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ALMIRA ASTUDILLO GILLES

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By

Almira Astudillo Gilles

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ABSTRACT

A SOCIAL EXCHANGE APPROACH TO WORKER PARTICIPATION

By

Almira Astudillo Gilles

Organizational theorists have developed numerous and sometimes divergent views concerning the dimensions of worker participation. This study analyzes participation using the framework of social exchange theory and contrasts this perspective with existing cognitive, affective, and contingency models of the participation process. The social exchange model presented here defines worker participation as a series of exchange transactions between management and employees. Three hypotheses are tested: (I) An individual's contribution to a participative exchange is the result of his or her utility calculation; (II) Interactions are perceived to be successful if resources or the control over resources are mutually exchanged. These resources are categorized as pecuniary, career or advancement, and socialization items; and (III) Successful interactions will be beneficial to the parties involved, participants will have high levels of involvement and will be allowed more access to decisions, and a wide range of issues are addressed.

Data from focus group discussions and interviews with company officials were used to construct the survey form. The survey was then administered to supervisory/managerial

and nonsupervisory personnel at two sites. Scales were constructed to represent the different perspectives in Hypothesis I and the item categories in Hypothesis II. Reliability coefficients were computed for all scales, and regression analyses conducted for the three hypotheses. For Hypothesis I the dependent variable is expressed involvement and the predictors are position and department of respondent, along with cognitive, affective and social exchange variables. For Hypothesis II the dependent variable is success and the independent variables are the "currency" items mutually exchanged. For Hypothesis III the dependent variable is success and the predictors are actual involvement, access to decisions, range of issues addressed, and success of coworker relations. Trust in supervisor, good coworker relations, and influence are significant social exchange factors. Respect is an important affective factor, and job satisfaction and increased job knowledge and skill the most important cognitive factors. The most valuable items exchanged are information, the opportunity to improve job performance, the opportunity to help others, and commitment to the exchange partner. Success is tied to high access to the decision making process.

Worker participation is a complex phenomenon and research would benefit from a pluralistic approach that spans multiple levels and perspectives. Social exchange theory has much to offer and should be pursued at a deeper and broader level.

For Mama and Papa, with gratitude and love

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CHAPTER 1

INTRODUCTION AND OVERVIEW

This study investigates the process of increasing worker participation in a firm's decision making process by modelling worker participation programs as a series of exchange transactions between employees and management. The proposed model assumes rational behavior from these parties. Rationality in social exchange theory requires only that (1) actors have a set of values, goals and purposes and that (2) their behavior be consistent with these (Harsanyi, 1977). This paper suggests that a party's decision to contribute to an exchange is the result of a benefit-cost assessment of motivational, contingency, and social exchange factors. These factors come from models of the participative process which concentrate mainly on the link between participation and worker satisfaction and productivity. Cognitive models suggest that participative management is viable because it enhances the flow and utilization of important information in the organization. Affective models propose that participation will lead to greater attainment of higher order ego needs such as self-expression, and these in turn lead to increased morale and satisfaction. Contingency scholars suggest that it is not possible to develop models

of participation that will hold across all individuals and situations, and offer theories which center on the decision situation, relationships and values, among others.

Worker participation is referred to here as the employee's formal or informal, direct or indirect contribution to a participative relation between the employee and management. This conceptualization of worker participation is based on the tenets of social exchange theory which, in its classical formulation, focuses on dyadic interactions motivated by the pursuit of self-interest (Homans, 1961). Such a relation is initially asymmetrical and consists of an independent series of transactions between the two parties that involves the actual or potential exchange of organizational resources or control over resources.

This dyadic relationship between management and the workforce is conceived of as being defined and maintained by value calculations, interpersonal comparisons, and normative judgments. Based on the premise of social exchange theory that individuals seek valued outcomes, it is proposed that participation programs are successful to the extent that transactions are perceived by parties to be beneficial enough to sustain the exchange.

Specifically, the hypotheses to be tested are (I) An individual's contribution to a participative exchange is the result of his or her assessment of various factors that

constitute a utility or value calculation (using contingency, affective/motivational, cognitive, and social exchange considerations); (II) Successful participative interactions involve a two-way exchange of resources or control over these resources. These resources generally fall into the following categories: pecuniary items, career or professional advancement items, and socialization or humanistic items; and (3) Interactions perceived to be successful will be judged to be beneficial to the actors involved, will feature higher levels of involvement, will involve more access to decisions, and will cover a wider range of issues in the exchange interaction.

What the Proposed Model Offers

The construct of participation refers to a wide variety of human behaviors. Several studies have considered participation objectives and effects. Models of the participation process have focused on affective, cognitive, and contingency factors which mediate the participation-outcome relationship. This paper will primarily address the process of participation and investigate the value that these perspectives, along with social exchange theory, hold for the concept of worker participation.

The proposed model is different from past approaches to work participation in that it conceives of worker participation programs in terms of dynamic, emergent interactions between people, rather than focusing on formal

or prescribed structure. This is rooted in the relational tradition of communication where the role of human action in forging and maintaining communication linkages in enacting structure is emphasized (Monge and Eisenberg, 1987). Specifically, the proposed model (1) takes the relationship between actors as the basic unit of the participation activity; (2) introduces or makes explicit the rational character of actors in making decisions regarding participation; (3) describes the currency and terms of the exchange (quid pro quo exchange of extracontractual resources); and (4) analyzes successful participatory activities in terms of the dyadic exchange relation processes rather than focusing on formal characteristics of the participation activity itself.

Why Use Social Exchange Theory?

Social exchange is a formal theory which may be applied to many social research areas. It "attempts to account for the emergence, persistence and demise of sustained social relations (Emerson, 1987)." The most fundamental element of the social exchange model is the exchange relation, which implies not isolated events but a continuing series of opportunities, initiations, and transactions. In Emerson's words (1972a:46) the concept of an exchange relation "links each transaction to a history and a future for specified actors, emphasizing a more or less durable social relation between actors with behaviors significantly modifiable

across time." Blau (1987) observes that such concepts as marginal utility (from economics) can be adapted to explain noneconomic observations and serve as building stones for constructing rigorous, hypothetico-deductive theory.

This perspective is well suited to a study of participative processes because it focuses on the social relations of actors involved in sequential transactions. It also utilizes interfactional mechanisms that operate in workplace relations such as norms, value or utility and uncertainty. Social exchange theory allows a researcher to dissect the dynamics of a participative work relation by looking at a critical element--each party's contribution to the relation.

How participation is conceptualized by a researcher is very much influenced by his or her value orientation and by what he or she considers to be appropriate outcomes. The proposed model provides a way by which the preferred outcomes and values of the parties involved (management and the workforce) are accommodated. The process of exchange proposed here follows an actor's behavior through a participative transaction, thus possibly providing a means of explaining and predicting "successful" outcomes. While this proposed approach is limited in its usefulness for drawing causal inference, it provides a starting point for investigating participation as a dyadic transaction or exchange of organizational resources.

Implications of the Study

The results of this study could have significant implications for both theoretical and applied work on participation. First, the proposed framework for the process of exchange builds from theories of behavior and cognition in the work setting, economics, organizational sociology and communication, and conflict bargaining and negotiation. It offers various extensions for small group and organizational communication theory, organizational justice research, and individual action models (e.g., uncertainty reduction) as applied to work organizations. This approach is different from existing models of the participation process because it addresses the complex and multidimensional nature of worker participation by turning to tested frameworks in other fields of study. Second, a major finding in this paper is that employees are less interested in obtaining tangible rewards such as extra time and are more concerned about adherence to normative values and smooth interpersonal relationships. This is evidence that the interactions which occur within a worker participation framework resemble social rather than economic exchanges. While both exchanges generate an expectation of some future return on contributions the exact nature of that return is unspecified in social exchanges. Furthermore, social exchanges do not appear to occur on a quid pro quo or calculated basis but are based on an individual's belief

that other parties to the exchange will discharge their obligations in the long run. This finding has research implications for participation and other areas in organizational sociology. The distinction between social and economic exchange parallels Rousseau's and Park's (1993) conceptualization of transactional and relational contracts. The former are short-term agreements specifying the limited involvement of each party and the latter are open-ended and long term. The data in this study point to the prevalence of relational contracts in participative relations which, because of its socioemotional content, diminishes the role that instrumental rationality plays in the participation process.

These results have implications for the applied setting as well. An understanding and acceptance of the contractual relationship might help managers in planning the reward structure of their participation programs and in evaluating its outcomes. The framework this model provides should heighten their awareness of their relationships with employees and their role in the exchange, and direct attention to workplace norms and individual values and preferences. No matter what the impetus for installing participation programs (material or idealist) this approach helps managers to realize that the attainment of "desirable" outcomes is decisively linked to the quality of the exchange relationship, perhaps even more than to the desirability of

the outcome.

Relevance of Research in this Area

Participatory practices continue to be implemented in the U.S. and abroad, which suggest a strong belief that participation is desirable. Empirical links have been made between participation and outcomes such as job satisfaction, work motivation, increased productivity, and increased communication. Researchers and practitioners will no doubt benefit from an increased understanding of the relationships which comprise the inner mechanics of the participation process. The proposed model also builds on industrial relations systems research, such as how stable participation activities meet the interests and expectations of parties in the system (Cutcher-Gershenfeld, 1991). The model attempts to describe how these interests (values) are translated into action, by using the principle of rational behavior and observing the social context in which exchanges are embedded.

Finally, this study heeds the call for research that uses communication theory to study participative process. (Monge and Miller, 1988).

Research Strategy

In order to test the proposed model of participative exchange, data was collected from organizations with formal participation programs (with officially recognized

structures and procedures), although informal structures and processes were studied as well. Qualitative data (information used for the construction of the survey instrument) was collected from three sites, the maintenance and engineering divisions of an airline company, an engineering firm, and a hospital. Quantitative data (survey data) were collected from two sites, the airline company and a tools manufacturer. Quantitative data consisted of individual responses in a survey. Qualitative data consisted of interviews with key personnel, focus group discussions, and archival data.

Limitations of Study

External Validity

Cook and Campbell (1979) carefully distinguish between generalizing to populations and generalizing across populations, although both are germane to external validity. The former is crucial for ascertaining whether any research goal that specified populations have been met, and the latter is crucial for ascertaining which different populations (or subpopulations) have been affected by a treatment (i.e., assessing how far one can generalize).

This can be restated as dealing with the problem of knowing whether findings of a study are generalizable beyond the immediate sample of the study. The main concern is that the narrow and unique character of actors and their environment significantly limits the generalizability of

research findings. This concern relates to the general controversy over the extent to which limitations in the representativeness of sampling restricts generalizability. In this case, the concern would be whether the findings can be generalized to other organizations, workers, settings, since the firms would be selected primarily on the basis of convenience (with a few requirements). Bass and Firestone (1980) have argued that limitations in the sample do not restrict the generalizability of the findings unless there is some theoretical or empirical basis for expected certain relationships. "Ultimately, generalizability is an issue for future investigators to demonstrate, either by showing that patterns of relationships remain invariant across research settings or respondent characteristics, or by providing a sound theoretical rationale for inferring similarity of relationships (p. 464)". Likewise, Tunnel (1977) has argued that external validity cannot be achieved in a single study.

Similarly, Calder et al.(1982) assert that while background factors should be contained in testing practical interventions, they have no place in theory testing. Berkowitz and Donnerstein (1982) similarly claim that theoretically oriented studies need not be as concerned about the representativeness of the sample used as they should be about the internal or construct validity of their operationalizations. Cook and Campbell (1979) and Calder et

al. (1982) argue that external validity is not necessary for achieving a rigorous theory test and may be sacrificed in favor of the other types of validity.

Construct Validity

A possible problem arises when a researcher fails to develop a sufficiently operational set of measures and when "subjective" judgments are used to collect the data. This study might suffer from this primarily because part of the study is phenomenological, allowing respondents to define important variables in the participative exchange. Thus, where possible, multiple sources of evidence were used when collecting information for questionnaire construction. Also, potential factors were identified a priori and included in the quantitative phase, which should provide a more systematic measurement of possible relationships between variables.

Reliability

To satisfy the objective of reliability the researcher must demonstrate that the operations of a study could be repeated, with the same results. Since data will be collected at one point in time, observations made at that time may differ from data collected at another time (during replication) due to the effects of maturation (employee perceptions change as programs develop in time) or history (an organizational event, such as unionization, could alter

employee perceptions). This threat was diminished by operationalizing as much as possible and by reviewing archives and other documents to get a sense of changes that have occurred in the past and linking these to possible changes in behavior. Key personnel have been interviewed to collect more insights on employee behavior during critical events and over the course of time.

Level of Analysis

One last issue in this study concerns the unit of analysis: the dyad. While it is the belief of the researcher that this substantive model can best be tested by focusing first and foremost on the basic unit of social exchange interaction--the dyad--there is a question of generalizability to other levels of analysis. Dyads are embedded in networks, so participative dyads are embedded in participative networks, which are in turn further embedded in organizational structure. Kenny (1988) states that human behavior simultaneously operates at multiple levels, and that in two-person (social) interactions, the two persons' behaviors are a function of two levels: the individual and the dyad. Therefore, one cannot use an "either or" approach (behavior is either at the individual or at the group level) but must simultaneously study variables at multiple levels. This study will attempt to uncover the processes and structures of dyadic interaction (and individual action embedded in it), and then call for extensions of the model

to network interaction in work participation exchanges.

CHAPTER 2

LITERATURE REVIEW

The Construct of Participation

The organizational studies literature shows that worker participation is not a unitary construct but is associated with different forms and outcomes. This raises the possibility that aggregating finding s across studies will yield misleading results unless the elements of participation are specified. Therefore, this study will present conceptual distinctions among perspectives on participation before proceeding to the proposed model.

Dimensions of Participation

Research on participation can be classified into three groups: (1) those who focus primarily on the participatory process; (2) those who analyze participation effects; and (3) those who study participation objectives. In general, these efforts have considered the various dimensions of participation, as follows:

> 1. Values, assumptions, and goals of implementors: social theories consisting of democratic theory,socialist theories, human growth and development theory, and productivity and efficiency orientation (sometimes called the 'management' school);
> 2. Properties of participation: Formal-informal; direct-indirect; access to decision; decision content, importance, and complexity; and social range (range of people involved and the extent of their participation);

3. Contextual boundaries: Characteristics of society; focus organization and other relevant organizations; and groups and individuals within organizations;
4. Outcomes: Individual, group, organization, and society.

Mason (1982) also talks of other dimensions: (1) scope of participation (number and type of issues available for the workers to determine, which vary among different organizational levels); (2) intensity of participation (psychological involvement of individuals in the act of participation); and (3) quality of participation (whether the activity on the part of the workers actually has an impact upon decisions made within the workplace).

Process of Participation

Theoretical models used to explain the process of participation include cognitive, affective, and contingency frameworks. Cognitive models suggest that participation is viable because it enhances the flow and utilization of important information. Theorists supporting this model (e.g., Anthony, 1978; Frost et al., 1974) propose that workers typically have more complete knowledge of their work than management does, so if they participate in decision making decisions will be made with a better pool of information. In addition, the model suggests that if employees participate, they will have better knowledge for implementing work procedures after decisions have been made (Maier, 1963; Melcher, 1976). The validity of these premises depend upon whether greater understanding is

actually achieved by participation and the degree to which full understanding is crucial to job performance. Affective models link participation to organizational outcomes through affective mechanisms, commonly used by human relations theorists (Likert, 1976; McGregor, 1960). They propose that participation will lead to the attainment of higher order ego needs such as self-expression, respect, independence. In turn, the attainment of these needs will lead to increased morale and job satisfaction. Affective models also propose that participation will lead to higher levels of productivity through intervening motivational processes. Motivational factors such as increased trust and sense of control may lead to less resistance to change and, ultimately, to more productive and efficient outcomes. Other motivational factors which lead to greater acceptance of organizational decisions and changes are group pressure and support and increased identification with the organization. Scholars who use the contingency models of participation argue that it is not possible to develop models which hold across all individuals and situations, and organizations whose internal features match the demands of their context will achieve the best adaptation. These theories center on personality (Vroom, 1960), decision situations (Vroom and Yetton, 1973), values of workers (Hulin, 1971). Vroom (1960) has found mixed support for the mediating effects of personality on productivity and

satisfaction. Some theorists suggest that the type of problems dealt with at various levels of an organization makes participation appropriate or inappropriate (Vroom and Deci, 1960). They suggest that participation may be less applicable at lower levels of the organization where functions are routinized, rather than at higher levels where problems are complex. Several scholars (Hulin, 1974) suggest that values mediate the participation-outcome relationship; for example, participation is more effective for certain types of organizations (such as research or service organizations) and positions of employees (middle and upper level positions).

Effects of Participation

Participation effects (which may also be called outcomes or objectives) are explained by the following models: (a) attitudinal (such as resistance to change, job satisfaction, job involvement, organizational commitment); (b) cognitive (increased utilization of information from lower levels of hierarchy, and downward dissemination of information); (c) behavioral (generally leads to higher levels of productivity).

Dachler and Wilpert (1978) developed a system of classifying participation activities according to function and ultimate outcomes. They classified participation schemes into four categories, according to purpose: human growth and development, productivity and efficiency,

workplace democracy, and socialist ideology. Human growth and development theories assume a basic hierarchy of needs which culminates in a need for self-actualization or growth. These theories have discussed participation as one among several means of overcoming debilitating effects of traditionally designed organizations on their members. The productivity and efficiency rationale for participation seeks an instrumental understanding of individuals and believes that people are capable of maximum output through social technologies. Participation is assumed to address the problems of alienation, dissatisfaction, and lack of commitment and the resulting cost of reduced efficiency and lower quality and quantity of production. Participatory democracy has focused on self-governance as a social value, although this school is characterized by conflict over the viability of social systems in different contexts. Generally, the societal outcome anticipated is self-determination in all aspects of collective life, based on the belief that the vast potential of individuals represents a good basis for wise and effective social decision making. Socialism gives work and the production process a central role in explaining human personality and social processes. The common arguments common to various forms of socialism refer to the alienation of producers from themselves as a result of the dialectical relationship between capital and labor. A central assumption in the socialist literature is

the potential of people to become economically liberated by participating actively in the production process, ultimately controlling it.

Social Exchange and Allied Theories

The basic tenet of social exchange theory is that the interest of parties lead them to carry out exchanges that redistribute resources contained in a system. A system is usually defined as consisting of actors, resources or events, and an initial distribution of control of resources among actors. In a simple system of action containing only an exchange process, four concepts are linked: interest and control, both of which specify the relation between an actor and a resource; and power and value, which characterize actors and resources in relation to the system of action as a whole. Thus, the function of an exchange in a dyadic interaction would be determined by the power-dependence relations of actors, possibly along with balance, cohesion, and equality-equity objectives.

In various forms of the social exchange framework, the longitudinal exchange between two specific actors is the central concept around which theory is organized. With interpersonal process as its substantive focus, the research questions that have commanded greatest attention have been equity (Adams, 1963; Walster, 1975; Cook and Parcel, 1977), distributive justice (Homans, 1961), and power and exploitation (Blau, 1964; Emerson, 1962, 1972).

This implies that the process of exchange involves an interpersonal comparison of benefits expected from the interaction. Such a comparison requires a concept of subjective value or utility. Emerson (1987) begins to sketch a theory of subjective value or cardinal utility that consists of a set of actions, valued outcomes, opportunities and probabilities. He also distinguishes (1969, 1972) two different kinds of exchange situations: (1) distributive, where a single type of resource is exchanged among all actors in the system and where each actor places equal value in a unit; and (2) productive, where each actor contributes a resource unit which has no inherent value unless combined with other resources to create a joint product.

Other substantive issues addressed by social exchange research are the construct of value (Emerson, 1987), free riders, interactor-dependence, power structure, and power use, network exchange, legitimacy, justice, and productive exchange.

Rational choice theory presents another framework which utilizes the principle of utility maximization. It emerged in American sociology in the late 1940s and early 1950s in response to Talcott Parson's social theory (e.g., Homans, 1950; Collins, 1988). In American political science, public choice theory emerged a generation earlier in response to the then dominant institutional approach.

Rational choice theory is the formal elaboration of the

theoretical structure of decision- and game-theoretic constraints on utility maximizing actions (Bohman, 1992). The theory specifies that in acting rationally, an actor is engaging in some kind of optimization expressed either as maximizing utility or minimizing cost. What gives rational choice theory its power is that it compares actions according to their expected outcomes for the actor and postulates that the actor will choose the action with the best outcome. At its most explicit, it requires that costs and benefits of all courses of action be specified, then postulating that the actor takes the "optimal" action, that which maximizes the differences between costs and benefits (Coleman and Fararo, 1992).

The difference between the older social exchange theory and present-day rational choice theory is that the classic social exchange formulations of Blau and Homan focused on the transition from the actor in a situation to the coupling of such actors to constitute a social network of interactions, leading them to deal with the social interaction in detail. Present-day rational choice sociologists present a somewhat different view of micro-to-macro transition, with a principal interest in systemic outcomes. They focus on sociological analyses directed to accounting for historical phenomena often large in scale. For such work, micro-to-macro transition mechanisms are required that can treat interdependence without attention to

moment-to-moment flow of interaction among actors. Social exchange theory tradition has evolved into a exchange network paradigm (Cook and Emerson, 1978; Markovsky, Willer and Patton, 1988) which focuses on differential power as a function of network position and its impact on exchanges.

There is an ongoing debate about whether rational choice explanations are psychological explanations (see Satz and Ferejohn, 1994, and Hausman, 1994). The central thesis of Satz's and Ferejohn's externalist position is that rational choice explanations are often best understood as not relying on any claims about individual psychology. The central argument for externalism rests on the possibility that, in certain environments, different sets of preferences, beliefs, and acting on these preferences and beliefs will result in the same outcome. Hausman's internalist position claims that rational choice explanations are psychological because an individual's choice is determined by his or her rational preferences among feasible actions, considering physical, biological, social, and psychological factors.

Industrial Relations

Research in industrial relations further illuminates the process of participative exchange presented here. Implicit in the proposed model is the assumption that each actor/party brings to the relation his or her own set of interests and values, which are not necessarily in line with

the interests of the other party in the dyad. This is consistent with the mixed-motive assumption in industrial relations research on interactions (Cutcher-Gershenfeld, 1991) where stakeholders in an employment relationship are observed to not have just conflicting but consensus motives as well. He observes that cooperative features of participation confront the conflictual features of the employment relation. A participative structure imposed on a superior-subordinate interaction requires the cooperation of both parties, but it does not ensure it. The proposed model argues that each party assesses costs and benefits, tests these against the formal structure and process provided, then adjusts behavior. Where motives or goals of parties are similar or do not conflict, and assuming that the participation program is structured to realize these motives, it is likely that the program will be judged to be successful by the participants. In the case where interests are contradictory or the program cannot accommodate these goals, the situation would be what industrial relations literature would describe as descending towards 'conflict resolution,' probably involving negotiation and mediation behavior. Walton and McKersie (1991) conceive of labor negotiations as social negotiations where there is deliberate interaction between social units attempting to define their interdependence. Their delineation of this complex interaction is an appropriate description of the

proposed model as well. They believe that (1) the agenda contains both conflictual and collaborative items; (2) negotiations involve not just substantive items but attitudes, feelings, and the tone of relations. Similarly, the model incorporates substantive, behavioral, cognitive, attitudinal, contingency, and normative factors into the process; and (3) constituent members have some influence over the negotiators. The primary negotiators of the participation relation would be the employee and his or her supervisor/manager, and constituent members would refer to management.

The influence of industrial relations research on the proposed model can best be ascribed to the fact that the process of participative exchange is really one of "constructive" negotiation. The term "constructive" is used because the participation program is usually installed by management in order to increase employee involvement in the decision making process and is intended to be a cooperative venture. It is a process of negotiation because each party (either overtly or covertly) behaves in such a way so as to maximize utility from what is essentially a quid pro quo interaction. Social exchange theory posits that relationships are asymmetrical in power distribution, and the resulting exchange is a process of attempting redistribution of power (or resources, or control over such resources).

Measurement and Methodological Issues

Participation

Measurement and methodological issues revolving around participation vividly reflect various attempts at definition, description, and classification of the construct. Dimensions discussed in the literature are: (1) direct-indirect (experienced by individual workers through personal and small group opportunities); (2) formal-informal (base of legitimization is an explicit system of rules or consensus emerging upon interacting members; formal bases can be legal, contractual, or management policy); (3) reference unit (individual, group, organization, institution, society, multi-reference); (4) voluntary-de facto (policy formulated to address recognized needs by actors or participation by virtue of role in group or organization or by association/membership); (5) context (work organization, social or civic organization, societal institutions); (6) content of decision (e.g., routine personnel functions, work itself, working conditions, company policies, and (7) outcomes or effects.

