independently. The Scoring method is utilized in this study to analyze information about the ideas that legitimize the participation projects under study, the participant behavior and the values of the participants.

Interaction Scoring

Bales and Cohen have provided an elaborate manual with procedures for coding units of behavior, content, or values in terms of their location in the three-dimensional space.\textsuperscript{13} To grasp how the SYMLOG Interaction Scoring ends up being transferred to the three-dimensional space, an understanding of the Scoring method is helpful. Figure 2.3 is a SYMLOG Interaction Scoring Form. The task of the observer is to write a series of "messages" on the form.
<table>
<thead>
<tr>
<th>Time</th>
<th>Who Acts</th>
<th>Toward Whom</th>
<th>Act/Non</th>
<th>Direction</th>
<th>Ordinary Description of Behavior or Image</th>
<th>Pro/Con</th>
<th>Direction</th>
<th>Image Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Pat</td>
<td>GRP</td>
<td>Act</td>
<td>UF</td>
<td>our job is difficult, but necessary</td>
<td>Pro</td>
<td>UF</td>
<td>Sit</td>
</tr>
</tbody>
</table>

Figure 2.3
SYMLOG Interaction Scoring Form
The messages are the observer's notation that a "significant event" has taken place in the group. A message in the SYMLOG format might read:

15 PAT GRP ACT UF our job is difficult, but necessary PRO UF SIT.

Each part of the message is put in its appropriate column on the form. The "15" in the example is written in the "Time" column and indicates that the act took place fifteen meetings after the start of the group session. PAT is an abbreviation for a group member's name and is written in the "Who Acts" column. The notation GRP stands for group and is written in the column "Toward Whom" which denotes who PAT was acting toward, in this case, the group as a whole. The next message is ACT and is written under the "Act/Non" heading. The ACT means that PAT behaved overtly in a way that was intended to communicate with others in the group. NON written in the column means nonverbal behavior. All communicative acts are conveyed through behavior and are classified as either ACT or NON.

Next, the heading, DIRECTION, means the direction of ACT or NON. In the example, the notation is UF. This notation actually consists of two sub-parts. The first part, "U," stands for "Upward" which means "Ascendant or Dominant." The second part, "F," stands for "Forward" which means "Instrumentally Controlled." The notation UF combines these two meanings and uses them as a qualitative description of the behavior under consideration. The message then notes that fifteen minutes after the start of the session, PAT
acted toward the group in an ascendant or dominant manner that was also instrumentally controlled.

The final three parts of the message format deal with what kind of IMAGE is presented in the content of what the ACTOR says. An IMAGE is "a picture of an emotionally loaded focus of attention". Specifically, an "image" exists in the mind of the individual. It is a perception of some outside object or set of feelings that are aroused by a set of words. The observer's task is to locate the set of words that attention seems to be focused on by the actor and Receivers.

Under the heading ORDINARY DESCRIPTION OF BEHAVIOR OR IMAGE is where a few words, usually the actual words spoken by the ACTOR, would be placed. In the example above, "our job is difficult but necessary."

The column heading PRO or CON is for the notation of whether the IMAGE is something the ACTOR is for (PRO) or against (CON). In the example, the word "necessary" following the phrases "our job is hard" implies a favorable position, thus PRO would be placed in the PRO/CON column. The use of the PRO or CON notation permits the observer to record the value judgment expressed by the individuals in the group over a range of images discussed in group interaction.

The last column, IMAGE LEVEL, is used to separate different classes of images. They are: 1) reference to self, 2) reference to other (a specific other in the group), 3) reference to the group as a whole, 4) reference to the external situation in which the group interaction takes place, 5) reference to society, 6) reference to the imagination or feeling of the person speaking labeled fantasy images. In the example, the IMAGE LEVEL is SIT, the external situation of
the group. This means that PAT is in favor of some UF element in the external situation. Not everyone in the group will necessarily have the same direction toward the same general concept or image of "the situation." The particular direction in the image of the situation that PAT is in favor of is just one of the many possible positions that could be expressed about the image. Someone else in PAT's group may be CON UF SIT, meaning against the dominant instrumentally controlled behavior in the situation.

To summarize, SYMLOG can be addressed to three major levels of phenomena. These are: 1) the behavioral level, 2) the level of the content of the image present, and 3) the level of value judgment. The behavioral level includes the analysis of nonverbal communication. The level of image presented includes six subsets SELF, OTHER, GROUP, SITUATION, SOCIETY, and FANTASY each of which is also combined with the set of twenty-six directional notations. The level of value judgment is divided into PRO or CON. The SYMLOG message, what is scored, describes all three major levels if they appear. In other words, a person may ACT toward an OTHER without presenting an IMAGE. Or the person may ACT and present an IMAGE without communicating a value judgment PRO or CON. Or the person may ACT and communicate a value judgment, PRO or CON, about an IMAGE.

Once the SYMLOG Interaction Scores have been collected, the next step is aggregating and transforming them into a standardized plotting score for each group member. This is accomplished by summing the scores for each individual on each dimension. These raw summary scores are then transformed into standardized scores according to a formula given by Bales and
Cohen\textsuperscript{16} based on a metric of 18 units in each dimension. After the standardized plotting scores have been obtained, the next step is to place the scores within the SYMLOG three-dimensional space.

Figure 2.4 is the SYMLOG Field Diagram. It shows a two-dimensional plane and should be viewed as if one were looking into a cube from the top. In the Field Diagram, the location point of an individual if behavior is being scored, the content of an image or a value or set of values, on the F-B and P-N dimensions is enclosed with a very small circle. The position of an element on the U-D dimension is shown by the relative size of the outer circle around that element's point on the Field Diagram. The larger the outside circle, the more dominant the behavior, image, or value. The smaller the circle, the more submissive. The numerical location in the U-D dimension is written below the name of the element being scored. When all the steps, from scoring to constructing the Field Diagram, have been completed, then the interpretation of the Field Diagram may commence.

The value of SYMLOG as a methodology for the study of the relationship between idea systems about and the actual experience of worker participation should now be evident. The images expressed in ideas and the behavior manifested in action can both be scored by the same criteria and represented on the same set of coordinates. In addition, the values of individual actors can be scored with the same procedures thus permitting the three-way comparison--project ideas systems, individual values, and collective behavior--of the variables central to this research. Thus, a test for congruency may be undertaken since the same procedures are used to gather data for all variables. Congruency will be evidenced by similar locations of the variables in the SYMLOG space.
Figure 2.4
SYMLOG Field Diagram
Measuring the Idea System

To assess the idea system as expressed by each participation project, a careful analysis using the SYMLOG scoring of written statements about the role and relationship of the classes of objects in the project's idea system was undertaken. These statements were taken from the original sources that were used by the respective participation project. For Bigley Manufacturing, it was Quality Circle Handbook by Donald L. Dewar. For Warrenstown, it was A Memorandum of Mutual Trust authored jointly by Warrenstown, the union, and consultants from a local university. To determine the spatial configuration of the idea system for each participation project the value judgment level of SYMLOG was utilized. The rules for SYMLOG value scoring allow the researcher to locate the content of a prescriptive statement within the three-dimensional space of the model. The same SYMLOG procedure will be followed to map the values expressed by participants toward the project's idea system but for a different level—the individual field.

To illustrate how the assessment of project idea systems was accomplished, consider the following example taken from the QC project handbook.

"Quality" is a thought that resides in every executive mind. Participative management is the vehicle that puts it in the mind of every employee in the organization. Without the attention to quality, sooner or later any organization will fail.

This statement is scored PRO UF--Upward and Forward--because of the reference of putting quality in all employees' minds, which is a firm, businesslike, and impersonal ideal; concern is with effective performance. It is
also scored CON DPB—Downward, Positive, Backward—because of the reference to failure in an organization if attention is not given to quality. The statement is against the attitude that things will be taken care of by easy rewards or needs will be met without achievement.

In this study, SYMLOG scoring will be utilized to assess the four classes of objects in each project's idea system. The end product will be the location of these objects in the SYMLOG three-dimensional space.

**Measuring Participant Values**

SYMLOG scoring of the values each participant held toward the objects of the participation project was done on protocols obtained through individual interviews. All participants, including facilitators, from the observed QC and QWL groups were interviewed with the exception of the Office Committee (QWL project) where six out of twelve participants were chosen at random. Forty-seven interviews were conducted in all and each was tape recorded.

The researcher directed the discussion by asking each participant specific questions concerning the objects of their project's idea system (see Appendix C). The question format was open-ended to facilitate the expression of values. Questions 1-4 were designed to evoke responses centered on the participant's values toward the objectives of the participation project and the effects of having the project in their organization. Questions 5-10 and 12-13 were used to tap the participant's values toward the rules in the participation project, i.e., the procedures utilized in the face-to-face interaction of the group. Question 11 dealt with the role of the institutions, the actors, and the facilitator. The last set
of questions, 14-21, were included so that the participants would have to make value statements in assessing the strengths and weaknesses of their participation project.

At the end of each interview, the researcher asked each participant to state, on a scale of 1 - 5 (1 being lowest and 5 highest) their level of satisfaction with the participation project. At a later date the interview tapes were scored by the researcher.

**Measuring Group Behavior**

The SYMLOG system permits the analysis of actual behavior in terms of the same three-dimensional space used to define value judgments. In addition to the interviews discussed above, a substantial amount of time was spent at each field site observing the procedures associated with the participation project. Through SYMLOG scoring methods it is possible to identify what "portions" of the three-dimensional space are behaviorally manifested through a given organization's worker participation project.

Prior to the SYMLOG scoring of groups within the two projects under study, the researcher attended a meeting of each group to introduce himself and ask the group's permission to observe their interactions. The researcher explained the nature of the study as a comparison of QC and QWL participation projects, answered any of the participant's questions, and stressed that he was not going to be a participant or facilitator in the group. Instead he would sit away from the group, yet able to observe all interactions of the group
members. The researcher was granted permission from each group he requested.

The SYMLOG scoring sheets were used to record the behavior of participants in face-to-face interaction. Specific rules were followed on gathering the SYMLOG messages. At the behavioral level, each statement made by a member in the face-to-face group of the participation project was scored.

Nonverbal behavior was scored for all members of the group at ten minute intervals and at any time that a member's nonverbal behavior differentiated him from the rest of the group, i.e., leaves the group, stands up, stretches, yawns, sleeping, etc.

Reliability and Validity

For a researcher to singlehandedly utilize a relatively new research system would, at first glance, appear to have insurmountable problems in the areas of reliability and validity. It would have been desirable to have a group of assistants trained in the SYMLOG system to independently score the idea system of the two participation projects, the value of the participants toward their projects and the face- to-face interaction of the groups. Limits in time and funding precluded this approach. Instead, another course of action was pursued.

First, the author received training in the SYMLOG system at the Social Psychology Laboratory of The University of Chicago under the direction of Professor Fred L. Strodtbeck. While in training, two test instruments were
utilized that measure the reliability of one's SYMLOG scoring. These instruments are the Behavior Implication Task (BIT) and the Values Implications Task (VIT) developed by Bales and his associates at Harvard University. BIT and VIT both utilize the same format. Each SYMLOG dimension is listed on a separate SYMLOG Rating Sheet. One is asked to circle the adjectives that best fits the dimension described at the top of the page. After all dimensions are completed, a field diagram is constructed for the scores obtained one each dimension. A perfect score is represented by plotting scores forming a circle on the field diagram. The BIT and VIT were completed and field diagrams constructed by the author. These diagrams indicate that the author has correctly interpreted the behaviors and values of the SYMLOG dimensions in an independent test situation and that dimensions have not been confused in application.

In addition, a test for reliability was performed using three experts in SYMLOG scoring and a group of ten subjects who have no training in the SYMLOG method. The expert scored textual material regarding the idea system of each project. The group with no SYMLOG training used the rating method with the same material. Tests for reliability were calculated within and between the expert scorer and naive rater group using the computer program developed by Polley. For the expert scorers the correlations for each SYMLOG dimension are: U-D, .755; P-N,.733; F-B,.682. For the naive raters, the correlations are: U-D,.718; P-N,.703; F-B,.722. The test for inter-group reliability is reported as: U-D,.726; P-N,.678; F-B,.675.

The validity of the SYMLOG space can be inferred on the bases of Bales recent work in which he concludes that the SYMLOG space is a universal
semantic framework which has been found repeatedly in social-psychological and linguistics research (see footnote 9 & 10, chapter II).

**Data Analysis**

The data obtained to examine the hypotheses listed in Chapter I for the social field (the prescriptions of the project's idea system), the individual field (the values of the participants toward the project), and the group field (the behavior exhibited in face-to-face interaction and satisfaction with the project), will be analyzed in the following manner.

Hypothesis #1 states that there is a categorical difference in the patterns of thought embodied in the idea system of the two participation projects. Each participation project will be analyzed for their degree of correspondence of each of the nine categories used by Shils for differentiating thought patterns. An assessment will be made to determine the thought pattern each project represents.

Hypothesis #2 deals with the impact of the social field on the group field, in other words, the prescriptions of the projects' idea systems on participant behavior exhibited in face-to-face interaction. The distinct ideal-types of participation projects (the prescriptions of the Quality Circle and Quality of Work Life idea systems) express the ideal range of behavior that should be exhibited by the participants. Measuring the congruency of participant behavior within and between projects will involve the following procedures.

Utilizing SYMLOG scoring procedures, project participants will each have a location, a point within the SYMLOG space that represents their
behavior for each project meeting—the group field. The location of each participant's behavior will fall within one of the twenty-six SYMLOG semantic spaces or the center. The participant's behavior (the group field) can be compared and correlated with the prescriptions of their project's idea system—the social field—using the SYMLOG correlation table of the relationship of each SYMLOG semantic space to all others.¹⁹

Figure 2.5 shows how this correlation is obtained from the SYMLOG space. Element A, a hypothetical prescription of the role of a project leader, is in SYMLOG space at the 7U, 1P, 14F location. Element B, the behavior exhibited by the leader during a meeting, is represented by location 7D, 1P, 14B. Using the SYMLOG correlation table one finds that the correlation between space 7U, 1P, 1F and 7D, 1P, 14B is -1.0, a perfect negation correlation. In other words, in Figure 2.5 the social field had no impact on participant behavior. The correlations between the prescription of the idea system and participant behavior will constitute the behavior-correspondence score, the correlation of social field to group field, for each participant. The higher the behavior-correspondence score, the more congruency between behavior and prescription of the idea system—group field to social field. Mean behavior/correspondence scores will be calculated for the two projects and tested for differences.

The main object of the test for differences between behavior correspondence means of the two participation projects is to discover if there is a true difference between the impact of the project prescriptions on participant behavior. The fact that these scores were derived from behavior in various face-to-face groups requires that the group effect be treated as nested within projects for purposes of the analysis.
Figure 2.5
Example of Negative Correlation
Utilizing SYMLOG Field Diagram
The tests applied to the mean project behavior-correspondence scores will be both analysis of variance (ANOVA) and multivariate analysis of variance (MANOVA). Initially, the behavior-correspondence score means for each project will be tested in a univariate ANOVA model with separate analyses run for the behavior-correspondence scores computed on each of the nine idea system object categories (see Table 1.1) defined in the participation's project's idea system.20 In other words, nine ANOVA's will be computed on the basis of nine independent variables each defined as the correlation between a SYMLOG score for a particular value object and the behavior score received by each participant.

The model used for these ANOVA's will be a nested, main effects model. Specifically,

\[ Y = U + P + G + M + e \]

where \( Y \) is the criterion variable, behavior-correspondence scores; \( U \) is the grand mean; \( P \) is the main effect for the participation projects, QC and QWL; \( G \) is the main effect for groups (circles or committees within projects); \( M \) is the main effect for meetings (twelve meetings were observed)\(^{21} \) and \( e \) is the error variance. In the analysis, Groups are treated as nested within projects and Meetings are treated as nested within Groups.

In terms of the results themselves, there is little interest in the outcomes of the main effect test for Groups. According to SYMLOG theory, every interacting group is viewed as a unique field. The behavior of any one individual is, to some extent, constrained by the configuration of the behavior of the other members. Even among groups who share a highly specified set of procedures some variation on the group field is to be expected. Also, the
problem under consideration in this dissertation gives rise to no interest of the possibility of a Project by Group interaction.

Similarly, with regard to Meetings, variation in behavior from one meeting to another is to be expected on the basis of SYMLOG role theory. Bales' unit of analysis is a role not an "individual" or "personality." As Morgan\textsuperscript{22} has pointed out, "the critical factor is that...these roles (are) defined by the group members themselves" (emphasis in the original). The roles individuals play will vary from one occasion to the next, therefore, little concern shall be given to significant main effects for meetings in this study. In addition, there is no prediction deriving from the current problem definition that relates to any interaction effect between Meeting and Projects.

Following the computation of the nine individual ANOVA's, a multivariate analysis of variance will be completed using the nine behavior-correspondence scores as a vector of dependent variables. Given that the prediction concerns the relationship between idea system prescriptions over the range of relevant objects and behavior, it is appropriate to treat this relationship simultaneously in the multivariate framework.

Hypothesis \#3 deals with the congruency between the individual field and the social field. Due to a stronger prescription for self-selection in the QC project a higher degree of congruency is expected between the two fields of the QC project.

The participant's SYMLOG value scores--the individual field--toward the prescriptions of the project's idea system will be correlated with the prescriptions of the project's idea system using the SYMLOG correlation table described previously. These correlations will constitute the \textit{value correspondence score} for each participant. A higher value-correspondence score for
one project will signify more congruency between the social and individual field for that project.

Hypothesis #4 deals with the impact that the social field and individual field, in concert, have on the group field. It is hypothesized that individuals who hold values consistent with the prescriptions of their project will behave in a way that is more consistent with the prescriptions of the project and view the project as more positive and be more satisfied with their participation than individuals whose values diverge from the prescriptions of the project.

The value-corrrespondence scores will be utilized in an analysis of covariance (ANCOVA). The independent and dependent variables for the ANOVA are the same ones used in the ANOVA and MANOVA described earlier. The covariants are the value-corrrespondence scores. If there is no significant difference found between the projects when the value-correspondence scores are controlled, then the individual field, participant values, accounts for any differences found in the participant behavior, the group field. However, if there is a significant difference between the two projects with value-correspondence scores controlled, a strong case can be made that the prescriptions of the project, the social field, has an important impact on the behavior exhibited in face-to-face interaction, the group field.

The second part of the Hypothesis #4 deals with the impact of the congruency between individual values and the project's prescriptions on levels of participant satisfaction with their project. Data obtained on levels of participant will be manipulated in the following manner. Correlation coefficients will be generated from value-correspondence scores (the congruency between the social and individual field) and the participant's stated level of satisfaction on a 1 (very low) to 5 (very high) scale.
Notes


6Ibid., p. 90.

7Bales and Cohen, SYMLOG, p. 3.


See Appendix A for the definitions of the twenty-six SYMLOG directions at the behavior and value levels.

Bales and Cohen, SYMLOG, pp. 31-32.

Bales and Cohen, SYMLOG.

There are various reasons for an event to be significant; these include 1) characteristics of the actor which aids in understanding the actor's personality, 2) added insight in the understanding of the group mood or conflict, and 3) changes by individual actors in behavior and/or images.

Bales and Cohen, SYMLOG, p. 167.

Ibid., pp. 427-432.


Ibid., p. F1-2.

One of the original ten idea system objects was dropped from analysis due to confusion and misinterpretation during the interview phase of the research study. QC Participants could not differentiate between the idea
objects, Definition and the Task of the Group, while QWL participants could not differentiate the idea objects, Purpose and Task of the Group. Therefore, the idea object, Task of the Group, was eliminated from the analysis.

20 Two meetings for each group (the first and last meetings observed of the circles or committees utilized in this research) were used in this analysis to conform with the requirements of the statistical package used to analyze the data. It is expected that this number of observations is adequate to test for significant differences between the projects.

CHAPTER III

General to Specific: A Historical Account of Quality Circles and Quality of Work Projects

Background of Quality Circles

Quality Circles evolved out of the concern for improving quality in production that was first emphasized to Japanese producers by the United States following World War II. One objective of the U.S. occupation was to get the Japanese economy functioning as quickly as possible. Two major problems stood in the way of quick economic recovery: 1) Japan's lack of natural resources; and 2) Japan's reputation for shoddy workmanship. For economic recovery to begin, Japan would have to make international trading agreements and overcome the limited acceptance of their products.

The leaders of Japanese industry became aware of the need to adopt new management techniques to overcome their adverse economic conditions. Several American consultants were brought in to teach industrial standards to Japanese engineers and statisticians. The impetus for this instruction was that statistical methods employed in industrial quality control would speed-up industrial recovery and improve workmanship. One result of this consulting effort was the formation of the Union of Japanese Scientists and Engineers (JUSE), a nonprofit organization whose purpose was to "provide a standardized collection of information, strategies, and educational programs."1 JUSE
soon became Japan's educational center for statistical quality control methods by developing and promoting industrial quality control techniques in Japanese industry.

