ORGANIZATIONAL COMMITMENT IN A SELF-MANAGING WORK TEAM ENVIRONMENT

THESIS

Presented to the Graduate Council of the University of North Texas in Partial Fulfillment of the Requirements

For the Degree of

MASTER OF SCIENCE

By

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Denton, Texas
December 1991

This study examines the determinants of organizational commitment in a self-managing work team setting. The data used in the study are from a sample of 313 employees in an electronics manufacturing plant.

Chapter one introduces the reader to the topic of self-managing work teams and explains the relevance of commitment to this organizational structure. Chapter two is a review of the literature which focuses on commitment, its determinants, and two theories used to explain the relationship between them. The remaining chapters describe the methodology used in the study, explain the findings and draw conclusions.

Of all the factors analyzed, only perceived organizational support and autonomy were found to influence commitment in this sample. The relevance of these findings for business and academia is discussed.
ACKNOWLEDGEMENT

The author wishes to acknowledge the Texas Advanced Research Program for the grant that funded this project.
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CHAPTER I

INTRODUCTION

In the last decade, the topic of organizational commitment has attracted considerable attention. This is because numerous studies have linked organizational commitment to an array of desirable employee behaviors. For example, many researchers have linked organizational commitment with a positive influence on job performance (DeCotiis & Summers, 1987; Eisenberger, Fasolo, & Davis-LaMastro, 1990; Meyer, Paunonen, Gellatly, Goffin & Jackson, 1989; Mowday, Porter & Dubin, 1974; Porter, Crampom & Smith, 1976; Steers, 1977).

Other researchers have demonstrated commitment's negative effects on turnover (Angle & Perry, 1981; DeCotiis & Summers, 1987; Koch & Steers, 1978; Porter et al., 1976), and absenteeism (Eisenberger et al., 1990; Koch and Steers, 1978; Smith, 1977; Steers 1977).

A number of hypotheses have been offered to explain the relationship between commitment and these desirable employee behaviors. Primarily, commitment is believed to affect these behaviors because employees who are committed to an organization are also committed to the realization of its goals (Porter, Steers, Mowday & Boulian, 1974). Consequently, performance is believed to be greater among highly committed employees because they exert more effort to
achieve its goals which can lead to increased performance. Lower absenteeism among highly committed employees is believed to occur because they are motivated to attend work and pursue the organization's goals. Committed employees will also wish to continue their membership in an organization if they are strongly committed to its goals.

With the importance of these outcomes to organizational effectiveness, ways of increasing commitment have been sought among managers and researchers. While many of these efforts may involve simple measures such as a "pat on the back," a number of organizations are attempting far more ambitious strategies.

A growing interest has been seen in the development of new organizational structures designed to increase employee participation in decision-making which is believed to increase their commitment, motivation, and performance. Self-managing work team (SMWT) designs are one of these new structures. Organizations using SMWTs utilize a structure where workers are arranged into self-contained units. The organization provides workers with the necessary boundaries and skill development to permit the completion of a product within each team. This is most often accomplished with minimal supervision since the team members perform most of the supervisory tasks themselves. The advantages of this structure originate from the hypothesized benefits of empowering workers--increased commitment, motivation, and
performance. To understand why employee participation is believed to have such advantages, a brief discussion of how work has been accomplished through history is necessary. This discussion is complemented by theories of organizational structure and how their application has lead to the development of SMWTs.

Transition From Craftsmanship to Industrial Production

One can trace many of the structural properties found in today's SMWTs to the practices of craftsmen in the Middle Ages. Unlike the production worker of today, the craftsman was solely responsible for completing a product. As described by Cummings and Srivastva (1977), these responsibilities required the craftsman to perform a number of roles. The span of his activities included choosing raw materials, tools, methods of production, and the place where his finished products could be marketed. It was his knowledge, experience and "intuition" that allowed him to react to changes in the environment such as the availability of materials or the demands of the market. The features of individuality and freedom in the craftsman's work benefitted him and his customers. While this benefit was intrinsically rewarding, it would lead to high quality products and extrinsic rewards. As Cummings and Srivastva (1977) state:
Based on intrinsic rewards derived from work that was meaningfully designed and worthy of self-respect, the craftsman was motivated to perform high-quality work that assured him of an economic livelihood, community recognition, and social and psychological fulfillment (p. 17).

After the industrial revolution, the benefits of craftsmanship disappeared for many workers since much of their work could be accomplished by machines. With the guidance of research by Frederick Taylor (1911), work was scientifically broken down and restructured into mechanical components. In contrast to the craftsman's work that allowed discretion and individuality, "scientific management" practices—now referred to as traditional practices—simplified tasks into repetitive machine-like motions. Workers played the role of machines in order to adhere to the demands of new technology. Organizations were caste into the mold of machine-like structures as well. Hierarchies typified an organization of departments that performed repetitive, specified functions.