One ongoing debate in the literature concerns the link between participation programs and increased productivity and job satisfaction. Researchers have raised questions about the ability of participation programs to affect performance and satisfaction (Ferris and Wagner, 1985; Locke and Schweiger, 1979). This is an important methodological

and conceptual issue because inward performance and satisfaction is used as the rationale for the implementation of various forms of participation programs. However, inconsistencies in the literature on these outcomes have led theorists to question whether research has shown evidence of substantial relations between participation and performance or satisfaction (Chalos and Hakka, 1991; Yammarino and Naughton, 1992 are two examples.) Wagner (1994) has demonstrated that the average effects of participation are so small (although statistically significant) as to raise questions about practical significance). He offers the explanation that differences in the way participation is defined can lead to different results. The use of broader definitions of participation (such as those that include consultation and delegation) leads to more support for the participation-job satisfaction and performance relationship (Leana, 1986, 1987; Vroom and Jago, 1988).

The data collection method generally used is the questionnaire, which is subject to attribution, salience, and priming. Jago and Vroom (1975) report a response tendency to view one's own behavior as more participative than others view that behavior. This would lead to inflated self-reports of actual (sometimes referred to as 'objective') participation. French et al., (1966) even argue that objective participation operates via psychological (perceived) participation. If this were true

(although evidence is mixed) then the question of how to disengage objective from psychological would require other methods (possibly qualitative ones, such as systematic observation, research interviews).

There is the issue of interaction between different levels of analysis in the measurement of the construct. Although individuals in dyadic relationships are the reference unit of concern in this question, some studies (e.g., Lawler, Ledford, and Mohrman, 1989) define individual participation in terms of corporate participation programs, which lead to several problems. The first concerns the individual participant. A bias present in perceptual measures of influence is the performance cue effect. When a theory of behavior is close to common sense or cultural dictates, survey researchers may find it hard to distinguish between actual events and the lay psychology of behavior (Staw, 1986). Staw (1975) conducted an experiment to test this and found that subjects in successful groups rated their groups more positively on all dimensions commonly believed to foster effectiveness. Second, participation measured as a subjective employee perception may also be confounded with other job attitudes, especially work satisfaction. Also, measured as an 'objective' company characteristic (e.e., on the basis of managerial responses), participation may not correspond to employee experiences. This indicates a level of analysis issue: that at each level

of analysis at which important and interesting research can be conducted, the next larger unit in which the behavior is embedded will also have an impact. Another problem lies in the concept of "nonparticipation." Leitko, et al., (1985) note that nonparticipation is the modal response of workers to participation schemes. For workers who never had any experience with substantial participation, questions as to desire for participation are essentially hypothetical. By contrast, the attitudes of workers in other countries such as Germany or Yugoslavia who already are exposed to forms of participation, may be shaped by their particular experience and not indicate desire for participation in the abstract. It is also very difficult to define and measure nonparticipation. What constitutes it? Is an individual who says he or she is not participating actually participating less? Measuring the absence of something often brings its absence to the attention of the individuals involved, confounding the measurement itself. Further, it seems likely that some social desirability effects may be linked to participation, and individuals may be reluctant to admit that they are unwilling to participate (McCarthy, 1989).

Social Exchange Theory

Emerson (1987) claims that the starting point for interpersonal comparison of utilities is the measurement of the optimal level of valued outcomes across domains. This

raises two issues. The first is best addressed by Emerson's own statement that the only way to observe optimum levels would in the absence of environmental constraints, with simultaneous opportunities in all domains and over a period of time. This means that the possibility of measuring this baseline independently of the action it informs is of paramount importance--possible only in the laboratory. If such measurement were possible, then it would be feasible to make a priori judgments about an actor's probable course of action. However, the best approach to studying participation within a framework of social exchange requires a focus on dyadic relationships in the workplace. A second related issue is that in an exchange relation, knowledge of actors' utilities is required for interaction. However, interpersonal comparisons of utility would require a nonarbitrary origin, and Emerson notes that whether or not actors do value the same domains remains an empirical question. The latter brings us back to the previous difficult issue of baseline measurement.

Emerson's (1987) theory of value does not clearly specify the determinants of value. That value may be composed of need, objective probability, and uncertainty is not controversial. However, it may be useful to know if there are commonalities of needs that may be identified in advance, or ways of judging probabilities and uncertainties. Also, there is the problem of how to link given needs,

probabilities and uncertainties with specific values.

A similar problem arises when considering the major reward-cost formulations of distributive justice (Homans, 1961) and equity (Adams, 1965). In their theories, Person P and Other O compare their respective "profit" to "investment" ("outcome" to "input") ratios. When the comparison discloses profit proportional to investment, P and O are predicted to judge the circumstances as just or equitable. But when the comparison discloses either under or overreward relative to investments, P and O are predicted to view the exchange as inequitable.

The major criticism directed at the preceding reward-cost formulations and other similar exchange propositions is that they limit focus to a local interpersonal comparison undertaken by P and O. As discussed earlier, status value theorists (Berger, Zelditch, Anderson, and Cohn, 1972) argue that such a comparison cannot result in stable unambiguous meaning. Rather, a comparison made in isolation from a wider normative context surrounding the P-O relationship is "anomic" and meaningless. Justice evaluations can be meaningfully made only in terms of a commonly understood and accepted structure of social knowledge. Such a structure is composed of known kinds of persons similar to P and O, who possess general status characteristics, and who obtain general levels of status rewards.

The core issue, as Stolte (1987) puts it, is that

justice evaluations are closely bound to legitimacy. Generalized norms, explicit and formal or implicit and informal, are required. Stolte (1987) develops this aspect more fully by specifying the formation, acquisition and activation of different justice norms, including equality and equity.

There is still some controversy over the methodological issue of linking microsociological and macrosociological theories. Most theorists argue that there is a large gap between explanations of micro- and macroevents. Blau (1987) believes that the two involve incommensurate conceptual schemes. He suggests that basic concepts of microanalyses, such as reciprocity, obligations, or network density do not dissect social interaction and role relations between individuals and are therefore not relevant for macroanalyses. At the same time, basic concepts of macroanalysis, such as heterogeneity and inequality are emergent properties of collectives that cannot relate to individuals. Similarly, Gillmore (1987) says that macrosociological theories do well at explaining how structure constrains choices while microsociological theories inform us about individual decision making. However, Blau (1987) believes that macrosociological analyses cannot be built on microsociological analyses because the sociological processes with which microsociology is concerned are not the foundation of the conditions that

produce the social structures analyzed in macrosociological studies. Gillmore (1987) believes that with the concept of "exchange network" it is possible to explicitly link interpersonal events to group level phenomena, while at the same time examining the effects of social structure on individual decisions.

A major characteristic of research conducted on social exchange theory is that the majority of these studies are conducted in the laboratory, as is the practice with most social psychology experiments. The principal controversy surrounding the use of laboratory experiments revolves around a lack of external validity. As Campbell and Stanley, (1966) originally used the term, external validity refers to the potential for generalizability. Specifically, the question of external validity refers to the degree to which the effects demonstrated in any study may be generalized to other populations, settings, treatment variables, and measurement variables.

Controversies have arisen with respect to two different aspects of external validity. One refers to the artificiality of the laboratory setting, where the experimenter is unable to create conditions within the laboratory that resemble those found outside the experimental setting. This issue becomes salient especially in value and justice issues; the previous discussion on these concepts reveal that actors operate according to a

complex configuration of norms and values which would be difficult to approximate outside a particular field setting.

Rebuttals to the problem of artificiality include the observation that it is irrelevant when it comes to the major purpose of laboratory experimentation--theory testing. Carlsmith, Ellsworth, and Aronson (1976) distinguish between experimental realism and mundane realism, and state that the major purpose of testing theory is to faithfully operationalize relevant variables (experimental realism) regardless of whether or not it duplicates characteristics of certain laboratory settings (mundane realism). The current status of the controversy is that it is generally accepted practice to use both sites since each has valuable lessons to contribute to knowledge accumulation.

Other issues of external validity were discussed in Chapter 1 under "Limitations of the Study."

CHAPTER 3

RESEARCH MODEL AND HYPOTHESES

Definition of Terms

Worker participation will be defined here as the employee's direct or indirect, formal or informal contribution to a shared decision making process between employee and management. This definition of worker participation includes interactions between management and employees that occur outside of a formal program but are participative in nature (i.e., informal channels which allow employees input into decision making). Individual input is iterative and may be increased, decreased, maintained and withdrawn.

A relation is an exchange opportunity between a pair of individuals or corporate decision making parties. A participative exchange relation is an independent series of transactions in a decision making structure, which involves the actual or potential exchange of organizational resources or control over these. This dyadic relation consists of actors (employees and management), resources/events, and the initial distribution of control over resources (Coleman, 1990). It is this relation which serves as this study's conceptual and empirical unit. It is distinct from other

organizational relations in one aspect: it is a relation of mutual, although initially asymmetrical, dependence. Unlike relations based on authority or expertise systems, the participative exchange requires that each party recognize and accept the importance of the other's contribution so that the relation may continue. The exchange relation is bounded not only by formal and legal procedures but also by social parameters such as norms of equity, equality, and reciprocity. Without this recognition and acceptance of mutual dependence, the participative relation becomes merely one of many social relations that occur at the workplace.

The power of each actor in a participative exchange dyad resides in his or her control of valuable events and resources, and the value of an event or resource lies in the interests that powerful actors have in that event or resource. The exchange relation is initially asymmetrical since management defines these four elements.

Participation in an exchange requires different contributions from actors. The exchange may dispense rewards systematically and be bound by formal procedure or may be more informal and not have a reward structure.

A worker participation program is a series of opportunities between management and the rest of the workforce (or a part of it) for employee input into decisions that affect their jobs. It consists of relations between management and employees (or their respective

representatives), officially recognized by both, with potential for the exchange of resources. As mentioned earlier, an exchange relation is governed by structures and processes of a formal participation program but is influenced by an informal set of values, needs, and relationships.

Process of Exchange

This study focuses on process aspects of participation. It investigates how social exchange, cognitive, contingency and affective processes operate within the context of a formal participation program. The social exchange aspect of worker participation proposed here is based on a theory of individual rational action and dyadic organizing. (Please see Figure 1, Diagram of the Process of Exchange, at the end of this chapter.)

The first set of variables consist of involvement of a worker in participation programs as the dependent variable and social exchange, cognitive, affective, and contingency factors, as independent variables. Position of respondent and department (function) are treated as control variables. The second set consists of the dependent variable, perceived success of worker participation programs and the following independent variables: the exchange of specified items (pecuniary, career advancement and socialization), cost-benefit assessment, scope of decisions (range of issues), access to decisions, and actual involvement in the program.

Rational Action

The proposed model of participation could be described as a behavioral theory of choice that takes as a starting point the general principle of rational behavior. The current literature shows that, depending upon the participation model one chooses, the mechanisms that operate to bring about outcomes may be cognitive, contingency, or affective. This study proposes that underlying participative behaviors is a general principle of utility-maximization, which involves a choice of the best means available for achieving a given end. The proposed model firmly plants the principle of rational action in a framework of participative behavior. This implies a normative or prescriptive concept of rational behavior (goal-directed action). Actors could be described as having a single rational principle of action, that of acting so as to ultimately maximize the realization of their interests in a consistent manner. Actors are connected to resources (and thus indirectly to one another) through only two relations: their control over resources and their interest in resources.

The concept of rationality in the social exchange perspective does not imply constant deliberation or conscious decision making (Emerson, 1987). The values involved in choices are products of long-term conditioning. However, conscious, calculated decisions are also made, and

these decisions are usually made within a value domain (which is a list of things that an individual values.) Two things are in the same value domain if acquisition of one reduces the unit value of the other (Emerson, 1987). Therefore, the actor is not "rational" in a narrow sense. It is recognized that while there may be no conscious attempt to maximize utility, an individual is still capable of effectively calculating appropriate line of action and engaging in problem-solving behavior.

The system of action this paper chooses to address is a pairwise exchange of resources. In the social exchange of resources other than economic goods, the resources exchanged may not have all the properties of private goods, but comparisons are nevertheless made. The interests of actors lead them to carry out exchanges that redistribute the resources contained in the system. Management may redistribute time and capital in the pursuit of productivity. Workers may redistribute time and effort in the pursuit of personal financial gain.

Dyadic Organizing

The model proposed here utilizes Graen and Scandura's (1987) description of dyadic organizing (role taking, role making, and role routinization). The first stage is the role-taking or sampling phase. In the initial exchange the supervisor attempts to discover relevant talents and motivations (or resources and desires, in the proposed model

of participative exchanges) through iterative testing sequences. Since it is management who decides to install a formal participation program, the initiative to communicate the features of the program comes from them. The features of the program may be generally described as representing their expectations from employees. The employees also form their own expectations (implicitly or explicitly expressed) based on an assessment of the costs and benefits of the proposed exchange. It is at this stage where the behavior of utility maximization first comes into play. As mentioned earlier, this model of action requires a cardinal concept of utility or subjective value. In keeping with Emerson (1972), each actor is given a variety of opportunities which are connected to a set of possible exchange relations (i.e., opportunities to obtain valued resources from various sources). Alternatives are relations within the same exchange domain (offering "substitutable" resources). Domains are "points of articulation" (Emerson, 1972) between an actor's needs or values and sectors of the environment.

This cost-benefit calculation includes a consideration of individual and macrostructural factors. The set of internal considerations which drive the individual to action are: cognitive (Can I get useful information?), affective-motivational (Will it address my need for active involvement?), and contingency factors that focus on individual situations (How does my personality fit in?).

The second set of factors involves a macrostructure which imposes rules by which interactions proceed, and is inevitably shaped by past interactions. These external or macrostructural factors include organizational contingency factors (e.g., supervisory style), and possibly norms of equality-equity and reciprocity. (Since these norms are usually activated during role making, discussion will be postponed for that section.)

The last step in the sampling phase may include communication of expectations to the exchange partner. This communication may be formal or informal, reciprocal or one-sided.

The second phase is the role-making or development stage. During this phase, the partners evolve how each will behave in various situations and begin to define the nature of their relationship. Consequently, sets of interlocked behavior cycles that are mutually reinforcing emerge. This is typically the phase which requires the most active processing of information. Both actors decide on an action and implement it, and the rest of the phase is an evaluation of the consequences of this action, along with the corresponding modifications. Here, the costs and benefits are reality tested, along with preconceived norms and other variables expected to affect the process of exchange (affective, cognitive, contingency). The effects of the participative action chosen (behavioral, affective,

cognitive) become manifest and are considered in the cost benefit assessment.

One important factor to consider here is whether the actor is motivated primarily by self-interest and utility maximization behavior or is influenced by norms. The concept of a norm contributes to the principle of action. Social norms specify what actions are regarded by a set of persons as proper or improper. It is through the existence of norms that the role of the larger social network comes into play. Coleman (1990) says that a norm concerning a specific action exists when the socially defined right to control the action is held not by the actor but by others. This implies that there is a consensus in the social system or subsystem that the right to control the action is held by others. This is not a legally but a socially or informally defined right.

Norms that are expected to apply to the context of work participation are equality, equity, and reciprocity. For example, a profit-sharing plan may reinforce the expectation that all employees will have an equal share of company profits regardless of individual contribution, which would create a norm of equality. Or a Scanlon plan might allow management to allocate rewards according to group input or performance, reinforcing an equity norm, or expectations that rewards be distributed according to individual or unit effort or output. A norm of reciprocity has interesting implications for exchange behavior. There is marked

agreement among exchange theorists that the receipt of a benefit obligates the recipient to the benefactor. As Blau (1964:93) stated, "Social exchange involves diffuse favors that create diffuse future obligations." The obligation to reciprocate is clearly a major theme in the social exchange theories of Blau (1964), Levi-Strauss (1969), and Homans (1974). Blau (1964) and Mauss (1966) suggest that unreciprocated benefits create dependency on the part of the recipient and eventually power imbalance.

There are two types of exchange conditions. In a generalized exchange condition, the structure of the exchange relation mitigates against the direct reciprocation of resources. The debt can only be discharged through cooperation in a coalition endeavor that the benefactor is attempting to organize. Moreover, cooperation with a coalition-building attempt may also help insure the flow of future benefits. In the restricted exchange condition, however, one may immediately discharge one's obligation to reciprocate a benefit received because the exchange is bilateral and direct. There is no enhancement of cooperation in a collective effort because there is no future indebtedness.

If a norm of reciprocity is found to operate within a system (thereby affecting exchanges), analysis of exchange structures would be enhanced by focusing on dependence relations as affected by generalized or restricted

conditions. An individual's decision to contribute might be examined in the light of his or her perceived obligation to reciprocate because of structural conditions.

Gould (1993) makes a connection between norms and efficacy orientation in free-rider behavior. To summarize, he observes that fairness norms play an important part in collective action and that free-riding is less common among norm-oriented individuals. Whether individuals in participative exchanges resort to normative or self-maximizing behavior (or other motivating factors) is an empirical question to be answered in this proposal.

Aside from the norms mentioned previously, other macrostructural factors can contribute to cementing the relationship between the parties. One is commitment, which is defined psychologically as interpersonal trust and adherence to future obligations, or behaviorally as a tendency for an actor to continue to engage in exchange even in the presence of alternative exchange relations (Cook and Emerson, 1984). Commitment formation has important consequences for power processes in exchange structures. Power-dependence notions (Emerson, 1962, 1972) imply that the maintenance of access to alternative sources of valued resources enhances the actor's relative power. Differential availability of resources results in power imbalances within a network of connected exchange relations.

Another macrostructural factor is trust between

parties. Pennings and Woiceshyn (1987) argue that trust in organizations is a mode of control that is inherent in the relationship between interdependent individuals. They classify trust as: (a) institutional (which entails expectations about the behavior of role incumbents); and (b) informal or interpersonal (which involves specific rules and is unique to small networks of relationships, like dyads or face-to-face groups. Interpersonal trust enables individuals to define expectations of behaviors significant to others.) In institutional or formal trust, control is achieved through the repetition of particular behaviors, especially in a well-developed internal labor market or strong organizational culture. In informal or interpersonal trust, control is achieved through loosely coupled networks who develop specific interpersonal expectations that are idiosyncratic to that relationship.

The role routinization phase occurs after basic coupling is completed. This phase is characterized by functional interdependence, where mutual expectations become crystallized and coordinated effective behaviors are strengthened. This last phase may not occur, depending upon the stability of organizational conditions. Stability of conditions is affected by trust or commitment formation (aside from other organizational events) which makes the active processing of information that is characteristic of the preceding phase unnecessary. The effects of

participation are expected to persist given the course of action taken by the actors and the ultimate configuration of the relation. The role of cognitive, affective and contingency factors in the participation-outcome relationship becomes less salient since participative action is maintained by routine.

Assumptions

The proposed exchange theoretic approach to work participation is a model of individual action that focuses on an employee's behavior when presented with an opportunity to influence organizational decisions. In order to incorporate participative activity into the social exchange framework, the following assumptions will be made. First, it will be assumed that the individual is rational and seeks to maximize benefits and minimize costs. However, it will not be assumed that utility maximization is the only determinant of work behavior. This study proposes that although utility maximization is the underlying principle, other factors serve to mediate outcome and influence behavior. The literature on the process of participation presented in chapter 2 provides evidence for intervening cognitive, affective, and contingency mechanisms. The potency of these variables and the manner in which they interact with each other to activate behavior is an empirical question to be addressed in this paper. Second, it will be assumed that an employee's response to the

program is voluntary. The participation programs studied here are the result of managerial initiative, where the structure and procedures of the program are formally dictated by management. However, employees still retain the choice of withholding some resources, and there is generally no accurate method of judging employee contribution. For example, if an employee is required to participate in a quality circle system with standardized procedures he or she may physically comply with the requirements (attending meetings, filling up forms) but may decide not to volunteer all the information he or she has. There would be no way of ascertaining that the worker has indeed "fully" cooperated, i.e., given the maximum output he or she is capable of giving.

Therefore, when considering the voluntary-involuntary dimension of participation programs it is the belief here that there are no truly involuntary programs. An employee may be placed in such a situation but the individual contribution ("participation) is ultimately an individual decision. This issue eventually relates to the perception that the participative exchange is one of unequal dependence, where A's dependence on B varies with the value of the benefit B can provide and with the availability of the benefit to A from alternative sources. The base of power (the power of actors being equal to the value of the resources they control) of management lies in their ability

to provide extra resources to the employee (e.g., share of profit or productivity gains, more discretion in tasks than allowed in job specifications), while the base of power of the employee lies in their ability to withhold additional resources (e.g., useful suggestions that come out of spending extra time meeting with other people).

Second, the survey data consists primarily of respondent perceptions, which is assumed to approximate actual conditions. Unless the discrepancy between respondent perceptions and actual conditions (as reported by human resources personnel in interviews, and through the use of archival data) is large, it is beyond the scope of this study to investigate why such discrepancies exist between perception and reality.

It is important to recognize that values differ, and that action depends on his/her perception of events. This leads to another important variable, which is how informed or naive an actor is about the effect of his or her contribution to the exchange. Unless this contribution is made formal and explicit (written), actor perception of the dynamics of the exchange is what determines his or her behavior. The important element in value calculations and interpersonal comparisons is each actor's perception of the relation and its component, whatever actual conditions might be. Actors make judgments based on these perceptions, accurate or not, and the objective of this study is not to

explore the accuracy of perceptions but to understand motivations that drive the process of individual action and dyadic interaction.

Third, the decisions that are considered in the participative context refer only to work-related issues, and do not include activities that are not job-related.

Hypotheses

The thesis of this proposal is that an individual's contribution to a participation program is defined by his or her assessment of the costs and benefits associated with participation or nonparticipation. Specific hypotheses to be tested follow.

Hypothesis I: Utility

This hypothesis states that an individual's decision to contribute to a participative exchange is the result of his or her assessment of various factors that constitute a utility or value calculation. The following variables are expected to be considered in the cost-benefit evaluation:

1. Social exchange considerations:

    Subordinate's,
    a. Assessment that benefits of participating are greater than costs of participating;
    b. Assessment that benefits of not participating are greater than costs of not participating;
    c. Perception that returns are equitable (to each according to contribution);
    d. Perception that returns are equal (same for everybody);
    e. Commitment to coworkers;
    f. Commitment to supervisor/manager;
    g. Perception that program increases his/her

influence in work-related decisions;
h. Perception of his/her dependence on others to get work done;
i. History of favorable interaction with supervisor/manager;
j. Obligation to reciprocate;
k. Trust in exchange partner.

2. Contingency factors:
   a. History of favorable interaction with coworkers;
   b. Supervisor is supportive (external to individual);
   c. High decision quality (important decisions) covered by exchange (external to individual);
   d. High need for independence or control over one's work (internal).

3. Affective Factors: Exchange has produced
   a. More respect for subordinate;
   b. More opportunities for self expression;
   c. Increased job satisfaction;
   d. Increased morale;

4. Cognitive Factors: Exchange has produced
   a. Increased understanding of organizational activities;
   b. Increased information and skill required for job;
   c. Decreased resistance to change.

Hypothesis II: Currency

An individual perceives success in interactions where resources are mutually exchanged. The general categories of resources exchange are (1) pecuniary items (information, monetary incentives, mental and physical effort, time spent on participative activities alone); (2) career or professional advancement items (opportunities to improve job performance, influence decisions, professional growth, development of professional contacts); and (3) social or humanistic items (helping others, personal growth or

friendship, commitment to exchange partner, trust in exchange partner).