In 1950 the leaders of JUSE learned that W. Edward Deming, a statistician for the U.S. Government, would be visiting Japan to advise the occupation government on the use of statistical techniques. JUSE contacted Deming asking if he would conduct a seminar for its members. In July 1950, Deming spoke to an audience composed of the top 50 executives of Japanese industry stressing the importance of quality in production and that the phrase "Made in Japan" could be transformed from a synonym for junk into a hallmark of quality.\textsuperscript{2}

JUSE requested Deming to give additional training seminars in statistical quality control procedures to industrial scientists and engineers. Deming's statistical seminars were so successful that he was in constant demand.\textsuperscript{3} In 1951, the Japanese Government honored Deming with the Second Order Medal of the Sacred Treasure presented to him by Emperor Hirohito for his contribution to Japan's economy. Also in 1951, JUSE established the annual Deming awards for corporate and individual achievement in quality improvement.\textsuperscript{4} Deming had created enthusiasm for the use of statistical quality control among the leaders of Japanese industry.

Building on Deming's achievements was Dr. J. M. Juran, a quality control consultant, who in 1954 held a series of lectures in Japan. Juran introduced a different orientation toward quality control, stressing that it is not achieved by the acceptance or rejection of a project at the end of the production line. Rather, quality control is a part of the management function and must be practiced throughout the firm. Quality begins in the design stage and ends with
satisfactory service being provided to the consumer. Juran wanted quality control taught to middle management. However, the Japanese extended his recommendation so that everyone in the organization, from the top management to the shop floor, would receive instruction in statistical quality control methods.

A systematic approach was used to train the Japanese workforce. JUSE conducted quality control methodology seminars for managers in all functions of an organization--Research, Development, Design, Purchasing, Accounting, Sales, Production, etc. This broad-based training of managers diminished the need for specialist engineers and, as a consequence, most quality control departments took on mainly an advisory and consulting role. After the training of managers came the task of training of "Gemba-cho". Under the Japanese system of organizing work, the Gemba-cho is a type of working foreman, i.e., he is a work leader, teacher, and production worker. Since this category of worker consists of several thousand people, a new training form (as well as more conventional methods) were used.

The conventional form consisted of a textbook written in 1952 by Dr. Kaom Ishikawa entitled Introduction to Quality Circles. Also utilized for training was a manual edited by Ishikawa in 1959 entitled Quality Control Text Book for Foremen. The new training form was a radio broadcast course sponsored by the Japanese government on the subject of quality control. This course consisted of 91 lessons of 15 minutes each, broadcast daily from June through September 1956. This course was repeated annually through 1962. In addition to training, a journal, Gemba to QC (Quality Control for the Foreman), began publication in 1962 on a quarterly basis and the first annual Foreman's QC Conference started in November 1962. Even with the
extensive training and attention given the Gemba-cho, he was limited in utilizing his new found knowledge by the fact that the workers under his control were not trained in quality control techniques. A mechanism for using these human resources in the services of improving quality needed to be developed; this mechanism was the Quality Circle (QC).

The initiative for the QC concept came from the editors of *Gemba to QC*. They saw QC as a way of completing the training of the total workforce in quality control methods and enhancing the knowledge and training of the Gemba-cho. Basic content from the Gemba-cho training was compressed into ten (10) training sessions for non-supervisory workers by JUSE. Member companies of JUSE were soliciting for firms willing to experiment with the QC concept. Their circles began in May of 1962 and by the end of that year there were twenty circles.¹⁰ By 1966, there were over 8,000 circles in operation with a membership of over 120,000.¹¹ A Quality Circle organization with national and regional affiliation soon followed. In 1963, *Gemba to QC* became a national journal devoted exclusively to Quality Circles. Today in Japan, there are over one million Circles in operation with a membership of over six million workers.¹²

The overall impact of Japan's stressing Quality Circles and statistical quality control methodology has been described by Robert E. Cole, Director of the Center for Japanese Studies at the University of Michigan, as follows:

Workers began to participate in study groups to upgrade quality control practices. This practice gave both a simple and most profound twist to the original idea propagated by the Western experts. Quality shifted from being the prerogative of a minority of engineers with limited shop experience (outsiders) to being the responsibility of each employee. Each worker, in concert with his or her workmates, is expected to take responsibility for solving quality problems.¹³
Quality Circles in the U.S.

In 1962 a group of Japanese workers (actually a QC group) visited various production facilities in the United States. One of this group's site visits was the Lockheed Missile and Space Company of Sunnyvale, California. During the tour of the plant facilities, the Japanese discussed their experiences of how quality problems could be overcome with the use of the QC group. They also shared written material about QC's with their host, Wayne S. Ricker, Manufacturing Manager for the Sunnyvale plant. During this time, the Sunnyvale plant was producing Poseidon C3 missiles. The Poseidon project was not meeting production schedules. Reliability problems were causing many delays that were directly attributed to the lack of quality control. The quality assurance department was responsible for investigating quality problems and remedying them. However, although quality problems were given highest priority, the quality assurance group could not identify and correct them with sufficient accuracy and speed to meet production schedules.14

Due to pressure from top management, a major shift in quality responsibility occurred. The quality of the Poseidon was no longer to be the responsibility of the quality assurance group alone, but rather was to be considered a general manufacturing problem.15 This organizational shift in quality responsibility made Mr. Ricker, as Manufacturing Manager, the person now ultimately responsible for quality problems. The juxtaposition of this organizational shift and the visit by the Japanese workers are significant events that planted the idea in some Lockheed managers that a QC project might work in the U.S. firm.
In November 1973, Lockheed Missiles and Space Company organized a tour of Japanese industrial plants. The tour included Wayne Ricker as leader of the tour group; Donald Dewar, quality control coordinator; William J. Nichol, product assurance assistant manager; Edward P. Rogers, management training coordinator; Louis Bernard, manager of labor relations; and Isamu Yoshioka, manufacturing supervisor and interpreter for the group.\(^{16}\) The Lockheed group visited eight Japanese companies and was particularly impressed with the workers' involvement in their jobs. They learned that some QC's had solved problems that had baffled professional engineers.\(^{17}\) They were also impressed by the leadership provided by supervisors in the QC's and the high degree of training that the QC members were given.\(^{18}\) In their trip report, the team stressed how Quality Circles motivated workers and increased their sense of participation in the organization. They also noted the strong support top management gave to the QC project and the involvement of workers in their jobs.\(^{19}\)

The study team was exceedingly optimistic about its findings in spite of their tentative conclusions that: "the QC concept was probably more naturally suited to Japanese than American culture; that management commitment was vital; and that the training required and the materials supplied by JUSE were of an unexpectedly high caliber."\(^{20}\) After they returned home, the team recommended installing Quality Circles in Lockheed. Their recommendation was accepted and Donald Dewar was named QC training coordinator with other members of the study team assisting in developing training materials and structuring the QC project.
Ricker believed that the principles responsible for the success of Quality Circles in Japan were universal factors and strove to emulate the Japanese model. The training materials used at Lockheed were translated verbatim from QC material provided by JUSE. The QC project at Lockheed was implemented exactly as they had seen it done in Japan.

To increase awareness of the QC project, seminars were held for Lockheed supervisors and managers. Interested supervisors were then instructed in the technique of organizing, training, and maintaining the circles. After completing this training program, supervisors asked for volunteers among their subordinates to start a Quality Circle. The first circle began in October 1974. By the end of 1975 there were 15 circles, and by 1977 there were 30 covering a variety of departments—production, development, machine, electronic, and composite.

During the first year of operations, Lockheed documented over $750,000 in savings as a result of suggestions and implementation of QC ideas. At the end of the second year, the accumulated total of savings directly attributed to Quality Circles was $2,844,000. In one department, rejects were reduced from 25 to 30 per 1,000 hours to less than 6 per 1,000.

Structure, Policies, and Procedures of a Quality Circle Project

A Quality Circle is defined as a small group of people doing similar work, meeting regularly to identify, analyze, and solve product quality or productivity problems. They usually meet for one hour each week in or
near their work area. The circle's focus on possible productivity problems is due to the link between quality and productivity in industrial life. Productivity may suffer when quality is below acceptable limits and pieces are discarded. The QC definition, while accurate, does not indicate how this problem-solving employee participation project functions, how it is structured or the training that occurs in a Quality Circle project.

As stated previously, the purpose of Quality Circles is to increase quality and/or productivity. There are, however, other objectives that QC projects strive for as a result of implementation. These are to:

1) inspire more effective teamwork
2) promote job involvement
3) increase employee motivation
4) create a problem-solving capability
5) build an attitude of problem prevention
6) develop harmonious manager/worker relationship
7) develop a greater safety awareness
8) promote cost reduction.

To achieve these objectives, the Quality Circle project within any organization is implemented along the existing authority structure and all levels of the organization that participate in Circle activities receive varying degrees of training in the Quality Circles approach to employee involvement in problem solving.

There are four positions within a Quality Circle project which correspond to the normal management hierarchy. Figure 3.1 depicts this overlay of a Quality Circle project with the normal management hierarchy.
The QC Steering Committee consists of top and middle management who provide support and guidance for all Circle activities. The committee has the responsibility of selecting a facilitator. In addition, the committee sets the goals and objectives for the project, establishes the operational guidelines and controls the rate of expansion.

<table>
<thead>
<tr>
<th>Organizational Hierarchy</th>
<th>Quality Circle Hierarchy</th>
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<tbody>
<tr>
<td>Top and Middle Management</td>
<td>Steering Committee</td>
</tr>
<tr>
<td>Supervisors</td>
<td>Circle Leaders</td>
</tr>
<tr>
<td>Employees</td>
<td>Circle Members</td>
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<tr>
<td>Staff Position</td>
<td>Facilitator</td>
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<tr>
<td>i.e. Director of Training</td>
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<tr>
<td>Personnel Director</td>
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Figure 3.1
Relationship Between Management and QC Hierarchy

The Circle leader is usually the supervisor from the work area of the Circle. The leader conducts the training for his Circle, and is responsible for the operation of the Circle. In addition, the leader is to provide guidance for the Circle's activities and assure proper communication with management through means such as minutes of Circle meetings, activity reports, and management presentation by the Circle.
The Circle members are the regular employees who voluntarily participate in the Quality Circle project and go through the Quality Circle training in problem-solving techniques.

The Circle Facilitator is responsible for coordinating the overall program. The facilitator, in concert with the Steering Committee, develops a plan for implementing Quality Circles, and training for management and Circle leaders. The facilitator attends all Circle meetings and provides support to Circle participants as needed. Also, the facilitator must maintain records to reflect all Circle achievements.30

Quality Circle training is conducted at all levels of the QC structure but the quality and quantity of training differs among the various levels. Training of Quality Circle problem-solving techniques is considered the "heart of a QC project" and four specific approaches are utilized based upon the needs of the particular groups being educated; managers, facilitators, leaders, or members.31

Management training consists of an introduction to QC and the benefits that can be derived from the project. The main objective of this training is to gain management support for the QC project. A considerable amount of time is dedicated to results from QC application including reduction in scrap rates, defect rates, accidents, and employee turnover. The management training usually lasts no more than two hours and is given periodically throughout the year to remind managers that their open support is essential for the QC project to achieve success.32

Facilitator training consists of two 40-hour courses which include classroom instruction and actual practice. Each course is conducted in five working days.33 The first course contains instruction in the eight
"basic" QC problem-solving techniques and the management presentation (see Figure 3.2), plus group problem-solving and communications. On completion of the first course, the facilitator is considered to be equipped with the knowledge and skills necessary to start a QC project and carry it through its first five months of operation.34

The second course for the facilitator is in the "advanced" QC techniques (see Figure 3.2). Emphasis is placed on developing the teaching skills of the facilitator. The majority of the course is spent in role playing, case studies, and practical application of the QC techniques.35

The third level of QC training is for the leaders. This training is a concentrated version of the facilitator's course presented in three 8-hour sessions. The leader training covers the essential parts of the same materials studies by the facilitator. Although the training is not as

<table>
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<tr>
<th>BASIC</th>
<th>ADVANCED</th>
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<tbody>
<tr>
<td>Brainstorming</td>
<td>Graphs - Construction</td>
</tr>
<tr>
<td>Cause and Effect Diagrams</td>
<td>Control Charts, X-R</td>
</tr>
<tr>
<td>Sampling Techniques</td>
<td>Control Charts, P, N</td>
</tr>
<tr>
<td>Data Collection</td>
<td>Scatter Diagrams</td>
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<tr>
<td>Pareto Diagrams</td>
<td>Stratification</td>
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<td>Checksheets</td>
<td>Data Evaluation</td>
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<td>Graphs - Applications</td>
<td>Case Studies</td>
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<td>Histograms</td>
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<td>Management Presentation</td>
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Figure 3.2
QC Training Course
extensive since being a QC leader is in addition to supervisory duties, "therefore (the QC leader) is not expected to be as conversant in QC matters as the facilitator." 36 The facilitator is considered the teacher in QC and the Leader assists in the teaching.

Member training begins at the first meeting of the Circle and continues through the tenth meeting with time devoted at each meeting to learning one of the "basic" QC techniques and applying that technique to solve problems. During this training phase, the meeting time is divided evenly between these two endeavors. 37 The advance QC techniques are taught to the QC members if, in the opinion of the leader and/or the facilitator, a problem warrants the additional instruction. A typical Circle meeting during the training phase is one (1) hour long and divided into three sections--review, new material, and application (See Figure 3.3).

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>10 minutes</td>
<td>Review Previous Meeting</td>
</tr>
<tr>
<td>20 minutes</td>
<td>Presentation of New Material</td>
</tr>
<tr>
<td>30 minutes</td>
<td>Practical Application of QC Techniques</td>
</tr>
</tbody>
</table>

Figure 3.3
Typical 60 Minute QC Meeting During Training 38
The Operation of a Quality Circle

Figure 3.4 is a diagram of the operation cycle of a Quality Circle and the steps a circle works through for implementation of their ideas. After the first ten sessions, the QC members have been instructed in all the basic QC techniques and are equipped to follow a problem through the total Quality Circle Operation Cycle.

The first step in the cycle is for the QC members to identify any problems of a quality or productivity nature in their work area. After discussing the merits of the problem mentioned, the Circle moves to step 2 and selects, by a majority vote of the Circle, one problem to work on.
Step 3 utilizes simple statistical methods that are a part of QC problem-solving techniques. The purpose of Step 3 is to analyze the major cause of the problem. The fourth step is for the Circle to develop a solution to the problem. Again, statistical techniques may be used in testing out a variety of solutions in an attempt to identify the best one for the problem at hand. After the first four steps have been completed, the Circle is ready for Step 5, the Management Presentation. At this step, the Circle presents to the manager responsible for their work area (usually the Circle's supervisor/leader/supervisor) the problem, a recommended solution and a request to implement the solution. In other words, at the management presentation, the Circle reviews for management, all their work in the first four steps of the Operation Cycle. After the Circle members have presented their findings to management, it is management's responsibility to study the request and report back to the Circle either granting permission to implement the solution or giving reasons for the denial of the request.

Bigley Manufacturing decided to use the Quality Circle material authored by Donald L. Dewar, one of the initial consultants at Lockheed, primarily because Dewar's approach did not require an on-site consultant. Instead, key personnel from Bigley were trained by Dewar in an intensive week-long workshop, with additional consulting done by phone. All materials for the QC program at Bigley were provided by Dewar as part of the workshop fee. Two Bigley employees, one the Director of Training, the other an appointed UAW official, were sent to the Dewar workshop to receive training in the Quality Circles approach and implement QCs after training.
As in all Quality Circle projects, a QC Steering Committee is charged with the responsibility of setting goals and objectives. At Bigley it was decided by the Vice President for Manufacturing to assign these functions to the existing Labor-Management Committee (LMC) composed of five management directors and five union officials (this includes the union and management personnel that received the QC facilitation training).

Prior to being assigned the duties of QC Steering Committee, the LMC functioned mainly as an information sharing mechanism between labor and management. The impetus to form the LMC was a strike over the 1979 contract. Part of the strike settlement was the informal formation of the LMC.

There are no guidelines or official policies stating the LMCs actual status—no official written document outlining what power rests with the LMC. The sharing of information in the LMC was usually one-sided with management personnel telling the union what new policies and procedures were going to be instituted and stressing the problems in production quantity and quality. The union members were not against the LMC being assigned the duties of QC Steering Committee, but did not feel as co-equals in its formation. Their input in duties relating to the QC project can be characterized as a "wait and see" attitude. The union leadership knew that something needed to be done to improve production and that QC might be a suitable response. But the union's growing frustration with not getting concrete results from interaction on the LMC clouded their involvement as QC Steering Committee members. The union members on the LMC basically allowed management to make
decisions on QC policies with no union input. Many times the LMC would meet with only one union member present--the union official who received the QC facilitator training.

It should be noted that the union LMC members did not in any way attempt to prevent union participation in QC activities on the shop floor. Their cautious involvement as QC Steering Committee members was mainly due to the past failure of the LMC to be productive.

QC training commenced in January of 1982 with a one-hour presentation given to all supervisors on each shift. The presentation was mandatory for supervisors. The purpose of the presentation was to explain Quality Circles, their usefulness to the organization and sign up supervisors for a ten-week, 90-minute per week, training for QC Circle leaders. Management from the LMC also attended the presentation. It was stressed during the presentation that the QC Leader training did not commit the supervisors to immediately start a QC in their department. It had been decided by the QC Steering Committee to implement QCs gradually. The training would provide a pool of potential QC leaders.

No supervisor would be forced to start a QC if he was opposed or not interested in the project. However, those supervisors who were interested would be able to initiate a Circle, in their department during the leader training, if there was enough interest among department employees. Of the twenty-three supervisors and four managers who attended the presentation, eighteen volunteered for the training. Fifteen were supervisors and three were managers. In January 1982, the QC Leader training commenced. From the original eighteen that volunteered
for the training, three managers and nine supervisors completed the ten-week QC Leader course.

It was proposed by the QC facilitators and agreed to by the QC Steering Committee that in order for a supervisor to start a Circle, three criteria must be met. First, the supervisor must be attending the QC Leader training course. Second, the union steward for the department must volunteer to be a Circle member. Third, no more than seven department employees could be in the Circle. If more than seven volunteered, a drawing by lot would determine the Circle's membership.40

To identify departments that met the criterion for Circle implementation, the QC facilitator had individual talks with: 1) supervisors in the QC Leader training group; and 2) union stewards whose supervisors were in the QC Leader training. The facilitator identified four departments that met the implementation criteria. Orientation meetings were held for each of these departments. During the orientation, a film on Quality Circles was shown followed by a question and answer period. At the end of the orientation meeting, the facilitator asked for volunteers to start a QC in their department. This is in line with standard QC implementation procedures. Voluntary membership in a Circle is universal; no one is forced to participate.

There was enough interest in four departments--25-1 & 25-2, both production departments and 32-1 & 32-2, quality control departments--to start Quality Circles. The QC Steering Committee decided to implement one circle each week during February 1982. The order of implementation was 32-2, 32-1, 25-2, and 25-1. Each of these circles would be composed of the supervisor as Circle Leader, the union steward and between two
and six other department employees as Circle members. One of the Circles, department 25-1, disbanded after two meetings due to the supervisor quitting the QC Leader training for personal reasons. The other department Circles completed the QC training using the Dewar QC material.

Bigley's Quality Circle project follows the hierarchy that is found in all Circle projects with a modification, suggested by the consultant, to get union support. The modification is union input on the QC Steering Committee. The Bigley QC project has a Steering Committee comprised of top/middle management and union officials; Circle leaders who are department supervisors; and Circle members--the subordinates of the Circle leader. The QC facilitator is the linking pin between the three QC levels.

Quality of Working Life at Warrenstown

The Warrenstown QWL project was initiated in July 1976, with an agreement between the City of Warrenstown, Local #100 of the American Federation of State, County, and Municipal Employees, AFL-CIO, (AFSCME), and a local major state university. The purpose of the QWL project follows the "dual focus" discussed previously. That is: 1) to improve the quality of the work environment of municipal employees; and 2) to improve the services provided by the City of Warrenstown. The QWL project started in two divisions of the Warrenstown Public Service
Department--the Division of Sewage and Drainage and the Division of Water.

In 1979, the three parties involved in the QWL project held a retreat to assess the project's past and plan for the future. One result of the retreat was a document entitled *A Memorandum of Mutual Trust* which encompassed the principles on which the project is based and outlines the potential benefits derived from involvement in the project. This document is considered a policy guide for the Warrenstown project and is still in use today. It is a joint statement of the beliefs the parties hold toward QWL and the principles that should guide the project.

The *Memorandum of Mutual Trust* contains five principles that the parties will agree guide their interaction in the Warrenstown QWL project. These principles are:

1. **Communications** is identified as the most important principle. The Memorandum states: "improved communications requires an open mind a willingness to share information, ideas and opinions, and respect for those differences. Communication enables the airing and possible resolving of conflict before confrontation occurs".