The effects of this structure has included huge increases in effectiveness and efficiency. Societies have benefitted greatly from the large-scale economic growth that has resulted from such methods. Businesses have assumed large profits that were unknown to the craftsman of the
Middle Ages. What was sacrificed in the transition, however, is the type of intrinsic motivation that the craftsman experienced--replaced by extrinsic rewards and coercion. The effects of this transition on the worker were not addressed by management science at the time.

Worker Needs and Production Needs: No Longer Separate Realms

It was not until the now classic Hawthorne studies were conducted in 1924 that researchers began to discover that the social and psychological aspects of a job had an impact on workers, and more importantly, their performance. The studies were originally conducted to measure the effects of the physical environment on worker motivation. The scientists instead discovered that the interest they and plant management showed toward the workers, not the changes in the environment, motivated the workers to perform at higher levels. Their change in output resulted from the psychological effect of feeling that the work they performed was important. This study was the beginning of a trend in management science to address the social and psychological aspects of work in addition to the technical aspects.

Although this interest was popular among some researchers, the need to address the social and psychological needs of workers was not recognized by many
industries until technologies such as sonar, radar, and computers required workers with higher levels of competence. Since these new forms of technology were based on information not production, machine-like workers performing simple tasks were no longer sufficient. The operation of these machines required higher-order skills. As Cummings and Srivastva (1977) note:

Information handling, complex decision-making, planning, and process control demanded high levels of vigilance, technical problem-solving skills, self-initiated behavior, and social and communication skills. (p. 18)

The traditional job design did not meet the requirements necessary to utilize sonar radar and computers. In this example of new technology, the work requirements established the needs for worker discretion and freedom in performing the work.

The demands for these skills were not limited to the requirements of technology, however. A study by Trist and Bamforth (1951) demonstrated that the environment in which work is performed is also an important consideration in job design. The researchers examined the work process of a coal mine in Great Britain where the work design of team coal-extraction was replaced by a traditional work design.
complete with hierarchies and departmentalization. According to Cummings and Srivastva (1977):

Previously, miners had worked under a 'single place' form of mining in which pairs of workers carried out all of the required tasks with little supervision or external control. (p. 43)

This method was effective because coal mining is a highly variable task. When conditions on the coal face changed, workers had to adjust the amount of time they spent on each aspect of the work. For example, if the coal face displayed a harder surface than was encountered in the past, workers would have to spend a disproportionately greater amount of time extracting the coal from the face then the time they spent on other tasks.

When the coal mining methods were mechanized, the workers' jobs were completely restructured. Instead of pairing off workers into autonomous groups, they were placed into three shifts designed to carry out different and narrowly defined tasks. The work of group three depended upon the successful completion of group two's work which depended upon the completion of group one's work. This system, in accordance with traditional management practices, was efficient as long as the process flowed smoothly. However, as described by Cummings and Srivastva (1977), when
changing conditions on the coal face caused problems for the first group, the entire production would break down:

External supervision was unable to remedy this situation, since the conditions of underground mining made it difficult to control and to coordinate workers effectively. The inability to cope with the requirements of the task resulted in hostility and conflict among the workers, and between workers and management. (p. 44)

Instead of the predicted efficiency of the new coal mining work design, the results of this structure included a drop in productivity and an increase in absenteeism and turnover. Once the production methods were brought back to the single place method of team work, the adverse affects of the mechanized structure were eliminated.

The Impact of Environmental and Technological Change On the Structure of Organizations

These examples illustrate that the forces of technology and environment play key roles in the way organizational structures work. Many new technologies require workers with higher-order skills. Different environmental conditions encountered by different industries require varied approaches to production processes. "Organizations that
exist in relatively certain and unchanging environments rely on centralized authority, rules and procedures, and planning to coordinate departments" (Gibson, Ivancevich & Donnelly, 1988, p. 514). This type of structure is effective as long as the environment is stable. For organizations that exist in more dynamic and complex environments, this type of structure cannot be relied upon. Increased environmental uncertainty increases the number of problems that require top management's attention. As Gibson et al. (1988) describe, the increased flow of information and problems tend to overload the system:

As a greater number of nonroutine, consequential problems occur in the organization's environment, managers are more and more drawn into day-to-day operating matters. . . Changes in market demand, resource supplies, and technology disrupt plans and require adjustments during task performance. (p. 514)

These adjustments are disruptive to a traditional work structure. The demands on management in the British coal mines exemplify this point—they were overloaded by the demands of the changing coal face.

Today, many organizations must deal with change and uncertainty in the environment. The influx of high-quality, low-cost products into the market place from Japan and other countries have put a strain on the sales and profitability
of U.S. companies. Many organizations find that they cannot generate the increases in productivity in conjunction with quality needed to cope with these new demands. For organizations to progress, many workers must be trained to solve problems and make decisions on their own instead of relying on management for all solutions. Organizational structures must also be adjusted to give workers the authority they need to carry out their decisions.