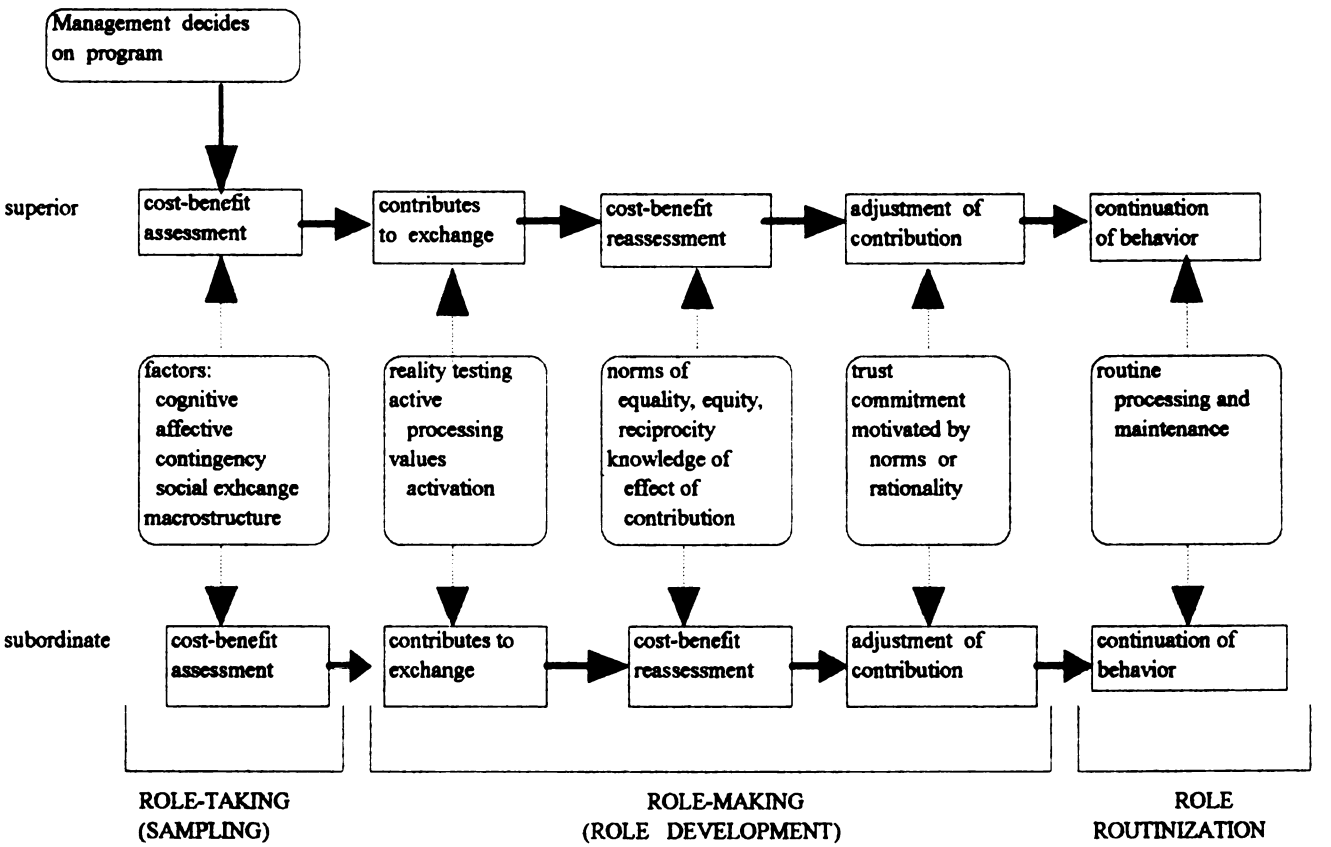
The motivation for acting on this last set of items may have intrinsic components as well. The calculus of reciprocity is difficult to understand in items where the value is intrinsic to the individual and where deliberation may be subconscious. Therefore, while this set of factors is conceptualized as an exchange item, it should be recognized that utility calculations may play a less visible role here than with the other currencies.

Hypothesis III: Successful Exchanges

Dyadic interactions perceived to be successful by the parties involved are characterized by: (1) extensive involvement by exchange partners in the exchange relationship (intensity of interaction); (2) high level of access to decision making process allowed to subordinate (quality); (3) wide range of issues covered by the exchange relationship (scope); (4) exchange relation is perceived to be mostly beneficial to parties involved; and (5) relations with coworkers are perceived to be successful.

Figure 1

Proposed Model of the Process of Exchange.



CHAPTER 4

METHODOLOGY

Sample

This study involves samples from two populations: the maintenance and engineering facility of American Airlines, and Company B,a Europe-based manufacturer of construction tools. It is a multi-case embedded design (with two levels of analysis: the individual, and the dyadic interaction between supervisor and subordinate). The respondent organizations have work participation programs in place (some have more than one program); each program is at a different phase of development and implementation.

The size of the sample taken from each population was determined by convenience, i.e., the number of respondents provided by the organization. In American Airlines the sampling frame consisted of a section of the maintenance and engineering facilities. Employees from six divisions were requested to join the survey, including six managers, twelve supervisors and nonsupervisory personnel. A total sample size of 241 was obtained, and the response rate on the survey questionnaires was 67%. The sample was predominantly male, which reflected majority gender in the workforce of this facility. Most of the workers in the population sample

have certificates or associate degrees in their specialized area of expertise. There were no engineers surveyed.

Survey forms were given to supervisors who volunteered to participate in the study, who in turn distributed the forms to their employees. Respondents were requested to complete the questionnaire during their free time,and most of the forms were returned the day after they were distributed.

The sampling frame in Company B consisted of all sections in manufacturing and engineering. The number of supervisory and nonsupervisory personnel who were given questionnaires is hard to specify because of the manner in which the forms were distributed. The questionnaires were given to employees as they left their shift by a human resources manager who explained to each employee what the survey was about. The manager did not keep track of the number of forms distributed. Also, the work system allowed employees to report to different managers and supervisors so it was difficult to keep track of individual superior-subordinate dyads. A total sample size of 43 was obtained. The response rate on the questionnaires was 22%. The workforce is approximately 40% female. As is the case with American Airlines, most of the workforce have certificates of associate degrees in manufacturing technology, except for the engineering department where the majority held more advanced degrees in engineering. This department also had

more employees of European nationalities than the other departments.

Profile of American Airlines and its QWL Program

American Airlines is one of the leading providers of air transport in the United States. In 1985, it surpassed United Airlines in passenger traffic and regained the number one title after twenty years. Last year, it posted sales of approximately 14.7 MMM. The major hubs are at Dallas/Fort Worth and at Chicago. It contracts smaller regional carriers (American Eagle partners) to feed traffic into the system.

The Sabre system of American Airlines is a computer reservation system which is regarded as the best in the industry. It allows agents to assign seats, book Broadway plays and lodging, send flowers to passengers. It is extremely successful in filling in American Airlines space efficiently and at low cost.

The Tulsa facility consists of a maintenance and engineering division, as well as administrative offices. Although there are many maintenance cities in the United States, Mexico, Europe, and Latin America, actual maintenance personnel in these cities may include as few as 30 mechanics. The Tulsa workforce is huge, consisting of 5,300 employees.

The Tulsa facility has many "participative management" programs in place, one of which is called "QWL," the object

of this study. QWL is approximately fifteen years old, and consists primarily of a central QWL team with representatives from the union and support staff, and QWL groups for each unit composed entirely of rank and file employees. The QWL program was initiated by top management without prior negotiation with the workforce; however, information about the pending program was disseminated company-wide. The QWL process consists mostly of monthly meetings where ideas are verbalized; only those with potential for acceptance are formalized in a request. Management approval is required for ideas which would involve expenditures. Access to the program is generalized (where participants may consider any issue) and direct (where participants are personally involved in discussions.) Although many issues are open for consideration the most common area is working conditions. Communication is usually bottom up where information is volunteered by the rank and file and directed towards management.

As mentioned earlier, QWL is one of five "participative" programs. The others are (1) IDEAAS IN ACTION, which is a suggestion system that rewards employees with successful ideas a financial remuneration amounting to 10% of first year savings, with a maximum of $50,000; (2) LEAAP, which also distributes individual financial incentives if the workgroup attains an increase in cost savings; (3) CDR, a career development program which

identifies skills needed for jobs and allows employees access to these jobs;(4) the Golden Wrench Award, which is a peer-nominated award system which recognizes superior employee performance, and (5) CTL, or "Commitment to Leadership," whose mission is to evolve a more participative style of leadership by promoting upward feedback.

At the time the survey was administered American Airlines had already undergone what the media had called a major layoff, and the company was anticipating another batch due to a poor business climate. The employees seemed aware of the intention of management and tension was predictably high on the shopfloor, as was apparent in the focus group discussions conducted for the study. The CTL program is nine years old and its mission is to evolve a more participative style of leadership. It targets supervisory and managerial personnel, and involves pilot groups charged with the primary responsibility of promoting upward feedback.

Profile of Company B and its TCS Program

Company B is a tools manufacturer with headquarters in Liechtenschtein, with facilities in the United States, Latin American, Canada, Austria, Great Britain and Switzerland. It manufactures anchors, pneumatic fastening systems, drilling and anchoring systems, powder-activated tool systems, electric screwdrivers, and diamond core drilling systems. Last year it posted sales of approximately

$976,727,800 and was ranked sixth out of 25 top private companies in Tulsa, based on sales revenue in the Tulsa Annual Report for 1994. The Tulsa facility has approximately 650 employees. There are 200 distribution centers in the United States employing a total of 600 sales personnel.

The participation program of the tools manufacturer is called "Total Customer Satisfaction (TCS)" and covers all rank and file and supervisory-managerial positions and covers all departments. Its primary objective is productivity gain and its mission is to provide a supportive environment for its employees, facilitate teamwork, break down departmental barriers, and enable them to share in the leadership of the company. The program consists of permanent workcells or teams (composed of nonsupervisory employees), steering or guidance teams (composed of managers), and ad hoc (matrix) teams. The agenda focuses on job content and work conditions issues, and access to the decisionmaking process consists the solicitation of team members' opinions. The program is at an early stage of development, where employees are getting more acquainted with the program and undergoing the final stages of training for it.

At the time of survey administration Company B was in the process of developing an incentive compensation plan where an individual would be rewarded if his or her idea resulted in cost savings. This was to cover only hourly

employees. Employees were aware of this plan and were initially skeptical until payoffs were made at mid-year.

Data Collection

In searching for companies to join the study, a list of companies in the Tulsa area was obtained from the Tulsa Chamber of Commerce. The chairman of the psychology department and several faculty members from the business school at the University of Tulsa were consulted about which companies had worker participation programs. Approximately 25 companies were contacted by telephone, which resulted in meetings with vice presidents and managers of six organizations. Three companies initially agreed to join the study, but two of these had to withdraw due to organizational changes. Company B joined the study at a later stage.

Data collection consisted of two phases: qualitative and quantitative. The objective of the qualitative phase was to collect information on the features of the participation programs. (Please see Appendix A, Perceived Elements of Exchange Relation.) This information was collected from three firms (American Airlines, a small technology firm, and a large hospital), although the last two organizations withdrew from the study. Since the tool manufacturer joined the project at a late stage, they agreed to forego the qualitative stage and rely on information collected from the three firms, with an extensive review and

pilot testing of the questionnaire prior to survey administration. Key company personnel in the human resources departments and in other units involved in participation activities were interviewed about the participation activities in their organization as well as related information. The information here was used for compiling information on and creating a profile for each population. Also, two focus group discussions (one composed of managerial/supervisory and the other, rank and file employees) were held separately, in order to gather information on their perceptions of the participation activities. The nonsupervisory focus groups consisted of between ten to twelve employees who volunteered after memos were circulated within the organizations. The supervisory focus groups consisted of supervisors and managers who were usually requested by the contact person in the organization to join the discussion. The group discussions began with an introduction to the study and then proceeded with a brainstorming session on issues presented by the researcher. The contact persons were never part of either the nonsupervisory or supervisory group discussion, and group members were assured that the results would not be disseminated to anybody in the organization. This seemed to increase the participants' willingness to be frank about their opinions. The data collected here was used for the construction of survey forms in phase two. Archival records

(organizational charts, job descriptions and specifications of benchmark jobs, and materials on participation programs) were also be examined.

The qualitative data collection phase was followed by the collection of survey data. The objective of the quantitative phase was to collect more measurable information to test the hypotheses. Before the survey was administered the questionnaire was presented to the human resources department for pretesting and discussion. Both organizations felt that because of the sensitive nature of the questionnaire content anonymity and confidentiality had to be guaranteed by the researcher. A color coding scheme was devised which would enable pairing subordinates with their supervisors. The company representatives also felt that answering the form should be voluntary and only the most pertinent information should be solicited so as not to displease the respondents, especially considering the volatile condition of their employee relations. They preferred not to include personal information that might reveal the respondent's identity. After final approval was obtained for the forms the survey was administered.

The questionnaires were administered to samples in each organization in the manner described above. Generally, they were asked opinion questions concerning their involvement in the participation activates and their exchange interactions with their supervisor or manager, as the case may be. There

were two versions of the survey instrument, one for managerial/supervisory personnel and one for nonsupervisory personnel (Please refer to Appendix B, Survey Form for Managerial and Supervisory Personnel and Appendix C, Survey Form for Nonsupervisory Personnel.)

Analysis of Qualitative Data

The items that surfaced here were used for the construction of the standardized questionnaire to be administered in phase two. In gathering information for hypothesis I, respondents were asked if they made cost-benefit calculations and interpersonal comparisons. They were also asked to enumerate transaction costs and benefits, if any existed. Second, since other models of participation will also be tested in this paper, respondents were also asked questions on motivational and situational factors that affect their decision to participate in an exchange relationship. The general consensus was that costs and benefits were important and assessed. The concept of exchange in the participative relationship between superior and subordinate was more easily understood and supported by supervisors and managers than nonsupervisory employees. In all sites, nonsupervisory employees were less supportive of the program and described a more asymmetrical exchange relationship ("More interdependence but no responsibility").

For hypothesis I, respondents gave information on what they perceive are exchanged during their transactions. Most

of respondents agreed on the following "currencies": information/ideas, financial incentives, opportunities for control over resources, time, and abstract values (such as commitment, loyalty, satisfaction, etc). A common variable was control over their workplace ("You can make changes in your work environment," "Freedom to learn and express"). About half of the respondents expressed a desire for more tangible rewards while the other half was content to be "considered as an individual", to "gain the chance to express your own opinion."

For hypothesis III, respondents provided information on what they perceived to be levels of involvement in the exchange, considering two factors: frequency of interaction and quality of interaction. They were asked to define and describe "quality of interaction" on their own. Many answers revolved around the opportunity to get involved in the decision making process in matters relating to the quality and quantity of their own work ("pride in job performance," you can critique work rules and habits", "open communication") It was generally acknowledged that the employee's access was confined to giving input and that "You don't always get your own way."

Analysis of Quantitative Data

Hypothesis I

For the first hypothesis, a list of items hypothesized to be considered in the cost-benefit calculation was

presented in the questionnaire (Part I). The respondent was requested to choose a response, for each item, from a scale which describes the effect that item might have on his or her involvement (from "increases involvement" to "no impact on involvement" to "decrease involvement.") Although this seven-point scale could be considered as a ratio scale (because numbers 7 and 1 actually refer to "considerable impact", although in opposite directions, 6 and 2 refer to "some impact", 5 and 3 refer to "little impact', and 4 means "no impact"), data will be treated as nominal and analyzed as such. It is believed that valuable information will be lost if only magnitude of response is considered and direction ignored. Four scales were constructed, one each for social exchange factors, affective factors, contingency items, and cognitive factors. (Please refer to Appendix D for the scales for hypothesis I.) The control variables tested (in the form of dummy variables) were position of the respondent (supervisory/managerial or nonsupervisory) and department (which numbered eight for American Airlines).

Multiple regression analyses was used for analysis of the data. Since the sites differed considerably in their sample sizes, different approaches of regression analyses was used. For the bigger sample, American Airlines, several multiple regression analyses were performed. First, each scale was tested separately, using the regression equations (1) to (4) below. Second, scales were entered at different

stages, using regression equations (1), and (5) through (7).

(1) $Part_{ctrl} = a + bP_1 + bD_1 + bD_2 + bD_3 + bD_4 + bD_5 + bD_6 + bD_7 + e.$

(2) $Part_{socex} = a + bI1 + bI2 + bI3 + bI4 + bI5 + bI6 + bI7 + bI8 + bI9 + bI10 + bI11 + bI13 + e.$

(3) $Part_{aff} = a + bI19 + bI16 + bI17 + bI18 + e;$

(4) $Part_{cog} = a + bI18 + bI20 + bI21 + bI22 + e;$

(5) $Part_{cs} = a + bP + bD_1 + bD_2 + bD_3 + bD_4 + bD_5 + bD_6 + bD_7 + bI11 + bI13 + bI4 + bI8 + bI10 + bI9 + bI6 + bI5 + bI11 + bI7 + bI2 + bI3 + e;$

(6) $Part_{csa} = a + bP + bD_1 + bD_2 + bD_3 + bD_4 + bD_5 + bD_6 + bD_7 + bI1 + bI13 + bI4 + bI8 + bI10 + bI9 + bI6 + bI5 + bI11 + bI7 + bI2 + e;$ and

(7) $Part_{all} = a + bP + bD_1 + bD_2 + bD_3 + bD_4 + bD + bD_7 + bI1 + bI13 + bI4 + bI10 + bI9 + bI6 + bI5 + bI11 + bI7 + bI2 + bI3 + bI18 + bI17 + bI16 + bI19 + bI20 + bI21 + bI22 + e;$

where,

$Part_{ctrl}$ = participation of respondent, based on control factors Position (P) and Department ($D_{1...7}$);

$Part_{socex}$ = participation of respondent, based on social exchange factors;

$Part_{aff}$ = participation of respondent, based on affective factors;

$Part_{cog}$ = participation of respondent, based on cognitive factors;

$Part_{cs}$ = participation of respondent, based on control and social exchange factors;

$Part_{csa}$ = participation of respondent, based on control, social exchange, and affective factors;

$Part_{all}$ = participation of respondent, based on control, social exchange, affective, and cognitive variables;

P_1 = position of respondent, where P_1 = 1 if respondent is a nonsupervisory employee;

D_1 = department of respondent, where D_1 = 1 if respondent is from the Product Support and Supply department;

D_2 = department of respondent, where D_2 = 1 if respondent is from the Component Avionics and Widebody Maintenance department;

D_3 = department of respondent, where D_3 = 1 if respondent is from the Aircraft Overhaul department;

D_4 = department of respondent, where D_4 = 1 if respondent is from the CAM/APU department;

D_5 = department of respondent, where D_5 = 1 if respondent if from the Components Maintenance department;

D_6 = department of respondent, where D_6 = 1 if respondent is from the Avionics department;

D_7 = department of respondent, where D_7 = 1 if respondent is from the Composite Shop department;

I1 = Benefits of participating exceeds costs of participating;

I2 = Equity;

I3 = Equality;

I4 = Commitment to coworkers;

I5 = Commitment to supervisor;

I6 = More influence in decisionmaking;

I7 = Dependence on others;

I8 = Good relations with coworkers;

I9 = Good relations with supervisors;

I10 = Trust supervisor/subordinate;

I11 = Reciprocity in exchange with supervisor or subordinate;

I13 = Costs of not participating exceeds benefits of not participating;

I16 = Employee gains respect from participating in decision making;

I17 = Participation program offers opportunities for self-expression;

I18 = Satisfaction due to involvement in decision making;

I19 = Increased morale;

I20 = Employee learns more about company;

I21 = Increase in job knowledge or skill;

I22 = Acceptance of changes in organization.

An analysis of residuals was performed to test for violations of assumptions. Data was tested for violation of linearity by plotting residuals of the independent variables

against the dependent variable (involvement of respondent in program). The distribution of residuals was examined for normality. To detect multicollinearity, a correlation matrix of all variables was constructed, and tolerance factors computed for each independent variable. Although the correlation matrix does not provide evidence of a strong relationship between these variables and the dependent variable they are nevertheless included because these are the concrete features of the program that partners must face and incorporate into their relationships.

Cronbach's alpha was computed for the social exchange, affective, cognitive, and contingency scales used in part I of the questionnaire. (Please refer to Appendix F for the results of reliability analyses.) Since all but the contingency scale displayed acceptable alpha levels, the contingency scale was not used in the regression analysis. The standardized item alpha for Company B was 0.8985, while for American Airlines this coefficient was 0.7911. Both coefficients indicated acceptable levels of internal consistency.

Hypothesis II

For the second hypothesis, respondents were asked about their perceptions on what items were exchanged during their transactions. Items were grouped in the following manner: information/ideas, financial incentives, opportunities for control over resources, time, and abstract

values (such as commitment, loyalty, satisfaction, etc). The questionnaire asked the respondents to describe they exchanged these items by requesting them to choose a response from a scale for each currency item (Part II in the questionnaire). This is a nominal scale, since the numbers are merely representations of different actions. It is believed that such a scale provided more specific information about the process and content of exchanges. Frequencies were computed for each response per item for all nonsupervisory questionnaires, then re-computed according to supervisor.

Hypothesis II was tested with the following regression equations:

(5) $Success_{pec} = a + bII1 + bII2 + bII3 + bII4 + bII5 + bII6 + bII7 + e;$

(6) $Success_{cat} = a + bII8 + bII9 + bII11 + bII12 + bII13 + e$

and,

(7) $Success_{soc} = a + bII10 + bII14 + bII15 + bII16 + e;$

where,

$Success_{pec}$ = Success of relationship with supervisor or subordinate, based on exchange of pecuniary items;

II1 = Information about job responsibilities;

II2 = Information about department;

II3 = Information about company;

II4 = Monetary incentives;

II5 = Increased mental effort;

II6 = Increased physical effort;

II7 = Extra time spent on participation program activities;

$Success_{car}$ = Success of relationship with supervisor or subordinate based on career advancement items;

II8 = Opportunity to influence decisions;

II9 = Opportunity to improve job performance;

II11 = Opportunity for professional growth;

II12 = Recognition;

II13 = Opportunity to develop professional contacts;

$Success_{soc}$ = Success of relationship with supervisor or subordinate based on socialization items;

II10 = Opportunity to help others;

II14 = Opportunity for personal growth or friendship;

II15 = Commitment or loyalty to supervisor;

II16 = Trust in supervisor;

An analysis of residuals was performed to test for violations of assumptions. Data was tested for violation of linearity by plotting residuals of the independent variables against the dependent variable (perceived success of interactions with partner). The distribution of residuals was examined for normality, a correlation matrix of all variables was constructed, and tolerance factors computed for each independent variable.

The Cronbach's alpha coefficients for these scales were higher for Company B than for American Airlines.

Hypothesis III

Hypothesis III focuses on specific behavioral and structural parameters of the formal participation program. The literature on participation provides evidence for the importance of several structural dimensions, namely: (a) scope (number and type of issues available); (b) intensity of participation (actual involvement); and (c) quality of participation (access to the decisionmaking process). For hypothesis III, respondents were asked to characterize successful participative interactions or exchanges. Part III in the questionnaire is broken down into two types of questions: (1) the success of their interactions, represented by a 5-point scale (extremely successful to complete failures); and (2) the nature of their involvement in the program (all four questions in Part IIIC of the questionnaire).

Frequencies were also computed for nonsupervisory responses, both pooled (entire nonsupervisory sample) and grouped by supervisor. The grouped responses were compared to the corresponding supervisory response for one site only since comparison was not possible in the other site.

Two other independent variables are included in the regression analysis for Hypothesis III which are not structural but nevertheless focus on subordinate behavior and are hypothesized to affect the supervisor-subordinate dyadic relationship. The first is the respondent's

assessment of costs and benefits (single to multiple assessments). This is central to the thesis of this paper, that utility calculations performed by actors affect their behavior (frequency and quality of participation). The second predictor is a social exchange consideration, namely the success of the respondents' interactions with coworkers. This is also considered to be important because since the individual behaves in a normative context, the strength of these values and norms generated and sustained by coworkers directly affects supervisor-subordinate relationships. The variable "success of interactions with coworkers" indicates how much the respondent adheres to normative pressure. The importance of this variable is further signified by its relatively high correlation with the independent variable, "success of interactions with supervisor." This covariation may serve to indicate, at least at this point of the discussion, that the norms prevalent in the work setting are receptive to the nurturing of both supervisor-subordinate and coworker relationships.

Analysis of residuals was performed to test for violations of assumptions. Data was tested for violation of linearity by plotting residuals of independent variables (success with coworker, level of involvement, access level, range of issues, cost-benefit assessment) against the dependent variable (success with supervisor). The distribution of residuals was examined for normality. To

detect multicollinearity, a correlation matrix of all variables was constructed, and tolerance factors computed for each independent variable. The correlation matrix does not provide evidence of a strong relationship between these variables and the dependent variable.

Hypothesis III was tested using the following regression equation:

$Success_{sub}$ = a + bIII1 + bIII2 + bIII3 + III4 + III5 + e,

where,

$Success_{sub}$ = success of relationship with supervisor or subordinate, based on subordinate behavior and properties of the program;

III1 = success or relations with coworkers;

III2 = respondent's participation in the program;

III3 = subordinate's access to decisions (or superior's perception of this);

III4 = range of issues covered by participation program; and

III5 = subordinate's assessment of costs and benefits associated with participating in program.

Level of Analysis

The smallest unit to be analyzed in this paper is the individual, specifically individual perceptions of the process of participative exchange. The level of analysis, however, must go beyond the individual. For the model to be adequately tested, individual behavior and cognition that

results from a social interaction has to be investigated as it is embedded in a wider social context of organizational structure and process. Concretely, this would involve not just a testing of hypotheses concerning individual responses but analyzing how these figures describe participative exchanges and how individual action is affected by organizational context (program and organizational context information to be collected from archives, interviews, etc.) Therefore, it is best to describe this design as primarily multi-level (dyadic relationships embedded in the organization, as perceived by the individual). However, it must be noted that all quantitative data to be analyzed were collected from single individuals, and the rest of the analysis (such as comparing grouped nonsupervisory data with corresponding supervisory data) is qualitative and descriptive. Therefore, while the phenomenon to be studied is the participative dyadic relationship, the quantitative method for analyzing it will consist of individual-based data.