2. **Attitude.** The project was initiated because of an attitude exhibited by the parties of mutual trust, respect, and open-mindedness. The Memorandum states "these attitudes allow a spirit of cooperative self-interest to develop among all groups, which helps improve the work environment, promotes personal growth, and increases individual dignity."

3. **Cooperation** is considered an essential principle in the QWL project. Cooperation is accomplished through mutual problem-solving between different groups of employees, different levels of management, different units or areas of the City; in addition to mutual problem-solving between labor and management.
4. **Responsibility** within the Warrenstown QWL project means that everyone has a stake in the successful operation of City government. Responsibility is shared among all employee-citizens. The **Memorandum** states: "QWL members have an obligation to identify the goals of their work group, to analyze, to investigate, plan, evaluate, and pursue these goals in a mutual manner."

5. **Experimentation** in the QWL project allows the opportunity to go beyond the limits of rigid or vague policies and procedures and modify a particular situation. Labor and management both can benefit from changes in problematic situations.\

The benefits from the parties involvement in the QWL project can be accrued at the personal level, the organizational level, and from the perspective of the public. The **Memorandum of Mutual Trust** states that:

QWL offers the opportunity to remove obstacles to enjoying, mastering, and improving one's job. Employees have both the need and the right to contribute their ideas to the operation of the City. QWL provides an atmosphere within which this can take place. It gives a way for employees at any level, including management, to offer and develop their ideas about how to make the system work more effectively and more humanly. The personal fulfillment which results from exploring and improving policy, work methods, work planning, or the work environment leads to higher quality services for the public.

As stated earlier, the Warrenstown QWL project started in two divisions of the Public Service Department. In 1981, an additional division was added to the project--the Division of Sanitation. The structure of the Warrenstown project consists of joint labor-management committees.
There are four separate levels of committees—Working Level, Division Level, Department Level, and City Level—in the QWL project that are patterned along the hierarchy of authority within the City and the Union. The Working-Level Committee corresponds to an independent work site, i.e., a water treatment plant, office area of a department or division. The Division-Level Committee corresponds to a total unit within a department such as Water Treatment, Street Maintenance, etc. The Department-Level Committee includes a main functional area of the City, i.e., Department of Public Services, Department of Safety, etc. Last, the City-Level Committee comprises the policy making positions for the City and the Union.

The Working-Level Committees are composed of fixed and elected positions. The fixed positions include the manager and assistant manager for the City, and the chief steward and a steward for the Union. The elected positions number three and four from the labor and the management work-force at the work site. Each Working-Level Committee elects a chairperson, vice chairperson, and secretary. These positions are usually alternated between labor and management. Each Working-Level Committee decides the most effective way for the work site to be adequately represented by work areas, shifts, or job classifications. Even though the Working-Level Committee is a representative body, all employees have the opportunity to attend and contribute to the Working-Level Committee if they desire to convey their ideas or concerns.

A Division-Level Committee assists the Working-Level Committees by approving experiments, making suggestions, and implementing
Division-wide proposals. Each Division-Level Committee consists of the Division superintendent, business manager, Division chief steward, and one manager and union representative from each Working-Level Committee. The Department-Level Committee has parallel responsibilities to the Division-Level Committee, only on a department-wide basis. Experiments may be proposed at the Department level which may affect the entire Department. Department Committee members include the Director of the Department of Public Service, the Vice President of AFSCME Local #100, the Division superintendents, and the chief stewards from each Division.

Policy making decisions and the monitoring and evaluation of the QWL project lies with the City-Level Committee. The composition of the City-Level Committee is the Mayor, several department directors, the City's labor relations administrator, the President of Local #100, the Regional Director for the Union, and three members of the Union Executive Board.

The Working-Level Committees meet twice a month during work time for approximately one and one half (1 1/2) hours. The other committees--City, Department, and Division--meet once a month during the work day for one and one half (1 1/2) hours. Subcommittees may be used by any committee on an ad hoc basis to work on topics that require research or investigation. In addition to the labor-management members on each committee, at the time of this research, a third party from a local major university attended each committee as a facilitator. The facilitator's role was to assist committees in defining issues, problem areas, and reaching solutions. Often the facilitator would help a committee develop
proposals for changing some problematic aspect of the work environment. The facilitator also provided the committee with information on current projects, helped in data collection (so members could better define concerns), generate solutions, and evaluated outcomes.

The Chairperson of each committee is responsible for preparing an agenda for each meeting, beginning and ending the meeting on schedule, allowing all members the opportunity to participate, and utilizing consensus as a means for decision-making, whenever possible. Minutes for each committee are recorded by the committee secretary who is also responsible for distributing them to the members and the chairpersons of all other committees.

Experimentation is a principle component of the Warrenstown QWL project and allows committees to attempt solutions to problems or topics that they identify as important. Experiments are initiated by a committee after: 1) reaching a consensus on the problem; 2) reaching agreement that action should be undertaken to initiate a change. The committee then develops a proposal for an experiment to effect the desired change. Usually, a subcommittee is formed to gather facts relevant to the problem and proposed experiment. Membership on a subcommittee may consist of committee and non-committee members. A proposal will contain the possible advantages and disadvantages of the experiment, the amount of time requested for the experimental period, indicate who will be affected by the experiment, the effect (if any) on the bargaining agreement between the City and the Union and how the experiment will be evaluated. The final step in the proposal process is for
the committee to submit the proposal to the appropriate upper level QWL committee for review and comments.

Although the committees are guided by the Memorandum of Mutual Trust, each individual involved in the QWL project has a unique interpretation of what QWL is, what it is supposed to accomplish, and how it operates. This diversity of thought does not seem to impair the functioning of QWL since each committee allows individuals to express concerns and ideas, and stresses the importance of respecting the opinion of others.

There are no set areas in which topics must fall, i.e., productivity, work areas, policies, etc., nor are there topics that are considered off-limits for discussion by a committee. Some topics may be short-lived on a committee agenda by either quick resolution or lack of interest by the committee members. In addition, a variety of topics may be discussed at one meeting. The only constraint for the committee is the time allocated for the meeting itself. Topics are many times turned over to a subcommittee for investigation. The subcommittee reports back to the full committee for guidance in dealing with the topic. Decisions on topics usually do not occur until all members have had the opportunity to investigate, discuss, and hear all points of view on a particular issue. Decisions on topics usually do not occur until all members have had the opportunity to investigate, discuss, and hear all points of view on a particular issue.
Notes


2 Ibid., p.10.


7 Ibid.

8 Ibid.


14 Ibid.


18 Ibid.

20 Ibid., p. 75.


22 Ross and Ross, Japanese Quality Circles & Productivity, p. 16.


24 Ross and Ross, Japanese Quality Circles & Productivity, p. 16.


28 Ibid., pp. F13-1 - F13-10.


30 Ibid., p.257

31 Ibid., p.258

32 Ibid.

33 Ibid.

34 Ibid.

35 Ibid.

36 The Memorandum of Mutual Trust is quoted extensively in the remainder of this chapter. Due to the researcher's commitment of confidentiality, the identity of the parties and the proper citation cannot be divulged.
CHAPTER IV
The Idea System of QWL and QC

Introduction

All worker participation projects are based on a set of beliefs about the purpose and value of participation and the relationship between participation and other aspects of the work environment. This set of beliefs, the idea system, helps legitimize the fact that in any worker participation project, time is taken away from doing work in order to talk about work. On the basis of the discussion of idea systems presented in Chapter I, it is possible to differentiate idea systems into categories. Systems of ideas that previously have been described in industrial relations literature as ideologies may, under careful analysis, be viewed more properly as outlooks, creeds, movements of thought, or programs. At the end of this chapter, the participation projects under study will be classified using Shil's typology of patterns of thought.

The Idea System of Quality Circles at Bigley

As stated previously, Bigley uses the Dewar QC material for conducting its QC project. The Dewar material states specifically the roles and
relationships that occur among the significant objects in the QC idea system. The Dewar QC material present step-by-step instruction for complete QC implementation. Bigley followed the Dewar QC material without deviation. To assess the idea system of the QCs at Bigley, it is appropriate then to examine the source and reference material utilized, i.e., the published Dewar guidelines. Therefore, the following discussion of the idea system objects in the Bigley QC project is based on the Dewar QC training material.

The actors in the Bigley QC project are the workers, managers, and a facilitator. Specific expectations for each actor group are identified to insure the proper functioning of the QC project. For workers, membership in a quality circle must be voluntary. This principle for membership serves to keep those employees with negative attitudes about QCs out of the project. Only those workers who are willing to follow the policies of the QC may stay in the Circle. If a Circle member continually exhibits negative behavior or violates the rules of the QC, the leader or facilitator will ask him to leave the Circle. By volunteering, the worker must accept the QC project "as is"—there is no role for a member to play in policy formation.

The role of the manager in the QC project is defined at two levels. At the supervisory level, individual supervisors volunteer to be Circle leaders. by this act of volunteerism, they agree to follow the policies and procedures of the QC project as do the worker/members. However, an additional emphasis is placed on the supervisor/leader's attitude. The Circle leader is expected to exhibit enthusiasm for the project. He needs to believe that his subordinates can make a worthwhile contribution and that through QC activities, the Circle members can have an effect on work efficiency. The
Circle leader is to be a positive force on gaining new Circle members by "talking up" the advantages of QCs in the organization.

Management above the supervisory level may be involved in the QC project in two ways. First, a manager may be a member of the Steering Committee. In this position, he is expected to have a general knowledge of the QC project and formulate policies that enhance the achievement of the overall goals of the QC project. A Steering Committee member does not need to know the detailed content of the member training, but is mainly concerned with project effectiveness and growth. The second way a manager can be involved in the QC project occurs when a supervisor under the manager's span of control becomes a Circle Leader. In such cases, this manager will be part of the audience for the management presentation. The manager is to review the recommendations made by the QC and report back to the Circle either approving their recommendation or explaining why the recommendation cannot be implemented. Other managers are encouraged to attend management presentations to show support for the QC project. Any management personnel who has negative comments concerning the QC project are advised to keep their opinions to themselves.

The role of facilitator in a QC project is multi-faceted. The facilitator is the pivotal position in the QC hierarchy. He has had the most extensive training in QC philosophy and techniques, and is looked upon as the QC expert. The facilitator's duties can be classified into three distinct categories: initiator, coordinator, and rule keeper.

As an initiator, the facilitator is responsible for identifying and selecting individual supervisors to receive leader training and serve as Circle Leaders. After the supervisor has been trained, the facilitator assists in obtaining
volunteers among the Circle Leader's subordinates. Normally, this is accomplished by having an introductory QC orientation for the supervisor's department. There is a question and answer session included in the QC orientation that is used by the facilitator to "shape potential members attitudes by giving the proper QC perspective to employees". This "proper perspective" is conveyed with the adherence to QC policies and procedures as the correct way for employees to have input into quality and production problems. The facilitator stresses to employees that they are the ones who know what problems exist and the QC project, if followed, can solve problems and foster a better work environment. Also, the facilitator has periodic meetings with management groups throughout the organization to explain the importance of QC and build interest in the project.

The facilitator also has the responsibility to coordinate the overall activities of the total QC project. This includes written reports to the QC Steering Committee on Circle activities, scheduling of QC meetings, attendance at all Circle meetings and arranging for management presentations. If required, the facilitator may arrange for engineers or staff people to meet with Circles that need expert advice in solving a particular problem. A "win-win" attitude is constantly emphasized by the facilitator in dealings with others.

The final category of duties for the QC facilitator is rule keeper. The facilitator more than anyone else continually monitors the Circles to ensure that all policies and procedures are followed. He "must do whatever is necessary to provide for a smooth-running operation." If a Circle becomes involved in discussions or topics that are not concerned with quality or production problems, the facilitator will instruct the QC that it is dealing in
an area which is not under the Circle's authority. Circle members who do not actively participate in discussions or show negative behavior in the Circle meeting will be counseled by the facilitator. If the member's behavior does not improve, the member will be requested to leave the Circle.

The QC techniques are also guarded by the facilitator. The Circle members and the leader are encouraged and reminded by the facilitator that all problems worked on by the Circle must be approached from the QC point of view. Prior to each meeting, the facilitator checks to insure that the leader has an agenda; and afterwards discusses the good and bad aspects of the leader's method of conducting the Circle meeting. As the rule keeper, the facilitator decides what is the proper interpretation for all QC policies and procedures.

The institutional affiliation of the actors, the union, and management are given differing roles in the Bigley QC project. As suggested by Dewar, the union was invited to fill positions on the QC Steering Committee. If the union had declined the positions, it would not have placed the QC project in jeopardy. When a labor union exists in an organization wanting to establish a QC project, management is typically advised by the QC consultant to communicate to the union leadership the purpose of the project and not be concerned if the union does not want an active role on the QC Steering Committee. What is desired from the union is a commitment toward solving quality and/or production problems by recognizing that these types of problems exist and not interfere with union members who desire to be Circle members.

Management's role in the QC project is to be enthusiastically supportive of Quality Circles by word and deeds. Management should allow Circles to
meet during normal working hours. They should encourage formation of Circles as a part of the organization's routine. Circle members should be allowed to attend other Circle meetings when invited to work on joint projects that affect the work areas of both Circles.

Management must place a high priority on and encourage members to attend Circle meetings. Circle activities should become part of the organizational goals and organizational activity reports. Management is also asked to publicize Circle activities and accomplishments in speeches and presentations. It is stressed that management support is the key to all other QC activities. That is, if management support is non-existent, then none of the other QC activities matter, because they are "doomed to failure."  

The objectives of the QC project can be broken down into its purpose, task of the Circle, and definition of the project. Quality Circles are defined as:

A group of workers from the same area who usually meet for an hour each week to discuss quality and/or production problems, to investigate causes, recommend solutions, and take corrective actions when authority is in their preview.  

The Circle's task is to identify problems and, by following QC techniques, arrive at a solution to present to management for approval. The purpose of the Circle is to reduce errors and improve quality. However, by adherence to the QC procedures and policies, other purposes for the QC project are to: 1) inspire more effective teamwork; 2) promote job involvement; 3) increase employee motivation; 4) build an attitude of problem prevention; 5) promote personal and leadership development; and 6) create a problem-solving capability.
The final object class of the QC idea system is the rules that govern the operation of the Circle. The rules are found in: 1) the QC procedures that must be followed; 2) the task of the Leader; and 3) the limits placed on the topics the Circle may discuss.

The QC procedures (discussed in Chapter III, See Figure 3.4) are the training content that is given to the Circle's members. These procedures include problem identification, problem selection, problem analysis, and the management presentation. Problem identification uses brainstorming to generate a list of problems that the Circle may wish to address. Problem selection involves a narrowing down of the problem list. A vote is taken to determine which problem will receive the Circle's attention. Only one problem at a time is addressed by the Circle. Problem analysis uses the statistical methods and charting techniques the Circle members learned during their initial training. The techniques are used to verify the problem, identify causes of the problem, and identifying the best solution. When the Circle has completed these steps it is ready to present its recommendation to management. A special Circle meeting, the management presentation, is held with the Leader's supervisor, the management person responsible for hearing and evaluating the Circle's findings. The manager reviews the Circle's recommendation and either approves it or reports back to the Circle the reasons why their recommendation cannot be implemented. After the management decision, the QC process starts over with a problem identification meeting followed by the other steps.

The role of the Leader is to keep the Circle on task and not deviate from the stated policies and procedures. The Leader is responsible for the smooth and effective operation of the Circle. He is expected to provide an agenda so
that the time allotted for the QC meeting is used with maximum efficiency. He is in charge of seeing that the Circle is working toward solutions to quality and/or production problems.

Topics in the Circle are limited to quality and/or production problems that occur in the work area of the Circle members. The Circle may not discuss subjects identified by the QC Steering Committee as being outside the Circle's concern. These include, but are not limited to: wages and salaries, benefits, disciplinary policies, employment or termination policies, grievances, new product design, market policies, and personalities. Within these limits, it is the Circle's right to decide on a problem to investigate.

The Idea System of QWL at Warrenstown

The idea system of the Quality of Work Life project at Warrenstown is found in The Memorandum of Mutual Trust, an agreement formulated by the City of Warrenstown, AFSCME Local #100 and the university-affiliated third party. The Memorandum was the result of a collective effort on the part of each party. Specifically, a weekend conference was held two years after the initiation of QWL at Warrenstown. Sixty participants, active in the project, attended and worked on writing various parts of the Memorandum. Later, everyone in the QWL project had an opportunity to voice their opinion on its content. Since early 1979, the Memorandum has been the guide for policies and procedures of the Warrenstown QWL project.

The actors in the QWL project are the workers and managers employed by the City of Warrenstown and the third party facilitators supplied by a
local major university. No differentiation is made between the responsibilities of a worker or manager on a QWL committee member. Both have responsibilities that include: 1) being on time for meetings; 2) reading minutes of previous meetings; 3) talking to their constituents about QWL activities; 4) assisting the chairperson by reminding members to stay on the topic of the agenda; 5) volunteering for subcommittee work; 6) volunteering to hold office and share committee duties; and 7) giving feedback from constituents (co-workers or managers) on various topics that come before the committee. QWL committee members are charged with taking an active role in the committee as well as identifying the needs and desires of their colleagues.

The role of the facilitator on the QWL project is to assist the parties in their face-to-face interactions within the QWL committee structure and help both parties interpret and implement QWL principles. These principles are communication, developing mutual trust, joint responsibility for the success of the project and experimenting with changes in the work environment. By assisting the parties in the development of these principles, the long range goal for the facilitator is to render his presence unnecessary. It is believed that when a certain level of trust and understanding is reached, the QWL project will become a free-standing, in-house program operated by and for the City of Warrenstown.

The institutions of the Union and City administration have specified commitments that both guarantee they will perform. The Union guarantees that:

- It will work in good faith with the Warrenstown Administration to reach consensus on the best means to discharge the City's duty to deliver services to its citizens.
- It acknowledges the responsibility of its elected officials to participate in and serve on QWL committees.

- It will take whatever actions are necessary to keep the membership informed of developments and decisions made in QWL.

- It will discourage in every possible manner, any attempts by individuals to use QWL to the detriment of the Warrenstown Administration or the majority of employees.

- It will encourage participation by its members in QWL activities that take place outside regular working hours.

The Warrenstown Administration guarantees that:

- It will work in good faith with the Union and other employee representatives selected through QWL to reach consensus on the best means to discharge the City's duty to deliver services to its citizens.

- It will provide the time necessary for committee meetings and other authorized QWL activities.

- It accepts the policy of utilizing productivity increases for expanding services to the public rather than reducing employment.

- It agrees to work with the Union and employees in exploring and developing a means of sharing any productivity gains achieved through QWL among the employees involved and the citizens of Warrenstown.

- No employee will be laid off or have his compensation reduced as a result of the QWL project.

In addition to the separate guarantees made in the Memorandum by the Union and the City, both parties make a joint statement. The Union and the City jointly guarantee that:

- They will use QWL as a mechanism for constructive resolution of difficult issues.
- They are willing to try new things with the understanding that efforts which do not work to the satisfaction of the majority can be terminated without prejudice to the entire QWL project.

In addition to the parties separate and joint commitments found in the Memorandum, there are three other points of joint responsibilities agreed upon by the parties: duration, funding, and evaluation. Both parties agree to formally consider modifications to the Memorandum every two years. However, any or all parts of the Memorandum may be modified by the City Committee after consultation with the other committees in the project. The project is viewed as a developing process and modifications are based on needs.

Funding for the project is to be a joint responsibility of the City and the Union as determined by the City Committee. The Union agrees to make a good faith effort to bear whatever portion of the expenses that it reasonably can and the City will contribute the difference. The evaluation of the QWL project is recognized by both parties as necessary for the periodic adjustments and "fine tuning." Both parties recognize that the use of cost-effectiveness criteria will not reveal the true scope of the QWL project since it deals with difficult to measure outcomes such as attitudes, participation, trust, and cooperation.

The purpose of QWL is to provide an opportunity for discussion, experimentation, and improvement in all areas of the City. It is designed to help all City employees better understand the function of municipal services and the relationship between those services and the employees' role in maintaining, delivering, and developing those services. The Warrenstown QWL project has five basic principles that serve to guide the parties in meeting the goals of QWL: communication, attitude, cooperation,
responsibility, and experimentation. Through the committee meetings these principles are jointly developed by the parties. It is the responsibility of the Union and City to decide how these principles will enhance their interactions and what steps will be taken to realize mutual trust in their relationship.

QWL is seen as being beneficial at a personal level, a work level, and to the general public. It offers an opportunity to remove obstacles that interfere with enjoying, mastering, and improving one's job. QWL provides an atmosphere where this can take place. It allows employees to offer and develop their ideas about how the work environment can be made more effective and humane. QWL provides the arena for these things to happen, but it is up to the workforce, both labor and management, to engage in activities that follow the basic principles of QWL to make the process a reality.