Competition, concerns with productivity, and needs for flexibility in an uncertain environment have resulted in a broader interest toward self-managing work teams as a possible solution. Although companies have been reluctant to give more decision-making power to their workers, advocates of this structure claim that it leads to increases in quality and productivity (Yeatts, Thibodeaux & Beyerlein, 1990). Another benefit is a flatter organization that reduces middle management positions. This results in an organization that is more flexible and able to produce the specially tailored products in the timely manner that customers demand.

The Impact of SMWT Structures
on Organizational Commitment

Not unlike the craftsmen in early Europe, employees in SMWT organizations receive the fulfillment and motivation
resulting from a strong involvement in the many dimensions of their work. As employees become more involved in the multiple benefits of teamwork, they gain increased commitment to the organization. Commitment is believed to be influenced by SMWT designs because the organization provides an environment where the workers' social and psychological needs are met (Orsburn, Moran, Musselwhite & Zenger, 1990). Committed workers, in turn, increase their identification with and involvement in the organization and its goals (Porter et al., 1974). Commitment is a principal factor in the call for SMWT structures since it results in higher performance and lower absenteeism and turnover.

While Orsburn et al. (1990) promote the link between SMWTs and commitment, their conclusions are based largely on anecdotes and consensus. This is understandable due to the lack of empirical studies on SMWT structure in general. Commitment studies also lack sufficient explanation of the effect that SMWT structures have on organizational commitment. In a review of organizational commitment literature, Reichers (1985) states that although organizations are presumed to be the focus of the individual's commitment, an examination of the nature of the organization is lacking in most commitment studies. In an attempt to address these concerns, the following study was designed to empirically evaluate the effects of a SMWT structure on the commitment of employees to their organization.
CHAPTER II

REVIEW OF THE LITERATURE

In reviewing the literature, three issues require attention. The first is to provide an operational definition of commitment. This is followed by a brief overview of four different categories of factors that have been found to influence commitment. In the last section, two theoretical perspectives and proposed models are discussed.

Definition of Commitment

The definition and measurement of organizational commitment has been treated in a number of ways. Becker (1960) theorized that commitment grows out of the investments that a member puts into an organization. As the tenure of members increase, they have more invested in an organization and are typically given more rewards. This "side-bet" approach to organizational commitment has been used in various studies (Alutto, Hrebinjak & Alonso, 1973; Farrell & Rusbult, 1981; Grusky, 1966; Hrebinjak & Alutto, 1972; Rusbult & Farrell, 1983; Sheldon, 1971).

The definition of commitment gained new dimensions with Porter et al. (1974). Focusing primarily on "the strength
of an individual's identification with and involvement in a particular organization," Porter et al. (1974, p. 604) characterized a committed individual as having the following qualities: (a) a strong belief in and acceptance of the organization's goals and values; (b) a willingness to exert considerable effort on behalf of the organization; (c) a definite desire to maintain organizational membership. These qualities are operationalized through the Organizational Commitment Questionnaire (OCQ) which has been one of the most widely used instruments to measure commitment.

This definition and its measurement through the OCQ is not without its critics, however. One concern is that the definitions used in operationalizing the OCQ do not distinguish commitment from other concepts. For example, "a willingness to exert considerable effort on behalf of the organization" implies a force to act—much like the concept of motivation (DeCotiis & Summers, 1987). Furthermore, the questions that measure the "desire to maintain organizational membership" are very similar to questions that measure intent to stay or intent to quit—concepts that have been shown to be highly predictive of turnover (Mobley, 1982). Reichers (1985) points out that this "concept redundancy" may in fact explain why commitment has been found to relate so strongly to turnover. Hom, Katerberg and
Hulin (1979) identified this type of conceptual overlap as a problem when they used the OCQ in their study of turnover.

To address these concerns, researchers have since broken commitment into attitudinal and behavioral components. Even the designers of the OCQ have acknowledged this distinction (Mowday, Porter, & Steers, 1982). The affective attachment that an individual has toward an organization is the attitude most often examined in studies that distinguish between these two dimensions. Specifically, it measures the emotional attachment an individual has toward the organization. The definition and measurement of affective commitment are used in this study because affective commitment provides an ideal construct for measuring the consequences of commitment without concern of overlapping other concepts such as employee motivation or intent to stay (Allen & Meyer, 1990).

Major Factors That Determine Commitment

Previous studies of commitment are characterized by a general lack of agreement regarding its specific determinants and the theoretical perspectives explaining their effects. However, a brief review of commitment literature demonstrates that the various determinants are often placed into four broad categories. These are personal
characteristics, role-related characteristics, work experiences and structural characteristics.

While studied determinants of commitment are related to only four categories, the specific factors linked to commitment are many. This is partially true because many studies have simply examined the correlation of these factors to commitment. While some factors have consistently shown a strong attachment to commitment, others are inconsistent and show mixed results.