CHAPTER 5

RESULTS

This study provides evidence for the complexity and multidimensionality of worker participation. While there is some support for the applicability of social exchange theory to worker participation the importance of affective and cognitive mechanism cannot be ignored.

Hypothesis I: Why Workers Participate

An individual's decision to contribute to a participative exchange is (1) influenced by utility calculations; and (2) this assessment includes social exchange, contingency, affective, and cognitive considerations.

Findings for both sites will be presented despite the low statistical power of Company B's results (due to small sample size.) It is interesting that although the two sites differ greatly in organizational and participation program characteristics many of their results converge.

Hypotheses are tested by frequencies analysis and multiple regression analysis. Following is a detailed presentation of the findings from this study.

Frequencies: American Airlines

Part I of the questionnaire listed items which completed the statement, "I participate in the QWL program because..." Frequencies and percentages were computed for all nonsupervisory responses. Cases with missing data were deleted. The number of valid cases for the frequencies computation ranged from 215 to 218. (Please refer to Table 1, Percentages of Responses on Hypothesis I Items [Part I of the questionnaire], American Airlines, at the end of this chapter.)

Two items in the list offered in Part I asked the respondents about the benefits and costs of participating and the benefits and costs of not participating. Forty percent of all nonsupervisory respondents agreed that they participate in the program because the benefits of participating outweigh the costs of participating. Thirty percent neither agreed nor disagreed with this statement. Forty percent neither agreed nor disagreed that their involvement is affected if the costs of not participating are more than the benefits of participating; twenty-seven percent indicated that their participation is affected by this statement. There appears to be a clustering of responses around 25% to 40% for this issue, regardless of the question asked. This means that respondents are generally undecided about cost and benefit assessment. These figures do not provide strong support for the practice of

utility or value calculations when these employees decide to get involved in participation programs. However, this does not mean that they do not make utility calculations; it can only be inferred that costs and benefits do not have great utility in their calculations.

Items on the list which were considered to be important in deciding involvement (that is, marked "agree" or "strongly agree") follow:

"I participate in the QWL program because:"

1. "I can contribute to decisions that are important to me"--60% agree, 15.2% strongly agree;

This is a contingency factor that addresses the quality of the decisions covered by the exchange.

2. "My supervisor is generally open to or supportive of my ideas"--58.5% agree, 9.2% strongly agree;

This is also a contingency factor indicating a perceived leadership style that is supportive, or a program that enables the supervisor to adopt this attitude.

3. "I enjoy good relations with my coworkers"--57.3% agree, 29.8% strongly agree;

This is a social exchange factor indicating a history of favorable interactions with coworkers.

4. "I enjoy good relations with my supervisor"--55.5% agree, 19.7% strongly agree;

This is a social exchange factor indicating a history of favorable interactions with the supervisor.

5. "I am committed to my coworkers"--53.2% agree; 17% strongly agree;

This is a social exchange factor indicating a set of

expectations among fellow employees.

6. "I have a high need to control my own work"--52.5% agree, 15.2% strongly agree;

This is a contingency factor which indicates a high need for independence.

When "agree" and "strongly agree" responses are combined the cumulative effect is often large, indicating that for these items respondents appear to have more definite ideas about why they participate in their company's programs.

These frequency results yield several definite patterns. First, there is clearly more support for what this paper classifies as contingency variables as a whole than other factors ("agree" or "strongly agree" responses in this category showed higher percentage values than in others). Conceptually, this paper classifies the former as those factors (both internal/personal and external/situational to the individual) that mediate the effects of participation and are not primarily affective/motivational, cognitive (use of information), or social exchange (focuses on the dyadic supervisor-subordinate relationship and its patterns of behavior). However, when the contingency scale was tested for reliability (using Cronbach's alpha) the alpha coefficient was found to be low.

Therefore, while it is possible to conclude that the items enumerated under the contingency label (supportive

supervisor, contributes to important decisions, high need to control own work, and dependence on others) are deemed to be important to the respondents, it cannot be said that the contingency perspective was tested adequately. In order to do this, the variables must clearly belong to one construct or framework which in this case is the contingency model. It is possible that some variables labelled as "contingency" factors could belong to other frameworks as well. A case in point is the factor, "high need to control own work, " which is classified here (based on the literature) as a contingency variable. However, this variable could also behave as an affective factor when it is viewed as a higher order ego need.

Second, most of the social exchange factors presented affect involvement. A look at the frequencies reveals that eight out of the eleven social exchange considerations showed their highest percentages in the "agree" category. The only items which did not receive an "agree" (but a "neither agree nor disagree" response instead) were (1) benefits of not participating outweigh costs of not participating; (2) returns or rewards from getting involved are equitable, or distributed according to input from individual (or in the case of group effort according to group input); and (3) obligation to reciprocate. This indicates that utility calculations, equity and reciprocity are grey areas when it comes to involvement in participation

programs.

The other items that received "neither" responses were (1) increased information and skill for job (a cognitive factor); and (2) decreased resistance to change (also cognitive). It is unfortunate that these two items did not elicit definite reactions from the respondent. Cognitive models use the underlying principle of efficient utilization of information to justify participation. Decreased resistance to change is also considered in the literature as an important intervening mechanism which leads to desired organizational outcomes such as productivity and efficiency. There is the possibility that either the program does not result in an increase in job information and skill or this factor just does not enter into the respondent's decision to participate or not to participate. The same can be said about the second factor, "decreased resistance to change."

Third, all affective factors also showed "agree" as the most frequently chosen response, although these percentage values were lower than the social exchange or contingency ones. This indicates that although most respondents find these affective factors to be important there are almost as many respondents who either do not value it or have no opinion on the matter.

These results highlight certain issues. One is that no conclusion can be made about whether employees make utility calculations when deciding involvement in a program. There

were no "strongly agree" and only one "disagree" response, indicating that the factors presented did not elicit strong reactions from the respondents. However, the item "benefits of participating outweigh costs" did receive a relatively high "agree" response (40%), which indicates that some thought was given to costs of benefits. The same cannot be said about the issue of nonparticipation. The item "costs of not participating outweigh benefits of not participating" received its highest percentage in the "neither agree nor disagree" category, indicating that this is not a salient issue when considering involvement. Second, there is a clear bias in favor of factors that describe social relationships. These factors, namely "committed to coworker," "committed to supervisor," "good coworker relations," "good supervisor relations," "trust in partner" all received very high "agree" percentages. The frequencies do not provide clear evidence of utility calculations; employees seem to be motivated not by explicit utility maximization but by adherence to social norms. These social norms specify what actions are regarded by a set of persons as proper or improper and require that harmonious relations be maintained. Whatever personal cost-benefit analyses might be performed by the individual is not as important in deciding involvement in programs as keeping the social fiber intact through good social relations. This is apparent in the ranks of three variables pertaining to this: out of 22

items, the third highest rank went to "good coworker relations," the fourth went to "good supervisory relations," and the fifth went to "commitment to coworker."

The finding that commitment to both coworker and supervisor are considered important supports Cook and Emerson's (1984) proposition that in a network of connected exchange relations, commitment formation between factors of one relation foster commitment formation in others. The concept of commitment is especially interesting because it implies adherence to the present exchange relationship and to future obligations, despite alternative exchange relations.

The top two variables pertain to the dyadic participative relationship between supervisor and subordinate: the top rank went to 'high decision quality' (contributes to important decisions) and the second went to 'supportive supervisor.' This indicates that the employee prefers to get involved in decisions that have some value to him or her (value attainment as objective) and his or her objective is affected by the behavior of the other party. Therefore, while the respondent might not recognize utility maximization (in terms of costs and benefits) as an overt consideration for participation the employees nevertheless recognize that the relationship requires some reallocations of resources (support from supervisor and the opportunity to influence important decisions constitute a redistribution of

power). An alternative explanation might be that the program is past the role making or development stage (when the most active processing of information takes place). This is certainly feasible, since the program has been in operation for approximately seven years now. The possibility that they are now in the role routinization phase (where trust or commitment formation makes conditions more stable) is certainly supported by the value the respondents have placed on commitment and smooth relationships.

Frequencies: Company B

Frequencies and percentages were computed for all nonsupervisory responses (Please refer to Table 2 Percentages of Responses on Items in Hypothesis I [Part I of the Questionnaire], Company B, on page 121.) Cases with missing data were deleted. The number of valid cases for the frequencies computation ranged from 39 to 41. Two items on the list offered in Part I refers to the benefits and costs of participating and the benefits and costs of not participating. 51.3% of all nonsupervisory respondents agreed that they participate in the program because the benefits of participating outweigh the costs of participating, and 15.4% strongly agreed with this response. 20.5% neither agreed nor disagreed with this statement. Forty percent neither agreed nor disagreed that their involvement is affected if the costs of not participating are more than the benefits of participating; 57.5%

indicated that their participation is affected by this statement (52.5% agreed and 5.0% strongly agreed). These figures provide strong support for the practice of cost-benefit assessments when these employees decide to get involved in participation programs. Costs and benefits appear to contain great utility in their calculations. As for nonparticipation, most respondents agreed that they are more likely to get involved in a program if the costs of not participating outweigh the benefits of not participating. However, a large percentage (40%) were undecided on this matter; this indicates that assessing the utility of not participating is less common behavior than assessing the utility of participating.

While none of the most popular items (items which showed a clear majority for a single response) were rated "strongly agree," the responses showed agreement for:

"I participate in the QWL program because:"

1. "I enjoy good relations with my coworkers"--51% agree, 46.3% strongly agree;

This is a social exchange factor indicating a history of favorable interactions with coworkers.

2. "I am committed to my coworkers"--46.3% agree, 29.3% strongly agree;

This is a social exchange factor pertaining to expectations and other normative values.

3. "My supervisor is generally open to or supportive of my ideas"--52.5% agree, 10% strongly agree;

This is also a contingency factor indicating a leadership

style that is supportive, or a program that enables the supervisor to adopt this attitude. This is a social exchange factor indicating a set of expectations among fellow employees.

4. "I can contribute to decisions that are important to me--52.5% agree, 20.5% strongly agree%;

This is a contingency factor that addresses the quality of the decisions covered by the exchange.

5. "I enjoy good relations with my supervisor"--43.9% agree, 31.7% strongly agree;

This is a social exchange factor indicating a history of favorable interactions with the supervisor.

6. "I have a high need to control my own work"--43.9% agree, 22% strongly agree;

This is a contingency factor which indicates a high need for independence.

7. "Getting involved in the program boosts morale--47.4% agree, 13.2% strongly agree;

This is an affective factor describing an outcome of participation.

8. "I feel more satisfied with my job because the program allows me to get more involved in decisions--42.5% agree, 15% strongly agree;

This is also an affective factor describing an outcome for the individual.

9. "I trust my supervisor in work-related matters--39% agree, 17.1% strongly agree;

This is a social exchange factor indicating trust in the exchange partner.

10. "My job skill and knowledge increases because of

participation--37.5% agree, 15% strongly agree; This is a cognitive factor describing an outcome that results from greater understanding or more information.

Most of the social exchange factors were again considered to affect involvement. Seven out of the eleven social exchange considerations had their highest percentages in the "agree" category. The only social exchange items which did not receive an "agree" (but a "neither agree nor disagree" response instead) were (1) returns or rewards from getting involved are equal, or distributed equally regardless of effort; (2) returns or rewards from getting involved are equitable, or distributed according to input from individual (or in the case of group effort according to group input); and (3) obligation to reciprocate. This parallels the finding in American Airlines that reciprocity, equality, and equity are not important concerns of the respondents.

Other factors that received mostly "neither agree nor disagree" or "disagree" responses were: (1) dependence on others to get work done (contingency); (2) respect gained from participating in decisionmaking (affective); and (3) accepting company changes is made easier through participation (cognitive). Apparently, these items are not very important to respondents.

Third, all but one of the affective factors showed "agree" to be the most frequently chosen response, although

these percentage values were lower than the social exchange or contingency ones.

Once again, no conclusion can be made about whether employees make explicit utility calculations when deciding involvement in a program although there are some indications that they do. The item "benefits of participating outweigh costs" did receive a relatively high affirmative response (51% agree and 15% strongly agree), which indicated that some thought was given to costs and benefits. The same cannot be said about the issue of nonparticipation since the figures indicating agreement and neither agreement nor disagreement are too close to conclude with certainty.

Like American Airlines, social relationships are important. These factors, namely "committed to coworker," "committed to supervisor," "good coworker relations," "good supervisor relations," "trust in partner" all received very high "agree" percentages.

Reliability Analysis for Both Sites

When the internal consistencies of the scales were tested using Cronbach's Alpha, both sites showed reliability coefficients of 0.5 or greater for all scales except for the contingency scales.

As stated earlier, the contingency scale will not be used in the regression analysis. In general, Company B's coefficients were higher than those of American Airlines, and both sites showed the highest alpha values for the

social exchange scale. This is probably somewhat affected by the length of the scale; the social exchange scale is much longer than the others.

A look at individual scales for Part I revealed that the two sites showed similarities in their perception of which items had the most and least effect on the scales. (This is based on the magnitude of alpha if item is deleted, as presented in Appendix F-1 to F-8, Reliability Analysis Tables for Hypothesis I Scales). For the social exchange scale, the items with the largest effect on reliability were "commitment to supervisor," "good relations with supervisor," and "trust in supervisor." Factors which focus on the exchange partner (the supervisor) are crucial to the formulation of the social exchange scale. The least important variable is "reciprocity." This is apparent in the lack of agreement or disagreement by respondents in the frequencies analysis on the value of reciprocity.

For the affective factors scale both sites showed low alpha values if "respect" is omitted, indicating that respect is an important affective factor. For the cognitive scale, the important variables were "satisfaction" and "learns more about the company."

Multi-stage Regression Analysis for American Airlines

This procedure consists of entering sets of variables into the equation at different stages of the regression. This was performed only for American Airlines because the

sample size of the other company did not permit it. When the control variables (position and department of respondent) were entered first, the R^2 was 0.21. (Please refer to Table 3, Multi-stage Regression Analysis for Hypothesis I, American Airlines, at the end of this chapter.) This clearly shows a moderate effect on the dependent variable by the control variables. The social exchange variables were entered at the second stage, which resulted in an R^2 of 0.30. The succeeding stages consisted of affective variables (R^2 = 0.35) and cognitive variables (R^2 = 0.36). The addition of control variables clearly enhanced the regression analysis concerning why workers participate. Cognitive variables had the least effect on R^2. An analysis of R^2 changes reveals that the social exchange variables most effective in explaining variation in the dependent variable (involvement in the participation program) were "participation benefits were greater than costs," and "good coworker relations." The increase in R^2 with the addition of the affective factor, "satisfaction," is larger than any succeeding affective and cognitive factors. (Please refer to Table 3, R^2, at the end of this chapter.) This shows that the social exchange factors presented were generally more useful in explaining why workers participate than affective or cognitive variables. The variables which were found to be significant were "good relations with coworkers (a social exchange factor," and

"satisfaction (an affective factor.)" Significant t values for 5 out of 8 departments indicates that there were significant differences in responses among departments. Several variables had negative beta coefficients, namely, "commitment to coworkers," "trust in supervisor," "reciprocity," "increase in morale," "increase in job knowledge or skill," and "employees learn more about the company." (For comparison, please refer to Table 4 to Table 6, Regression Analysis Tables for Hypothesis I, American Airlines, at the end of this chapter.)

Regression Results: Company B

The regression results for the social exchange scale for Company B shows an R^2 of .30. The biggest R^2 change is "trust in supervisor," where R^2 increased by .13. The next biggest R^2 changes were for "more influence" and "equity of rewards," both of which increased R^2 by .07 The biggest R^2 change for the affective scale was "respect," which increased R^2 by .04. As for the cognitive factors, "increased job knowledge and skill" changed R^2 by .05, the biggest change among the four cognitive variables. Although the small sample size of Company B does not really permit a regression analysis of more than three variables the regression results will nevertheless be presented for comparison purposes with American Airlines.

A comparison and contrast of results between sites is useful for illustrating developmental stages of the

participation process. However, it is recognized that Company B results have very low statistical power and results have to be interpreted with extreme caution.

There were no significant variables for any scale. Like American Airlines, negative coefficients were found for "reciprocity," "increased morale," "increased job knowledge or skill," and "learn more about the company." (Please refer to Tables 7, 8, and 9, Regression Analysis for Hypothesis I, Company B, at the end of this chapter.)

Hypothesis II: The Process of Exchange and Success

The second hypothesis proposes that exchanges are regulated by (1) currencies; and (2) reciprocity. It suggests that successful participative interactions consist of two-way exchanges between superior and subordinate. Part II of the questionnaire provides information on specific items and how these items are exchanged (mutual, one-way, or not exchanged).

Frequencies: American Airlines

Among the nonsupervisory responses, the highest percentage values per item clustered around two-way ratings. (For a complete listing of the percentages per item, please refer to Table 10, Percentage of Responses on Items in Hypothesis I [Part II of the Questionnaire], American Airlines on page 131.) To summarize, the items with a relatively clear consensus (where the highest percentage per

item is above 50%) follows:

1. Trust--72.7% answered that this was mutually exchanged;

2. Opportunity to help others--64.6% also answered two-way exchange;

3. Opportunity to improve job performance--59.95 answered two-way;

4. Information about job--59.5% answered two-way;

5. Opportunity for personal growth or friendship--56.7% answered two-way;

6. Opportunity to influence decisions--55% answered two-way;

7. Opportunity for professional contacts--52.4% answered that this was not exchanged;

The above frequencies show that the most popular items for mutual exchange are "trust," "opportunity to help others," "opportunity to improve job performance," "opportunity for personal growth and friendship," and "opportunity to influence decisions." "Trust" had the highest percentage of "agree" or "strongly agree" responses.

Aside from computing frequencies for the entire nonsupervisory sample, the responses of subordinates were compared with their corresponding supervisor. This was done to test congruence of perceptions about the participative process, specifically the items exchanged. Although sixteen supervisors were surveyed, two supervisors did not return their forms, and the total number of groups was reduced to fourteen.

The predominant answer for how an item was exchanged was "two-way", and this was particularly true for groups that had a high number of similar ratings. An interesting observation is that the group that had no similar rating showed that the most frequent supervisor responses were "two-way" and "one-way, give" while the most frequent subordinate responses were "one-way, give" and "not exchanged," indicating that the supervisor usually had a more optimistic view of the exchanges than his subordinates.

Missing data ranged from 1.8% to 6.4% with a mode of 3.2%, and valid cases numbered from 205 to 212. Cases with missing information were deleted from computation.

As for the specific items exchanged, those that frequently elicited the same responses from supervisor and subordinates are as follows:

1. Opportunity to improve job performance--13 groups agreed that this was mutually exchanged;

2. Opportunity to help others--13 groups agreed on two-way exchange;

3. Opportunity to influence decisions--12 groups agreed on two-way exchange;

4. Opportunity for personal growth or friendship--10 groups agreed on two-way exchange;

5. Trust--10 groups agreed on two-way exchange.

The popular items are similar to the popular ones culled from the entire nonsupervisory sample in the preceding section. The fact that supervisory responses are very similar to nonsupervisory ones (and considering that

this questionnaire asked questions about participation never asked before) is more evidence that the program (and its attendant patterns of behavior) is in a role routinization stage. Their similar perception of the complex dynamics of the exchange indicates that they have settled into a routine with crystallized expectations and coordinated behaviors.

Frequencies: Company B

Among the nonsupervisory responses, the highest percentage values per item clustered around two-way ratings. (Please refer to Table 11, Percentages of Responses on Items for hypothesis II, Company B, at the end of this chapter.) Items with a relatively clear consensus (where the highest percentage per item is above 50%) follow:

1. Opportunity to help others--56.1% answered two-way exchange;

2. Opportunity for personal growth or friendship--55% answered two-way;

3. Trust--53.7% answered that this was mutually exchanged;

4. Opportunity to improve job performance--53.7% answered two-way;

These items are very similar to those of American Airlines. However, the order of variables according to importance is different. "Trust" was at the top of the American Airlines list while "opportunity to help others" was at the top of the Company B list.

Missing data ranged from 2.4% (one case) to 9.8% (four cases), clustering around two and three missing cases. The

number of valid cases ranged from 37 to 41. Cases with missing information were deleted from computation.

Regression Results: American Airlines

The results of the regression analysis evaluating pecuniary factors reveal that the exchange of information about job responsibilities affects the success of relations with the exchange partner (as revealed by an R^2 change that was the largest among the social exchange factors.) Among the career advancement factors, "recognition" was found to have the greatest effect on success of interaction. Significant variables were "recognition," "improve job performance," and "develop professional contacts." Only the variable "influence decisions" had a negative value, although this value is small. Among the socialization factors, "commitment to supervisor" and "trust in supervisor" were the most influential. Both socialization factors were significant. All socialization factors had a positive effect on perceived success of participative relationships. (Please refer to Tables 12, 13, and 14, Regression analysis for hypothesis II, American Airlines, at the end of this chapter.)

Regression Results: Company B

Company B's regression results will be presented inspite of its small sample size because of reasons stated earlier.

The regression analysis for Company B showed results similar to American Airlines. Information about job responsibilities had the most influence on success of exchange among the pecuniary factors. The opportunity to influence decisions was the most influential among the career factors. Among the socialization factors, two items were equally important: the opportunity for personal growth and friendship, and commitment to supervisor. Two pecuniary factors were significant: "information about department" and "increased mental effort." Negative beta coefficients were found for "information about the company," "extra time spent on participation," and "influence decisions." (Please refer to Tables 15, 16 and 17, Regression analysis for the results of the regression analysis for hypothesis II, Company B, at the end of this chapter.)

Hypothesis III: Structure, Behavior and Success

This hypothesis deals with perceptions of success in participative exchange interactions. It is proposed that the perceived success of dyadic exchanges is linked to structural and behavioral factors of the participative exchange relationship. These factors are: (1) subordinate's access to decisionmaking process; (2) range of issues presented to subordinate; (3) subordinate's cost-benefit assessment of the relationship; (4) subordinate's actual participation in the program; and (5) subordinate's perceived success of his/her relationship with coworkers.

Analysis of the data consists of an examination of response frequencies (of the entire nonsupervisory pool and by dyadic linkages) and a multiple regression model.

Frequencies: American Airlines

In the pooled nonsupervisory sample, none of the highest frequency values per item exceeded fifty percent of total responses per item. This indicates that there is no clear consensus on the items in Part III.

Following is a list of each item and the response with the highest frequency value. (See Table 18 Percentages of Responses for Items in Hypothesis III [Part III of the questionnaire], at the end of this chapter.)

1. Success of interactions with supervisor--37.5% answered "moderately successful;"

2. Success of interactions with coworkers--48.5% answered "moderately successful;"

3. Actual level of participation--37.3% answered "often, when asked;"

4. Access to decisionmaking process--53.3% answered that the supervisor was open to comments from subordinates;

5. Scope of decisions--30.6% answered that the types of decisions covered multiple levels;

6. Cost-benefit assessment--40.5% indicated a single reason for participating, namely that the benefits of participating outweigh the costs of participating.

Judging from the above items, superior-subordinate relations in the participative context can be characterized as being moderately successful, where subordinates participate often when asked, where superiors are open to

comments, where decisions open for participation cover multiple organizational levels, and where benefits are often weighed against costs. Coworker relations were also reported to be moderately successful.

Missing data per item ranged from 0.5% to 4.4%, and the number of valid cases per item ranged from 195 to 203.

When the nonsupervisory data was matched to the corresponding supervisory data fourteen groups emerged. The number of items that individual groups agreed on ranged from one to five (out of the possible six items above), with a mode of three (six groups agreed on three items). The items that elicited the most number of similar responses were (1) Assessment of costs and benefits (eleven groups had similar responses on this item, and the most frequent response was that the benefits of participating outweigh the costs); and (2) success of interactions with coworkers (seven of the groups had similar responses, the most frequent one being "moderately successful"). The item that pertained to the respondent's actual level of participation (item number three above) was not compared.

Frequencies: Company B

In the pooled nonsupervisory sample, none of the highest frequency values per item exceeded fifty percent of total responses per item. (Please refer to Table 19, Percentages of responses on items for hypothesis III [Part III of the questionnaire], Company B, at the end of this

chapter.)

Following is a list of each item and the response with the highest frequency value.

1. Success of interactions with supervisor--26.8% each answered "adequate","moderately successful", or "extremely successful";

2. Success of interactions with coworkers--46.3% answered "moderately successful";

3. Actual level of participation--40% answered "often, own initiative;"

4. Access to decisionmaking process--50% answered that the supervisor was open to comments from subordinates;

5. Scope of decisions--29.4% answered that the types of decisions covered multiple levels;

6. Cost-benefit assessment--45.5% indicated no assessment, followed by 39.4% who indicated a single reason for participating, namely that the benefits of participating outweigh the costs of participating.