The task of the QWL committees is to identify and discuss improvements within the work environment. Committee members may offer comments or suggestions on any subject they wish. Many times committee members seek information from management concerning operations or equipment. Committee members are to represent their constituency in QWL meetings. The committee sets its own agenda with no limits from outside sources. The Memorandum, however, recommends that Work-Level committees develop proposals for experiments that will improve the work environment. The Memorandum also lists a recommended set of guidelines for developing a proposal. The guidelines are:

1. Define the problem as clearly as possible.
2. Put the proposal in writing.
3. List all the facts relevant for analyzing the problem.
4. List the possible advantages and disadvantages of the proposed experiment.
5. State the length of the experiment (a minimum of 6 months is recommended).
6. Indicate the proposal's effect on the collective bargaining agreement.
7. Submit the proposal to the appropriate committee for review and comments. (The reviewing committee will submit a written evaluation of the proposal to the committee where it originated.)
8. The proposal should include the process by which labor and management can evaluate the experiment.

The QWL committee is not limited by the collective bargaining agreement in developing experiments. If both parties agree to an experiment, it can be put into effect even if it is contrary to the language of the labor contract.

The rules governing the QWL project are found in the procedures, tasks of the committee chair, and the limits on topics for discussion. Procedures for conducting QWL meetings are found in the Memorandum. Attendance at QWL meetings on a regular basis is needed for the continuity and progress of a committee. Each Working-Level Committee is advised to meet at least twice a month for approximately one and one half (1 1/2) hours and other committees are advised to meet at least once a month. Each committee should keep minutes of its meetings and post them for others to read. The committees are free to limit the amount of time allotted to any discussion.

In QWL, decisions are made by consensus. Consensus is defined as the absences of explicit disagreement among committee members. How a committee achieves consensus is not defined, but decision-making by vote is discouraged. However, if voting is necessary, it is recommended in the Memorandum that a minimum proportion for passage of a measure be established.
This proportion should be at least 50% plus one votes of all committee members, not just those in attendance. This recommendation is the lower limit and committees are free to choose and set a higher vote requirement.

The task of the Committee chair is to prepare an agenda, begin and end the meeting on time, allow all to participate, clarify conflicts as they arise, and to bring the group to consensus whenever possible. The Chair and Co-Chair of a QWL committee are alternated between labor and management. The Chair is allowed to vote, if one is taken. The Chair should summarize and bring to closure all agenda items covered during the course of a meeting.

The discussion of these two distinct participation projects point to fundamental differences between the idea system of the projects and their expectation of participants. For a common point of reference, the projects can be assessed using Shils' typology, presented in Chapter I, to discover if the differences between the projects places them in different categories of patterns of thought. If so, there are important implications for participant's behavior.

**Classifications According to the Shils' Typology**

**Assessment of the Quality Circle Project**

1. **Explicitness of formulation.** The Quality Circle project has a high degree of explicitness of formulation. The training which establishes a QC project covers every aspect of the project's activities. The four main components of the QC structure are assigned specific tasks and responsibilities. The objectives, procedures, and problem-solving techniques are systematically written out for the facilitator, Circle Leader, and Circle members to follow.

Conclusion: High.
2. **Integration around a particular belief.** The QC project is integrated around a limited and explicit belief that workers following the QC approach can and will be able to improve the quality and/or productivity of the organization. According to Dewar:

Quality Circles can be a most powerful ally in solving problems and effecting significant efficiencies in an organization's operations. Dramatic gains will result by putting these people (employees) on the team...Employees who are treated as important resources, and who are truly part of the team will make "their" organizations formidable competitors in any field.\(^7\)

Conclusion: Yes.

3. **Acknowledged affinity with other pattern(s).** Quality Circles acknowledge an affinity with other patterns of thought. The academic fields of motivation and organizational behavior are movements of thought that QCs borrow from to substantiate the importance of employee participation in the project. Especially useful are Maslow's Hierarchy of needs, Herzberg's Two-factor Theory of Satisfaction, and McGregor's work on Theory X and Theory Y management styles. QC also utilizes the literature from the job enrichment area to link involvement in a job and motivation.

Conclusion: Yes.

4. **Closure to variation.** Dependent on the problem a Circle undertakes, variation is allowed by the introduction of new problem-solving techniques. Variation may also occur to obtain management support and involvement. Dewar stresses in his Quality Circle Handbook, Chapter 16, "Selling the Concept," that the:

Quality Circle idea should not be presented as something that must be done 100% by the book. There are plenty of variations in use. True, they are not major ones, but the Quality Circle philosophy is flexible to be accommodating.\(^8\)

Conclusion: Moderate.
5. Imperativeness in conduct. As a QC member, one is expected to follow the policies of the project and obey a code of conduct that the Circle creates which governs its own operations. A standard code of conduct, shaped by the QC Steering Committee, would save time and assure uniformity but, according to Dewar, "experience clearly shows that Circle members adopt stricter guidelines for themselves than management normally requires." Although the Circle's code of conduct is created by the Circle, a list of ideas for the code is read to the Circle members by the Leader to "help speed things up." The items below are a partial listing of the code of conduct items given to QCs using the Dewar material. The code of conduct may include:

* Attend all meetings, be on time
* Make others feel a part of the group
* Maintain a friendly attitude
* Strive to assure enthusiasm
* Participate according to the golden rule
* Pay attention--avoid disruptive behavior
* Avoid actions that delay progress
* Avoid criticism and sarcasm toward the ideas of others
* No disruptive side conversations
* Use encouragement
* Don't give solutions--find causes first
* Always strive for win-win situations
* Don't lecture unless you are an expert

Conclusion: High.

6. Accompanying affect. In addition to solving quality and/or productivity problems in their own work areas, QC members will have a change in attitude toward their organization. This change in attitude is attributed to the QC members involvement in the project and can lead to a greater willingness to work toward goals set by the organization. Through QC participation, an employee will have a different view of the organization and develop a spirit of teamwork.

Conclusion: Moderate to High.
7. **Consensus of those who accept the pattern of thought.** Members of a Quality Circle are expected to have a positive attitude toward the participation project. Dewar's *Quality Circle Handbook* has a section entitled "Counseling Techniques" that are guidelines for the facilitator to follow when "negative behavior" cannot be handled during a Circle meeting. Topics covered include: maintaining control, how to handle special situations, i.e., quiet members, talkative members, negative members, recognition speakers, and what Dewar identifies as the "playboy" or "playgirl." Conclusion: Yes.

8. **Authoritiveness of promulgation.** There is authoritiveness of promulgation for the QC materials utilized by organizations. Consultants in the QC field, with their own published materials and extensive experience in implementing Quality Circles, rely heavily on their own results in selling QCs to other organizations. Also, the Japanese Union of Scientists and Engineers (JUSE) is credited with publishing the early QC training materials and providing leadership attributed to the growth of QCs. Conclusion: Yes.

9. **Association with a body intended to realize the pattern of beliefs.** JUSE is still involved with QCs in Japan. In the United States, the International Association of Quality Circles (IAQC) was formed in late 1977. IAQC serves as a repository and clearing house for QC information. Consultants and organizations with Quality Circles may join IAQC. In addition to the international structure of IAQC, the development of local chapters is encouraged within the QC framework. *Quality Circles* is the official publication of the IAQC. It contains articles on current events of Circles, reports of governments legislation affecting worker participation, new techniques used by others and articles written by QC members. Conclusion: Yes.

The profile of Quality Circles fits the *program* type pattern of thought in Shils' typology. Quality Circles have: a high degree of explicitness of formulation, are integrated around a particular belief, have an acknowledgment of other patterns, a moderate closure to variation, moderate to high
accompanying affects; consensus is expected by those involved in the QC project, they have an authoritativeness of promulgation, and are associated with a group (JUSE or IAQC) intended to realize and spread Quality Circles.

Assessment of the Quality of Work Life Project

1. **Explicitness of formulation.** There is no step-by-step guide that guarantees success for QWL. The project is organizationally specific in its approach to improving the work environment. It is the responsibility of the parties to define what QWL is, how it is to be structured, and what guidelines or objectives will influence the project. The participants must decide what they desire to accomplish and what benefits they will derive by their involvement.

   Conclusion: No.

2. **Integration around a particular belief.** There is no one belief that integrates QWL. There can be many different beliefs that the parties or the individual participants consider as the basis of the project. However, there is usually found within a QWL project a reference to the dual focus--to improve the work life of the employees and enhance the effectiveness of the organization.

   Conclusion: No.

3. **Acknowledged affinity with other pattern(s).** The Memorandum of Mutual Trust states that:

   "The Quality of Work Life began as a program, but it is becoming a flexible method for labor-management and supervisor-employee communication, cooperation, and management."
While the authors of the Memorandum did not define "program" in the strict sense of Shils, the transformation could not take place without an acknowledged affinity to other patterns of thought. With the involvement of a major state university, the QWL project was most likely associated with an intellectual movement of thought.

Conclusion: Yes.

4. **Closure to variation.** There is no closure to variations in the QWL project. One of the principles that the parties in the project under study have agreed to its experimentation. The parties agree that:

    QWL gives the opportunity to step outside the limits and rigors of vague policy and procedures and make changes in a particular situation...Experimentation allows changes to be made within one area of a division or the City without affecting the operation of the rest of the division or City.

Conclusion: No.

5. **Imperativeness in conduct.** The QWL project under examination has five principles that help shape its meaning. These are communication, cooperation, mutual trust, responsibility, and experimentation. The parties agree that these principles will guide their interactions. However, there is no implicit or explicit way in which the parties agree to work on these principles. Conflict may arise during face-to-face interaction. No section of the Memorandum states what is considered "appropriate" conduct.

Conclusion: No.

6. **Accompanying affect.** The benefits of involvement on QWL vary depending on one's point of view. QWL is seen as offering participants the opportunity to remove obstacles that inhibit one from enjoying, mastering, and improving one's job. It is a process by which all employees at any level, including management, can offer and develop their own ideas about how to make the system of work more effective and more humane.

Conclusion: Moderate.

7. **Consensus of those who accept the pattern of thought.** Scholars in the field of industrial relations have a difficult time defining QWL. Participants as well have differing views on what QWL is since the project allows for individual interpretations. The institutions that are involved in the project, labor and management, may have positions that are separate and distinct...
from one another, but the participants from these institutions do not have to have consensus among themselves.

Conclusion: No, but the separate institutions may.

8. **Authoritativeness of promulgation.** There is no published guide for QWL projects to utilize for the authoritative way of implementing a QWL project. One of the fundamental ideas of QWL is for the parties to explore ways of resolving conflict that has interfered in their relationship. In the QWL project utilized for this research, one of its goals is to reach a point of self-sufficiency, i.e., a time when a third party would not be considered necessary for the successful operation of the project.

Conclusion: None.

9. **Association with body intended to realize the pattern of belief.** There is no association with a body intended to spread the QWL project to other organizations except through the individual group affiliation of the members who may converse with others within their respective group; encouraging the adoption of the QWL process. There are, however, consultants in the QWL field who are willing and ready to assist organizations wanting to implement QWL but they are not unified in any singular organization.

Conclusion: No.

The QWL profile fits the *outlook* pattern of thought in the Shils' typology with the institutional parties possibly holding different *creeds*. The Quality of Work Life projects have: a lack of explicit information in regards to formulation of a QWL project, do not have an integrated belief that all participants must comply, there is an acknowledged affinity with other patterns of thought, no closure to variation, no imperativeness in conduct directed toward the QWL participants, moderate accompanying affect, no demand for consensus, no authoritativeness of promulgation and no corporate body or association that is intended to realize the outlook pattern of thought.
Table 4.1 is a modification of the Shils' patterns of thought typology presented in Chapter I, Table 1.2. To the right of distinct patterns of thought are the participation projects under review. By comparing the two projects with one another and the thought pattern classifications, the categorical difference between the projects becomes clear.

QWL has a different type of pattern of thought than QC. The QWL project is an outlook with the labor and management actors holding different creeds within the QWL outlook since they bring divergent emphasis to different elements, i.e., the dual focus of QWL.

As stated previously, the QC project falls in the program type of thought pattern. By utilizing Shils' typology, it has been shown that Quality Circles and Quality of Work Life projects represent different patterns of thought. The projects are divergent ideal types of worker participation. Varying degrees of adherence, in a variety of categories, is expected of participants because of the project's pattern of thought. By instituting the research methods of SYMLOG, a more detailed analysis of these ideal types can be achieved. SYMLOG allows for the fine-grained distinction of values exhibited by the participation projects and the result of this analysis will be used to compare the reality of participant behavior exhibited within and the values expressed toward these two ideal types.
### Table 4.1

Patterns of Thought with Quality Circles and Quality of Work Life Projects Added for Comparison

<table>
<thead>
<tr>
<th>Degree of:</th>
<th>Ideologies</th>
<th>Programs</th>
<th>Creeds</th>
<th>Systems &amp; Movements of Thought</th>
<th>Outlooks</th>
<th>Participation</th>
<th>Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit Information</td>
<td>High</td>
<td>Yes</td>
<td>Moderate</td>
<td>Yes</td>
<td>Lacking, Pluralistic</td>
<td>High</td>
<td>No</td>
</tr>
<tr>
<td>Integration around beliefs</td>
<td>Yes, always &amp; explicit</td>
<td>Yes, limited &amp; explicit</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Acknowledgment of other patterns</td>
<td>None</td>
<td>Yes</td>
<td>Yes, but less than Outlooks</td>
<td>None</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Closure</td>
<td>Yes</td>
<td>Moderate</td>
<td>Possible</td>
<td>No</td>
<td>No</td>
<td>Moderate</td>
<td>No</td>
</tr>
<tr>
<td>Conduct</td>
<td>High</td>
<td>High</td>
<td>Moderate</td>
<td>No</td>
<td>No</td>
<td>High</td>
<td>No</td>
</tr>
<tr>
<td>Affect</td>
<td>High &amp; Intense</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Low</td>
<td>Moderate to High</td>
<td>Moderate</td>
</tr>
<tr>
<td>Consensus by adherents</td>
<td>Demanded</td>
<td>Yes</td>
<td>Occasionally, fragmented</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Promulgation, authority</td>
<td>High</td>
<td>Yes</td>
<td>Moderate</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>None</td>
</tr>
<tr>
<td>Corporate association</td>
<td>Standard mode of operation</td>
<td>Yes, but may be one</td>
<td>Possible; not necessary</td>
<td>No</td>
<td>No</td>
<td>Yes, at least 2</td>
<td>No</td>
</tr>
</tbody>
</table>
SYMLOG Analysis of the QC and QWL Projects

SYMLOG is used to assess the idea system of the participation projects under study since it permits the mapping of the objects as defined by the idea system onto a set of coordinates making comparisons among the idea systems possible. SYMLOG also allows comparisons across the levels of values, content, and behavior, since, as was shown in Chapter II, each of these levels can be transformed into a common three-dimensional space.

The dimensions, described in adjectives that apply to the quality of behavior or values, are: 1) U, Dominant vs. D, Submissive; 2) P, Friendly vs. N, Unfriendly; and 3) F, Instrumentally Controlled vs. B, Emotionally Expressive.

The labels of the directions indicate how the qualitative behaviors' or values' descriptive names are translated into names descriptive of directions on the physical space model Figure 2.2) U, D, P, N, F, and B. The spatial names of the dimensions are U-D (for Upward-Downward), P-N (for Positive-Negative), and F-B (for Forward-Backward). The letters on the smaller cubes are the various combinations of the directional names U, D, P, N, F, and B. These are the names given for the direction that fall between the main ones. There are a total of twenty-six directional names with each serving as the label for a variable in the SYMLOG system as shown in Appendix A.

For the purpose of this research, the SYMLOG scoring method is used (See Chapter II) to determine within which of the twenty-six SYMLOG variables an object of a participation project's idea system is located. By
identifying the location of an object in the idea system, comparisons can be made of the project participant's behavior and values to the idea system.

**SYMLOG Scoring of the Idea Systems**

The objects of the idea systems under study are found in the written documents that guide and explain them, i.e., the QC material published by Dewar and the Memorandum of Mutual Trust, respectively. Statements within each document that pertained to an object of the participation project's idea system, except for worker and manager, were identified and scored using SYMLOG scoring at the value level. This scoring level is utilized since it allows for the assessing of an idea system object in terms of the objects expressed relationship for (PRO) or against (CON) a particular value quality. Workers and managers under the actor group were excluded from the value scoring because few, if any, value statements about these objects could be identified within the documents. Their involvement within the participation project is necessary by definition and values statements that were concerned with workers or managers fell into categories of other objects such as Procedures, Task of the Group, and Topics. The objects of the idea system for the QC and QWL projects that were scored at the value level were:

1. Purpose (PUR)
2. Topics (TOC)
3. Procedures (PCD)
4. Role of the Union (ROU)
5. Role of the Facilitator (ROF)
6. Role of Management (ROM)
7. Definition (DEF)
8. Role of the Leader/Chair (ROL)
9. Task of the Group (GRP)
10. Success (SUC)

The notations in parenthesis are used in plotting the objects on the Field Diagram. The tenth object, Success, was added to the value list in order to clarify how the project defines success for itself.

SYMLOG Location of the QC and OWL Idea System Objects

Figure 4.1 is the Expanded Field Diagram for the idea objects of the QC project. Each idea object has a PRO position that represents the values that the object is for. The objects Purpose, Topic, and Procedures have CON positions representing values the object is opposed to. Each idea object does not have a CON position since the material used in obtaining the SYMLOG scores did not contain CON values for each object.

The criteria for an object receiving a unique SYMLOG label is found in Table 4.2. If an object is associated with values that are represented by the confines of a particular SYMLOG space, it was labeled such using the standard SYMLOG notation.