The range of personal characteristics that have shown positive links to commitment in previous studies include demographics such as age and tenure (Angle & Perry, 1981; Brown, 1969; Hall, Schneider & Nygren, 1970; Hrebiniaik, 1974; Lee, 1971 Morris & Sherman 1981; Sheldon, 1971). Other studies have found that women have more commitment (Angle & Perry, 1981; Grusky, 1966; Hrebiniaik & Alutto, 1972) and people with higher levels of education have less commitment (Angle & Perry, 1981; Morris & Sherman, 1981; Morris & Steers, 1980; Steers 1977). A range of personality factors such as work ethics and needs for achievement have been positively linked to commitment (Buchanan, 1974; Card, 1978; Hall et al., 1970; Hall & Schneider, 1972; Steers, 1977). Job involvement, or how important work is to one's life, has shown positive links (Stevens et al., 1978; Wiener & Gechman, 1977).
Role-related characteristics that have been negatively linked to commitment include role conflict and role ambiguity (Morris & Koch, 1979; Morris & Sherman, 1981). Job scope and challenge have been positively related (Brown, 1969, Buchanan, 1974; Fukami & Larson, 1984; Hall et al, 1970; Hall & Schneider, 1972; Steers, 1977).

Structural factors have also been linked to commitment in some studies. Decentralization, worker ownership, participation in decision-making and formality of written rules have each been positively linked to commitment in some studies (Morris & Steers, 1980; Spector, 1986).

Work experiences are considered a major socializing force of workers entering an organization, and hence, can have a strong influence on commitment. Positive attitudes of co-workers toward the organization, perceived personal importance to the organization (Brief & Motowidlo, 1986; Buchanan, 1974; Hrebiniak, 1974; Mowday et al., 1979; Steers, 1977), and perceived organizational dependability or support (Eisenberger et al., 1990; Meyer and Allen, 1988; Organ & Konovsky, 1989; Steers, 1977) have been shown to positively influence commitment. A high degree of social involvement in the organization (Fukami & Larson, 1984), perceived pay equity and a presence of group norms regarding hard work (Buchanan, 1974; Steers, 1977) have also been positively linked to commitment in various studies.
One criticism of commitment studies focuses on the lack of agreement regarding determinants of commitment. Furthermore, many factors are linked without any sound theoretical basis to support them. While some of the differences in commitment determinants may be partially explained by the different measures of commitment employed by the researchers, Mowday et al. (1982) argue that the sample type has the largest influence:

For any given individual within a specific organizational context, and at a particular point in time, some factors will be important and others will be relatively insignificant. The task for researchers is to discover across many different samples of employees and different types of organizations and organizational settings which variables tend to have the most consistent and the largest impacts on whether organizational linkages do or do not develop. (p. 204)

Theoretical Perspectives

The reasons why some factors are linked to commitment have been explained through various perspectives. Some have argued that commitment to an organization could be shaped by existing attitudes or prior behavior (Meyer & Allen, 1988; O'Reilly & Caldwell, 1981; Salancik, 1977; Salancik & Pfeffer, 1978). Perspectives of this sort typically do not
acknowledge that the process of commitment is related to an organization—only to the psychological characteristics of the individual.

Others point out that determinants are often related to commitment on the principles of need satisfaction (Buchanan, 1974; Morris & Sherman, 1981; Steers, 1977). This frequently accepted perspective asserts that employees are more likely to associate themselves to an organization and work toward its goals when working conditions satisfy their basic needs (Alderfer, 1972; Hackman & Lawler, 1971; Maslow 1943).

One of the most widely accepted perspectives in explaining commitment is exchange theory (Angel & Perry, 1983; Bateman & Organ, 1983; Brief & Motowidlo, 1986; Eisenberger et al., 1990; Etzioni, 1961; Gould, 1979; Levinson, 1965; Mottaz, 1988; Mowday et al., 1982; Organ & Konovsky, 1989; Steers, 1977). This perspective explains that employees attach themselves to an organization in return for rewards (Blau, 1964).

Because of its widespread use, exchange theory is one perspective utilized in this study. Another perspective, socio-technical theory, is also part of this study. Socio-technical theory bases its assumptions on the benefits of providing a job structure that satisfies employees' needs. This perspective is most often cited as the rationale behind
the development of self-managing work team (SMWT) designs. Further explanation of socio-technical theory follows.