A profile of superior-subordinate participative relations in Company B would include the following characteristics: (1) interactions between superior and subordinate are mostly successful; (2) most subordinates participate on their own initiative; (3) the superior is open to comments; (4) decisions open to participation cover multiple levels of the organization; and (5) workers either make no assessments of costs and benefits or believe that benefits outweigh the costs.

Missing data per item ranged from 2.4% (one case) to 22% (nine cases), and the number of valid cases per item ranged from 32 to 41.

Regression Analysis: American Airlines and Company B

For American Airlines the variable that affects perceived success of participative exchanges the most is "success of coworker relations." The following variables were found to be significant:"cost-benefit assessment" and "success of coworker relations." All beta weights were positive, indicating a positive relationship between socio-structural factors and perceived success of participative interactions. Company B shows that "success of coworker relations" is the most influential, followed by "access to decisionmaking." Both variables were significant at .01 and .001 levels, respectively. All factors displayed a positive relationship to the dependent variable, perceived success of exchange interactions. (Please refer to Tables 20 and 21, Regression analysis for hypothesis III, both sites, at the end of this chapter.)

Missing Data in the Regression Procedure

There appears to be a problem with missing data. Although missing data appears to be random the magnitude is substantial. The strategy chosen to deal with missing data is listwise missing-value treatment, where a case is eliminated if it has a missing value on any variable in the list. This resulted in 29 cases chosen for analysis out of an original 41 (or 70% of total cases were used).

Comparison Between the Two Sites

Similarities in findings between sites will be presented despite the low statistical power of Company B results. This is done to address the issue of generalizability of results across research settings. However, comparison will be limited to frequencies analysis because the regression results of Company B cannot contribute to the discussion in a meaningful way.

Hypothesis I

The frequencies analysis shows that both sites considered good relations with coworkers to be the most important factor for determining employee involvement in participation programs. Both companies also indicated that other important factors are: (1) good relations with supervisor; (2) the opportunity to contribute to decisions that are important to them; and (3) commitment to coworkers.

The predictors in scales found to have acceptable reliability were regressed against level of participation. In assessing which social exchange factors were most helpful in explaining variation in the actual level of participation of the respondent (by looking at changes in R^2 with the addition of an item) the two sites showed few similarities. Both agreed that more influence was important. However, Company B results showed that trust in supervisor was the most influential factor, and that equity of rewards was important as well. American Airlines found good coworker

relations, dependence on others, and participation benefits exceeding costs to be important, although there were small differences in the R^2 changes.

As for affective factors, both found respect to be influential. American Airlines' biggest R^2 change was satisfaction, and Company B considered morale to be important as well.

The cognitive factors scale produced different patterns between the sites. American Airlines found satisfaction to be most influential, while Company B found increased job knowledge/skill to be the top predictor.

Hypothesis II

The frequencies show that there was a clear consensus for the mutual exchange of the following items (represented by fifty percent or more for the frequency of the "two-way exchange" response: (1) trust in exchange partner (higher for American Airlines); (2) opportunity to help others (higher for American Airlines); (3) opportunity for personal growth or friendship (higher for American Airlines); (4) opportunity to improve job performance (higher for American Airlines).

When the internal consistencies of the scales were tested using Cronbach's Alpha, both sites showed reliability coefficients of 0.5 or greater for all scales. Again, Company B's coefficients were higher than those of American Airlines. Both sites showed the highest alpha values for the

socialization scale. A look at individual scales for Part II revealed that the two sites diverged in their perception of which items had the most and least important effects on the scales.

In assessing which pecuniary factors were most helpful in explaining variation in the perceived success of participative exchanges (by looking at changes in R^2 with the addition of an item) the two sites showed some similarities. Both agreed that information about the department and information about job responsibilities (considerably higher for Company B) were important.

As for career advancement factors, both found the opportunity to improve job performance to be influential (considerably higher in Company B), and to a lesser extent, professional recognition. Company B also considered the opportunity to develop professional contacts to be moderately influential, while American showed a slight R^2 change for it as well.

The socialization factors scale produced similar patterns between the sites. Both found the highest R^2 changes for the opportunity to help others, and also agreed that commitment/loyalty to supervisor was important as well. American Airlines found trust in supervisor to be very influential in the success of exchanges, while Company B found the opportunity for personal growth/friendship to also have a significant effect.

Hypothesis III

Both sites showed majority responses for the following variables: (1) "adequate" success of interactions with supervisor; (2) "moderately successful" interactions with coworkers"; (3) access to decision making process characterized by supervisor being open to comments from subordinates; and (4) scope of decisions characterized by multiple levels, mostly confined to immediate workplace or departmental decisions.

It is interesting to note that despite differences in structure, procedure and history of participation programs both sites show similar characteristics. This is probably a typical profile for participation programs in Tulsa; interviews with company officials and focus group discussions in other organizations (during the qualitative data collection phase) yielded the same access and scope dimensions, and success rate.

Table 1

Percentages for Items in Part I of Questionnaire.(Hypothesis I), American Airlines.

Item Number in Form	n	Description	Valid Percentage				
			Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I1	217	PART BENEFITS>PART COSTS	7.5%	40.1%	30.4%	8.3%	3.7%
I2	218	EQUITABLE REWARDS	6.4	17.0	27.5	29.8	19.3
I3	218	EQUAL REWARDS	6.9	33.5	22.5	28.4	8.7
I4	218	COMMITTED TO COWORKER	17.0	53.2	23.4	5.5	0.9
I5	217	COMMITTED TO SUPERVISOR	6.9	49.8	29.5	8.3	5.5
I6	217	MORE INFLUENCE	12.0	14.9	22.1	11.5	12.4
I7	217	DEPENDENT ON OTHERS	6.9	33.6	20.3	24.4	14.7
I8	218	GOOD COWORKER RELATIONS	29.8	57.3	9.2	2.8	0.9
I9	218	GOOD SUPERVISOR RELATIONS	19.7	55.5	16.1	4.6	4.1
I10	217	TRUST SUPERVISOR	13.8	47.9	20.7	10.1	7.4
I11	217	DUTY TO RECIPROCATE	2.3	28.1	30.4	27.6	11.5
I12	217	SUPPORTIVE SUPERVISOR	9.2	58.5	8.3	3.2	3.7
I13	217	BENEFITS NOT PART <COSTS NOT PART	9.2	27.2	40.1	18.9	4.6
I14	217	CONTRIBUTE TO IMPORTANT DECISIONS	15.2	60.8	12.4	7.4	4.1
I15	217	HIGH NEED TO CONTROL WORK	15.2	52.5	26.3	5.1	0.9
I16	217	RESPECT	4.6	33.2	44.7	13.4	4.1
I17	218	SELF-EXPRESSION	10.1	49.5	28.0	8.3	4.1
I18	218	JOB SATISFACTION	11.5	41.3	29.4	13.8	4.1
I19	215	BOOSTS MORALE	7.0	42.3	32.6	12.6	5.6
I20	218	LEARN MORE ABOUT COMPANY	8.7	38.5	30.3	17.4	5.0
I21	218	INCREASED JOB KNOWLEDGE AND SKILL	5.5	29.8	34.9	22.0	7.8
I22	218	DECREASED RESISTANCE TO CHANGE	6.0	32.1	43.6	12.8	5.5

Table 2

Percentages for Items in Part I of Questionnaire (Hypothesis I). Company B.

Item Number in Form	n	Description	Valid Percentage				
			Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I1	39	PART BENEFITS>PART COSTS	15.4%	51.3%	20.5%	10.3%	2.6%
I2	40	EQUITABLE REWARDS	10.0	22.5	32.5	10.0	25.0
I3	39	EQUAL REWARDS	10.3	17.9	25.6	30.8	15.4
I4	40	COMMITTED TO COWORKER	30.0	47.5	15.0	5.0	2.5
I5	41	COMMITTED TO SUPERVISOR	22.0	36.6	24.4	7.3	9.8
I6	40	MORE INFLUENCE	17.5	40.0	22.5	7.5	12.5
I7	41	DEPENDENT ON OTHERS	4.9	19.5	22.0	26.8	26.8
I8	41	GOOD COWORKER RELATIONS	46.3	51.2	0	0	2.4
I9	41	GOOD SUPERVISOR RELATIONS	31.7	43.9	12.2	9.8	2.4
I10	41	TRUST SUPERVISOR	17.1	39.0	22.0	4.9	17.1
I11	40	DUTY TO RECIPROCATE	7.5	40.0	12.5	17.5	22.5
I12	40	SUPPORTIVE SUPERVISOR	10.0	52.5	20.0	10.0	7.5
I13	40	BENEFITS NOT PART <COSTS NOT PART	5.0	52.5	40.0	2.5	0
I14	40	CONTRIBUTE TO IMPORTANT DECISIONS	20.0	52.5	15.0	7.5	5.0
I15	41	HIGH NEED TO CONTROL WORK	22.0	43.9	24.4	9.8	0
I16	40	RESPECT	12.5	35.0	37.5	12.5	2.5
I17	40	SELF-EXPRESSION	7.5	47.5	27.5	12.5	5.0
I18	40	JOB SATISFACTION	15.0	42.5	25.0	10.0	7.5
I19	38	BOOSTS MORALE	13.2	47.4	18.4	13.2	7.9
I20	40	LEARN MORE ABOUT COMPANY	10.0	37.5	35.0	12.5	5.0
I21	40	INCREASED JOB KNOWLEDGE AND SKILL	15.0	37.5	17.5	20.0	10.0
I22	40	DECREASED RESISTANCE TO CHANGE	12.5	32.5	35.0	15.0	5.0

Table 3

Multi-Stage Regression Analysis. R^2. (Hypothesis I), American Airlines.

	Stage			
	1[a,e]	2[b,f]	3[c,g]	4[d,h]
Code	n=241	n=234	n=229	n=241
LB	0.01	0.01	0.02	0.02
RE	0.02	0.02	0.03	0.03
PU	0.06	0.06	0.07	0.07
BR	0.12	0.13	0.13	0.14
PI	0.13	0.14	0.14	0.15
GR	0.13	0.14	0.15	0.15
BL	0.14	0.14	0.15	0.15
DN	0.21	0.21	0.22	0.22
I1		0.25	0.26	0.26
I13		0.25	0.26	0.26
I4		0.25	0.26	0.26
I8		0.28	0.29	0.29
I10		0.28	0.29	0.29
I9		0.28	0.30	0.30
I6		0.29	0.31	0.31
I5		0.29	0.31	0.31
I11		0.30	0.31	0.31
I7		0.30	0.31	0.31
I2		0.30	0.31	0.31
I3		0.30	0.32	0.32
I18			0.34	0.34
I17			0.34	0.34
I16			0.35	0.35
I19			0.35	0.35
I21				0.35
I22				0.35
I20				0.36

[a]control variables entered
[b]control and social exchange variables entered
[c]control, social exchange, and affective variables entered
[d]all variables entered

Table 3 (cont'd).

t-Statistic

Code	Stage 1	2	3	4
LB	-2.88**	-2.89**	-3.32***	-3.18**
RE	-2.30*	-2.67**	-2.41*	-2.39*
PU	-3.21**	-2.76**	-2.97**	-2.75**
BR	-3.70***	-3.57***	-3.72***	-3.53***
PI	.96	.49	.39	.42
GR	.18	-4.27	-.43	-.35
BL	-1.19	-1.21	-1.40	-1.24
DN	-4.39***	-2.89**	-2.52*	-2.27*
Intercept	14.97***			
I1		2.09*	1.45	1.42
I13		.62	.06	.07
I4		-1.01	-1.50	-1.63
I8		1.98*	2.22*	2.15*
I10		-.50	-1.12	-1.21
I9		1.37	1.08	.96
I6		1.82	1.64	1.76
I5		-.01	.67	.78
I11		-.54	-.94	-.97
I7		-.28	-.09	.02
I2		.77	.29	.44
I3		1.18	1.14	1.18
Intercept		6.82***		
I18			2.23*	2.25*
I17			.26	.12
I16			1.55	1.48
I19			-.05	-.11
Intercept			6.15***	
I21				-.11
I22				1.28
I20				.86
Intercept				5.94***

[a]Key to symbols: * denotes p<.05;** denotes p<.01, and *** denotes p<.001.
s_{e1}=1.18 s_{e2}=1.14 s_{e3}=1.12 s_{e4}=1.12

Table 3 (cont'd).

Beta

	Stage			
Code	1	2	3	4
LB	-.22	-.23	-.26	-.25
RE	-.18	-.22	-.19	-.19
PU	-.24	-.21	-.22	-.21
BR	-.26	-.26	-.26	-.25
PI	.07	.04	.03	.03
GR	.01	-.03	-.03	-.02
BL	-.09	-.09	-.10	-.09
DN	-.25	-.20	-.18	-.16
Intercept	4.87			
I1		.14	.10	.09
I13		.04	.00	.00
I4		-.07	-.11	-.12
I8		.14	.15	.15
I10		-.03	-.07	-.08
I9		.10	.07	.07
I6		.12	.11	.12
I5		.04	.05	.06
I11		-.03	-.05	-.06
I7		-.01	-.01	.00
I2		.04	.01	.02
I3		.07	.06	.07
Intercept		3.46		
I18			.15	.16
I17			.01	.00
I16			.10	.10
I19			-.00	-.00
Intercept			3.17	
I21				-.08
I22				.08
I20				-.05
				3.11

Table 4

Regression analysis evaluating the relationship of social exchange factors and level of involvement in the participation program[a] (Hypothesis I[b]), American Airlines.

Predictors	R^2	Adjusted R^2	Beta[d]	t[c]
I1 (Part benefits>costs)	.02	.02	.10	1.38
I13(No part. costs>benefits)	.03	.02	.03	.48
I4 (Commitment to coworker)	.04	.03	-.01	-.13
I8 (Good coworker relations)	.07	.05	.11	1.45
I10(Trust in supervisor)	.07	.05	.02	.31
I9 (Good supervisor relations)	.08	.06	.15	1.80*
I6 (More influence)	.11	.08	.17	2.45*
I5 (Commitment to supervisor)	.11	.07	-.06	-.75
I11(Reciprocity)	.11	.07	-.01	.27
I7 (Dependence on others)	.13	.08	-.13	-1.99*
I2 (Equity of rewards)	.14	.09	.13	1.95*
I3 (Equality of rewards)	.14	.09	-.01	.27
Intercept			2.10	5.92***

[a] s_e=1.30

[b] n=212

[c] Key to symbols: * denotes p<.05;** denotes p<.01, and *** denotes p<.001.

[d] Beta=beta weights, or partial regression coefficients when other predictors are standardized.

Table 5

Regression analysis evaluating the relationship of affective factors and level of involvement in the participation program[a] (American Airlines) Hypothesis I[b]

Predictors	R^2	Adjusted R^2	t[c]	Beta[d]
I18 (satisfaction)	.05	.05	2.31	.17
I17 (self-expression)	.06	.05	1.03	.07
I16 (respect)	.07	.06	1.48	.10
I19 (morale)	.07	.05	.38	.02
Intercept			13.31***	2.65

[a] s_e=1.33

[b] n=214

[c] Key to symbols: * denotes p<.05;** denotes p<.01, and *** denotes p<.001.

[d] Beta=beta weights, partial regression coefficients when all predictors are standardized.

Table 6

Regression analysis evaluating the relationship of cognitive factors and level of involvement in the participation program[a] (American Airlines) Hypothesis I[b].

Predictors	R^2	Adjusted R^2	t[c]	beta[d]
I18 (satisfaction)	.05	.05	2.96*	.21
I21 (increased job knowledge/skill)	.05	.05	.29	.02
I22 (acceptance of changes in company)	.07	.06	2.02*	.14
I20 (learns more about company)	.07	.06	-1.06	-.07
Intercept			15.12***	2.82

[a] s_e=1.32
[b] n=218
[c] Key to symbols: * denotes p<.05;** denotes p<.01, and *** denotes p<.001.
[d] Beta=beta weights, or partial regression coefficients when all predictors are standardized.

Table 7

Regression analysis evaluating the relationship of social exchange factors and level of involvement in the participation program[a] (Hypothesis I[b]), Company B.

Predictors		R^2	Adjusted R^2	t[c]	Beta[d]
I1	(Part benefits>costs)	.00	-.02	-1.09	-.29
I13	(No part. costs>benefits)	.00	-.04	.89	.24
I4	(Commitment to coworker)	.00	-.08	.14	.04
I8	(Good coworker relations)	.02	-.09	.84	.18
I10	(Trust in supervisor)	.15	.01	1.80	.51
I9	(Good supervisor relations)	.15	-.01	-.30	-.08
I6	(More influence)	.22	.03	-1.69	-.39
I5	(Commitment to supervisor)	.22	.00	-.15	-.05
I11	(Reciprocity)	.22	-.02	-.39	-.10
I7	(Dependence on others)	.23	-.05	-.02	.00
I2	(Equity of rewards)	.30	.00	1.41	.28
I3	(Equality of rewards)	.30	-.03	.38	-.09
Intercept				1.63	2.39

[a] s_e=1.54

[b] n=37

[d] Key to symbols: ' denotes p<.05;" denotes p<.01, and "' denotes p<.001.

[e] Beta-beta weights, or partial regression coefficients when other predictors are standardized.

Table 8

Regres-

Table 8

Regression analysis evaluating the relationship of affective factors and level of involvement in the participation program[a] (Hypothesis I[b]), Company B.

Predictors	R^2	Adjusted R^2	t[c]	Beta[d]
I18 (satisfaction)	.01	-.01	.18	.04
I17 (self-expression)	.01	-.04	.03	.06
I16 (respect)	.05	-.02	1.39	.28
I19 (morale)	.07	-.04	-.78	-.17
Intercept			6.17	3.38

[a] s_e=1.51

[b] n=38

[c] Key to symbols: * denotes p<.05;** denotes p<.01, and *** denotes p<.001.

[d] Beta=beta weights, or partial regression coefficients when other predictors are standardized.

Table 9

Table 9

Regression analysis evaluating the relationship of cognitive factors and level of involvement in the participation program[a] (Hypothesis I[b]), Company B.

Predictors	R^2	Adjusted R^2	t[c]	Beta[d]
I18 (satisfaction)	.01	-.01	.49	.21
I21 (increased job knowledge/skill)	.06	.06	-.11	-.20
I22 (accepts changes in company)	.06	-.01	1.39	.00
I20 (learns more about company)	.07	-.03	-.37	-.13
Intercept			4.20'''	2.86

[a] s_e=1.54

[b] n=40

[c] Key to symbols: ' denotes p<.05;'' denotes p<.01, and ''' denotes p<.001.

[d] Beta=beta weights, or partial regression coefficients when other predictors are standardized.

Table 10

Table of Percentages for

Table 10

Table of Percentages for Items in Part II of Questionnaire (Hypothesis II), American Airlines

Item Number in Form	n	Description	Valid Percentage			
			2-way	1-way, receive	1-way, give	not exchanged
II1	212	INFORMATION ABOUT JOB	59.5	30.7	1.4	8.4
II2	240	INFORMATION ABOUT DEPARTMENT	48.8	43.3	2.3	5.6
II3	240	INFORMATION ABOUT COMPANY	41.5	48.6	0.9	9.0
II4	213	MONETARY INCENTIVES	22.6	26.9	0.9	49.5
II5	213	MORE MENTAL EFFORT	39.7	17.2	18.2	24.9
II6	224	MORE PHYSICAL EFFORT	26.8	15.0	29.1	29.1
II7	220	EXTRA TIME FOR PARTICIPATION ACTIVITIES	42.4	10.5	7.6	39.5
II8	212	OPPORTUNITY TO INFLUENCE DECISIONS	55.0	15.2	3.3	26.5
II9	220	OPPORTUNITY TO IMPROVE JOB PERFORMANCE	59.9	13.7	15.1	11.3
II10	211	OPPORTUNITY TO HELP OTHERS	64.6	7.5	15.6	12.3
II11	220	OPPORTUNITY FOR PROFESSIONAL GROWTH	42.4	11.0	7.1	39.5
II12	214	RECOGNITION	44.8	12.9	2.9	39.5
II13	214	OPPORTUNITY FOR PROFESSIONAL CONTACTS	32.7	10.6	4.3	52.4
II14	220	OPPORTUNITY FOR PERSONAL GROWTH/FRIENDSHIP	56.7	7.1	7.1	29.0
II15	220	COMMITMENT/LOYALTY TO SUPERVISOR	46.0	5.2	19.0	29.9
II16	213	TRUST	72.7	3.9	6.3	17.1

Table 11

Table of Percentages for Items in Part II of Questionnaire (Hypothesis II), Company B.

Item Number in Form	n	Description	Valid Percentage			
			2-way	1-way receive	1-way give	not exchanged
II1	40	INFORMATION ABOUT JOB	47.5	35.0	5.0	12.5
II2	40	INFORMATION ABOUT DEPARTMENT	50.0	32.5	2.5	15.0
II3	40	INFORMATION ABOUT COMPANY	30.0	48.6	0.9	9.0
II4	39	MONETARY INCENTIVES	20.5	30.0	10.3	38.5
II5	39	MORE MENTAL EFFORT	33.3	12.8	20.5	33.3
II6	37	MORE PHYSICAL EFFORT	25.6	10.3	33.3	30.8
II7	36	EXTRA TIME FOR PARTICIPATION ACTIVITIES	37.8	18.9	13.5	29.7
II8	39	OPPORTUNITY TO INFLUENCE DECISIONS	51.3	10.3	5.1	33.3
II9	40	OPPORTUNITY TO IMPROVE JOB PERFORMANCE	55.0	5.0	15.0	25.0
II10	39	OPPORTUNITY TO HELP OTHERS	56.1	0	19.5	24.4
II11	40	OPPORTUNITY FOR PROFESSIONAL GROWTH	41.0	12.8	12.8	33.3
II12	38	RECOGNITION	47.5	10.0	2.5	40.0
II13	40	OPPORTUNITY FOR PROFESSIONAL CONTACTS	34.2	13.2	2.6	50.0
II14	40	OPPORTUNITY FOR PERSONAL GROWTH/FRIENDSHIP	55.0	10.0	35.0	0
II15	40	COMMITMENT/LOYALTY TO SUPERVISOR	50.0	5.2	30.0	20.0
II16	41	TRUST	53.7	2.4	9.8	29.3

Table 12

Regression analysis evaluating the relationship of pecuniary factors and perceived success of participative exchanges[a] (Hypothesis II[b]), American Airlines.

Predictors	R^2	Adjusted R^2	t[c]	Beta
II2 (information about department)	.07	.06	2.26*	.19
II3 (information about company)	.07	.06	-.35	-.03
II1 (information about job responsibilities)	.12	.10	1.68	.13
II5 (increased mental effort)	.15	.14	2.66*	.19
II7 (extra time spent on participation)	.16	.13	-.96	-.07
II4 (monetary incentives)	.18	.16	1.83	.14
II6 (increased physical effort)	.18	.16	.77	.06
Intercept			22.69***	3.07

[a] s_e=1.04

[b] n=197

[c] Key to symbols: * denotes p<.05; ** denotes p<.01, and *** denotes p<.001.

[d] Beta=beta weights, partial regression coefficients when all predictors are standardized.

Table 13

Regression analysis evaluating the relationship of career factors and perceived success of participative exchanges[a] (Hypothesis II[b]), American Airlines.

Predictors	R^2	Adjusted R^2	t[c]	Beta[d]
II9 (improve job performance)	.11	.10	2.00*	.17
II8 (influence decisions)	.11	.11	-.22	-.01
II12 (recognition)	.17	.16	2.53*	.20
II11 (professional growth)	.18	.16	.66	.05
II13 (develop professional contacts)	.20	.18	2.06*	.16
Intercept			25.89***	3.11

[a] s_e=1.02

[b] n=230

[c] Key to symbols: * denotes p<.05;** denotes p<.01, and *** denotes p<.001.

[d] Beta=beta weights, or partial regression coefficient when all predictors are standardized.

Table 14

Regression analysis evaluating the relationship of socialization factors and perceived success of participative exchanges[a] (Hypothesis II[b]), American Airlines

Predictors	R^2	Adjusted R^2	t[c]	Beta[d]
II10 (help others)	.11	.11	.78	.05
II14 (personal growth/friendship)	.14	.13	1.20	.08
II15 (commitment/loyalty to supervisor)	.20	.18	2.21**	.15
II16 (trust in supervisor)	.29	.28	5.11***	.37
Intercept			19.36	2.69

[a] s_e=.95

[b] n=198

[c] Key to symbols: * denotes p<.05;** denotes p<.01, and *** denotes p<.001.

[d] Beta=beta weights, or partial regression coefficients when all predictors are standardized.