The SYMLOG directional notation identifies the semantic meaning that the idea object conveys. The location of the object in the three-dimensional space illustrates the values carried by the object in the context of the training manual in which it was found. Table 4.3 lists the idea system objects, the location of the object in the SYMLOG three-dimensional space, and a description of the value quality of the object.
Figure 4.1
SYMLOG Field Diagram for the QC Project
Table 4.2
Delineation of the Twenty-six SYMLOG Variables plus the Center Space

<table>
<thead>
<tr>
<th>SYMLOG Space (variable symbol)</th>
<th>U-D Dimension</th>
<th>P-N Dimension</th>
<th>F-B Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>U</td>
<td>6 to 18</td>
<td>-6 to 6</td>
<td>-6 to 6</td>
</tr>
<tr>
<td>UP</td>
<td>6 to 18</td>
<td>6 to 18</td>
<td>-6 to 6</td>
</tr>
<tr>
<td>UPF</td>
<td>6 to 18</td>
<td>6 to 18</td>
<td>6 to 18</td>
</tr>
<tr>
<td>UF</td>
<td>6 to 18</td>
<td>6 to 6</td>
<td>6 to 18</td>
</tr>
<tr>
<td>UNF</td>
<td>6 to 18</td>
<td>-6 to -18</td>
<td>6 to 18</td>
</tr>
<tr>
<td>UN</td>
<td>6 to 18</td>
<td>-6 to -18</td>
<td>-6 to 6</td>
</tr>
<tr>
<td>UNB</td>
<td>6 to 18</td>
<td>-6 to -18</td>
<td>-6 to -18</td>
</tr>
<tr>
<td>UB</td>
<td>6 to 18</td>
<td>-6 to 6</td>
<td>-6 to -18</td>
</tr>
<tr>
<td>UPB</td>
<td>6 to 18</td>
<td>6 to 18</td>
<td>-6 to -18</td>
</tr>
<tr>
<td>P</td>
<td>-6 to 6</td>
<td>6 to 18</td>
<td>-6 to 6</td>
</tr>
<tr>
<td>PF</td>
<td>-6 to 6</td>
<td>6 to 18</td>
<td>6 to 18</td>
</tr>
<tr>
<td>F</td>
<td>-6 to 6</td>
<td>-6 to 6</td>
<td>6 to 18</td>
</tr>
<tr>
<td>NF</td>
<td>-6 to 6</td>
<td>-6 to -18</td>
<td>6 to 18</td>
</tr>
<tr>
<td>N</td>
<td>-6 to 6</td>
<td>-6 to -18</td>
<td>-6 to 6</td>
</tr>
<tr>
<td>NB</td>
<td>-6 to 6</td>
<td>-6 to -18</td>
<td>-6 to -18</td>
</tr>
<tr>
<td>B</td>
<td>-6 to 6</td>
<td>6 to 18</td>
<td>-6 to -18</td>
</tr>
<tr>
<td>PB</td>
<td>-6 to 6</td>
<td>6 to 18</td>
<td>-6 to -18</td>
</tr>
<tr>
<td>DP</td>
<td>-6 to -18</td>
<td>6 to 18</td>
<td>-6 to 6</td>
</tr>
<tr>
<td>DPF</td>
<td>-6 to -18</td>
<td>6 to 18</td>
<td>6 to 18</td>
</tr>
<tr>
<td>DF</td>
<td>-6 to -18</td>
<td>-6 to 6</td>
<td>6 to 18</td>
</tr>
<tr>
<td>DNF</td>
<td>-6 to -18</td>
<td>-6 to 6</td>
<td>6 to 18</td>
</tr>
<tr>
<td>DN</td>
<td>-6 to -18</td>
<td>-6 to -18</td>
<td>-6 to 6</td>
</tr>
<tr>
<td>DNB</td>
<td>-6 to -18</td>
<td>-6 to -18</td>
<td>-6 to -18</td>
</tr>
<tr>
<td>DB</td>
<td>-6 to -18</td>
<td>-6 to 6</td>
<td>-6 to -18</td>
</tr>
<tr>
<td>DPB</td>
<td>-6 to -18</td>
<td>6 to 18</td>
<td>-6 to -18</td>
</tr>
<tr>
<td>D</td>
<td>-6 to -18</td>
<td>-6 to 6</td>
<td>-6 to 6</td>
</tr>
<tr>
<td>CENTER</td>
<td>-6 to 6</td>
<td>-6 to 6</td>
<td>-6 to 6</td>
</tr>
<tr>
<td>IDEA SYSTEM OBJECT</td>
<td>SYMLOG LOCATION</td>
<td>VALUE QUALITY ASSOCIATED WITH</td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------</td>
<td>-----------------------------</td>
<td></td>
</tr>
<tr>
<td>Success (PRO)</td>
<td>UPF</td>
<td>ACTIVE TEAMWORK TOWARD COMMON GOALS, ORGANIZATIONAL UNITY: purposeful democratic task leadership, acceptance of the task by authority, group unity, or morale in performance or tasks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Upward-Forward</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Positive-Forward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purpose Topic</td>
<td>PF</td>
<td>RESPONSIBLE IDEALISM, COLLABORATIVE WORK: working cooperatively with others without any obtrusive status concerns, optimism with regard to task success, task oriented communication, altruism with regard to others, dedicated with the task and others.</td>
<td></td>
</tr>
<tr>
<td>Definition</td>
<td>Positive-Forward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of Management</td>
<td>UF</td>
<td>EFFICIENCY, STRONG, EFFECTIVE MANAGEMENT: assertive, businesslike, strictly impersonal, emphasis on loyalty rather than liking among members, identification with an impersonal plan, a right and correct way of doing things in order to realize the plan goal or task.</td>
<td></td>
</tr>
<tr>
<td>Task of Group</td>
<td>Upward-Forward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of the Union</td>
<td>F</td>
<td>CONSERVATIVE, ESTABLISHED, TASK-ORIENTED: analytical, problem-solving, acceptance of the task as given, a serious and searching attitude toward truth or the best precedents, a constrained, persistent and impersonal manner, continuous attention to the task and a lack of humor, a desire to have things highly organized, well-defined, and under control.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Forward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of Leader</td>
<td>UNF</td>
<td>ACTIVE REINFORCEMENT OF AUTHORITY, RULES, AND REGULATIONS: authoritarian, inflexible, controlling of what is considered right and wrong, responsibility to punish others for wrongdoing or lack of discipline.</td>
<td></td>
</tr>
<tr>
<td>Procedures</td>
<td>Upward-Negative-Forward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of Facilitator</td>
<td>U</td>
<td>Upward</td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>---</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>INDIVIDUAL PROMINENCE, PERSONAL POWER: very active, dominant, high physical or emotional energy, powerful.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(CON)

<table>
<thead>
<tr>
<th>Purpose</th>
<th>DNB Downward-Negative-Forward</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMISSION OF FAILURE, WITHDRAWAL OF EFFORT: alienation from both task and from the group, quitting the task, lack of participation, discouragement, and dejection, disagreement with group goals, withdrawal of effort.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Topic</th>
<th>U Upward</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDIVIDUAL PROMINENCE, PERSONAL POWER: dominant, very active, powerful.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Procedures</th>
<th>DPB Downward-Positive-Backward</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUIET CONTENTMENT, TAKING IT EASY: active participation is not required either to please others or to accomplish group task.</td>
<td></td>
</tr>
</tbody>
</table>

The objects for the QC project that are PRO locations, are scattered in the Forward area of the three-dimensional space. All the objects, except the Role of Facilitator ROF, contain an F, Forward. This represents values associated with task-oriented behavior that are concerned with serious efforts at problem-solving. Each of these objects express values that may be described as demanding a particular and specific kind of instrumental behavior. Also, the objects are located in both areas of the P-N dimension. This represents a polarization among different objects of the QC idea system.

Polarization occurs when images within the SYMLOG Field Diagram are located at different ends of one or more dimensions. The QC objects, Procedures (PCD), and Role of Leader (ROL) have values at opposite ends of
the P-N dimensions in relation to the objects Purpose and Topics. This polarization may cause individual participants to question what components are most important in the project since competing values are found in the idea-system. Purpose (PUR) and Topics (TOC) have values associated with the quality of friendliness and equality among members of the QC project while the objects Procedures (PCD) and Role of the Leader (ROL) express values of unfriendliness and self-protection.

This polarization also has an effect on the object Success. The value associated with the success of QC is that of group unity on realizing its goals through task performance but Procedures (PCD) and Role of the Leader (ROL) are in conflict (polarized) with Success. Procedures (PCD) and Role of the Leader (ROL) have values within the UNF dimension, attributed to values of inflexibility and insistence on control. The objects of the QC project are not internally consistent in their values in the P-N dimensions.

The objects exhibiting CON values are Topic (TOC), Purpose (PUR), and Procedures (PCD). The CON value associated with Topic is in the U, Upward space; with Purpose DNB, Downward-Negative-Backward; and Procedures UPB, Upward-Positive-Backward. The CON Purpose is consistent in value expression (the polar opposite) with the PRO Purpose on two dimensions. The CON Topic (TOC) object is located in the same SYMLOG space as the PRO Role of Facilitator (ROF), U, Upward-Dominant. The PRO Topic (TOC) is in the PF, Positive Friendly space. The CON Topic (TOC) object exhibits values that are against power and dominance but are for (PRO) topics associated with collaborative work.

Figure 4.2 is the Expanded Field Diagram for the QWL project. Each idea system object has a PRO location and six objects: Purpose (PUR), Role
Figure 4.2
Expanded Field Diagram for the QWL Project
of the Union (ROU), Role of Facilitator (ROF), Role of Management (ROM), Role of Leader (ROL), and Success (SUC) have CON locations in the three-dimensional space.

The PRO objects in the QWL idea system are clustered on the P, Positive, Friendly side of the P-N dimension. The Topic (TOC) object is below the mid-point of the F-B dimension, but it is not far enough below to be classified in the B, Backward, Emotionally Expressive area.

All the CON values associated with the QWL objects are located in the N, Negative, Unfriendly side of the P-N dimension. These are values associated with self-interest and disagreement with attempts of others to preserve solidarity or equality of opportunity. Four objects, Role of the Union (ROU), Role of Management (ROM), Role of Facilitator (ROF), and Success (SUC) have an additional location on the F-B dimension.

Table 4.4 is a list of the QWL idea system objects, the SYMLOG notation for each object and a description of the value quality associated with each object.
Table 4.4
Location of QWL Idea System Objects in the SYMLOG Space

<table>
<thead>
<tr>
<th>IDEA SYSTEM OBJECT</th>
<th>SYMLOG NOTATION</th>
<th>VALUE QUALITY ASSOCIATED WITH:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(PRO)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purpose</td>
<td>UPF</td>
<td>ACTIVE TEAMWORK TOWARD COMMON GOALS, ORGANIZATIONAL UNITY: purposeful leadership, conflict</td>
</tr>
<tr>
<td>Role of the Union</td>
<td>Upward-</td>
<td>between members handled by mediation and conciliation, group unity, or morale important in</td>
</tr>
<tr>
<td>Role of the Leader</td>
<td>Positive-</td>
<td>relation to group task.</td>
</tr>
<tr>
<td>Role of the</td>
<td>Forward</td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procedures</td>
<td>PF</td>
<td>RESPONSIBLE IDEALISM, COLLABORATIVE WORK: working cooperatively with others without any</td>
</tr>
<tr>
<td></td>
<td>Positive-</td>
<td>obstructive status concerns, optimism with regard to others, dedicated and concerned with</td>
</tr>
<tr>
<td></td>
<td>Forward</td>
<td>the task and others.</td>
</tr>
<tr>
<td>Definition</td>
<td>UP</td>
<td>POPULARITY AND SOCIAL SUCCESS, BEING LIKED AND ADMIRE: outgoing, positive, receipt of high</td>
</tr>
<tr>
<td>Success</td>
<td>Upward-</td>
<td>acceptance, recognition, sociable, cordial, group solidarity encouraged by conditions outside</td>
</tr>
<tr>
<td>Task of Group</td>
<td>Positive</td>
<td>the group.</td>
</tr>
<tr>
<td>Role of the Facilitator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topic</td>
<td>P</td>
<td>EQUALITY, DEMOCRATIC PARTICIPATION ON DECISION-MAKING: unconcerned with status differences,</td>
</tr>
<tr>
<td></td>
<td>Positive</td>
<td>unafraid of disagreement, friendly, informal, humanistic, uncompetitive.</td>
</tr>
<tr>
<td>(CON)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of Management</td>
<td>UNB</td>
<td>SELF-ORIENTED INDIVIDUALISM, RESISTANCE TO AUTHORITY provocative, egocentric show-off,</td>
</tr>
<tr>
<td></td>
<td>Upward-</td>
<td>interferes with the exercise of authority of with maintenance of standards.</td>
</tr>
<tr>
<td></td>
<td>Negative-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Backward</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.4 (continued)

<table>
<thead>
<tr>
<th>Role of Facilitator</th>
<th>UNB</th>
<th>ADMISSION OF FAILURE, WITHDRAWAL OF EFFORT: alienation from both the task and from other group members, quitting the task, feeling of unhappiness, dissatisfaction, discontent, frustration, deprivation, disappointment, discouragement, resignation, or despair.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role of the Union</td>
<td>NB</td>
<td>REJECTION OF ESTABLISHED PROCEDURES, REJECTION OF CONFORMITY: irritable, cynical, evasive, a negative negative attitude toward the group as well as the task, noncompliance with any kind of rules or requests, gets into conflict with authority.</td>
</tr>
<tr>
<td>Purpose</td>
<td>UN</td>
<td>TOUGH-MINDED, SELF-ORTIENTED, ASSERTIVENESS: domineering, powerful, contemptuous of the welfare of others, overactive aggressive temperament, disregards others' feelings, attacks, deflates the status of others.</td>
</tr>
<tr>
<td>Role of the Leader</td>
<td>Upward-negative</td>
<td></td>
</tr>
</tbody>
</table>

The values associated with success of the QWL project are not in conflict with values associated with the other idea objects. Success is based on openness and group identification (UP). The QWL project shows a high level of internal consistency among its values. The parties in QWL, labor and management, have similar values (UPF) associated with their role in the project. This is consistent with the joint ownership approach taken by QWL. All the objects in the QWI idea system have equalitarian values which is one of the basis for the project. No one party or individual dominates the participation project.

Field Diagram comparisons for the two projects' idea systems illustrates the relative value consistency of the QWL project and the polarization
of the QC project. The QWL objects are in the P, Positive, F, Forward, quadrant of the diagram, and the QC objects are scattered along the P-N dimension. Some of the objects in each of the projects are in close proximity to one another. For example, QC Purpose is in the PF, Positive-Forward space, and the QWL Purpose is in the UPF, Upward-Positive-Forward space. Both projects have values for Success in the UP, Upward-Positive area with the QC project having the added dimension of F, Forward, which reflects the QC project's concern with productivity.

Differences occur between the two projects in their values associated with Procedures (PCD) and the Role of the Leader (ROL) along the P-N dimension. In QC, both of these objects express values that are concerned with authority and controlling what is considered "right and wrong" within the context of the project. In QWL, these objects have values expressing cooperation, organizational unity and active teamwork toward common goals. Different meanings for these objects within the two participation projects affects the meaning of participation for those involved.

The Role of the Leader (ROL), Role of Management (ROM), and Role of the Union (ROU) all are located in the UPF, Upward-Positive-Forward, space for the QWL project. They reflect values associated with teamwork toward a common goal. However, the QC project expresses different values for these objects. The Role of the Union (ROU) is F, Forward, signifying values associated with task-orientation and not questioning the task at hand. The Role of Management (ROM) UP, Upward-Forward, is to be assertive and to devise the correct way of running QCs in the organization. Management has a more dominant role to play in the QC project. The Role of the Leader (ROL) UNF, Upward-Negative-Forward, has values associated with the active
reinforcement of authority. The QC leader is responsible for implementing the rules and regulations of the QC project and insuring that deviations do not occur.

Both Quality of Work Life and Quality Circles are worker participation projects that have gained in popularity over the last decade. Through the SYMLOG analysis and the classification according to the Shils' typology of patterns of thought, a more rigorous identification of the form and meaning of participation for the two projects has developed. While the concept of participation has broad implication and meaning, it can be shown that the worker participation projects in this study are different in the form and meaning each gives to the concept of participation. Neither project has the power or force of an ideology (which is the usual concept used by industrial relations researchers in discussions about worker participation projects).

Quality Circle is a program based on a single belief in improving quality/productivity through employee involvement in a limited decision-making role. Quality of Work Life is an outlook with the main actors holding different creeds that interact within the confines of the QWL outlook. There are a variety of beliefs that form together to create the QWL project. The involvement by the parties in QWL is open--there is no set direction or limit on decision-making that is predetermined. The parties must decide their own involvement and limits.

There is unification among the objects of the QWL idea system. In QC there is an internal contradiction, a polarization, found between certain idea system objects. For example, QC members work cooperatively with one another, however the collaborative workings among the QC membership is not a matter of style but demanded by the procedures used and the role that the
QC leader is expected and told to assume within the confines of the QC project. However, at this stage we do not know if the polarization found in QC has an effect on the values or behavior of the participants.

For someone to be in agreement with the QWL or QC idea system, they would have to agree with different values for similar idea system objects. Do the fundamental differences in the idea system of QWL and QC show a relationship to the participant's values and observed behavior? This is the question that is dealt with in Chapter V.

2Ibid., p. F1-3.

3Ibid., p. F6-9.

4Ibid., p. 62.

5Ibid.

6Ibid., p. F1-2.

7Ibid., p. F1-3.

8Ibid., p. F16-6.

9Ibid., p. F6-7.

10Ibid., p. 47-49.

11Expanding the Field Diagram is a technique used to make comparison within and between Field Diagrams. The Field Diagram is expanded by the amount necessary to bring the most "far out" image to the edge of the diagram. The sense of the relative constriction and expansiveness is preserved in the Expansion Multiplier which is found at the top of the diagram. If there is no expansion, this index is 1. The higher it is above 1, the more the diagram has been expanded; the smaller the original constellation. The expansion of a Field Diagram does not alter the cluster of images within a given angle of the Field Diagram. But, images clustered on different sides of the zero point will expand away from each other and will appear more polarized in the expanded diagram than in the original. This is a desirable feature of the expansion and assists the researcher in analysis of the diagram by graphically showing unification or polarization of points on the diagram.
CHAPTER V

Quantitative Relationships

The behavior correspondence score is operationally defined as the correlation between an individual's behavior as scored by SYMLOG for each face-to-face meeting and the SYMLOG value score for the prescriptions of that individual's project idea system. The behavior correspondence score was calculated by determining the location in SYMLOG space of a participant's behavior for a given meeting and finding the correlation of that SYMLOG location with the SYMLOG location that represents the prescriptions of the project's idea system. Each correlation is essentially the angle formed by two vectors originating at the center and ending at the SYMLOG location of the behavior, on the one hand, and the program prescription on the other. The SYMLOG correlation matrix developed by Bales and Cohen\(^1\) was used to assign numeric values to the spatial correlations.

Table 5.1 is a list of the behavior correspondence score means for QC and QWL projects for each idea system prescription. Figure 5.1 is a bar graph of the means reported in Table 5.1. The QC project has higher
Table 5.1
Behavior-Correspondence Score Means (X) by Project for Each Idea System Object

<table>
<thead>
<tr>
<th>Idea System Object</th>
<th>OWL (X)</th>
<th>QC (X)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose (PUR)</td>
<td>.262</td>
<td>.583</td>
</tr>
<tr>
<td>Topic (TOC)</td>
<td>.465</td>
<td></td>
</tr>
<tr>
<td>Procedures (PCD)</td>
<td>.369</td>
<td>.542</td>
</tr>
<tr>
<td>Role of Union (ROU)</td>
<td>.269</td>
<td></td>
</tr>
<tr>
<td>Role of Management (ROM)</td>
<td>.262</td>
<td>.470</td>
</tr>
<tr>
<td>Role of Facilitator (ROF)</td>
<td>.279</td>
<td></td>
</tr>
<tr>
<td>Definition (DEF)</td>
<td>.279</td>
<td>.583</td>
</tr>
<tr>
<td>Success (SUC)</td>
<td>.279</td>
<td>.527</td>
</tr>
<tr>
<td>Role of Leader (ROL)</td>
<td>.262</td>
<td>.240</td>
</tr>
</tbody>
</table>

Figure 5.1
Graph of Mean (X) Scores

----- = QC (X)'S
_____ = QWL
Chapter 4 showed how each project fell within a different pattern of thought utilizing the Shils' typology. The type of pattern of thought contained within a project's idea system has behavioral implications for a project's participants. As mentioned earlier, the Shils' typology can be viewed as a dogmatic hierarchy. Thought patterns vary in the control they exert over their adherent's behavior. Quality Circles are classified as a program and Quality of Work Life as an outlook. A program is closer to an ideology than an outlook because of the relatively greater normative explicitness found within its idea system.

The higher congruency between participant behavior and project prescriptions found in the QC project can be viewed as the consequence of a system of ideas which explicitly defines what is expected in most phases of face-to-face interaction. Training given to QC members identifies the types of behavior that are considered "proper" in order for the project to achieve its stated goals. The success of the QC project is based on the Circle members following the prescriptions of the project as presented by the Circle Leader and Facilitator through instructional material obtained mainly through outside consultants. The instruction of "proper" behavior has the effect of constraining participant behavior since it defines, in advance, the type of face-to-face interaction that should be exhibited by the QC participants. These constraints have the effect of limiting certain aspects of face-to-face interaction for all involved order to achieve what is put forth as the common good for all involved. Therefore, a higher congruency is expected between behavior and project prescriptions of a program (QC) than an outlook (QWL).

However, utilizing the descriptive statistics of mean scores does not establish if the higher behavioral congruency QC participants is due to the idea
system of project. Therefore, it is necessary to conduct a statistical test to discover if there is a significant difference between the behavior of project participants and if behavioral differences are due to the respective project's idea system.

**Analysis of Variance**

As indicated in Chapter III, three-way nested (hierarchical) ANOVAs were used to examine the relationship between the prescriptions of the two idea systems and the behavior exhibited by participants in face-to-face interaction. Meetings (2)^2 were treated as nested within Groups (6) which, in turn, were nested within Projects (2--QC or QWL). The logic for the nested model is based on the fact that while the principle concern is with estimating the variance between projects (QC and QWL), there are also internal sources of variation, i.e., among the various groups formed under the umbrella of a project and across the various meetings held by a given group. In other words, while there is no expectation that any one group will behave just like another, nor that behavior within any group will remain perfectly stable over meetings, it is expected that --net of Group and Meeting variations-- the two projects will differ on the behavior correspondence measure. The nested model permits a test of this prediction.

In the nested model variation associated with a particular group or meeting is partialled out before the significance of the differences between the projects is tested. This procedure allows a stronger test of the differences between projects. The criterion variable is the correlation between each individual's behavior for each meeting as scores by SYMLOG and the
SYMLOG value score of the prescriptions found in the relevant project's idea system. In other words, the criterion variable is each participant's behavior-correspondence score for each for the nine idea system object categories, i.e., Purpose, Topic, Procedures, Role of the Union, Role of Management, Role of the Facilitator, Definition, Success, and Role of the Leader. Thus nine $2 \times 6 \times 2$ ANOVAs were run—one for each of the nine idea object categories. The F-values resulting from these nine ANOVAs are reported in Table 5.2.

The first column in Table 5.2 shows the F-value for the total model, the three main effects. In parentheses under the F-value for the total model is the $r^2$ for the dependent variables, the nine idea system object categories. The model explains a significant portion of the variance for six of the nine idea system objects. Looking at column II, a significant main effect for Project was found in five of the nine idea system object categories. The F-values for Project are net of the Group and Meeting effects. In each case where there is a significant Project main effect, the full model is also significant.