**Socio-Technical Theory and Commitment**

Socio-technical theory has its origins in the work of the Tavistock Institute of Human Relations in London, England. Eric Trist is the Tavistock researcher who is primarily credited with socio-technical theory—a perspective that resulted from his study of the British coal mine discussed in Chapter I (French & Bell, 1984). The socio-technical approach recognizes that the organization of work involves more than the mechanical aspects of the work itself. The human aspects of work are also important to organizational performance and employee well-being. More specifically, as Rousseau (1977) notes, production systems require:

- both a technology, a process of transforming raw materials into output, and a social structure linking the human operators both with the technology and to each other. A socio-technical system is any unit in the organization composed of a technological and a social subsystem having a common task or goal to accomplish. (p. 19)
The interrelationship between the technological and social systems of work exists because the social structure ties people to the technology, and the nature of that technology determines what type of social structure needs to be created. The goal of socio-technical designers is to achieve a "joint optimization" which keeps both subsystems operating at their most effective level. As described by Cummings (1978), socio-technical designers:

attempt to design work structures so that a 'best match' is obtained between employees and technology. This may involve changes in the technology (i.e., equipment and process layout), the work structure (i.e., work roles and their interrelationships), or both. The primary aim is to design a work structure that is responsive to the task requirements of the technology and the social and psychological needs of employees: a structure that is both productive and humanly satisfying. (p. 626)

A structure that is "humanly satisfying" is one that fulfills human needs--a condition that other researchers have found to increase commitment (Buchanan, 1974; Morris & Sherman, 1981; Steers, 1977). For example, the mechanized coal-mining structure discussed earlier was neither productive nor humanly satisfying. Once a traditional structure was implemented, the three-shift social structure
met the needs of the technology. However, it left the workers isolated, unable to communicate effectively, and consequently, unable to adapt to variation in work demands. Overall, the resulting socio-technical system did not meet the requirements of the task and, consequently, was characterized by low performance.

The need to adapt to adversity brings out another important aspect of socio-technical theory: a socio-technical system must be open to the demands of its environment. Open systems allow the workers to self-regulate their activities enabling them to carry out their work despite fluctuations in the environment (Cummings & Srivastva, 1977).

To summarize, users of socio-technical theory highlight the importance of the environment and argue that it should be viewed as guiding the design of the technological and social subsystems. The resulting design jointly optimizes productivity and the social and psychological needs of its employees. One outcome of addressing the workers' needs is an emotional attachment to the organization—or increased commitment. Workers become more committed to an organization when they know that it will satisfy their needs.

One of the strengths of socio-technical theory in this form is that it is general enough to have a wide range of applications. This, however, is also a weakness. It does
not provide any explicit or concrete guidance about what organizational changes are best under what circumstances (Hackman & Oldham, 1976).

Successive work by other theorists gives socio-technical theory some specific dimensions that serve to guide organization design. One of the primary assumptions is that to achieve joint optimization between the technological and social aspects of work, workers within a unit should be permitted discretion in choosing methods to accomplish their goals. As stated by Rousseau (1977), "The use of discretion affects not only decision-making processes but the level and use of skills and job-related knowledge" (p. 20).

Many socio-technical theorists agree that there are certain job designs that effectively use workers’ skills and knowledge. The results of such a design produce an optimal socio-technical system that meets the needs of the organization and its workers. Meaningful work that allows the completion of an entire process or piece of work is one of the job dimensions said to be important in socio-technical designs. Workers also need responsibility and control over the work process. Cohesive work groups have a positive effect on productivity and satisfy worker needs for affiliation (Emery, 1959; McWhinney, 1972; Rousseau, 1977; Trist & Bamforth, 1951). The variety of tasks employees perform and the skills they use on the job (Emery, 1959;
McWhinney, 1972; Trist & Bamforth, 1951) in addition to learning on the job (Emery, 1959; McWhinney, 1972) are other important dimensions of a job that increase employee involvement in and performance on their work. McWhinney (1972) suggests that feedback on performance is important in helping workers improve their performance. As summarized by Rousseau (1977):

the composite picture of an optimal socio-technical system as conceptualized by theorists is a work system in which the jobs provide the opportunity to use a variety of skills, to make decisions, to complete meaningful whole pieces of work, to learn how well one is performing, to interact with others, and to learn. (p. 21)

In an early attempt to bring the general premises of socio-technical theory into a more specific framework, Hackman and Oldham (1976) produced a job characteristics model of work motivation. The model consists of five core job dimensions—skill variety, task identity, task significance, autonomy, and feedback—that affect certain psychological states of the employee. These resulting psychological states influence personal and work outcomes. I have adapted the core job dimensions of Hackman and Oldham's (1976) model and have added a sixth dimension (participation in decision-making) to produce a socio-
technical model explaining organizational commitment (figure 1). While Hackman and Oldham's (1976) model has been used to determine a range of personal and work outcomes, it has not been applied specifically to organizational commitment.

The first three job dimensions, skill variety, task identity and task significance, are hypothesized to affect commitment because they make the work experience meaningful to the employee. If workers find their work meaningful to them, they are more likely to feel an attachment to the organization that provides such work. Hackman and Oldham (1976) define skill variety as the degree to which a job requires a variety of different activities in carrying out the work. Task identity is defined as the degree to which the job requires the completion of a whole and identifiable piece of work. Task significance is the degree to which the job has a substantial impact on the lives or work of other people. If a job is high in these dimensions it will increase the worker's experienced level of meaningfulness (Hackman & Oldham, 1976). This, in turn, is hypothesized to increase commitment.