Table 15

Regression analysis evaluating the relationship of pecuniary factors and perceived success of participative exchanges[a] (Hypothesis II[b]), Company B.

Predictors	R2	Adjusted R^2	t[c]	Beta[d]
II2 (Information about department)	.05	.02	.37	.05
II3 (Information about company)	.06	.01	-.68	-.09
II1 (Iinformation about job responsibilities)	.36	.30	3.57	.54
II7 (Extra time spent on participation)	.37	.29	-.98	-.12
II4 (Monetary incentives)	.39	.30	.70	.13
II5 (Increased mental effort)	.43	.32	.40	.22
II6 (Increased physical effort)	.45	.32	.99	.20
Intercept			11.75***	2.92

[a] s_e=.93

[b] n=37

[c] Key to symbols: * denotes p<.05;** denotes p<.01, and *** denotes p<.001.

[d] Beta= beta weights, or partial regression coefficients when all predictors are standardized.

Table 16

Regression analysis evaluating the relationship of career factors and perceived success of participative exchanges[a] (Hypothesis II[b]), Company B.

Predictors	R^2	Adjusted R^2	t[c]	Beta[d]
II9 (Improve job performance)	.26	.24	2.02	.34
II8 (Influence decisions)	.33	.29	-.24	-.06
II12 (Recognition)	.37	.31	.89	.21
II11 (Professional growth)	.37	.29	.24	.04
II13 (Develop professional contacts)	.41	.31	1.43	.27
Intercept			11.71'''	2.79

[a] s_e=.94

[b] n=37

[c] Key to symbols: ' denotes p<.05;'' denotes p<.01, and ''' denotes p<.001.

[d] Beta=beta weights, or partial regression coefficient when all predictors are standardized.

Table 17

Regression analysis evaluating the relationship of socialization factors and perceived success of participative exchanges[a] (Hypothesis II[b]), Company B.

Predictors	R^2	Adjusted R^2	t[c]	Beta[d]
II10 (Help others)	.27	.25	.49	.09
II14 (Personal growth/friendship)	.36	.33	1.14	.25
II15 (Commitment/loyalty to supervisor)	.47	.42	.21	.07
II16 (Trust in supervisor)	.49	.43	1.30	.39
Intercept			11.48***	2.65

[a] s_e=.86

[b] n=38

[c] Key to symbols: * denotes p<.05;** denotes p<.01, and *** denotes p<.001.

[d] Beta=beta weights, or partial regression coefficient when all predictors are standardized.

Table 18

Table of Percentages for Items in Part III of Questionnaire (Hypothesis III), American Airlines

IIIA	SUCCESS WITH SUPERVISOR INTERACTIONS	n=200
	Complete failures	1.0%
	Mostly unsuccessful	9.0
	Adequate	31.5
	Moderately successful	37.5
	Extremely successful	21.0
IIIB	SUCCESS WITH COWORKER INTERACTIONS	n=203
	Mostly unsuccessful	3.4%
	Adequate	20.2
	Moderately successful	48.8
	Extremely successful	27.6
IIIC1	ACTUAL PARTICIPATION IN PROGRAM	n=204
	Rarely, when asked	1.0%
	Rarely, on own initiative	22.1
	Often, when asked	37.3
	Often, on own initiative	28.9
IIIC2	ACCESS TO DECISIONS	n=197
	No advance information given	18.8%
	Advance information given	7.6
	Open to comments	53.3
	Comments solicited	16.8
	Can vote	3.6
IIIC3	TYPES OF DECISIONS	n=196
	Work station	12.2%
	Department of division	29.6
	Company	2.6
	Work station and department	23.5
	All levels	30.6
IIIC4	COST BENEFIT ASSESSMENT	n=195
	Benefits of participating >costs of participating	40.5%
	Costs of participating >benefits of participating	9.2
	Benefits of not participating >costs of not participating	4.1
	Costs of not participating >benefits of not participating	3.1
	Reasons 1 & 4	10.3
	Reasons 2 & 3	2.1
	No assessment	30.8

Table 19

Table of Percentages for Items in Part III of Questionnaire (Hypothesis III), Company B.

IIIA	SUCCESS WITH SUPERVISOR INTERACTIONS	n=41
	Complete failures	2.4%
	Mostly unsuccessful	17.1
	Adequate	26.8
	Moderately successful	26.8
	Extremely successful	26.8
IIIB	SUCCESS WITH COWORKER INTERACTIONS	n=41
	Mostly unsuccessful	0.0%
	Adequate	24.4
	Moderately successful	46.3
	Extremely successful	29.3
IIIC1	ACTUAL PARTICIPATION IN PROGRAM	n=41
	Never participated	15.0%
	Rarely, when asked	15.0
	Rarely, on own initiative	12.5
	Often, when asked	17.5
	Often, on own initiative	40.0
IIIC2	ACCESS TO DECISIONS	n=32
	No advance information given	28.1%
	Advance information given	3.1
	Open to comments	50.0
	Comments solicited	18.8
	Can vote	0.0
IIIC3	TYPES OF DECISIONS	n=34
	Work station	5.9%
	Department of division	2.9
	Company	23.5
	Work station and department	14.7
	All levels	29.4
IIIC4	COST BENEFIT ASSESSMENT	n=33
	Benefits of participating > costs of participating	39.4%
	Costs of participating > benefits of participating	3.0
	Benefits of not participating > costs of not participating	0.0
	Costs of not participating > benefits of not participating	6.1
	Reasons 1 & 4	6.1
	Reasons 2 & 3	0.0
	No assessment	45.5

Table 20

Regression analysis evaluating the relationship between perceived success of participation program and socio-structural factors[a] (Hypothesis III[b]) American Airlines.

Predictors	R^2	Adjusted R^2	t[c]	Beta[d]
IIIC1 (actual involvement in program)	.03	.03	1.56	.11
IIIC2 (access to decisionmaking)	.06	.05	1.42	.10
IIIC3 (range of issues)	.06	.05	.73	.05
IIIC4 (cost-benefit assessment)	.08	.06	2.05**	.14
IIIB (success of coworker relations)	.16	.14	4.20***	.28
Intercept			4.24***	1.58

[a] $s_e = .84$

[b] $n = 200$

[c] Key to symbols: * denotes $p < .05$;** denotes $p < .01$, and *** denotes $p < .001$.

[d] Beta=beta weights, or partial regression coefficients when other predictors are standardized.

Table 21

Regression analysis evaluating the relationship between socio-structural factors and perceived success of participation program[a] (Hypothesis III[b]), Company B.

Predictors	R^2	Adjusted R^2	t[c]	Beta[d]
IIIC1 (actual involvement in program)	.15	.12	2.04	.29
IIIC2 (access to decisionmaking)	.37	.33	4.13***	.57
IIIC3 (range of issues)	.38	.31	.35	.05
IIIC4 (cost-benefit assessment)	.38	.28	.73	.11
IIIB (success of coworker relations)	.62	.55	4.03**	.54
Intercept			-2.62	-3.30

[a] s_e=.79

[b] n=35

[c] Key to symbols: * denotes p<.05;** denotes p<.01, and *** denotes p<.001.

[d] Beta=beta weights, or partial regression coefficients when all predictors are standardized.

CHAPTER 6

DISCUSSION

This paper seeks to provide evidence for the utility of social exchange theory in constructing the conceptual framework of worker participation and to compare that utility with those of affective, cognitive and contingency theories. To summarize, social exchange theory assumes that:

> 1. Social behavior can be explained in terms of rewards, where rewards are goods and services, tangible or intangible, that satisfy a person's needs or goals.
>
> 2. Individuals attempt to maximize rewards and minimize losses or punishments.
>
> 3. Social interaction results from the fact that others control valuables or necessities and can therefore reward a person. In order to induce another to reward him or her, a person has to provide rewards to the other in return.
>
> 4. Social interaction is thus viewed as an exchange of mutually rewarding activities in which the receipt of a needed valuable (good or service) is contingent on the supply of a favor in return (usually immediate).

In applying social exchange postulates to worker participation, this paper offered the following hypotheses: (1) An individual's decision to contribute to a participative exchange (as represented by dyadic supervisor-subordinate interactions which occur in the context of a formal participation program) is the result of his or her assessment of various factors that constitute a utility or

value calculation. Variables pertaining to social exchange theory and contingency, affective, and cognitive models of participation were hypothesized to be considered in the value calculation; (2) An individual perceives that resources are mutually exchanged in successful participative transactions; and (3) supervisor-subordinate interactions perceived to be successful by the partners are also characterized by the following structural and behavioral characteristics; (a) mutual exchange between supervisor and subordinate; (b) high level of access to the decision making process allowed to subordinate; (c) wide range of issues covered by the participative relationship; and (d) involvement in the exchange relationship is perceived to be more beneficial than costly.

Hypothesis I: Why Workers Participate

The first issue this hypothesis addresses is whether or not workers make cost-benefit assessments when faced with the decision to contribute to a participative exchange. The frequencies results of American Airlines for Part I of the questionnaire shows that while 47.6% either agrees or strongly agrees with this statement, the majority of responses either disagrees or are undecided or indifferent. This bifurcation of results suggests that explicit utility calculations are not common among American Airlines employees. This is further supported by the regression results for American Airlines for hypothesis I. The factor,

"cost-benefit assessment" is not a significant variable, although it raised R^2 by a comparatively large .04%. This finding is consistent with criticism directed at rational choice theory (or the cost-benefit and utility maximization principles of social exchange theory.) Houghton (1995) believes that one weakness of rational choice theorists is that all parties tend to speak as if rational action had to be preceded by deliberation and calculation. He argues that not all voluntary action can be deliberate, since deliberation is itself a sequence of voluntary actions, the consideration of alternatives. Furthermore, the formulation of alternative courses of action cannot be reduced to rules or the operation of any calculus. He sees the difficulty of treating every situation as calling for a calculated response or being a subject for deliberation.

This finding also adds to the large accumulation of empirical evidence that contends that certain aspects of the maximization model of microeconomic theory (Morgan and Duncan, 1982) do not describe the ordinary decision process of individuals (Arkes and Blumer, 1985; Tversky and Kahneman, 1986).

Another dimension that is relevant to this finding is the type of resource that is exchanged. As will be demonstrated later, few interactions involve the exchange of only economic or only interpersonal resources. In fact, many of the resources exchanged involve both economic and

interpersonal benefits (Foa, 1993). The difficulty of quantifying benefits (and costs) when it is not a pure economic resource may have led respondents in this study to believe that their decisions are not economic ones that could be presented in terms of utility measurements. They perceive that the resources they exchange are more interpersonal than economic.

The second issue deals with investigating which among the three models of participation presented (social exchange, affective, and cognitive) contributes most to our understanding of why workers participate. Most of the social exchange factors were considered to affect involvement. A look at the frequencies reveals that nine out of the eleven social exchange considerations presented accumulated their highest percentages in the "agree" category.

All affective factors also showed "agree" as the most frequently chosen response, although these percentage values were lower than the social exchange or contingency ones. The only cognitive item that was popularly received was "learn more about the company."

The frequencies findings for part I of the survey (Hypothesis I: Why Workers Participate) show that both sites considered good relations with coworkers (a social exchange factor) to be the most important factor for determining employee involvement in participation programs. Both

companies also indicated that other important factors are: (1) good relations with supervisor; (2) the opportunity to contribute to decisions that are important to them; and (3) commitment to coworkers.

Regression analysis shows that the factors which have the greatest effect on the level of participation reported by respondents from both sites were: (1) influence in the decision making process (social exchange); and (2) respect (affective). Other factors that American Airlines workers value are good coworker relations, job satisfaction, dependence on others, and benefits of participation outweigh costs. Trust in supervisor, morale, and increased job knowledge/skill are valued by Company B employees.

These results show support for elements from all theoretical perspectives presented in this paper to explain participation outcomes. Factors from all three theoretical perspectives, combined with control variables (position and department of respondent) account for 36% of the variation in the dependent variable, "employee involvement in the participation program" for American Airlines. (This is presented in the final R^2 in stage 4, Table 3 at the end of chapter 5.) The R^2 without control variables is .25, which indicates moderate explanatory power of variables from the three participation models. The position (supervisory/managerial or nonsupervisory) and department of the respondent account for 21% of the variation in the

dependent variable.

Although there were more social exchange factors supported by evidence than any other model this is mainly due to the fact that there were more variables in the social exchange scale than others. Therefore, while it appears that social exchange theory contributes much to the model of the participation process in comparison to others, the other variables also play a vital role in explaining this phenomenon.

The importance of affective, cognitive, and social exchange factors (specifically the concept of norms) indicates that aside from feeling and perceiving, an individual also reacts morally to what ought to be or ought not to be with reference to structures of exchange. Because moral judgment rests on some sense of what is legitimate or illegitimate (Stole, 1990) it necessarily entails either the formation or the use of social norms. These findings emphasize the subjective meanings, feelings, and judgments individuals experience in reaction to the objective structures of dependence and exchange in a participative relationship.

Hypothesis II: Reciprocity and the Currency of Exchange

The second hypothesis suggests that successful superior-subordinate participative interactions are characterized by two-way exchanges of resources or control over these. This gives rise to two issues: (1) what

currencies are being exchanged; and (2) which currencies, mutually exchanged, contribute to successful interactions.

The currency of exchange is an important construct because it is these items, exchanged mutually, which provide for the continuation of exchange behavior. The frequencies show a clear consensus for the mutual exchange of the following items (represented by fifty percent or more for the frequency of the "two-way exchange" response: (1) trust in exchange partner (higher for American Airlines); (2) opportunity to help others (higher for American Airlines); (3) opportunity for personal growth or friendship (higher for American Airlines); (4) opportunity to improve job performance (higher for American Airlines)

The data in part II provide more support for the findings in part I about the importance of good relations and value attainment. There is a clear consensus that trust in the exchange partner is a predominant item exchanged. This ties in with previous findings on commitment formation and the interpersonal expectations that are components of the exchange relationships surveyed.

The following items were also exchanged: (1) opportunity to influence decisions; (2) job information; and (3) opportunity to develop professional contacts. There are clearly more socialization and career items exchanged than pecuniary ones. This indicates that the participative interactions present in American Airlines allow two-way

exchanges of these factors. The high frequency of two-way responses reveals that the participation program does function as a series of social exchanges of mutually desirable goods or services. The potential for exchange (represented by "opportunities" in the survey form) may also be considered as actual exchanges because they both serve to sustain the dyadic relationship. The evidence points to the constructive nature of expectations which are moderated by trust and commitment to the exchange partner.

When supervisory responses were compared to the responses of their subordinates agreement was found for the mutual exchange of the following items: "opportunity to improve job performance," "opportunity to help others," "opportunity to influence decisions," "opportunity for personal growth and friendship," and "trust in exchange partner." This validates the nonsupervisory reports of currencies exchanged since the two lists contain the same items. The fact that these lists are similar is helpful in explaining why superior-subordinate interactions are generally reported to be successful. This is illuminated by industrial relations research on mixed-motives in interactions. Implicit in this industrial relations model is the assumption that each actor/party brings to the relation his or her own set of interests and values, which are not necessarily in line with the interests of the other party in the dyad. Where motives or goals of parties (and in

this case, the control of resources is the objective of the individual) are similar or do not conflict, and assuming that the participation program is structured to realize these motives, it is likely that the program will be judged to be successful by the participants. Aside from similarity of perceptions, the mere presence of opportunities for exchange may contribute to success. Walton and McKersie (1991) conceive of labor negotiations as social negotiations where there is deliberate interaction between social units attempting to define their interdependence.

The social aspect of the interaction, or the process by which negotiations (between supervisor-subordinate) occur and interpersonal relations (among coworkers) are maintained are of primary utility as well. This also helps to explain the finding that opportunities for exchange, not only actual exchange behavior, are important for successful interactions.

The second issue in hypothesis II concerns employee perceptions of successful interactions in terms of currencies exchanged. The regression analysis shows that the perceived success of participative exchanges were most affected by the mutual exchange of the following currency items: (1) information about the department and job responsibilities (pecuniary); (2) the opportunity to increase job performance (career); (3) professional recognition (career); (4) professional contacts (career);

(5) opportunity to help others (socialization); and (6) commitment/loyalty to supervisor (socialization). Another significant currency item mentioned by American Airlines was trust in supervisor (socialization), while Company B found increased mental effort (pecuniary) and personal growth/friendship (socialization) to be important as well. Career and socialization items are perceived to be more important for success than pecuniary ones.

This is interesting because most of the career and socialization items chosen refer to opportunities rather than actual exchanges and are therefore less quantifiable. To illustrate, direct observation and measurement of the "opportunity to help others" is less possible than the measurement of "extra time spent on participation activities." Foa (1993) suggests that resources can be classified on the basis of two coordinates: concrete-symbolic and particularistic-universal. On the first coordinate, concreteness, services and goods involve the exchange of some overtly tangible activity or product and are classified as concrete. Status and information are typically conveyed by verbal or paralinguistic behaviors and are symbolic. Love and money are engaged in both concrete and symbolic forms and thus occupy intermediate positions. For the respondents, the participative relationship seems to serve as more as a means of symbolic interaction rather than a vehicle for the acquisition of material or tangible goods.

The very nature of employee access to decisions (where employees' opinions are solicited) suggests that partners both receive and give information as a result of that involvement. This is apparent in the regression result that a successful participation interaction involves an exchange of information about department and job responsibilities. Collecting, analyzing and discussing data relevant to work problems can provide insights into the job that were not previously present. Other resources exchanged arise out of the social process or interaction itself, both through monthly QWL meetings and daily interactions with supervisors. Other resources are also exchanged through the CTL (leadership) program in American Airlines, namely opportunities to develop one's career (professional recognition, contacts, improvement of job performance) and opportunities to interact with others and develop social bonds.

These findings have two implications for how success is perceived by the respondents. The first is that participative interactions succeed because they enhance the flow and use of information in the system. This is consistent with the results of the Miller and Monge analysis (1986). The second is that participative interactions work because they lead to greater attainment of higher-order needs. The types of resources that fall under career and socialization are likely to satisfy higher-order needs of

status and self-worth. These two observations come to even sharper focus in the light of empirical evidence in the participation literature that worker participation programs generally have statistically significant but small effects on performance and satisfaction (Wagner, 1994). This indicates that workers get involved in such programs or interactions for reasons other than the productivity objectives initiated by management. Although questions could be raised about the practical significance of programs where performance objectives are not realized, these programs are still useful for two reasons. First, Abelson (1985) observed that even very small episodic effects can sometimes have strong cumulative consequences if allowed to amass over time. Second, other more individual-oriented objectives are being met, which leads to employees forming favorable impressions of corporate managerial practices.

Another dimension is the symbolic nature of the items exchanged. The fact that successful exchanges involve items that are difficult to measure has ramifications for the role of cost-benefit assessment in the proposed model. The situation of having intangible currencies drives partners in exchange relations to be less concerned with explicit or extrinsic measures of utility or value. This is again an indication of a more intuitive and subjective manner of measuring value. As stated earlier, the literature on social exchange theory presented in chapter 2 supports this

type of assessment behavior. Decision making is not always a rational, conscious, deliberate effort but usually involves subconscious processes. This is probably why respondents do not report engaging in utility maximizing or cost-benefit assessment behavior; it is usually not a conscious effort. This is consistent with Walton and McKersie's belief that negotiations involve not just substantive items but attitudes, feelings, and the tone of relations as well.

Hypothesis III

This hypothesis attributes the success of participative interactions to certain structural and behavioral aspects of the formal program. This paper suggests that interactions are more successful if subordinates are more actively involved in the program, if they are given more access to the decision making process, if the range of issues addressed by the program covers many decision areas and levels, and if subordinates perceive benefits of getting involved to outweigh costs. Coworker relations were reported to contribute to successful interactions as well.

The information that we get from the frequencies data of both sites refers to properties of the participation program and the respondent's behavior. It tells us that not very respondents are active in the program and reminds us that the information we get from them is based on this limited experience. The extent of their potential or actual

involvement (access to decisions, scope of decisions) does not indicate a program with a very symmetrical distribution of control over resources. However, the finding that both supervisors and subordinates enjoy moderately successful relations indicates that these relationships do survive and that there is probably more value attached to smooth social relations than to a reallocation of power. Both sites attach value to the role of coworker relations, access to decision making, and cost-benefit assessments in determining the success of interactions with supervisors.

The results of the regression analysis further reinforce the importance of access to decision making to perceptions of success. Access to decisions is an important dimension to participation because it defines the quality of interaction and extent of involvement of the respondent. Most of the respondents reveal that they are allowed to make suggestions on their own initiative, and this is clearly important to the success of their interactions. In this situation, the fair process effect serves to mediate success. The social influence explanation of the fair process effect suggests that ability to voice an opinion can produce greater acceptance of outcomes (Cohen, 1985). The fair process effect implies that procedures are seen as legitimate and just. Such a belief can only enhance a relationship and contribute to its success.

Participation in the decision making process,

especially when there is a mutual exchange of resources, creates loyalty, commitment, and possibly trust in the exchange partner. This is observed in hypothesis I where the results show "trust in supervisor (the exchange partner)" to be a valued construct. The importance of being able to contribute to a decision area (instead of merely being informed about it) is further supported by qualitative evidence; many of the group members attached feelings of pride and self-worth to this opportunity to contribute. An alternative explanation to the fair process effect lies in the effect of affective factors on employee involvement. The feeling of self worth satisfies higher-order ego needs, such as respect, which leads to job satisfaction, worker motivation, and productivity.

The importance of coworker relations that other parts of the survey reveal is again apparent in the results for hypothesis III. The finding that success of interactions with supervisors is influenced by success of coworker relations reveal the power that workplace norms exert in relationships. It also indicates that superior-subordinate relationships are embedded in a network of other relationships in the organization.

Demographic Information

As discussed earlier, the two organizations did not permit the collection of information on individual characteristics because they were cautious about losing

their workers' trust during a time organizational uncertainty. However, several pieces of information might have enhanced the findings of this study. One useful concept is that of the individual's choice of comparative referent. This concept is a valuable tool in further illuminating our understanding of interpersonal comparisons because it provides the individual with a standard by which he or she assess his or her value domains. Within organizational research, comparison theories (for example, social comparison theory, equity theory, and some formulations of social exchange theory) have been used to explain individual reactions to a wide variety of outcomes, including pay (Dittrich and Carnell, 1979), job complexity (Oldham, et al., 1986), and workplace status (Greenberg, 1988). Prediction of an individual's response (positive, negative, or neutral) depends on the referent used by the individual.

Several personal factors influence access to information about referents and their perceived relevance. One personal factor is gender. There is evidence that most men and women prefer same-sex comparisons (Major and Testa, 1989). This could be a function of perceived relevance of similar (same-sex) comparisons. Further, Major and Forcey (1985) point out that pronounced sex segregation may limit the information women would need to make cross-sex comparisons. The American Airlines workforce is

predominantly male, and it would have been interesting to observe if female respondents do make cross-sex comparisons because they are in a male-dominated field and are more accessible to information for comparison with males.

Another social indicator that might have been useful is race. There is some indirect evidence in the relative deprivation literature suggesting that people prefer to use same-race comparisons (Stouffer, et al., 1949). Education research has found that same-race comparisons decrease as members gain more information about cross-race referents (Drury, 1980; St. John, 1975). The workers in the hangar and shop sections of American Airlines (which essentially was the sampling frame) work under desegregated conditions, which would lead us to expect cross-race comparisons not unlike that of gender.

Tenure is also a potential social indicator. Individuals with longer tenure are more likely to have acquired more information about employees other than those from their own unit or organization, and internal referents may be less appropriate (Ashford, 1988). It is expected that workers with longer tenure will make more external comparisons than those with less tenure. Differences might be found in responses between tenure groups, especially if the referent choice of longer-tenure employees belong to organizations markedly different from American Airlines.

And finally, although education and professionalism are

predicted to result in greater reliance on external referents (Goodman, 1974), there is no wide variability in level of education among employees in the sampling frames. Therefore, education would not be a useful social indicator in this study.

Departmental Information

The multi-stage regression analysis performed on American Airlines data reveals that the inclusion of control variables (position and department) contributed greatly to the understanding the first hypothesis: why workers get involved in participation programs. Similar results were found for the other two hypotheses, which focus on the success of participative interactions. In both cases, the R^2 of the control variables alone (during the first entry stage) was a substantial portion of the final R^2 (when all the independent variables had been entered). This tells us that other dimensions of employee involvement (such as different participation practices among organizational units, or value orientation, culture or climate prevalent among sectors of the workforce) might have been in operation. The qualitative data presented earlier provides evidence that the cultures or climates of departments (even with similar functions) vary. Appendix H ("Comments from American Airlines Questionnaires") tabulates additional comments written by respondents and categorizes these according to department. (Company B questionnaires did not

have additional comments that are useful to the analysis.) In a post-survey interview with the director of maintenance and engineering he suggested that variability between departments could be a function of the physical working conditions of the respondents. He described hangar units as being in a less hospitable work environment than shop units which worked in an "office" environment. An examination of Appendix H reveals that comments within shop departments are more consistent than within hangar and off-base departments. The shop questionnaires contained comments which were more favorable towards the QWL program than off-base or hangar units. Off-base units and the only hangar unit included in the survey displayed mixed attitudes towards the QWL program or relationships with supervisors. This is somewhat supportive of the director's opinion that shop employees in more comfortable physical environments have more positive attitudes towards the program.