Several main effects are also evident for Groups and Meetings in column III and IV respectively. These will not concern us for the following reasons. A certain amount of differences among groups is expected on the basis of SYMLOG field theory. Bales and Cohen state that:

The SYMLOG system provides extensive means for recognizing and conceptualizing individual differences between persons, general characteristics of the individual personality, and inconsistencies of motivation, values, and behavior within the same personality, as well as consistencies. In using the system, one recognizes and characterizes unique properties of each group of individuals in interaction.
Table 5.2
F Values for NINE Project By Group By Meeting
Nested ANOVA’s (N=105)

<table>
<thead>
<tr>
<th>Source</th>
<th>I Model</th>
<th>II Project</th>
<th>III Group</th>
<th>IV Meeting</th>
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</tr>
<tr>
<td>Idea Objects</td>
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<tr>
<td>1) Purpose</td>
<td>3.98***</td>
<td>14.73***</td>
<td>2.30</td>
<td>3.32**</td>
</tr>
<tr>
<td></td>
<td>(.32)</td>
<td>(.17)</td>
<td></td>
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</tr>
<tr>
<td>2) Topics</td>
<td>1.78</td>
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<td>3.17</td>
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</tr>
<tr>
<td></td>
<td>(1.17)</td>
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<td>3) Procedures</td>
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<td>1.75</td>
<td>1.94</td>
</tr>
<tr>
<td></td>
<td>(.18)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) Union</td>
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<td>11.22***</td>
<td>2.60*</td>
<td>3.10**</td>
</tr>
<tr>
<td></td>
<td>(.30)</td>
<td>(.25)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) Manager</td>
<td>2.74***</td>
<td>1.22</td>
<td>2.35</td>
<td>3.43**</td>
</tr>
<tr>
<td></td>
<td>(.25)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>6) Facilitator</td>
<td>4.03***</td>
<td>5.53*</td>
<td>6.60***</td>
<td>2.06</td>
</tr>
<tr>
<td></td>
<td>(.32)</td>
<td>(.32)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7) Definition</td>
<td>5.68***</td>
<td>18.29***</td>
<td>7.45***</td>
<td>2.39*</td>
</tr>
<tr>
<td></td>
<td>(.40)</td>
<td>(.40)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8) Success</td>
<td>6.08***</td>
<td>13.00***</td>
<td>8.31***</td>
<td>3.45**</td>
</tr>
<tr>
<td></td>
<td>(.42)</td>
<td>(.42)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9) Leader</td>
<td>1.87</td>
<td>0.05</td>
<td>2.02</td>
<td>2.07</td>
</tr>
<tr>
<td></td>
<td>(.18)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05
** p < .01
*** p < .001

R² in parentheses
In addition, Morgan adds understanding to the phenomenon of expected variation in behavior from one meeting to another by clarifying that Bales' unit of analysis is a role, not an "individual" or "personality." Morgan states "the critical factor is that... these roles (are) defined by the group members themselves (emphasis in original)." Therefore, an interacting group can be seen as a unique gestalt. The role of any individual member, to some extent, is contingent on the configuration of the role positions occupied by the other group members.

Finally, the way in which the nested ANOVA design computes the Group's and Meeting's results, column III and IV, does not take into consideration the findings at the Project level. A significant finding within Groups (or Meetings) is based on one group (or one meeting) against all other groups (or Meetings). Consequently, it does not add to the understanding of the phenomenon under examination, i.e., the effect of a participation project's idea system on the behavior of its participants in face-to-face interaction.

Figure 5.2 is a graph of the behavior-correspondence score means for the QC and QWL projects for the five idea object categories that were found to be significantly different. These idea objects are Purpose, Role of the Union, Role of the Facilitator, Definition, and Success. In every case the behavior-correspondence mean score for the QC Project was higher than the QWL project. The findings of the ANOVA test gives added support to hypothesis #2; namely that the qualitative difference, in the two projects' idea systems have a different impact on behavior. The pattern of thought classified closer to the "ideology" end of the Shils' typology, Quality Circles, produces greater behavioral adherence to it than the Quality of Work Life project which is classified farther from "ideology" in the Shils' system. In
Figure 5.2
Behavior-Correspondence Score Means (X) for the Five Significant Value Object Categories (N = 105)

** P < .05
*p < .001
accounting for this finding we must keep in mind the different procedures whereby individuals become members of QC and QWL projects respectively. Quality Circles place strong emphasis on voluntary membership in the circles. Due to its voluntary nature, QC projects may attract participants that have individual value that are highly congruent with the project. This could account for the differences in behavior-correspondence scores between the two projects. Conversely, self-selection is limited in the QWL project because of the representative nature of its membership structure. The low correlation between participant behavior and the QWL idea system (.26 to .27) may be a function of divergent participant values toward the project.5

Analysis of Covariance

To ascertain if participant values have an effect on the differences found in the impact of the projects' prescriptions on exhibited behavior an analysis of covariance (ANCOVA) was performed for the nine idea object categories. The co-variates are the value-correspondence scores for each project participant. The value-correspondence scores are defined as the correlation between the nine project idea system prescriptions with the values that each participant holds toward the project's prescriptions. A two step procedure was involved in computing the value-correspondence score. First, it was necessary to determine the nine SYMLOG locations that represent each individual participant's values toward the nine project prescriptions. To obtain these participant values, the researcher held individual interviews with all available participants. The interviews were tape recorded and SYMLOG value scored at
a later date by the researcher. The next step was to find the correlation of the SYMLOG location that represented each participant's values toward the nine idea system prescriptions with the SYMLOG location that represented the prescriptions of the project's idea system. This was done by using the correlation matrix developed by Bales and Cohen.6 The correlation thus computed represents the degree of correspondence between a participant's values and those promulgated by the participation project with which he is associated.

Only a subset from the original ANOVA data could be analyzed since values for all participants used in the ANOVA analysis were not available for interviews with the researcher due to layoffs, leaves of absences, transfers, promotions and/or quits. To establish a basis for comparison of the ANCOVA analysis, another ANOVA was performed on the smaller sample using the same design as previously reported. Table 5.3 shows the F-values for the total model and the three main effects. In parentheses under the F-value for the total model is the r² for the amount of variance in the behavior correspondence score accounted for by the model for each component of the idea system. The model explains a significant portion of the variance for two of the nine idea system categories.

However, the main point of interest in this analysis is the significance of the Project variable which is shown in Column II. There is a significant difference between the QC and QWL participation projects in four of the nine idea system categories. This is somewhat different then the results in Table 5.2. With this smaller data set, three of the formerly significant relationships dropped out (Role of Union, Role of Facilitator, Success), two are added
<table>
<thead>
<tr>
<th>df</th>
<th>Idea Object</th>
<th>I (Model 11)</th>
<th>II (Projects 1)</th>
<th>III (Group 4)</th>
<th>IV (Meeting 6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Purpose</td>
<td>1.60 (.22)</td>
<td>5.0*</td>
<td>0.80</td>
<td>1.56</td>
<td></td>
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<tr>
<td>2) Topic</td>
<td>1.48 (.20)</td>
<td>.02</td>
<td>2.06</td>
<td>1.33</td>
<td></td>
</tr>
<tr>
<td>3) Procedures</td>
<td>1.22 (.17)</td>
<td>4.21*</td>
<td>.51</td>
<td>1.20</td>
<td></td>
</tr>
<tr>
<td>4) Union</td>
<td>1.38 (.19)</td>
<td>2.97</td>
<td>.83</td>
<td>1.49</td>
<td></td>
</tr>
<tr>
<td>5) Management</td>
<td>1.78 (.23)</td>
<td>4.68*</td>
<td>1.22</td>
<td>1.67</td>
<td></td>
</tr>
<tr>
<td>6) Facilitator</td>
<td>1.38 (.19)</td>
<td>1.04</td>
<td>2.52*</td>
<td>.68</td>
<td></td>
</tr>
<tr>
<td>7) Definition</td>
<td>2.01* (.26)</td>
<td>6.15**</td>
<td>2.81*</td>
<td>.79</td>
<td></td>
</tr>
<tr>
<td>8) Success</td>
<td>4.43** (.29)</td>
<td>3.47</td>
<td>3.72**</td>
<td>1.39</td>
<td></td>
</tr>
<tr>
<td>9) Leader</td>
<td>.92 (.14)</td>
<td>1.57</td>
<td>.59</td>
<td>1.03</td>
<td></td>
</tr>
</tbody>
</table>

* p F<.05
** p F<.01

R² in parentheses
Table 5.4
Behavior Correspondence Mean (X) Scores for Each Idea System Object by Project (N = 76)

<table>
<thead>
<tr>
<th>Idea System Object</th>
<th>QC (X)</th>
<th>QWL (X)</th>
</tr>
</thead>
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<td>.59</td>
<td>.38</td>
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<tr>
<td>Topic</td>
<td>.59</td>
<td>.58</td>
</tr>
<tr>
<td>Procedures*</td>
<td>.23</td>
<td>.48</td>
</tr>
<tr>
<td>Role of Union</td>
<td>.54</td>
<td>.38</td>
</tr>
<tr>
<td>Role of Management*</td>
<td>.15</td>
<td>.38</td>
</tr>
<tr>
<td>Role of Facilitator</td>
<td>.49</td>
<td>.39</td>
</tr>
<tr>
<td>Definition*</td>
<td>.59</td>
<td>.39</td>
</tr>
<tr>
<td>Success</td>
<td>.53</td>
<td>.39</td>
</tr>
<tr>
<td>Role of Leader*</td>
<td>.23</td>
<td>.38</td>
</tr>
</tbody>
</table>

*p < .05
(Procedures, Role of Management) and two remained (Purpose and Definition) from the previous ANOVA. Table 5.4 is a list of the behavior correspondence mean scores (X) for each project sample used in the ANCOVA.

For the ANCOVA, the same three-way nested (hierarchical) design performed for the ANOVA was utilized with individual participant's value-correspondence scores for each of the value-object categories treated as a co-variate. In this form of analysis the values of the co-variates are statistically held constant while the analysis of variance is performed. This allows the researcher to examine and possibly eliminate the co-variates as alternative explanations of the observed variation on main effects. Nine $2 \times 6 \times 2$ ANCOVAs were run. One ANCOVA was run for each of the nine idea object categories (the criterion variables) with the Project, Group and Meeting nested design as the independent variables and the participants' value correspondence scores for each idea system category as the co-variates. The F-values resulting from these nine ANCOVAs are reported in Table 5.5.

The first column in Table 5.5 shows the F-values for the total model, the three main effects with 11 degrees of freedom. In parentheses under the F-values for the total model is the $r^2$ for the dependent variable, the nine idea system object categories. The model explains a significant portion of the variance for three of the nine idea system objects after controlling for participant values.

Column II lists the F-values of project, net of the Group and Meeting effect for each of the nine idea system objects. There are three significant main Project effects: Purpose, Role of Management, and Definition. In two cases, Purpose and Definition, where there is a significant Project effect, the model is also significant. Table 5.6 lists the F-values of the Project main
Table 5.5

F Values for Nine Project by Group by Meetings Nested ANCOVA's

<table>
<thead>
<tr>
<th>Source</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
<th>VI</th>
<th>VII</th>
<th>VIII</th>
<th>IX</th>
<th>X</th>
<th>XI</th>
<th>XII</th>
<th>XIII</th>
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<td>Groups</td>
<td>Meetings</td>
<td>Purpose</td>
<td>Topic</td>
<td>Procedures</td>
<td>Union</td>
<td>Management</td>
<td>Facilitator</td>
<td>Definition</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>6.8**</td>
<td>1.47</td>
<td>1.26</td>
<td>.41</td>
<td>.31</td>
<td>4.68*</td>
<td>8.18**</td>
<td>1.29</td>
<td>.33</td>
<td>.57</td>
<td>2.8</td>
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<td>2) Topic</td>
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<td>1.47</td>
<td>1.61</td>
<td>.11</td>
<td>0.32</td>
<td>11.99***</td>
<td>.15</td>
<td>.04</td>
<td>.01</td>
<td>.65</td>
<td>.28</td>
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<td>3) Procedures</td>
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<td>.82</td>
<td>3.37</td>
<td>.42</td>
<td>.89</td>
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<td>2.2</td>
<td>.38</td>
<td>.28</td>
<td>2.15</td>
<td>.03</td>
<td>.23</td>
<td>.03</td>
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<tr>
<td>4) Union</td>
<td></td>
<td>1.39</td>
<td>1.3</td>
<td>1.36</td>
<td>.94</td>
<td>.19</td>
<td>.15</td>
<td>5.61*</td>
<td>.95</td>
<td>.32</td>
<td>2.40</td>
<td>.13</td>
<td>2.91</td>
</tr>
<tr>
<td>5) Management</td>
<td></td>
<td>1.44</td>
<td>3.85*</td>
<td>1.03</td>
<td>1.47</td>
<td>.02</td>
<td>2.18</td>
<td>.89</td>
<td>.27</td>
<td>2.20</td>
<td>2.20</td>
<td>.04</td>
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<tr>
<td>6) Facilitator</td>
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<td>1.25</td>
<td>.15</td>
<td>1.68</td>
<td>.5</td>
<td>0</td>
<td>1.06</td>
<td>.21</td>
<td>.47</td>
<td>.05</td>
<td>3.49</td>
<td>.02</td>
<td>3.93*</td>
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<tr>
<td>7) Definition</td>
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<td>2.21**</td>
<td>5.22*</td>
<td>2.3</td>
<td>.81</td>
<td>.40</td>
<td>.20</td>
<td>.59</td>
<td>7.73**</td>
<td>.05</td>
<td>.21</td>
<td>.34</td>
<td>4.91*</td>
</tr>
<tr>
<td>8) Success</td>
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<td>2.33**</td>
<td>.77</td>
<td>2.7*</td>
<td>1.64</td>
<td>.06</td>
<td>1.5</td>
<td>.13</td>
<td>1.15</td>
<td>.27</td>
<td>2.12</td>
<td>.05</td>
<td>6.16*</td>
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<tr>
<td>9) Leader</td>
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<td>.83</td>
<td>2.6</td>
<td>.73</td>
<td>.82</td>
<td>.03</td>
<td>.64</td>
<td>1.98</td>
<td>.86</td>
<td>.47</td>
<td>3.20</td>
<td>0</td>
<td>1.45</td>
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</tbody>
</table>

* p < .05  
** p < .01  
*** p < .0001  
R² in parentheses
### Table 5.6
F-Value for Project Within ANOVA & ANCOVA ANALYSES With Significant Co-variates

<table>
<thead>
<tr>
<th>IDEA OBJECT</th>
<th>ANOVA</th>
<th>ANCOVA</th>
<th>SIG. CO-VARIATES</th>
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</thead>
<tbody>
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<td>Purpose</td>
<td>5.0</td>
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<td>4.68*</td>
</tr>
<tr>
<td>Topic</td>
<td>.02</td>
<td>1.04</td>
<td>11.99***</td>
</tr>
<tr>
<td>Procedures</td>
<td>4.21</td>
<td>3.37</td>
<td></td>
</tr>
<tr>
<td>Union</td>
<td>2.97</td>
<td>1.3</td>
<td>5.61*</td>
</tr>
<tr>
<td>Management</td>
<td>4.68*</td>
<td>3.85*</td>
<td></td>
</tr>
<tr>
<td>Facilitator</td>
<td>1.04</td>
<td>.15</td>
<td>3.93*</td>
</tr>
<tr>
<td>Definition</td>
<td>6.15**</td>
<td>5.22*</td>
<td>7.73**</td>
</tr>
<tr>
<td>Success</td>
<td>3.47</td>
<td>.77</td>
<td>4.91*</td>
</tr>
<tr>
<td>Leader</td>
<td>1.57</td>
<td>2.6</td>
<td>6.16*</td>
</tr>
</tbody>
</table>

*p < .05  
**p < .05  
***p < .0001
model is also significant. Table 5.6 lists the F-values of the Project main effect found in the ANOVA and the ANCOVA analyses. Also included are the three co-variates that were significant in some fashion--Procedures, Role of the Union and Success. If an idea object is significant in the ANOVA analysis and remains significant in the ANCOVA it would add strength to the hypothesis #2 which states that the qualitative differences in the two project's idea systems will have a different impact on behavior.

The significant objects in the ANOVA are Purpose, Procedure, Role of Management and Definition. Three of these, Purpose, Role of Management and Definition are still significant while holding individual values constant in the ANCOVA. The loss of significance in Procedures could be due to individual values. However, since none of the co-variates are significant it is possible that the slight drop in the F-value of Procedures is a statistical artifact caused by the loss of degrees of freedom due to the nine co-variates. The ANCOVA analysis gives strong evidence to the impact of a participation's idea system on participant behavior. Even with individual participant values toward the project's idea system held constant there is still an effect between the prescriptions of the idea system and participant behavior.

Satisfaction

It was hypothesized that individuals who hold values consistent with a given participation project's prescriptions will view the project as more
positive and be more satisfied with their participation than individuals with values different than those expressed by the prescriptions of the project.

Satisfaction measures were taken during interviews with participants on a five point scale with 1 being very low satisfaction with the project and 5 representing very high satisfaction. Table 5.7 shows the correlation coefficients for the satisfaction scores with the value correspondence scores. The correlations are all positive and significant at the .01 level or above, thus supporting Hypothesis #3; individual participant values that are congruent with the project's prescriptions results in higher satisfaction levels with the project.
Table 5.7
Correlation Coefficients for Individual Satisfaction and Value Correspondence Scores (N=72)

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<th>Satisfaction</th>
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<td>Purpose</td>
<td>.39</td>
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<td>(.0007)</td>
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<tr>
<td>Topic</td>
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<tr>
<td></td>
<td>(.0001)</td>
</tr>
<tr>
<td>Procedures</td>
<td>.54</td>
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<tr>
<td></td>
<td>(.0001)</td>
</tr>
<tr>
<td>Role of Union</td>
<td>.51</td>
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<tr>
<td></td>
<td>(.0001)</td>
</tr>
<tr>
<td>Role of Management</td>
<td>.49</td>
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<tr>
<td></td>
<td>(.0001)</td>
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<tr>
<td>Role of Facilitator</td>
<td>.32</td>
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<tr>
<td></td>
<td>(.0007)</td>
</tr>
<tr>
<td>Definition</td>
<td>.37</td>
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<td>(.002)</td>
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</table>
Summary of Findings

Hypothesis #1. There is a difference in the type of pattern of thought embodied in the idea systems that legitimate the participation projects under study. Using the Shils' typology, the Quality Circle approach is a program and Quality of Work Life is an outlook capable of tolerating different creeds among participants. In addition, different values are attached to the objects of each participation project's idea system according to the SYMLOG scoring system. In an overall sense, these distinctions suggest that Quality Circles are more impersonal and task-oriented and Quality of Work Life is more concerned with group, cooperative values.

Hypothesis #2. Due to the qualitative differences in the prescriptions of the Quality Circle and Quality of Work Life idea systems, there is a differential impact of the two distinct idea systems on participants' behavior. The Quality Circle project has been shown to produce greater behavioral adherence than the idea system from the Quality of Work Life project. This can be attributed to QC containing prescriptions within its idea system that demand a greater behavioral adherence from participants than the prescriptions within the Quality of Work Life project. This finding confirms the Shils typology classification of the two projects with the QC program having greater participant adherence than the QWL outlook.

Hypothesis #3. For the Quality Circle project, there is found to be a high degree of congruency between individual values toward the project and the prescriptions of the QC idea system. For the Quality of Work Life project there
is diversity found among the values expressed by participants and the prescriptions of the QWL idea system.

**Hypothesis #4.** For both projects, QC and QWL, it was found that individuals who hold values consistent with the prescriptions of their respective project: a) behave in a manner that is consistent with the prescriptions of their project's idea system and b) view the project as more positive and are more satisfied with their own participation in the project than individuals with values different from those expressed by the prescriptions of the project.

**Relationships of Findings to the Model**

Figure 5.3 is a copy of the model presented in Chapter 1 (Figure 1.1). As stated previously, the model defines the relationships among the classes of variables under study: the prescriptions of a worker participation project's idea system, the value held by the participants, and the behavior that is produced under the context of participation. In the model each of the variables fall within a different level of a distinct social-psychological field. The distinction among the social-psychological fields is based on the observation that, a) each individual has, at a given moment, a psychological representation, or image about the various aspects of his lifespace. This internal view is called the individual field. In addition to the individual field, one can observe b) the nature of the interaction among individuals in a face-to-face situation. This is the group field and is independent of the image held by one or more of the participants
Figure 1.2
Model of Relationships among the Levels of Variables and Fields of Phenomena Involved in Worker Participation
themselves. Finally, one can observe c) the ideas, images or beliefs that seem to be widespread in a society or social system (i.e., organizations) at a given time. This level of societal image is referred to as the **social field**.

There is, however, an added component which adds clarity to each of the fields. Within each of the fields there is a differentiation of levels for the classification of variables. The levels of types of variables are: **behavior** (including both verbal and non-verbal components); **content**—the meaning or semantic properties of objects as expressed through speech or other symbols; and **value**—the emotional charge or valence that individuals attach to objects.