Knowledge of results, or feedback, can add to employees' feelings of competence if they find that their work meets or exceeds company standards. If their work is below standards, feedback provides opportunities for employees to improve their performance and grow.
Figure 1: Socio-Technical Job Dimensions Hypothesized to Affect Organizational Commitment

Job Dimensions

- Skill Variety
- Task Identity
- Task Significance
- Autonomy
- Feedback
- Participation in Decision-Making

Personal Outcomes

Organizational Commitment
Hackman and Oldham (1976) assert that when employees gain clear information from their work or other people as to how they are performing, it causes positive work and personal outcomes. Feedback is hypothesized to affect commitment since the organization lets employees know when they are doing well and gives them a chance to improve and grow.

Autonomy and participation in decision-making are both hypothesized to affect commitment because they increase the worker's experienced responsibility. Hackman and Oldham (1976) define autonomy as the degree to which the job provides freedom and independence to the individual in scheduling the work and in determining the procedures to be used in carrying it out:

To the extent that a job has high autonomy, the outcomes depend increasingly on the individual's own efforts, initiatives, and decisions, rather than on the adequacy of instructions from the boss or on a manual of job procedures. (p. 258)

Participation in decision-making is another important dimension of socio-technical theory for similar reasons (Rousseau, 1977). Many studies have found participation in decision-making to be a key variable that determines commitment (Darden, Hampton & Howell, 1989; Decotiis & Summers, 1987; Meyer & Allen 1988; Salancik, 1977; Spector, 1986; Stumpf & Hartman, 1984). When people make decisions,
they choose to pursue certain objectives or goals. With group decision-making, a participant "not only publicly agrees to pursue a particular goal, but has some hand in designing the implementation of that goal" (Salancik, 1977, p. 35). Active participation implies that members are willing and able to accomplish a goal. Their public agreement to pursue a chosen goal identifies them as responsible for the outcome.

Salancik (1977) asserts that an increase in responsibility leads to an increase in commitment to the organization and its goals. Since both autonomy and participation in decision-making increase an individual's responsibility for the success and failures that occur on the job, they should be important determinants of commitment.

Even though participation in decision-making has often shown strong positive links to commitment, there is evidence that individuals do not always desire, nor respond favorably to personal control (Rodin, Rennert, & Solomon, 1980). As Hackman and Oldham (1980) point out, the desirability of participation in decision-making depends on the characteristics and needs of the individual. However, since socio-technical theorists generally consider it to be an important element of a motivational job design, the impact that participation in decision-making has on commitment in a SMWT organization should be explored further.
Exchange Theory and Commitment

An alternative to socio-technical theory in the explanation of commitment is exchange theory. Exchange theory focuses on the principles of reciprocity or giving something in return for something else. Much of the present-day references to exchange theory focus on the works of Peter Blau (1964). The assumptions of exchange theory are not new to this century, however. Attention to this principle is widespread in historical writings and across cultures. Social philosophical writings dating back to Aristotle's *Nicomachean Ethics* defined the principles of social exchange. The following centuries witnessed writings from La Rochefoucauld in 1664, Mandeville in 1714, and Adam Smith in 1759 that examined the principles of exchange in social life. In this century Marcel Mauss, an anthropologist, presented a general analysis of gift exchange in simple societies in 1925 (Blau, 1964).

The first systematic application of this theory was originated by George C. Homans (1961) and expanded upon significantly by Blau (1964), who states that the basic assumptions of exchange theory are that people:

enter into new social associations because they expect doing so to be rewarding and that they continue relations with old associates and expand their interaction with them because they actually find doing
so to be rewarding. Associating with another person may be intrinsically rewarding, as in love and in sociability, or it may bring rewards that are extrinsic to the association itself, such as advice from a colleague and help from a neighbor. In either case, the desire to satisfy some want is assumed to underlie the association. (Blau, 1974, p. 204)

Consequently, social interaction is an exchange process where individuals seek to obtain rewards from their social associations. If an individual perceives that associating with others will be a rewarding experience, then that person will want to pursue the association to realize those rewards. The notion of exchange also includes obligations. Blau (1974) argues that "A person who derives benefits from associates is under obligation to reciprocate by supplying benefits to them in return" (p. 205).

Blau (1974) also emphasizes that this process is not restricted to economic exchange; social exchange is highly prevalent in societies. Neighbors and friends do favors for each other and are rewarded either by the resulting good feelings, a simple "thank you," or even by a returned favor in the future.

This principle applies to employees of organizations as well. Although workers who lend their skills to an organization expect economic rewards (e.g. pay and benefits)
for their efforts, social rewards are expected as well. For example, a manager may allow an employee to take a day off without any economic consequences. In the future however, the employee may voluntarily stay after hours to help his or her manager complete an important assignment. Other social exchanges could include increased output on the employee's behalf in return for public recognition of his or her efforts. While these examples were exchanges that occurred between two people, they could also be considered exchanges between the organization and its employee since the manager represents the organization.