An alternative or supplemental explanation is that supervisory styles vary greatly across departments. The relationship between leadership style and upward influence has long been noted (Cobb, 1986). One component of formal supervision is closeness of supervision. A lack of close supervision can facilitate greater subordinate discretion and influence, while close supervision can suppress such discretion.

While the additional comments presented are useful in

explaining the statistical significance of the departmental variable, a more systematic approach is required to test for differences. Semantic network analysis could be used to examine core values, beliefs, and subcultures of attitudinal groups, both within and across departments. This could also further illuminate why half of the departments surveyed (hangar and off-base units) are inconsistent in their perceptions of and attitude towards the QWL program.

Discussion of Comparative Results

A comparison of frequencies obtained from both sites is useful for illustrating relevant paradigms. Also, sample size is not as crucial in frequencies analysis than in other methods of data analyses. Therefore, frequencies results between the two samples will be compared and contrasted, although with a certain amount of caution.

One reason why similar results between sites were obtained despite differences in size and developmental age of the program is that the exchange patterns in both sites are similar. Individuals in a relationship are guided in their actions toward each other by their orientations. Ridley and Avery (1979) present a typology of exchange patterns in relationships. Judging from the findings, the interactions in both sites may be typified as a combination of mutual benevolence and considerate-benevolent. The mutual benevolence components of the relationships are apparent in several ways.

First, their behavior is based on both partners having mostly "positive-other" orientation. This is indicated by 'adequate' or 'moderately successful' judgments of interactions with supervisors.

Second, dyad members seem more concerned with being sensitive to their partner's needs than concerned with whether behaviors are reciprocated or rewarded. This is indicated by (a) low response for reciprocity item; (b) ambiguous cost-benefit assessment behavior; and (c) high emphasis on the importance of supervisor relations and trust in exchange partner.

Third, the participative interactions, which are interlocking exchanges in a complex matrix of relationship behaviors, appear to derive from committed social relationship. Although this is more true for American Airlines; both indicated the value of commitment to exchange partner.

As for the considerate-benevolent component of the relationships, the primary characteristic which applies to the findings is that both partners possess different but valuable goods and services, and that interactions are asymmetrical. One partner has more control over resources than the other. Balance is achieved when both partners have the ability to withdraw valued resources. This condition is apparent in the fact that the majority of responses in both sites for the manner in which items are exchanged was "two-

way", indicating mutual exchanges.

Results from both sites from parts I, II, and III of the survey (why respondents participate, reciprocity and currency, and exchange success) reveal that relations in the workplace (and attendant factor such as commitment and trust) have a high value for the respondents, sometimes even higher than factors which refer to the substantive content of the participation exchanges. These findings, especially the finding that coworker relations are important, reveal the role of network norms, or the social network influence on dyadic relationships. As noted earlier in this paper, the findings underlie the importance of social networks within which dyadic partnerships are initiated, maintained, or terminated. This is especially salient in exchanges that occur in the participative context; although these exchanges are bound by formal structures and procedures employee involvement is to a large extent voluntary and informal.

A social network is used in reference to those persons with whom one or both of the dyad members is in actual contact. Bossevain (1979) observed that

> A person's network forms a social environment from and through which pressure is exerted to influence his behavior; but it is also an environment through which he can exert pressure to affect the behavior of others. It is the reservoir of social relations from and through which he recruits support to counter his rivals and mobilizes support to attain his goals.

The absence of a rigid set of rules and procedures in the programs of both sites probably contributed to the

permeability of the dyadic relationship to external influences, notably those pertaining to other linkages in the network.

The disparate findings between sites is obviously a result of differences in organizational and program characteristics. Another useful tool for explaining differences is by analyzing program development, using the dyadic organizing model of Graen and Scandura (1987), reviewed earlier in this paper. Their model consists of three stages of organizing, mainly role taking or sampling, role making or development, and role routinization. The participation program of Company B is at an incipient stage (approximately a year old), contrary to that of American Airlines, which is seven years old. Company B can therefore be classified as being at the role taking or sampling stage, while American Airlines would be either late role development or early role routinization. The behaviors of Company B respondents are consistent with those theorized to be dominant at this stage: (1) They have either made no utility assessments since there is no history by which to judge present or future behaviors, or they have made assessments where their participation is justified by benefits outweighing costs; (2) They characterize their actual participation as being more frequent than that of American Airlines (where participation is more routine and requires less active processing); (3) Success of their

dyadic interactions is more closely linked to tangible factors, such as job information, access, influence, scope; in fact, hypothesis three shows the largest intercorrelation to be between success of interaction and access to decisionmaking process; and (4) Fewer currencies have been exchanged, possibly due to the early stage of interaction. The American Airlines sample, on the other hand, reveals behaviors more consistent with later phases: (1) Trust is a vital factor in the dyadic relationship; (2) More currencies have been exchanged; (3) Most of the respondents have made utility assessments, where involvement was determined by benefits of participating outweighing costs; and (4) A value placed on socialization, as indicated by the largest intercorrelation in hypothesis three between success of interaction and coworker relations. Also, the fact that supervisory responses are very similar to nonsupervisory ones for popular exchange items is evidence that the program (and the patterns of behavior associated with it) is in a role routinization stage. Their similar perception of the dynamics of the exchange indicates that they have settled into a routine with crystallized expectations and coordinated behaviors.

Ridley and Avery's (1979) typology of exchange patterns also explain other differences in findings between sites. Early interaction may be characterized by the counting of specific goods/services that are given and received. This is

apparent in the items found to be important by Company B in the regression analyses: increased job knowledge/skill, equity of rewards, increased mental effort, opportunity to develop professional contacts. (Company B respondents also indicated fewer items exchanged, which is possibly an indication of how undeveloped the relationships are). The focus of Company B respondents on tangible rewards indicate that nonsupervisory respondents value the primary utility of the content of the exchange package rather than on secondary utility. This emphasis on utility indicates the presence of cost-benefit assessment behavior; Company B data shows a large correlation between cost-benefit assessment and actual participation by respondents. At this stage, they are a little more concerned with personal gain than developing relationships per se. In fact, an indication that respondents engage in competition is the presence of negative values between the factor coworker relations and other variables in hypothesis three (access, scope of decisions, actual involvement, cost-benefit assessment.

An interesting observation is that American Airlines had more 'two-way' items exchanged even though its program is more developed than Company B's. This is explained by history of interaction (Ridley and Avery, 1979); if one or both dyad members become dissatisfied they may well attend more closely to the specific goods/services exchanged and return to early patterns where they are again more cognizant

of specific items exchanged. This is not entirely inconsistent with earlier explanations of how trust allows partners in "developed" relationships to continue exchanges. Trust probably allows partners to know that certain valued goods/services will be delivered, in a more generalized manner. Nonsupervisory employees are cognizant of which items are exchanged, and trust leads to reliability of delivery. Institutional and interpersonal control (as discussed in Chapter II) have been routinized through the repetition of both formal and informal behaviors, and expectations are well defined. Trust, developed by a long history of interaction, permits the routine exchange of resources.

A fundamental assumption in organizational psychology is that is impossible to understand behavior in organizations without understanding the interactions between features of the organizational context and characteristics of individuals operating within the system (Pfeffer and Salancik, 1978; Schneider, 1983). Organizational climate represents a shared perception that people attach to particular features of the work setting (Schneider and Reichers, 1983), and is the appropriate unit of analysis for environmental factors.

Ostroff (1993) presents three facets for classifying climate orientations: (1) affective--people involvement, interpersonal or social relations; (2) cognitive--

psychological involvement, self-knowledge and development; and (3) instrumental--task involvement, work processes. Organizational context, as represented by climate, is best treated here as a variable which worked in conjunction with lower level characteristics, thereby strengthening the relationship between individual and dyadic characteristics (cognition, affect, social exchange and contingency factors) and the success of a worker participation program. American Airlines, with its numerous programs designed to increase worker influence and assist in personal development attempts to cover all three facets mentioned above. By installing these programs it has created a participative environment, characterized by cooperation (CTL) and social rewards (Golden Wrench Award), both of which are affective facets. It covers the cognitive facet by providing opportunities for career advancement (CDP), intrinsic rewards (Golden Wrench Award), innovation (IDEAAS) and autonomy (QWL). Instrumentality was provided in the form of extrinsic rewards (IDEAAS and LEAAP) and a structure which increased access by providing many channels of participation. The magnitude of their participative efforts probably contributed to the longevity of the QWL program because the different programs complemented, rather than competed with each other. These climate factors are congruent with the individual-based findings of the study: reciprocity in exchange (hypothesis II), trust in exchange partner,

commitment and loyalty to exchange partner, and favorable relations with exchange partner and coworkers. The participative organizational climate served to reinforce and strengthen the relationship between individual and dyadic characteristics and favorable participation outcomes.

The variety of exchange structures also helps explain why nontangible rewards were preferred over pecuniary ones in the QWL program. The QWL program does not provide financial incentives unlike the IDEAAS and LEAAP programs. The QWL program is probably seen by employees as primarily a vehicle for the exchange of resources that are social or humanistic in nature and symbolic in form.

One interesting finding is that despite a climate favorable to participation American Airlines respondents rated the success of their participative interactions as either moderately successful or adequate. An organizational event, recent and pending layoff of personnel in the facility, may have served to moderate the relationship between employee attitudes and perceived success of superior-subordinate exchanges. Uncertainty in the environment (specifically, job security) may have affected employee trust in management in general, and this may have trickled down and translated into a lower success rating of their relationship with representatives of management, their supervisors.

However interesting the link between organizational

context and individual-dyadic factors might be, there is still a need to adequately measure organizational climate before its influence on other variables can be determined with some confidence. A joint investigation of climate, personal orientations, and their interaction would be an appropriate place to start.

This recommendation reveals the complexity of a research agenda that requires the researcher to address cross levels of analyses. However, complexity should not impede either theoretical progress or practical application since the control of action is not dependent on a complete knowledge of everything that influences behavior. Both worker participation and social exchange are multidimensional constructs which involve the analysis of, but are not limited to, dyadic interchange. In fact, this study finds that dyadic relations are embedded in a network of other individual, dyadic, and organizational behaviors. A contribution this study makes is that it translates fundamental tenets of social exchange theory into testable propositions by transposing these tenets on the construct of worker participation. In doing so, a fresh description of the worker participation process is arrived at and the applicability of social exchange theory to work behavior is explored.

CHAPTER 7

RECOMMENDATIONS AND CONCLUSION

The purpose of this paper was to construct a model for the process of work participation based on psychological and sociological theories (affective, cognitive, contingency, and social exchange, respectively). Employees were asked to link their participation or involvement to values and outcomes representing the above models. Partial support was found for the social exchange model, as well as the other models presented in chapter 2. This is evident in the following results of this study: (1) many social exchange variables were related to employee involvement in hypothesis I; (2) a high frequency of two-way transactions were reported in hypothesis II; (3) many social exchange factors were exchanged in hypothesis II; and (4) there was moderate support for cost-benefit assessment behavior in hypotheses I and III. It is apparent that social exchange theory has much to offer to the current literature on worker participation. Its primary contribution is the proposition that employees involved in a participation program make exchanges of goods and services and that this series of transactions evolve over time. The fact that cost-benefit assessment behavior and reciprocity (which lie at the heart of social exchange theory) received mixed results indicates that work

participation is a complex phenomenon and that each framework contributes to different dimensions of the concept. However, the social exchange perspective has much potential in explaining the process of participative interactions because it focuses on the management-workforce relationship as represented by the dyadic superior-subordinate relationship.

Although this paper originally chose to focus on the superior-subordinate relationship the findings of the study bear out the importance of understanding the social environment that the dyadic relationships are embedded in. Further research is recommended on interactional and structural criteria not just between dyadic partners but between them and other individuals and dyads. Concepts to investigate in participation linkages and network might include metric characteristics (size, centrality, density, reachability), exchange content, and properties of the linkages, such as reciprocity, strength or intensity (amount of resources that flow through the network), symmetry, and multiplexity or diversity (degree to which same people are involved in different networks). Commitment formation within the organization may be especially helpful in illustrating the success of participation exchanges. Commitment formation in participation activities increases mutual dependence among actors and therefore enhances the equality of power. Furthermore, Cook and Emerson (1984)

have found that within a network of connected exchange relations (e.g., a department in a corporation) commitment formation between members of one relation fosters commitment formation in other relations, and the balance of power therefore shifts toward equality throughout the entire network.

This leads to another aspect of the exchange relation: the role (and function) that individual or collective dyads play in the organization. The diversity of linkages is represented by the role of relationships between dyad members and others within the dyadic network. 'Role' is used in reference to the norms and expectations that apply to a particular position. Each dyad plays a number of different roles, and roles may be single-stranded or multi-stranded (Gluckman, 1955 and Wheeldon, 1969). The role relations of individuals, dyads, and groups involved in decision making must be defined in the context of the organization in order to understand motivational behavior. This leads to several research implications. One is that role relations in a participative exchange context (in a worker participation program) might be compared to other organizational contexts (other participation schemes, nonparticipative relationships). Another issue addresses the finding in this paper that coworker relations were valued highly when respondents were asked to assess their participative interactions with their immediate supervisor.

This means that the success of a supervisor-subordinate relationship is very much affected by a subordinate's relationship with his or her peers. The norms and expectations that develop from peer relationships (which are informal parts of the structure) might serve as the contact point between linkages and could help define the formal role or function of the supervisor-subordinate dyad and determine its success.

Another area which might be investigated is exchange content, which refers to the elements of the transaction. Although this paper addressed this issue it was limited to items exchanged in the dyadic relationship. An examination of resources available outside of the dyad (and the opportunities for exchange) would enhance our understanding of behaviors that occur in a dyad since external availability and alternative resources also enter into the utility calculations of dyadic partners. The quality of exchanges might be examined from the perspective of leader-member exchange theory. This approach employs a transactional approach where supervisors treat individual subordinates differently (Duchon, Gree, and Taber, 1986). Consequently, relatively stable dyads develop and range from lower to higher quality exchanges. In the former, formal organizational authority is exercised; supervisors obtain routine subordinate performance and subordinates receive standard organizational benefits (Graen and Cushman, 1975).

Higher quality exchanges are typified by support and mutual trust (Liden and Graen, 1980), interpersonal attraction (Danserau, Graen, and Haga, 1975), loyalty and bidirectional influence (Dienesch and Liden, 1986). Both supervisors and subordinates enjoy advantageous rewards.

Although reciprocity as a questionnaire item in part I ("I have a duty to give something to my supervisor when I receive something from him/her") did not elicit very much response, there are other indications that reciprocal behavior does occur. The high frequency of two-way or mutual responses for exchange items in part II of the questionnaires indicated that exchanges flowed both ways. The construct of reciprocity is very valuable in the framework of participation and must be investigated in detail. Theoretically, it lies at the heart of most formulations of social exchange theories. Degree of reciprocity, which is also described as directional flow or directedness by some researchers (Kapferer, 1969), serves as a general indicator of the individuals' levels of investment in the social relation. One issue for further investigation is a closer look at variations in reciprocal behavior. Reciprocity does not imply consistent exchanges, just constant ones. Conditions must be studied in which reciprocity is equal or not, positive or not (which is possible in antagonistic exchanges but not "participative" ones). Considering that these interactions may also be

characterized as generalized rather than restricted exchanges (where exchange is indirect rather than direct) one may further understanding of reciprocity by analyzing the role that partner expectations play in the maintenance of reciprocal relationships. How powerful is commitment to the exchange partner in a situation of mostly unfulfilled expectations? What are acceptable compensating factors for these unfulfilled expectations? Does organizational commitment correlate with individual commitment? If, as Blau and other social exchange theorists claim, exchange is the basis of the formation and maintenance of any social relationship, do unfulfilled expectations cause the relationship to disintegrate or is there an intrinsic value to relationships as well? In other words, is the promise of opportunities for exchange (where, for example, supervisors are usually open to subordinates' comments, as is the case in this study) a sustaining factor?

Reciprocity also functions in relationships of unequal power, which is the kind analyzed in this paper. Thibaut and Kelley and Hollander's transactional leadership suggest that reciprocity is the defining criterion of the social relation itself and is never totally destroyed even in relationships of unequal power. This brings us to another issue which is need of further study: power. Do relationships in the work participation context differ very much with regard to power symmetry from other relationships

in the workplace? The structure of participative exchanges and its corresponding power implications were not addressed in this paper, which chose to focus on exchange processes dynamics instead. While the literature on power is vast, a narrower study of power in the context of participative exchanges in the workplace might focus on the type of power that is yielded. To what extent does it constitute a condition for determining the rate and nature of exchange, especially in a voluntary program that is first and foremost implemented by management?

A final recommendation would be to analyze the role that unions play in determining extent of involvement. It would be interesting to investigate if employees decide to become less involved in worker participation programs in the presence of alternate forms of employee involvement, and how the proposed model fits into the union context. Do affective, cognitive, and social exchange mechanisms behave differently in a union partnership? What are the currencies of a union transaction? The results show that the superior-subordinate dyadic relationship is open to other linkages in the organization. A salient issue might be how the exchange of resources or control is modified by a third party with possibly conflicting but nevertheless different objectives.

The premise that social interaction consists of exchange behavior is a very useful framework for work participation in that it provides both depth and breadth to

the study of participation. This paper incorporates psychological and sociological theories and the resulting model views the participative process as fundamentally a dyad-based interaction which influences and is influenced by network norms, values, structure and behavior, and where actors (consciously or unconsciously) make utility assessments. At the same time, the proposed framework does not necessarily exclude other conceptual frameworks of participation, such as those espoused by democratic, human relations, or productivity and efficiency orientations. The values, assumptions and goals of these perspectives may still serve as the rationale for the installation and continued existence of participation programs, along with social exchange concepts which amplify interactional criteria. This paper also provides some evidence for how behaviors evolve throughout the life of a participation program. Finally, this paper recognizes the need for continuing the investigation of the participation process as social exchange by analyzing structural components as well.

This paper provides support for the conceptualization of the process of work participation as a series of exchange transactions between employees and management. In using the social exchange approach the reciprocal nature of workplace relations between supervisor and subordinate is emphasized. While partial evidence is obtained for the proposition that cost-benefit assessment is a fundamental element of these

dyadic exchanges the concept of interpersonal trust as the key to fairness underlying exchanges appears to be a critical factor in determining success of interactions, level of involvement, and participation outcomes. Indeed, interviews with both managerial/supervisory and nonsupervisory employees in both sites reveal that the expectancy that promises or statements can be relied on is pivotal for the functioning of participative relationships.

A final recommendation of this paper is that the dynamics of supervisor trust-building behavior be investigated in the context of participative exchanges. More research might investigate which behaviors establish and sustain subordinate trust in their supervisor and how these expectations affect desired participation outcomes. For example, how critical is trust in supervisor if organizational rewards/benefits are formally specified and contractual, such as in a profit-sharing program?

In conclusion, the social exchange framework has contributed to the understanding of the process of work participation by amplifying dyadic interactions between superior and subordinate--the fundamental unit of work participation systems. In doing so, the theory highlights certain issues. First, the study shows that the social network is influential on dyadic relations; this is apparent in the finding that coworker relations and commitment to coworkers affect involvement in participation programs.

Second, reciprocity is essential to the success of the exchange (as indicated by the high frequency of mutual exchanges), and this reciprocity is moderated by trust in the exchange partner and their orientations (mutual benevolence-considerate benevolence). Third, simply participating in the process of exchange is just as important to employees (if not more so) as the benefits derived from it. This is consistent with the social justice framework, and is another avenue that participation research might pursue.

Researchers on worker participation must be clear about the levels and perspectives that characterize their work. At the same time, researchers should be pluralistic in their approach because the construct calls for work that spans multiple levels and perspectives. Research on worker participation now needs to progress cumulatively across disciplines, rather than being confined to current motivational, behavioral and attitudinal frameworks. The integration of other perspectives with existing ones should provide a more complete picture of the process and structure of worker participation and, ultimately, assist management in making organizations a better place to work in.

APPENDICES

APPENDIX A

PERCEIVED ELEMENTS OF EXCHANGE RELATION
(For focus group discussions)

I would like to ask you some questions about your relationship with your subordinates and coworkers in the participation program. Please feel free to give comments on anything related to the program or your involvement in it.

1. With whom do you frequently interact with because of the program? (Primary supervisor, coworkers)

2. Describe your interaction with them. (Activities, formal and informal procedures, etc.)

3. How would you describe your involvement in the program? (Active or passive, level of access to decisions, extent of contribution, nonparticipation)

4. Would you consider the activities in the program as involving some kind of an exchange? If yes, what are exchanged? By whom?

5. How do you go about deciding whether or not to participate in the program? (motivation, costs and benefits, job situation) What are the things you consider when deciding about how much to get involved?

6. Do you formally or informally (officially or personally) evaluate the results of your contribution/involvement? Is there an incentive for you to change your behavior if necessary?

7. Do you now have more or less power or influence in your work or the organization because of the program? Do you think other people (coworkers, supervisors, upper management) have more or less power or influence because of the program?

8. How would you describe the stage this program is at the moment? (testing/sampling, development, routinization)

9. Have you behaved differently during other phases of the program? (If applicable).

10. What are your criteria for a successful relationship with your primary supervisor in the program?

11. Would you consider your relationship with your primary supervisor as successful or unsuccessful? Why?

APPENDIX B

SURVEY FORM FOR SUPERVISORY AND MANAGERIAL PERSONNEL

FORM 3 (Supervisory/Managerial)
AN EVALUATION OF THE WORK PARTICIPATION PROCESS

I. I would like to get information from you on what affects your involvement in the TCS program. Each item completes the phrase, "I participate in the TCS program because ...". If you are not currently involved in the TCS program please respond according to your perception of the program. Please indicate your agreement or disagreement with the items by choosing a number from the scale described below. Encircle the appropriate number, ranging from 1 (strongly agree) to 5 (strongly disagree) for each item.

Scale:
1 Strongly agree (SA)
2 Agree (A)
3 Neither agree nor disagree (NA/D)
4 Disagree (D)
5 Strongly disagree (SD)

"I participate in the TCS program because..."

Item	Response				
	SA	A	NA/D	D	SD
1.Benefits of participating are more than costs of participating	1	2	3	4	5
2. Each person gets a reward based on his/her contribution	1	2	3	4	5
3.Everybody gets the same reward, regardless of effort	1	2	3	4	5
4.I am committed to my fellow supervisors and managers.....	1	2	3	4	5
5.I am committed to Hilti.....	1	2	3	4	5
6.I am committed to the people I manage or supervise	1	2	3	4	5
7.The program gives employees more influence in work-related decisions.....	1	2	3	4	5
8.I am dependent on other people to help me with my work	1	2	3	4	5
9.I enjoy good relations with the people I supervise.....	1	2	3	4	5
10.I trust the people I supervise or manage in work-related matters.....	1	2	3	4	5

APPENDIX B (cont'd).

Scale:
1 Strongly agree (SA)
2 Agree (A)
3 Neither agree nor disagree (SA/D)
4 Disagree (D)
5 Strongly disagree (SD)

"I participate in the TCS program because..."

Item	Response				
	SA	A	NA/D	D	SD
11.I have a duty to give something to the people I supervise or manage when I receive something from them.....	1	2	3	4	5
12. The program enables me to be more responsive to the ideas of the people I manage or supervise	1	2	3	4	5
13.Not participating would involve more costs than benefits	1	2	3	4	5
14. The TCS program allows the people I manage or supervise to contribute to decisions tha are important to them.....	1	2	3	4	5
15.Employees have a great need to control their own work.....	1	2	3	4	5
16.Employees earn respect when they participate in decision making.....	1	2	3	4	5
17.The TCS program offers opportunities for self-expression.....	1	2	3	4	5
18.The TCS program creates more job satisfaction.....	1	2	3	4	5
19.Getting involved in the TCS program boosts morale.....	1	2	3	4	5
20. The employees learn more about the company through the TCS program	1	2	3	4	5
21.Job skill and knowledge increases because of participation.....	1	2	3	4	5
22.Participation makes it easier for employees to accept changes in the company.....	1	2	3	4	5

APPENDIX B (cont'd).

II. The workplace is full of relationships involving exchanges between people who work together. We are interested in the exchanges that take place within the confines of the TCS program. Please indicate how you make exchanges with the people you manage or supervise by choosing the appropriate number from the following scale for items 1 through 16.