The quantitative analyses reported earlier tests the relationships shown in Figure 5.3. Line $r^1$ indicates that the prescriptions of a project's idea system affects the type of behavior one is likely to observe in a worker participation project. This relationship was found to be true. The prescriptions of the QC and QWL projects idea systems differentiated the observed behavior of participants. The QC participants exhibited greater behavioral adherence to the prescriptions of their project than participants in the QWL project. The second direct relationship, designated by line $r^2$, suggests that the values held by individual participants link with the idea system. This combination or interaction of individual's values and the externally presented idea system will have an effect upon observed behavior. While this relationship was found to be present, it is not as strong as the $r^1$ relationship. Even when participant values were held constant there was still an effect between the prescriptions of a project's idea system and the behavior exhibited in face-to-face interaction.

The $r^2'$ and $r^3'$ relationships had the following effect. Individuals who hold values consistent with the prescriptions of a given participation project
(r3' in the model) exhibited behavior that was more consistent with the prescriptions of the project's idea system than those whose personal values diverge from those contained in the project. In addition, the participants with congruency between their values and the prescriptions of their project's idea system established the foundation for the r3' relationship. These participants viewed their project as being more positive and were more satisfied with their participation than individuals with values different than those expressed by the prescriptions of the project's idea system.
Notes

1 Bales and Cohen, SYMLOG, pp. 398-399.

2 The two meetings utilized for statistical analysis were the first and last meetings observed by the researcher for each group.

3 Bales and Cohen, SYMLOG, p. 16.


5 The nine criterion variables of covariance (ANCOVA) was analysis of variance (MANOVA). The Wilks Criterion proved significant for Project F(9,85) = 37.10, p. F .0001)
CHAPTER VI
Summary & Discussion

This study examines the relationship between ideas about and the practice of worker participation. The framework for this examination is the idea system of two popular worker participation projects—Quality Circles (QC) and Quality of Work Life (QWL). Utilizing Edward Shils' classification of patterns of thought, the idea systems of the two participation projects were found to fall within different categories of the Shils typology. Specifically, the idea system for Quality Circles was found to be a program due to its high degree of explicitness of formulation; integration around a particular belief; acknowledgment of other patterns of thought; a moderate closure to variation; relatively high accompanying affect; authoritativeness of its promulgation; consensus by those involved in the QC project and a corporate body intended to realize and disseminate the ideals of the Quality Circle participation project.

The idea system of the Quality of Work Life project contains a different type of pattern of thought than Quality Circles. The QWL project is an outlook with the labor and management actors holding different creeds within the QWL outlook. This is due to the QWL idea system not having a high degree of explicitness of formulation; a wide array of beliefs held by
the QWL participants concerning the basis for the project; acknowledged affinity with other patterns of thought; the opportunity for experimentation and variation; no preconceived notions concerning the conduct of participants; moderate expectations regarding accompanying effects; no overall consensus of those who participate in the project is required; no authoritative of promulgation; and to some extent, there is not an association with a body intended to realize or spread the pattern of thought. The identification of the labor and management actors within the QWL outlook holding different creeds is based on the divergent emphasis that each actor places on various elements within the outlook, i.e., the dual focus of QWL.

The classifying of the two participation projects into distinct categories of the Shils pattern of thought typology carries with it divergent behavioral implications for the projects' participants. The QC program is expected to demand a high degree of control over participant behavior within the confines of the project. For the QWL outlook, no control over participant behavior is expected within the context of the participant project. However, the institutional affiliation of the QWL actors, i.e., labor and management will, at times, have a behavioral influence over their constituents through the creeds that each institution holds. The amount of participant control exerted by a creed is dependent on the emphasis and importance of the issue confronted within the participation project. By utilizing the Shils' typology, it has been shown that Quality Circles and Quality of Work Life projects represent different patterns of thought. A more detailed analysis of each project's idea system was achieved by using the SYMLOG research methods developed by Bales. SYMLOG
methods were used in three distinct ways. First, textual material from the participation projects were SYMLOG scored at the values level for each prescription in the project's idea system. Second, the behavior of the individual participants for each project was SYMLOG scored in the face-to-face interaction of the formal meetings in each project. Last, individual interviews were initiated with each project participant. The participants were asked a series of questions designed to elicit responses concerning their own values toward participation in the project and the values they held toward the prescription of their own project's idea system. All interviews were taped and at a later time, SYMLOG scored on the value dimension.

The data were analyzed to identify differences: 1) between the idea system of each project; 2) the behavior exhibited by participants in face-to-face interaction; 3) values held by participants toward their respective project; and 4) satisfaction of the participants with their involvement in the project. Differences were found in the value orientation of the prescriptions of the idea system for Quality Circles and Quality of Work Life and the overall consistency or value structure between the projects. Figure 6.1 and 6.2 are the SYMLOG field diagrams for the QC and QWL participations projects. All but one of the idea systems prescriptions in the Quality Circle project contained values associated with task-oriented behavior. This is not surprising, since the purpose of the QC project is to solve production and/or quality problems. However, discovering this task-oriented value in almost all of the QC prescriptions illuminates the degree of control over participant behavior that is inherent within the QC project. The QC value prescriptions do not allow for participants to deviate from
Figure 6.1
Expanded Field Diagram for the QC Project
Figure 6.2
Expanded Field Diagram for the QWL Project
the concern for participants engaging in serious efforts at problem solving. Some of the QC idea system prescriptions were also found to contain values classified as positive-friendly, while others had negative-unfriendly values. Therefore, an inconsistent internal value structure was discovered within the Quality Circle project.

The prescriptions of the Quality of Work Life idea system were found to all contain equalitarian values. This suggests that the prescriptions of the QWL idea system places a strong emphasis on noncompetitive practices between the participants and that there exists equal opportunity for all participants within the confines of the QWL project. Other values were found for the QWL prescriptions, i.e., upward-active, powerful and forward task-orientation, but there is no one idea system prescription causing an inconsistency among or between the value prescriptions. The QWL project's idea system has an internally consistent value orientation.

To identify the behavioral differences of the projects' participants, the congruency between the values of a project's idea system and each individual participant's behavior was examined utilizing behavior correspondence scores. A behavior correspondence score is operationally defined as the correlation between an individual's behavior as scored by SYMLOG for each face-to-face meeting and the SYMLOG value score for the prescriptions of the relevant project's idea system. The behavior correspondence scores were the criterion variable used in a three-way nested (hierarchical) analysis of variance. Five of the idea system prescriptions were found to be significant at the .05 level or above. The behavior of participants in the Quality Circle project exhibited greater adherence to the QC idea system than the behavior displayed by the
participants in the Quality of Work Life project. Thus, there is support to link ideas with behavior. The qualitative difference found between the two projects, QC a program (a relatively closed system) and QWL, an outlook (an open system) is manifested in the behavior of the project's participants.

To ascertain if participant values account for the difference found between the projects, an analysis of co-variance was performed on a subset of the ANOVA data. The same three-way nested design performed for the ANOVA was utilized with individual participants' value correspondence scores for each of the idea system prescriptions treated as a co-variate. A value correspondence score is operationally defined as the correlation between a participant's SYMLOG value score toward the prescriptions of the project's idea system and the SYMLOG value score of the idea system prescriptions. After holding participant values constant, four of the idea system prescriptions were significant at the .05 level or above, adding support to the impact of ideas on behavior.

The congruency of the values that an individual participant holds toward a participation project and the values associated with the idea system of the project was found to be highly related to an individual's satisfaction with their involvement in the participation project. It was found that individuals who hold values consistent with a given project's idea system, view the project as more positive and were more satisfied with their participation than individuals with values different than those expressed by the project's idea system.
Discussion

Worker participation is an approach to the management of an organization that allows workers involvement in decision-making within the organization. To the extent that workers become involved in a decision-making process that allows for determining the conditions of work, the work context becomes more democratic. But a paradox exists in worker participation endeavors since work itself, in its day-to-day routine, is fundamentally autocratic. A certain degree of subordination of individual will to a recognized authority is required in any economic enterprise. Ideas regarding worker participation may possibly open up authority to interpretation and reconstruction. However, ideas concerning participation may also be viewed as techniques used by management that create an illusion of a democratic process and justify actions that strengthen and give added meaning to the subordinated role that most must perform.1 The examination of ideas concerning participation, their use, and implications are worthy of serious attention since these ideas affect those who participate as well as the total organization engaged in a participation project. In addition, it is the microanalysis of the forms of participation, including their idea system that will shed light on whether participation is an illusion or contains substantive properties of a democratic process.

The discussion of Quality Circles is prefaced with the fact that the vast majority of participants interviewed in this study were very satisfied and in many cases elated with the participation project. The strong support for the QC project was due, in part, because it was the first time
that line workers ever had a mechanism for input into solving work-related problems. It was routinely expressed to the researcher by workers with 25-30 years seniority that in the QC program, they were asked what improvements could be made in the work process and not told. While this is a worthy step in a learning and growth process on the part of the participants in the QC project, there are structural barricades within the QC system that interfere with democratic decision-making by workers in determining their conditions of work.

The structure of the QC project is a reflection of the normal organizational authority hierarchy found in most enterprises. The QC Steering Committee is top and middle management, the supervisors are (usually) the Circle Leaders, the workers are the Circle members. The workers have no input into the functional and structural arrangements of the project and have no ability to change the QC process, since that is the sole responsibility of the Steering Committee who (usually) accept the format as "purchased" from the QC consultant without alteration. Indeed, this is one characteristic of QCs as a program of thought. QC consultants and trainers typically present QCs' procedures as relatively "sacred." There is no opportunity, given the structure of the QC project, for a reinterpretation or reconstruction of "authority" within the organization. Lines of communication do not change in the QC process. No new channels exist to express concerns for the conditions of work.

In fact, QCs do not actually discuss conditions of work. The limits that are placed on the Circle; namely, to derive solutions to quality or production problems, are discussions of the techniques of work, not the conditions of work. Since one of the premises of the Quality Circle
project is that those doing the work are the best ones to resolve work related problems, management is actually broadening the concept of F. W. Taylor's scientific management. Taylor stressed the importance of watching the best workers to extract the components of the work process in order to make workers more efficient and for management to control the process of work. Quality Circles can be viewed as Taylorism of the mind.

Pateman in discussing the meaning of participation, criticized management scholars on this same issue by stating that:

...that writers on management do not discriminate more carefully between different "participatory" situations is not surprising when one considers their reason for being interested in participation in the workplace. For them, it is just one management technique among others that may aid the achievement of the overall goal of the enterprise--organizational efficiency. Participation may...be effective in increasing organizational efficiency, but what is important is that these writers use the term "participation" to refer not just to a method of decision-making, but also to cover techniques used to persuade employees to accept decisions that have already been made by the management.²

Pateman called this type of participation situation pseudo participation. It is characterized by the creation of a feeling of participation through the adoption by industrial management of a certain approach or style. Management has a particular goal in mind and uses the techniques of participation as a means of inducing acceptance of the goal.³
Within the confines of the QC project, management is utilizing its authority to allow participants to give their time, energy, and mental ability to solve problems that affect the quality and productive capacity of workers. The direct benefit to the worker is not monetary since they are told that any savings they achieve, through the QC recommendations to management, assist the organization to survive competition and they are, therefore, helping to ensure their continued employment. The benefit for participation is assisting the organization, a feelings of belonging and organizational worth. The QC philosophy is that the workers, can have an impact on the organization. A line worker can contribute and is able to find solutions to work problems. So, the benefits to the Circle members are, in fact, one of the main purposes for management instituting the QC project. Namely, this purpose is to use their authority to have workers more closely identify themselves with the organization. Management has particular goals in mind, i.e., improving efficiency, organizational commitment, etc., and uses the QC project as a means of inducing acceptance of these management goals.

Earlier it was put forth that worker participation is an approach to management that allows worker involvement in decision-making within the organization. The only way to include QCs in a classification of worker participation is to view the concept of involvement to include asking permission to initiate action from a higher authority. Such a system does not correspond to a reasonable definition of industrial democracy. For worker participation to occur, workers or their representatives must have an impact on the acceptance or rejection of a proposition from the decision-making process itself. In addition, the workers must have
influence on defining the problem. Within QCs, the problem definition and the approach to resolution exists prior to participation. Quality Circles are consultation and training projects that allow workers to receive permission from management to devise a potential solution to a quality or production problem. The decision to implement, remains a management prerogative within management's domain. As pointed out by Cole, a major characteristic of Quality Circles is that they are not a threat to management authority in the normal hierarchical power structure. With the QC approach management is able to decentralize certain decision-making situations while still maintaining power and control. The training that Circle members receive, coupled with the rules and regulations of the QC project, force workers to analyze a problem from the interest of the organization and not from a self-interest point of view. The facilitator, and in some cases the Circle Leader, are on constant guard to uphold and institute the QC methods and procedures. The following is an example of the rolekeeper function:

QC Member: The idea we've been working on--sure seems to me that we're going to save the company a lot of money. I think that all of us working on this should get part of the savings that the company is going to get.

Facilitator: You are right. This idea will save the company a lot of money. And you know that is just great. The company needs to save money to be competitive and so we all can have a job here. If we started giving out the savings from the QC project, it would be defeating the purpose of us all working together. That's why there is no sharing of the savings. We want to all work together and save our jobs and make the company more productive, right?
This is not an isolated case, but a common occurrence—the patterning or channeling of workers' concerns to fit the QC process. However, for most of the QC participants, this is certainly not a negative aspect of the project. Workers gain new skills through their participation in the QC, skills that can be used in many settings outside the work context. Workers learn to focus on a problem, analyze it, and look at solutions. However, there is a strong possibility that as a result of denying workers' interests that fall outside of quality and production problems, QCs will not be able to survive. Especially as workers become more proficient in problem-solving techniques, they will want to attempt to analyze and solve problems outside the domain of the proper QC topic area. At that point in time a new process will have to be instituted that may possibly eliminate Quality Circles, or transform them from consultation programs to worker participation projects.

In its theory and application, Quality Circles represent an illusion of participation that strengthens the authority of management in decision making that affects the effectiveness and efficiency of the work force. Quality Circles also serve to legitimate the subordination role of the Circle member. He is allowed to ask permission of a higher authority to implement a solution of his own creation. His role is not to have input into the decision but rather to leave that function to the forces that "know best." The QC member by actions followed through the QC process legitimates the authority of management without discussions of its interpretation.

The Quality of Work Life project can be viewed as an opportunity for labor and management to reinterpret and reconstruct the authority within
the organization, not necessarily in a radical or dramatic upheaval of one party against another, but through rational discussion centered on areas of mutual concern and decision-making by consensus. Within the QWL project examined for this study are principles that the parties have mutually agreed will guide their interaction: communication, attitudes of mutual respect and open-mindedness, cooperation, responsibility, and experimentation. How these principles are set into action is constantly in a state of interpretation by the parties and the individual QWL participants. It is the parties themselves that mutually decide how ideas concerning participation will affect their behavior.

At a micro level a Quality of Worklife project fits the "garbage can" model for organizations proposed by March and Olsen. The garbage can model defines organizations as a set of procedures for argumentation and interpretation as well as for solving problems and making decisions." Also included in the model is a "choice situation" which is defined as "a meeting place for issues and feelings, looking for decision situations in which they may be aired, solutions looking for issues in which there may be answers and participants looking for problems for pleasure." 5

Within the model there is the possibility of interactions to occur among opportunities, participants, problems and solutions. Within QWL, at any given time, there will be a particular mixture of participants with their various perspectives, problems and solutions. This mixture can and does change over time (just like the contents of a garbage can) depending on the needs, desires, problems and solutions available to the participants. Since the QWL project is not fixed, the mixture of these elements is enhanced by the communication links built into the participation project.
The structure of QWL allows for new lines of communication for both labor and management. Due to the representative nature of the QWL project coupled with the QWL structure, a line worker could sit on a variety of QWL committees and have input and discussion with various levels of authority in the organization. Similarly, top management is placed in a position to learn firsthand the concerns of workers they normally would not be in contact with but rather through a management representative, i.e., supervisor or department head reports.

Since there are new lines of communication and new relationships established in a QWL project, it is not surprising to find a wide range of variance in participants' reports of satisfaction levels with the project. Participants have to internally deal with old beliefs regarding work and the role workers and managers are to have in the organization. Cooperation in QWL does not mean the absence of divisiveness, differences of thought or attitudes regarding change in the workplace. However, QWL does provide the opportunity to discover areas of mutual concern that may be resolved through joint effort.

Many times the efforts of the facilitator are focused on exploring areas where mutual discussion of workplace problems can benefit all. The facilitator does not assume the role of a rule keeper, but that of clarifying issues brought to open discussion and framing the issues in ways that both parties can see a benefit in its resolution.

Turning again to Pateman can assist in analyzing the QWL project. Besides pseudo participation defined earlier, Pateman also classifies two other types of activity as participative types. Partial participation occurs when one party, the worker(s), does not have equal power to decide the
outcome of decisions but can only influence them. Since the workers are in the position of permanent subordinates, the final prerogative rests with the permanent superiors, management. The last type of activity defined by Pateman is the situation of full participation. Within this type of participation, each individual member of a decision-making body has equal power to determine the outcomes of decisions. Full participation differs from partial participation in that there are not two "sides" having unequal decision making powers, but a group of equal individuals who have to make their own decisions concerning the subject being discussed and how a solution will be implemented.6

QWL is correctly labeled a worker participation project since workers have involvement in certain areas of decisionmaking within the organization. All QWL committees are a combination of workers and managers. Decision-making is a joint effort by consensus. Of course, consensus may not be achieved but it is the right of the individual parties, labor or management, to inhibit consensus. Approval or rejection of ideas is not the domain of management.

Using Pateman's terminology, QWL is a process that allows for parties to have access to full participation. Each party has equal power within the QWL context to determine the outcomes of decisions. Workers can use the QWL process for experimenting with new ideas and approaches to the context of work. They have a process of being involved in changing their own work environment in concert with management. While not all their ideas or experiments are mutually agreed upon, the QWL participants have the forum or arena to openly discuss and reason for change. If the proposed experiment is within the
authority of the committee, i.e., working level, department, etc., then the consensus of the committee is enough to initiate the experiment.

So within the QWL project is a responsibility placed on the parties and individual participants to mutually define their own interactions. It is not a process of "one right way," but rather a learning process that requires the parties to constantly re-examine questions of work and the work environment and the appropriate role of the use of authority and how workers and managers can mutually grow as productive members on a personal level, organizational level, and in society at large. QWL allows for the opportunity to question and learn. It is left to the parties to exploit that opportunity within the QWL process and their day-to-day dealings with one another.

Chris Arygris has written that we strive to teach children to become responsible adults, but when they go into the workplace as adults, individuals are treated like children.\textsuperscript{7} The Quality Circle project can be viewed as a move from childhood to adolescence. QC members are given the authority to ask permission similar to a teenager asking to use the family car or go out on a date. The Quality of Work Life project places the QWL participant in the role of an adult. Rational approaches are made to problems of mutual concern to all the parties in the organization and a forum is created for discussion. This is a key element in a theory of worker participation. There needs to be an arena for expression of ideas--ranging from self-serving to organizational--that is if others find the idea of interest, discussions can be engaged that will lead to action, if it is mutually agreeable to all involved.
Implications for a Theory of Industrial Democracy

This research has attempted to show that a simple, undifferentiated view of the constructs of ideology has lead to confusion and underappreciation of the role of ideas in determining the structure of worker participation projects. Using the typology developed by Shils to analyze the idea system of Quality Circle and Quality of Work Life projects, it has been demonstrated that there are distinguishable levels of control over behavior called for by these two idea systems. In addition, it has been shown that clear behavioral differences between QC and QWL projects are directly traceable to the differences in their respective idea systems. In effect, the idea system sets the limits of what is possible in a worker participation project. Some idea systems are more "permissive" than others. Most observers follow Pateman's evaluative approach and believe that the legitimacy of participation is tied to the amount of influence that workers interject on decisions. The limitation of this approach lies in its linear casual logic. "Raw power" is the focus of attention.

How often are initial preferences similar to the final decision? Using the amount of influence approach, the more often one's preferences becomes the final decision, the more influence, it is said, one party has had over the decision. But between the determination of one's preference and the final decision, if there is a system of participation, people talk. Depending on how constrained that talking is, the results of that talk alter initial preference by altering the beliefs and values upon which decisions are made. In forums for participation, people search not only for answers
but, perhaps more importantly, they also search for common criteria upon which answers can be legitimized.

Democracy in the workplace, as in the community or the society at large, rests on an unfettered access to the process of defining issues as a criteria upon which competing positions on those issues should be based. The analysis of QC and QWL idea systems attempts to illustrate that, by definition, the idea system of a participation project imposes constraints on how participation is structured and how it is likely to unfold. To the extent that these constraints predetermine the nature of participation in such a way that some initial preferences are more likely than others to result in a final decision, democracy is correspondingly limited. In other words, if the outcomes of any choice process can be predicted in advance on the basis of individually or group held preferences, the participation process is correspondingly superfluous.