The exchange perspective has been used widely in explaining the commitment process between employees and organizations. The theory implies that commitment is largely a function of rewards (Herzberg, 1966; Kalleberg, 1977). If individuals feel rewarded by aspects of their work, whether those rewards are intrinsic or extrinsic in nature, they will hold many positive attitudes toward the organization. Their attitudes, in turn, will affect their behavior. Commitment to the organization and the behaviors associated with commitment are the rewards that employees give back in this exchange relationship. As Steers (1977) explains:

Individuals come to organizations with certain needs, desires, skills, and so forth, and expect to find a
work environment where they can utilize their abilities and satisfy many of their basic needs. When the organization provides such a vehicle (for example, where it makes effective use of its employees, is dependable, and so forth), the likelihood of increasing commitment is apparently enhanced. When the organization is not dependable, however, or where it fails to provide employees with challenging and meaningful tasks, commitment levels tend to diminish. (p. 53)

A range of rewards have been linked to personal outcomes such as commitment in a series of studies. Katz and Van Maanen (1977) identified three empirically distinct categories of work rewards in their study of determinants to job satisfaction. These are task, social and organizational rewards (figure 2). Specific factors within these categories plus education produce a proposed exchange theory model for commitment. Although some of the rewards in these categories are the same as some job design components in socio-technical theory, they are still discussed in this section from the assumptions of exchange theory.

The first category is task rewards—-intrinsic rewards directly associated with doing the work. Autonomy, a measure of self-direction in work, is one task reward often cited as a positive predictor of commitment (Mottaz, 1988;
Figure 2: Concepts Representing Rewards in Exchange Theory Hypothesized to Affect Organizational Commitment.

- **Task Rewards**
  - Autonomy
  - Significance
  - Challenging work

- **Social Rewards**
  - Co-worker support
  - Supervisory support
  - Organizational support

- **Organization Rewards**
  - Satisfaction
  - with pay

- **Demographics**
  - Education

**Organizational Commitment**
Spector 1986). Autonomy is a reward because it provides employees freedom and individuality over how they schedule and perform their work.

Task significance—the degree to which the job has a substantial impact on the lives or work of other people—has also been positively linked to commitment in other studies (Mottaz, 1988). Tasks that are significant to the lives of other people give employees a sense of importance in their work which leads to an increase in their self-esteem—an intrinsic reward.

Another task reward that has been positively correlated with commitment is challenging work (Buchanan, 1974; DeCotiis & Summers 1987; Mottaz, 1988; Steers, 1977; Allen & Meyer, 1990; Meyer & Allen, 1988). The reason for this reward's importance is similar to that of task significance. According to Buchanan (1974), challenging work is important because "an individual's job is the main tangible manifestation of the organizational goals with which he is encouraged to identify" (p. 536). If employees' jobs are challenging in a way that bolsters their self-image and satisfies their needs for achievement, employees will feel intrinsically rewarded and, consequently, will feel a stronger attachment to the organization. If their jobs are considered unimportant or trivial to the organization or, in the case of task significance, to the lives or work of others, no intrinsic rewards are gained. Commitment to the
organization is likely to diminish when these factors are not experienced.

The second set of work rewards identified by Katz and Van Maanan (1977) are social rewards which deal primarily with the interactional aspects of working in an organization. Support received from supervisors and co-workers, are by nature extrinsic social rewards and have shown a positive influence on commitment (Mottaz, 1988; Steers 1977; Fukami & Larson, 1984; Meyer & Allen, 1988). Workers who experience support from their colleagues are likely to feel rewarded. This support should increase their affective attachment to the organization for providing such co-workers and leaders.

Another concept found to affect commitment is perceived organizational support—trust that an organization will fulfill its exchange obligations to an individual (Blau, 1964; Cook & Wall, 1980; DeCotiis & Summers 1987; Eisenberger et al., 1990; Meyer & Allen, 1988; Organ & Konovsky, 1989). Although Katz and Van Maanan (1977) did not include this concept in their distinct categories of work rewards, it is often related to exchange theory. Unlike economic exchange where obligations are well defined and enforceable by contract, Blau (1974) states that the obligations of social exchange are unspecified and based on trust:
Creating trust seems to be a major function of social exchange, and special mechanisms exist that prolong the period of being under obligation and thereby strengthen bonds of indebtedness and trust. (p. 209)

Trust that the organization will support them is a belief employees develop over time based upon their work experiences (Steers, 1977). Since perceived organizational support is based upon the social interaction between the organization and its employees, it is classified as a social reward in this study.