Scale:
1 TWO-WAY EXCHANGE: Both the people I manage or supervise and I have the opportunity to give and receive this item
2 ONE-WAY EXCHANGE, RECEIVING: I have the opportunity to only receive this item
3 ONE-WAY EXCHANGE, GIVING: I have the opportunity to only give this item
4 NOT EXCHANGED: This item is not exchanged

Item	Response 2way	Get	Give	No
1. Information about job duties and responsibilities	1	2	3	4
2. Information about my department	1	2	3	4
3. Information about Hilti	1	2	3	4
4. Monetary incentives	1	2	3	4
5. Increased mental effort	1	2	3	4
6. Increased physical effort	1	2	3	4
7. Extra time spent for TCS activities	1	2	3	4
8. Opportunity to influence decisions	1	2	3	4
9. Opportunity to improve job performance	1	2	3	4
10. Opportunity to help other people	1	2	3	4
11. Opportunity for professional growth	1	2	3	4
12. Recognition	1	2	3	4
13. Opportunity to develop professional contacts	1	2	3	4
14. Opportunity for personal growth or friendship	1	2	3	4

APPENDIX B (cont'd).

Scale:
1 TWO-WAY EXCHANGE: Both the people I manage or supervise and I have the opportunity to give and receive this item
2 ONE-WAY EXCHANGE, RECEIVING: I have the opportunity to only receive this item
3 ONE-WAY EXCHANGE, GIVING: I have the opportunity to only give this item
4 NOT EXCHANGED: This item is not exchanged

Item	Response 2way	Get	Give	No
15. Commitment or loyalty to the people I supervise or manage.....	1	2	3	4
16. Trust in the people I manage or supervise.....	1	2	3	4
17.Please list other things which you give up or gain, and indicate how you exchange this by encircling the appropriate number				
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

III. The following questions refer to the success of your interactions with the people you supervise or manage.

A. How would you describe most of your interactions with the people you manage or supervise? Please encircle one number.
5 Extremely successful
4 Moderately successful
3 Adequate
2 Mostly unsuccessful
1 Complete failures

B. Please characterize most of your interactions with your coworkers (other supervisors and managers) by encircling one of the following:
5 Extremely successful
4 Moderately successful
3 Adequate
2 Mostly unsuccessful
1 Complete failures

APPENDIX B (cont'd).

C. For items 1-3, please encircle the number beside the statement which best describes your involvement in the TCS program so far. Choose one number only. In cases where more than one answer applies, choose the answer which occurs most frequently.

1. Your participation in the program so far:
   1. Never participated. (PLEASE STOP HERE.)
   2. Participate rarely, and only when asked
   3. Participate rarely, but on own initiative
   4. Participate often, but only when asked
   5. Participate often on own initiative

2. How are the people you supervise or manage involved in decision making?
   1. No advance information is given to them regarding decisions to be made
   2. They are informed in advance about decisions to be made
   3. They are allowed to make suggestions or comments on their own initiative
   4. Their suggestions or comments are solicited before the decision is made
   5. They have a vote or the decision is completely in your hands

3. Types of decisions that are covered by the participation program:
   1. Issues that are the employees' primary responsibility or affect them directly
   2. Issues in your department or division
   3. Issues that concern the company in general
   4. 1 and 2 above
   5. all of the above

4. Your assessment of costs and benefits of participating or not participating in the program so far has been:
   1. Benefits of participation outweigh costs of participation
   2. Costs of participation outweigh benefits of participation
   3. Benefits of nonparticipation outweigh costs of nonparticipation
   4. Costs of nonparticipation outweigh benefits of nonparticipation
   5. 1 and 4 above
   6. 2 and 3 above
   7. No assessment made

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE. PLEASE REFER ANY QUESTIONS YOU MIGHT HAVE ABOUT THE RESULTS OF THE SURVEY OR THIS PROJECT TO THE OFFICE OF MR.

APPENDIX C

SURVEY FORM FOR NONSUPERVISORY PERSONNEL

FORM 3 (Nonsupervisory)
AN EVALUATION OF THE WORK PARTICIPATION PROCESS

I. I would like to get information from you on what would affect your involvement in the TCS program. Each item completes the phrase, "I participate in the TCS program because ...". If you are not currently involved in the TCS program please respond according to your perception of the program. Please indicate your agreement or disagreement by choosing a number from the scale described below. Encircle the appropriate number, ranging from 1 (strongly agree) to 5 (strongly disagree) for each item.

Scale:
1 Strongly agree (SA)
2 Agree (A)
3 Neither agree nor disagree (NA/D)
4 Disagree (D)
5 Strongly disagree (SD)

"I participate in the TCS program because..."

Item	Response				
	SA	A	NA/D	D	SD
1. Benefits of participating are more than costs of participating.....	1	2	3	4	5
2. Each person gets a reward based on his/her contribution	1	2	3	4	5
3.Everybody gets the same reward, regardless of effort	1	2	3	4	5
4.I am committed to my coworkers	1	2	3	4	5
5.I am committed to my supervisor.....	1	2	3	4	5
6.The program gives me more influence in work-related decisions	1	2	3	4	5
7.I am dependent on other people to help me with my work	1	2	3	4	5
8.I enjoy good relations with my coworkers	1	2	3	4	5
9.I enjoy good relations with my supervisor.....	1	2	3	4	5
10.I trust my supervisor in work-related matters.....	1	2	3	4	5

APPENDIX C (cont'd).

Scale: 1 Strongly agree (SA)
2 Agree (A)
3 Neither agree nor disagree (SA/D)
4 Disagree (D)
5 Strongly disagree (SD)

"I participate in the TCS program because..."

Item	Response				
	SA	A	NA/D	D	SD
11.I have a duty to give something to my supervisor when I receive something from him/her	1	2	3	4	5
12.My supervisor is generally open to or supportive of my ideas	1	2	3	4	5
13.Not participating would involve more costs than benefits	1	2	3	4	5
14.I can contribute to decisions that are important to me	1	2	3	4	5
15.I have a high need to control my own work	1	2	3	4	5
16.I gain respect from participating in decision making	1	2	3	4	5
17.The program offers opportunities for self-expression	1	2	3	4	5
18.I feel more satisfied with my job because the program allows me to get involved in decisions	1	2	3	4	5
19.Getting involved in the program boosts morale	1	2	3	4	5
20.I learn more about the company through the program	1	2	3	4	5
21.My job skill and knowledge increases because of participation	1	2	3	4	5
22.Participation makes it easier for me to accept changes in the company	1	2	3	4	5

APPENDIX C (cont'd).

II. The workplace is full of relationships involving exchanges between people who work together. We are interested in the exchanges that take place within the confines of the TCS program. Please indicate how you make exchanges with your supervisor by choosing the appropriate number from the following scale for items 1 through 16.

Scale:
1 TWO-WAY EXCHANGE: Both my supervisor and I have the opportunity to give and receive this item
2 ONE-WAY EXCHANGE, RECEIVING: I have the opportunity to only receive this item
3 ONE-WAY EXCHANGE, GIVING: I have the opportunity to only give this item
4 NOT EXCHANGED: This item is not exchanged

Item	Response 2way	Get	Give	No
1. Information about my job responsibilities	1	2	3	4
2. Information about my department	1	2	3	4
3. Information about Hilti	1	2	3	4
4. Monetary incentives	1	2	3	4
5. Increased mental effort	1	2	3	4
6. Increased physical effort	1	2	3	4
7. Extra time spent for TCS activities	1	2	3	4
8. Opportunity to influence decisions	1	2	3	4
9. Opportunity to improve job performance	1	2	3	4
10. Opportunity to help other people	1	2	3	4
11 Opportunity for professional growth	1	2	3	4
12. Recognition	1	2	3	4
13. Opportunity to develop professional contacts	1	2	3	4
14. Opportunity for personal growth or friendship	1	2	3	4

APPENDIX C (cont'd).

Scale:
1 TWO-WAY EXCHANGE: Both my supervisor and I have the opportunity to give and receive this item
2 ONE-WAY EXCHANGE, RECEIVING: I have the opportunity to only receive this item
3 ONE-WAY EXCHANGE, GIVING: I have the opportunity to only give this item
4 NOT EXCHANGED: This item is not exchanged

Item	Response 2way	Get	Give	No
15. Commitment or loyalty to my supervisor.....	1	2	3	4
16. Trust in my supervisor.....	1	2	3	4
17.Please list other things which you give up or gain, and indicate how you exchange this by encircling the appropriate number				
_____	1	2	3	4
_____	1	2	3	4
_____	1	2	3	4

III. The following questions refer to the success of your interactions with your supervisors.

A. How would you describe most of your interactions with your supervisor? Please encircle one number.
5 Extremely successful
4 Moderately successful
3 Adequate
2 Mostly unsuccessful
1 Complete failures

B. Please characterize most of your interactions with your coworkers by encircling one of the following:
5 Extremely successful
4 Moderately successful
3 Adequate
2 Mostly unsuccessful
1 Complete failures

APPENDIX C (cont'd).

C. For items 1-3, please encircle the number beside the statement which best describes your involvement in the TCS so far. Choose one number only. In cases where more than one answer applies, choose the answer which occurs most frequently.

1. Your participation in the program so far:
   1. Never participated. (PLEASE STOP HERE.)
   2. Participate rarely, and only when asked
   3. Participate rarely, but on own initiative
   4. Participate often, but only when asked
   5. Participate often on own initiative

2. Your involvement in decision making:
   1. No advance information is given to you regarding decisions to be made
   2. You are informed in advance about decisions to be made
   3. You are allowed to make suggestions or comments on your own initiative
   4. Your suggestions or comments are solicited before the decision is made
   5. You have a vote or the decision is completely in your hands

3. Types of decisions that are covered by the participation program:
   1. Issues that are your responsibility or affect you directly
   2. Issues in your department or division
   3. Issues that concern the company in general
   4. 1 and 2 above
   5. all of the above

4. Your assessment of costs and benefits of participating or not participating in the program so far has been:
   1. Benefits of participation outweigh costs of participation
   2. Costs of participation outweigh benefits of participation
   3. Benefits of nonparticipation outweigh costs of nonparticipation
   4. Costs of nonparticipation outweigh benefits of nonparticipation
   5. 1 and 4 above
   6. 2 and 3 above
   7. No assessment made

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE. PLEASE REFER ANY QUESTIONS YOU MIGHT HAVE ABOUT THE RESULTS OF THE SURVEY OR THIS PROJECT TO THE OFFICE OF MR.

APPENDIX D

Table D-1

Social Exchange Scale for Hypothesis I.

Questionnaire Item Number	Social Exchange Factor
I1	Benefits of participating exceed costs of participating
I2	Equity: reward based on individual contribution
I3	Equality: equal rewards for everybody
I4	Commitment to coworkers
I5	Commitment to supervisor
I6	Employee given opportunity to exert more influence in work-related decisions
I7	Dependence on others
I8	Good relations with coworkers
I9	Good relations with supervisor/s
I10	Trust supervisor in work-related decisions
I11	Reciprocity in exchange with supervisor/s
I13	Costs of not participating exceed benefits of not participating

Table D-2

Affective Scale for Hypothesis I.

Questionnaire Item Number	Affective Factor
I16	Employee gains respect from participating in decisionmaking
I17	Participation program offers opportunities for self-expression
18	Satisfaction due to involvement in decisionmaking
I19	Involvement in decisionmaking improves morale

APPENDIX D (cont'd).

Table D-3

Contingency Scale for Hypothesis I.

Questionnaire Item Number	Contingency Factor
I12	Supervisor is open to/supportive of contributions
I14	Employee can contribute to decisions important to him/her
I15	Employee has high need to control own work
I7	Dependence on others

Table D-4

Cognitive Scale for Hypothesis I.

Questionnaire Item Number	Cognitive Factor
I18	Satisfaction due to involvement in decisionmaking
I20	Employee learns more about company
I21	Increase in job knowledge or skill
I22	Involvement in program facilitates acceptance of company changes

APPENDIX E

Table 1

Means, Standard Deviations, reliability, and intercorrelations for all variables in Exchange of Pecuniary Items Scale[a] (American Airlines)

Variable	M	SD	Alpha[b]	II1	II2	II3	II4	II5	II6	II7
II1	1.58	1.25	.51	1.00						
II2	2.32	1.30	.51	.03	1.00					
II3	1.59	1.45	.50	.09	.05	1.00				
II4	2.65	1.15	.44	.00	.26	.26	1.00			
II5	2.30	1.45	.49	.19	-.01	.05	.17	1.00		
II6	1.47	1.45	.45	.18	.12	.10	.09	.28	1.00	
II7	2.09	1.44	.46	.01	.16	.15	.36	.07	.20	1.00

[a]alpha = .5244, standardized item alpha = .5277.
[b]If item is deleted.
n=218

APPENDIX E

Table 2

Means, Standard Deviations, reliability, and intercorrelations for all variables in Exchange of Career Advancement Items Scale[a] (American Airlines)

Variable	M	SD	Alpha[b]	II8	II9	II11	II12	II13
II8	2.00	1.45	.39	1.00				
II9	1.85	1.43	.43	.45	1.00			
II11	.41	.49	.50	.17	.19	1.00		
II12	.44	.49	.52	.16	.05	.48	1.00	
II13	.31	.46	.52	.16	.11	.48	.44	1.00

[a]Alpha = .5464, standardized item alpha = .6529.
[b]If item is deleted.
n=212

APPENDIX E

Table 3

Means, Standard Deviations, reliability, and intercorrelations for all variables in Exchange of Socialization Items Scale[a] (American Airlines)

Variable	M	SD	Alpha[b]	II10	II14	II15	II16
II10	.66	.47	.66	1.00			
II14	.58	.49	.69	.41	1.00		
II15	.46	.50	.67	.37	.44	1.00	
II16	.74	.43	.67	.50	.30	.43	1.00

[a]Alpha = .7366, standardized item alpha = .7381.
[b]If item is deleted.
n=220

APPENDIX E

Table 4

Means, Standard Deviations, reliability, and intercorrelations for all variables in Exchange of Pecuniary Items Scale[a] (Hypothesis II), Company B

Variable	M	SD	Alpha[b]	II1	II2	II3	II4	II5	II6	II7
II1	.43	.50	.71	1.00						
II2	.51	.50	.68	.41	1.00					
II3	.29	.46	.68	.38	.51	1.00				
II4	.21	.41	.73	.20	.11	.37	1.00			
II5	.32	.47	.70	.32	.21	.30	.19	1.00		
II6	.24	.43	.70	.14	.17	.32	.31	.68	1.00	
II7	.37	.49	.73	.21	.53	.22	.13	.05	.20	1.00

[a]alpha = .7398, standardized item alpha = .7397.
[b]If item is deleted.
n=40

APPENDIX E

Table 5

Means, Standard Deviations, reliability, and intercorrelations for all variables in Career Advancement Scale[a] (Hypothesis II), Company B.

Variable	M	SD	Alpha[b]	II8	II9	II11	II12	II13
II8	.51	.50	.80	1.00				
II9	.51	.50	.88	.56	1.00			
II11	.37	.49	.84	.64	.42	1.00		
II12	.45	.50	.81	.78	.46	.62	1.00	
II13	.32	.47	.84	.67	.32	.53	.63	1.00

[a]alpha=.8683, standardized item alpha = .8681.
[b]If item is deleted.
n=39

APPENDIX E

Table 6

Means, standard Deviations, reliability, and intercorrelations for all variables in Exchange of Socialization Items Scale[a] (Hypothesis II), Company B.

Variable	M	SD	Alpha[b]	II10	II14	II15	II16
II10	.57	.50	.88	1.00			
II14	.55	.50	.84	.73	1.00		
II15	.50	.50	.84	.53	.58	1.00	
II16	.55	.50	.82	.51	.68	.89	1.00

[a]alpha = .8851, standardized item alpha = .8850.
[b]If item is deleted.
n=40

APPENDIX F

Table 1

Means, Standard Deviations, reliability, and intercorrelations for all variables in Social Exchange Scale[a] (Hypothesis I), American Airlines

Variable	M	SD	Alpha[b]	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11	I13
I1	2.11	1.54	.63	1.00											
I2	1.55	1.24	.65	.05	1.00										
I3	1.94	1.26	.65	.22	.09	1.00									
I4	2.39	1.42	.62	.11	.11	.06	1.00								
I5	1.98	1.42	.61	.15	.16	.11	.41	1.00							
I6	2.10	1.38	.63	.29	.04	.09	.17	.09	1.00						
I7	1.92	1.24	.66	.12	-.02	.05	.08	.03	.14	1.00					
I8	2.96	1.10	.62	.06	.12	.01	.49	.28	.09	.08	1.00				
I9	2.57	1.31	.61	.07	.02	.04	.26	.48	.13	.10	.43	1.00			
I10	2.25	1.36	.61	.08	.16	.07	.25	.43	.22	.15	.25	.45	1.00		
I11	1.58	1.24	.67	.09	.04	.13	.03	.05	-.01	-.09	.02	.06	.05	1.00	
I13	1.59	1.47	.64	.44	.13	.07	.06	.05	.26	.26	.04	.05	.06	.09	1.00

[a]Alpha = .6598, standardized item alpha = .6554.
[b]If item is deleted.
n=212

APPENDIX F

Table 2

Means, Standard Deviations, reliability, and intercorrelations for all variables in Affective Factors Scale[a] (Hypothesis I), American Airlines

Variable	M	SD	Alpha[b]	I16	I17	I18	I19
I16	1.50	1.44	.62	1.00			
I17	2.11	1.43	.57	.21	1.00		
I18	2.04	1.44	.50	.22	.31	1.00	
I19	1.85	1.43	.49	.25	.30	.44	1.00

[a]Alpha = .6223, standardized item alpha = .6225.
[b]If item is deleted.
n=214

APPENDIX F

Table 3

Means, Standard Deviations, reliability, and intercorrelations for all variables in Contingency Factors Scale[a] (Hypothesis I), American Airlines

Variable	M	SD	Alpha[b]	I12	I14	I15	I7
I12	2.31	1.30	.19	1.00			
I14	2.64	1.15	.17	.26	1.00		
I15	2.30	1.44	.36	-.01	.16	1.00	
I7	1.98	1.25	.29	.19	.01	.03	1.00

[a]alpha = .3159,standardized item alpha = .3287
[b]If item is deleted
n=212

APPENDIX F

Table 4

Means, Standard Deviations, reliability, and intercorrelations for all variables in Cognitive Factors Scale[a] (Hypothesis I), American Airlines

Variable	M	SD	Alpha[b]	I18	I20	I21	I22
I18	2.01	1.44	.60	1.00			
I20	1.90	1.41	.57	.30	1.00		
I21	1.63	1.36	.56	.28	.31	1.00	
I22	1.51	1.45	.56	.27	.33	.37	1.00

[a]Alpha = .6461, standardized item alpha = .6466
[b]If item is deleted
n=218

APPENDIX F

Table 5

Means, Standard Deviations, reliability, and intercorrelations for all variables in the Social Exchange Scale[a] (Hypothesis III), Company B.

Variable	M	SD	Alpha[b]	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11	I13
I1	2.43	1.34	.77	1.00											
I2	1.48	1.40	.78	.00	1.00										
I3	1.64	1.31	.77	.10	.30	1.00									
I4	2.70	1.37	.77	.49	-.06	-.22	1.00								
I5	2.24	1.51	.72	.20	.24	.26	.51	1.00							
I6	2.24	1.46	.76	.02	.27	.19	.09	.42	1.00						
I7	1.67	1.17	.77	.09	-.13	.10	.12	.37	.12	1.00					
I8	3.37	.75	.78	.13	.03	-.22	.27	.06	.11	-.01	1.00				
I9	2.86	1.22	.74	.30	.26	.26	.10	.52	.34	.35	.26	1.00			
I10	2.16	1.42	.74	.20	.13	.38	.29	.66	.28	.31	.17	.58	1.00		
I11	2.05	1.20	.75	.07	.14	.31	.31	.60	.34	.26	.19	.32	.33	1.00	
I13	1.75	1.57	.76	.43	.19	.19	.10	.23	.49	.09	-.08	.34	.03	.36	1.00

[a]alpha = .7819, standardized item alpha = .7748.
[b]If item is deleted.
n=38

APPENDIX F

Table 6

Means, standard deviations, reliability, and intercorrelations for all variables in Affective Factors Scale[a] (Hypothesis I), Company B.

Variable	M	SD	Alpha[b]	I16	I17	I18	I19
I16	1.73	1.53	.74	1.00			
I17	2.05	1.39	.77	.32	1.00		
I18	2.18	1.44	.64	.54	.51	1.00	
I19	2.28	1.33	.71	.48	.34	.60	1.00

[a]alpha = .7783, standardized item alpha = .7791.
[b]If item is deleted.
n=38

APPENDIX F

Table 7

Means, Standard Deviations, reliability, and intercorrelations for all variables in Cognitive Factors Scale[a] (Hypothesis I), Company B.

Variable	M	SD	Alpha[b]	I18	I20	I21	I22
I18	2.15	1.45	.69	1.00			
I20	1.80	1.50	.75	.29	1.00		
I21	2.22	1.32	.60	.40	.41	1.00	
I22	1.82	1.51	.63	.46	.26	.64	1.00

[a]alpha = .7354, standardized item alpha = .7396.
[b]If item is deleted.
n=40

APPENDIX F

Table 8

Means, Standard Deviations, reliability, and intercorrelations for all variables in Contingency Factors Scale[a] (Hypothesis I), Company B.

Variable	M	SD	Alpha[b]	I12	I14	I15	I7
I12	2.25	1.33	.19	1.00			
I14	2.57	1.29	.17	.44	1.00		
I15	2.45	1.44	.36	.19	.26	1.00	
I7	1.62	1.16	.29	.32	.12	.20	1.00

[a]alpha = .5843, standardized item alpha = .5860
[b]If item is deleted.
n=40

APPENDIX G

Table 1

Means, standard deviations, reliability, and intercorrelations for all variables in Hypothesis III, American Airlines.

Variable	IIIA	IIIC1	IIIC2	IIIC3	IIIC4	IIIB
IIIA	1.00					
IIIC1	.20	1.00				
IIIC2	.20	.25	1.00			
IIIC3	.12	.21	.12	1.00		
IIIC4	.19	.25	.17	.07	1.00	
IIIB	.31	.04	.13	.07	-.01	1.00

n=204

APPENDIX G

Table 2

Means, standard deviations, reliability, and intercorrelations for all variables in Hypothesis III, Company B.

Variable	IIIA	IIIC1	IIIC2	IIIC3	IIIC4	IIIB
IIIA	1.00					
IIIC1	.39	1.00				
IIIC2	.53	.16	1.00			
IIIC3	.02	.34	-.08	1.00		
IIIC4	.31	.46	.42	.20	1.00	
IIIB	.31	-.12	-.23	-.18	-.32	1.00

n=33

APPENDIX H

Table 1

Comments from American Airlines Questionnaires.

Department Code	Additional Items Exchanged	Miscellaneous Remarks
Red[a]	Improved conditions (gain) --safety items get immediate attention	Frustration due to union employees not being committed to the success of company
	Opportunity to work with other departments on the implementation of ideas	Equal give and take in group, not limited to supervisor-subordinate
	Leadership, cooperation	Participation program extends beyond monthly meetings
Pink[a]	Job satisfaction	Open communication weakens the old adverserial relationship
	Authority, control	I gain a bettern workplace and a better relationship with management
	Opportunity for teamwork	Working incentive other than paycheck
	Versatility	
	Freedom to learn	
	Opportunity to demonstrate expertise	
Black[a]	Job satisfaction	Frustration towards irresponsible

APPENDIX H (cont'd).

Department Code	Additional Items Exchanged	Miscellaneous Remarks
	Authority, control	management; don't like supervisory style--authoritarian
	Teamwork	
Light blue[a]	Face-to-face contact with supervisor	
	Information about nonjob-related issues	
	Pride in job well done	
	Being treated as an individual and as an adult	
	If management had open ears it would help	
Brown[c]	Responsbility, accountability, authority	Participation program is nonexistent
		Could become a good vehicle to get around unresponsive supervision
		We wrote our CEO (about a problem) and got instant action; no one else would talk to us at any level; we did not use the participation

APPENDIX H (cont'd).

Department Code	Additional Items Exchanged	Miscellaneous Remarks
	Opportunity to understand company problems	program
Purple[b]	Learn to accept responsibility	I was a participation program coordinator but got no support
	Interdependence among team members	
	Excellence	
Yellow[a]	Opportunity to understand company problems	Spend too much time on nonQWL-problems
	Pride in job performance	Participation program is not working because too many people are only interested if it helps them
		I have a good relationship with my supervisor and the participation program has nothing to do with it

[a]shop department
[b]hangar department
[c]off-base department

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