The evidence suggests that when participation is structured in such a way that differences over preferences and the values that underline them are open issues, nondeterminate in advance, so are the "final" outcomes. It is this openness over the criteria that helps promote genuine engagement with the issues. The following definition is offered as a foundation for theorizing about and research in the area of worker participation:

Democracy in the workplace is an inverse function of the predictability of participant's contributions in defining the criteria against which the validity of proposed decision will be judged. To the extent the relative contributions or influence over the decision process are known in advance and stable--participation is respectively irrelevant.
Notes


2 Pateman

3 Ibid.


6 Ibid., p. 25.

APPENDIX A
SYMLOG Behavior Descriptions

U: active, talkative, strong, assertive, powerful, adventurous, thick-skinned, extroverted, superior, of high social status, rich, highly educated, experienced, successful, older, or self-confident

UP: outgoing, open, sociable, good-natured, happy, hale and hearty, cordial, genial, sociably extroverted or popular, strong solidarity group, rewards the identification of the members with each other as a group

UPF: high in leadership, interested in group's success in a task, initiative in helping the group's task performance or in building group unity or morale in relation to group tasks; a "natural leader" or an "inspirational leader" 

UF: firm, resolute, managerial, identified with impersonal ideals, identified with external task demands, determined, businesslike, controlling, concerned with loyalty rather than love, or concerned with receiving effective performance in relation to the task

UNF: authoritarian, moralistic, inflexible, inhibiting, demanding, punishing, prejudiced, dogmatic, insistent on discipline, self-righteous, arbitrary, pompous or self-important

UN: dominating, aggressive or hostile, tough-minded, ambitious, contemptuous of others, insensitive, competitive, overbearing, or threatening

UNB: rebellious, self-centered, deviant, exhibitionistic, narcissistic, ruggedly individualistic, selfish, self-gratifying, or conspicuous, to make authority weak, or interfere with authority, unpredictable or negative in its effect

UB: expressive, dramatic, entertaining, joking, playful, full of novelty and creativity, whimsical, fanciful, changeable, or having a good sense of humor, tending to relax standards or rules, suspend demands, release tension

UPB: enthusiastic, emotionally supportive, helpful, warm, nurturant, or rewarding, anxiety-reducing, makes one feel at home, protective of the underprivileged or helpless, providing for easy success or rewards
Appendix A (continued)

P: equalitarian, friendly or informally interested in others, humanistic, uncompetitive, self-accepting, likeable, or liking each other

PE: cooperative, responsible, idealistic, optimistic, altruistic, devoted, concerned, reward is given to the group as a whole, -- the reward is contingent upon successful cooperation and performance of the group as a whole

E: task-oriented, instrumentally oriented, tending to come directly to the point, or analytical, as serious about rules, values, norms, or beliefs, as impersonal or emotionally neutral, as searching, tentative, or faithful, or as ob-servant, careful, watchful, straight or straight-arrow

NE: conscientious, ruled by principle, legalistic, very controlled, overaccepting of pain, unhappiness, or punishment, guilt-inducing, imposing of performance so specific or high as to make failure or punishment likely

N: negativistic, self-protective, reserved, retentive, retractive, doubtful, suspicious, or jealous, frustration or punishment

NB: autonomous, resistant to authority, cynical, nonconforming, pessimistic, intolerant of control, anti-social, impervious to influence, refractory, contrary, noncompliant, sulky or sullen, defines some aspect of the situation as punishing conformity to standards, rewarding deviance, or undermining the standards of performance

B: disbelieving, heretical, resistant to common beliefs, unrealistic, scatterbrain, distractable, or uninterested in facts, distrustful of concepts, words, or rational arguments, preferring change or variety

PB: very friendly, likeable, affectionate, ready to share and enjoy sociability, looking for entertainment, liberal, generous, or "fun to be with," rewards freely available, not contingent upon performance or conformity to standards, or as not requiring performance

DP: calm, stable, appreciative, ready to admire others, trustful, tenderminded, ready to identify with others, thoughtful of others, docile, or willing to learn

DPF: respectful, believing, gentle, good, practical, having high will control, having character stability, dedicated to service, modest, humble, retiring, meek nice, or sensitive, responding in a dependable and gratifying way to performance demands
Appendix A (continued)

DF: dutiful, conventional, cautious, persistent, hardworking, or fearful of disapproval, concerned with controlling inner feelings, thoughts, or impulses; or obsessional, slow to react, or slow to change

DNF: self-sacrificing, self-pitying, ready to play the martyr, passively accusing, self-punishing, injured, hurt by overwork or overconformity, ashamed, or remorseful, arousing guilt because its demands are not met

DN: resentful, passively rejecting, depressed, morose, inexpensive, unsmiling, unappreciative, unacknowledging, ungrateful, or hard to please

DNB: alienated, discouraged, despairing, miserable, out of touch, autistic, apathetic, resigned, despondent, or suicidal

DB: tense, anxious, fearful, emotionally blocked, distressed, distractable, passively resistant to the demands of authority or leadership, uncooperative, withholding, or holding back, failing in task performance, not cooperating in the tasks of the group, or as holding back

DPB: dependent on love, helpless but lovable, expectant of help or nurturance; hoping for stimulation, expectant of having needs met without achievement; as infantile or immature, feeling as though one will be taken care of by easy rewards or provision of resources indefinitely, with low or no demands for performance

D: introverted, self-effacing, self-abnegating, powerless, passive, without enthusiasm or desire, colorless, restrained, uncommunicative, inexpressive, impassive, reticent, quiet, inactive, inert, immobile, or inhibited, failing to offer any stimulation or any opportunities for expressive or communicative activity, or as suppressed, depressed or inhibited
APPENDIX B
SYMLOG Value Descriptions

1 U

INDIVIDUAL PROMINENCE, FINANCIAL SUCCESS, PERSONAL POWER: often inferred from behavior perceived to be very active, dominant, talkative; correlated characteristics may include high physical or emotional energy, tendency to identify self with powerful persons or images such as a powerful parent, modern technology, wealth, competitive challenge from outside or within the organization; may be a result of active attempts to suppress an underlying fear of attack or domination by others or a chronic fear of weakness or failure.

2 UP

POPULARITY AND SOCIAL SUCCESS, BEING LIKED AND ADMIRED: often inferred from behavior perceived to be very socially extroverted, outgoing, positive; correlated characteristics may include original sociable temperament, receipt of high acceptance, recognition, admiration from either outside or within the organization, expansive feeling of high personal involvement, expansive self picture including high confidence in own task ability as well as own interpersonal warmth; may be a result of identity as well as own interpersonal warmth; may be a result of identification of self with an idealized parent, or a result of active efforts to overcome underlying feelings of depression.

3 UPF

ACTIVE TEAMWORK TOWARD COMMON GOALS, ORGANIZATIONAL UNITY: often inferred from behavior perceived as purposeful democratic task leadership; correlated characteristics may include identification of self with an idealized authority, acceptance of the tasks given by authority, feeling of liking others, may be reluctant to recognize any dislike, may depend upon the power of over-idealized positive feelings to submerge, deny, or transform negative feelings and dislikes within the group, may struggle to be super-competent in spite of feelings of wanting to quit, or to show rebellious independence.

4 UF

EFFICIENCY, STRONG EFFECTIVE MANAGEMENT: often inferred from behavior perceived as assertive, businesslike, strictly impersonal; correlated characteristics may include emphasis on loyalty rather than liking among members, identification with an impersonal plan, a right and correct way of doing things in order to realize the plan, goal, or task prescribed for the group by higher authority, a tendency to be insensitive to individual differences, to adhere literally to the plan as he or she conceives it without regard to consequences, possibly preoccupied with anxiety about punishment for failure.

5 UNF

ACTIVE REINFORCEMENT OF AUTHORITY, RULES AND REGULATIONS: often inferred from behavior perceived as authoritarian, controlling, disapproving; correlated characteristics may include strong identification of self with authority, with the right and responsibility to punish others for wrongdoing or lack of discipline; may be activated by felt threat to survival of
self or group from outside sources, or from internal sources of weakness,
disloyalty, or evil intent, real or imagined; may include tendency to blame others
for own faults, need to view the self as perfect, blameless, and as a hero in the
defense of the group from urgently present dangers, both external and internal.

6 UN  TOUGH-MINDED, SELF-ORIENTED ASSERTIVENESS: often inferred
from behavior perceived as domineering, powerful, contemptuous of the
welfare of others; correlated characteristics may include physical strength,
overactive aggressive temperament, build-up of anger from frustration, long
exposure to situations ruled by violence, force, threats of force, deception,
distrust, lack of social solidarity and support, threat to survival, need to depend
upon self alone; consequent belief in "survival of the fittest" as the "law of the
jungle," contempt for weakness and dependence, fear of being weak and
trustful, hence vulnerable.

7 UNB  RUGGED, SELF-ORIENTED INDIVIDUALISM, RESISTANCE TO AU-
THORITY: often inferred from behavior perceived by authority as provocative,
egocentric, show-off; correlated characteristics may include a conception of the
self as having fought with a bad authority and won, a special contempt of "nice
little girls and boys" who knuckle under to authority, a tendency to display the
self as fascinating, amazing, shocking, unrestrained, spectacular, mysterious,
or incalculable, a tendency to attract attention by extravagant mannerisms,
dress, or speech; may be directed to others who display submissive
dependence, conventionalism, or authority.

8 UB  HAVING A GOOD TIME, RELEASING TENSION, RELAXING CON-
TROL: often inferred from behavior perceived as joking around, expressive,
dramatic, often motivated by underlying negative feeling, disguised and
discharged in jokes or humorous behavior; the effect is to shift the feeling tone
in a positive direction, and to increase the feeling of freedom and self
confidence in dealing with threatening situations and overpowering negative
emotions--fear, anxiety, depression, alienation from others, hopelessness, fa-
tigue, frustration, etc.; requires a sense of perspective, ability to resist authority,
demands of convention.

9 UPB  PROTECTING LESS ABLE MEMBERS, PROVIDING HELP WHEN
NEEDED: often inferred from behavior perceived as entertaining, sociable,
smiling, warm; correlated characteristics may include tendency to give others
emotional support, concern for their comfort and welfare, concern to keep the
emotional tone of the group on the warm and friendly side, may be motivated
by a naturally nurturant temperament, or by experiences of hostile attack by an
authoritarian parent or other dangerous and threaten-ing person; may feel
anxiety at any signs of disagreement or conflict, fears attack on members who
may be seen as unable to meet task demands.

10 P  EQUALITY, DEMOCRATIC PARTICIPATION IN DECISION MAKING:
often inferred from behavior perceived as friendly, unconcerned with status
differences, unafraid of disagreement, correlated characteristics may include
lack of anxiety, lack of hostility, high self confidence and favorable self picture, seems to appreciate and enjoy others, aims to elicit friendly reactions from others, and expects to be accepted and valued as an equal; back-ground often includes parents or others who gave unconditional and unconflicted love; there are, however, "false positives," who seem to be motivated by fear of hostile attack or domination.

11 PF RESPONSIBLE IDEALISM, COLLABORATIVE WORK: often inferred from behavior seen as working cooperatively with others without any obtrusive status concerns, optimism with regard to task success, and altruism with regard to others; correlated characteristics may include tendency not to see domination and to deny or overlook unfriendly behavior of others, to feel admiration for others and see the good in them, tends to agree and to attract interaction from others because they wish to receive agreement, may be uncritical about authority and attracts contempt from cynical members because of this, believes in love.

12 F CONSERVATIVE, ESTABLISHED, "CORRECT" WAYS OF DOING THINGS: often inferred from behavior seen as strictly analytical, task-oriented, problem-solving; correlated characteristics may include an unquestioning acceptance of the task as given, and the authorized way of doing it, a serious and searching attitude toward truth or the best precedents, a constrained, persistent and impersonal manner, continuous attention to the task and a lack of impersonal manner, continuous attention to the task and a lack of humor, a desire to have things highly organized, well-defined, and under control; may be trying to prevent anxiety about expected punishment from authority if things are not done properly.

13 NF RESTRAINING INDIVIDUAL DESIRES FOR ORGANIZATIONAL GOALS: often inferred from behavior seen as persistently legalistic, a pervasive attempt always to be right; correlated characteristics may include a firm conviction that one is right and is the agent of authority, that one properly understands and interprets the law, the rules and regulations, the task, logic, and rationality; insists on compliance, induces guilt and fear of punishment in others, though strict compliance may appear to others to be unpleasant, or too costly, inefficient, injurious to the general welfare of the organization, outmoded or irrational.

14 N SELF-PROTECTION, SELF-INTEREST FIRST, SELF-SUFFICIENCY: often inferred from behavior that seems unfriendly, negativistic, persistently in disagreement with attempts of others to preserve solidarity, equality of opportunity, common rewards, and common fate of the group as a whole; correlated characteristics may include a fear of being drawn into a dangerous trust in others, who may then turn on one, a fear of being drawn into mediocrity, or into an over-involvement that will prevent one's own rise in status, a fear that the group as a whole will not survive, and that one must provide security for the self at all costs.
15 NB REJECTION OF ESTABLISHED PROCEDURES, REJECTION OF CONFORMITY: often inferred from behavior that seems irritable, cynical, evasive, uncooperative; correlated characteristics may include negative attitudes toward the group as well as the task, criticism of conventionality in general, often a dissatisfaction with the self, society, and one's situation in life as well; often seems to embrace personal and political positions that seem radical to the majority of the group; may emphasize personal freedom and autonomy, wishes to "stand alone," perhaps to provoke rejection: may refuse to accept expected social role--age, sex, occupation, social class, citizenship; resents authority, fears domination.

16 B CHANGE TO NEW PROCEDURES, DIFFERENT VALUES, CREATIVITY, GROWTH: often inferred from behavior that seems emotionally expressive, responsive to feeling and intuition rather than to the intellectual control ordinarily thought to be necessary to rational problem-solving and task performance; may be motivated by rejection of authority and demands of the present task, or by boredom and fatigue, but also may be motivated by the feeling that one has a better or more creative idea, or that creativity requires some relief or protection from presently established routine demands, that growth and development require time, some play and patience.

17 PB FRIENDSHIP, MUTUAL PLEASURE, RECREATION: often inferred from behavior that seems affectionate, likeable, oriented to present pleasure and fun, rather than to the demands of the task or other serious concerns; correlated characteristics may include tendency to attract jokes, friendly and personal small talk; may tend to identify with underprivileged persons of all kinds, favors emotional supportiveness and warmth, favors an assumption of expanding resources, interested in personal growth, social change conducive to growth, wants to raise the status of the underprivileged, to share liberally, without preconditions.

18 DP TRUST IN THE GOODNESS OF OTHERS: often inferred from behavior that seems appreciative, trustful, dependent, calm and ready to admire others; correlated characteristics may include a low participation rate, a tendency to emulate admired others; may be seen as observant and understanding; relates to others primarily in pair relationships, seldom addresses the group as a whole; may be introverted and easily aroused to sympathy, concerned with others in pain; avoids showing negative behavior, may have an underlying concern about, or fear of dominant and cruel attacks by others; "tenderminded," sensitive.

19 DPF DEDICATION, FAITHFULNESS, LOYALTY TO THE ORGANIZATION: often inferred from behavior that seems submissive, gentle, willing to accept responsibility, acceptant of authority, stable, practical, good, conforming; correlated characteristics may include considerable inhibition, underlying anxiety about pleasing authority, attempt to control anxiety or guilt by being
very nice and good; may show a tendency to overlook or downgrade the
importance of power, aggression, and material wealth in human affairs, and to
emphasize instead the importance of love, forgiveness, acceptance of one's lot
in life, and helping others.

20 DF OBEDIENCE, RESPECT FOR AUTHORITY: often inferred from behavior
that is submissive and very hardworking, persistent, even obsessive, in
attempts to please authority; correlated characteristics may include lack of
humor, inhibition of feelings, lack of expressiveness, an impersonal neutral
manner with regard to other members, marked carefulness and caution in both
working and speaking, an apparent concern with serious thoughts which are
kept to the self; may be fearful that if thoughts and emotions are expressed they
will be found objectionable, embarrassing, or too revealing of the self.

21 DNF SELF-SACRIFICE IF NECESSARY TO REACH ORGANIZATIONAL
GOALS: often inferred from behavior that seems self-punishing, so
hardworking that the person feels martyred, tends to complain and make others
(particularly those in authority, or those who are seen as the origin of task
demands) feel ashamed or guilty about requiring so much; correlated
characteristics may include high factual dependence upon a demanding and
punishing authority, either present, or in the past, an identification with such a
feared person which extracts both extreme obedience, and extreme ambivalent
hostility, resentment of dependence, and self pity.

22 DN PASSIVE REJECTION OF POPULARITY, GOING IT ALONE: often
inferred from behavior that seems depressed, sad, resentful; correlated
characteristics may include social introversion, a lack of social responsiveness,
motivation may include concealed envy, "sour grapes" attitude resulting from a
failure to attain social success, a feeling of loss of a valued part of the self, a
tendency to withdraw and mourn the loss; attitudes may tend to devalue
physical attractiveness, social-climbing techniques, attractive clothes, cars
houses, and other possessions that may assist popularity; the self may be
demeaned or made unattractive.

23 DNB ADMISSION OF FAILURE, WITHDRAWAL OF EFFORT: often inferred
from behavior that seems to indicate a feeling of alienation both from the task
and from other group members; quitting the task, actually trying to leave the
group, absenteeism, slowdown of work, lack of participation, showing
discouragement and dejection, absent-mindedness, preoccupation; motivation
may involve factors outside the group, or in it, such as fatigue, standards of
success set too high, failure or fear of failure, disagreement with direction of
group goals, or conviction that group goals are impossible, or that the means
employed will fail.

24 DB PASSIVE NON-COOPERATION WITH AUTHORITY: often inferred from
behavior that seems similar to "nonviolent resistance;" may be motivated by a
conviction that what is being required by authority is wrong, or that particular
group goals or conventions are wrong, but that one should be "civil" in
Appendix B (continued)

disobedience—one should seriously advocate a different set of values; may proceed from a history or experience of injustice, or from present demands; may involve anxiety, fear of failure, moral disapproval, or fear of personal guilt if one conforms; attempt is to shame au-thority and avoid active punishment.

25 DPB QUIET CONTENTMENT, TAKING IT EASY: often inferred from behavior that seems to indicate that the person is quietly happy just to be with others--active participation is not required, either to please others or to accomplish group tasks; may occur in a relaxed period after a job felt to be well done, or may be a result of lack of experience as to what the task requires, lack of training or ability, temporary disability or illness; the group is felt to be friendly and protecting, resources are felt to be available, alienation from the task is not felt, identification with others in a similar situation is likely.

SUPPRESSION OF PERSONAL NEEDS AND DESIRES: often inferred from behavior that seems markedly introverted, passive, uncommunicative, inexpressive, inhibited; may proceed from a conviction that any active effort, any desire or feeling that may lead to active effort, will result in failure, frustration and pain; therefore all desire, aspiration, effort, or attempt to change the situation or the condition of the self is given up; may result from repeated severe frustration; a kind of "learned helplessness" may set in, neither positive nor negative feeling about anything is expressed, the "self" is given up.

27 AVE AVERAGE: a value position too close to the center of all three of the major dimensions of polarization to be further classified; may result from a tendency both to approach and to avoid each of the polar value positions because of frustrating experiences in relation to each; may involve mental images of "horrible examples" of persons, philosophies, or ideologies at each pole that are rejected; may result in the inability to decide or to act, hence very low participation in the group, or may at times appear as a tendency to switch back and forth on issues, disagreeing with others no matter which side they may take.
APPENDIX C
QC/QWL Value Sheet

Name: ____________________________  Committee: _______________
Years of service: _____________  Time on Committee: _____________

1. What is the purpose of QC/QWL:

2. Have you noticed a change in attitude or increase in trust between labor and management due to QC/QWL:

3. What are the non-member's attitude toward QC/QWL:

4. Do you meet with the employees you represent or do they seek you out to discuss a topic:*

5. Do most topics come from labor or management:*

6. Is time wasted in QC/QWL meetings:

7. Is QC/QWL a way around the union:

8. Why does the company/city have the QC/QWL program:

9. How is conflict handled in the meeting:

10. How are topics chosen for discussion:

11. In the QC/QWL meetings, what is the:
    a) Role of union:
    b) Role of facilitator:
    c) Role of management:

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12. Are the topics centered on work or the environment:

13. Are there topics that should not be discussed:

14. What is "success" for QC/QWL:

15. What would you change in the program:

16. Why does QC/QWL work:

17. What would happen if the QC/QWL program ended:

18. What do you think about the committee structure:* 

19. Define QC/QWL:

*asked of QWL only
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