Organizational rewards are the third set of rewards that may impact commitment. Specifically, pay and benefits are factors looked upon as organizational rewards. While the relevance of pay and benefits is obviously clear to employment, these rewards have not shown as strong a link to commitment as task rewards (Mottaz, 1988).

Demographic variables are rarely linked to commitment, but education level has sometimes demonstrated a negative effect (Glisson & Durick, 1988; Morris & Sherman, 1981; Mottaz, 1988; Steers, 1977). When employees have higher levels of education, the ability of the organization to adequately reward such individuals is lessened—at least in their perceptions. As a result, highly educated employees become more committed to their own career or trade (Steers, 1977).
Integrating Socio-Technical and Exchange Theories

While these theories take different approaches to understanding commitment, they share some common ideas. Socio-technical theory focuses on the structure of work and how it affects employees' needs. If the structure affects them positively, desirable personal outcomes such as commitment will occur. Exchange theory takes a narrower view focusing on the rewards employees are given in return for their efforts. If an individual's skills are utilized, goals fulfilled and desires met, then that person will feel rewarded and will become more attached to the organization (Steers, 1977). The similarity is that socio-technical theorists suggest that the qualities of a participative work structure will provide many of the rewards important in the exchange theory model. Socio-technical theorists are concerned with providing a structure that meets the needs of production and fulfills the needs of workers. It follows that employees who experience such fulfillment from their organization are also likely to feel rewarded. In addition to these basic principles, the two theories also utilize some identical concepts (i.e. autonomy, task significance).

Together, these two theoretical frameworks are the basis for the determinants to commitment chosen for this study (figure 3). Separate analyses that test the explanatory power for each of these commitment frameworks on commitment are discussed in Chapter III.
Figure 3: A Comprehensive Model of Organizational Commitment Integrating Exchange Theory and Socio-Technical Theory.

**Socio-Technical Factors**
- Skill Variety
- Task Identity
- Task Significance
- Autonomy
- Feedback
- Participation in Decision-Making

**Exchange Factors**
- Task Rewards
- Task Autonomy
- Task Significance
- Challenging Work

- Social Rewards
  - Co-worker Support
  - Supervisory Support
  - Organizational Support

- Organizational Rewards
  - Pay and Benefits

- Education

**Organizational Commitment**
CHAPTER III

METHODOLOGY

This chapter begins with a description of the setting and the corporation used for the analysis in this study. This is followed by a discussion of measures used to represent commitment and the factors of socio-technical and exchange theories discussed in Chapter II. Finally, some limitations and delimitations of this study are addressed.

Description of Setting and Corporation

In the spring of 1990, the state of Texas funded the efforts of a University of North Texas research team to assess the impact of self-managing work teams on employee performance. The team consisted of a principal investigator, Dr. Dale Yeatts from the Department of Sociology, and two co-principal investigators--Dr. Mary Thibodeaux from the Department of Management and Dr. Mike Beyerlein from the Psychology Department. I was one of several senior research assistants employed for the project.

The target organization for this study was a manufacturing plant located in north Texas. The plant opened for operation in 1987 with self-managing work teams (SMWTs) in place. The plant structure consisted of a number
of 6 to 15-member teams in manufacturing and support functions. In most cases, the teams did not have supervisors. Supervisory roles such as administration, inventory management, customer relations, quality control, scheduling, and team leadership were dispersed to members of the teams and rotated every six months. There was only one supervisory level separating the work teams from the plant's top management team. Persons at this middle-management level were referred to as "area team leaders."

Questionnaires were distributed in the summer of 1990 to all 400 employees of the plant. The survey was distributed through the area team leaders. The company allocated time for each employee to complete the questionnaire and supplied the postage fees to return them to the UNT research team by mail. If the employee preferred, the questionnaire was returned to an area team leader who delivered it to a focal person in the Human Resource Development department. This focal person then delivered the remaining questionnaires to the UNT research team. The returned surveys totaled 313 (78 percent response rate).

Measures

Most questions included in the survey were gauged on a seven-point likert scale ranging from strongly disagree to
strongly agree. For a complete list of the items that measured each concept and the reliability of those items, refer to the Appendix.

Commitment

Commitment was measured using a modified version of Meyer and Allen's (1984) Affective Commitment Scale (ACS). Three questions from this eight-item scale were chosen to measure affective commitment. The responses to these three questions were added together to create an index measure for commitment \((X=13.7, \ SD=4.1, \ range=18)\). A reliability score was calculated in order to determine the consistency of the items used to measure a single concept. Reliability is important to measure so that the degree to which the items are measuring a single concept is known. This helps to determine the confidence in the indexes subsequently created.

For the three-item index used to measure commitment, the reliability score is .75. In this study a score of .60 or above is considered acceptable reliability. In other studies these three questions have also consistently shown high reliability in the measure of affective commitment (Allen & Meyer, 1990; Eisenberger et al., 1990; McGee & Ford, 1987).
Job Dimensions

Hackman and Oldham's (1980) five core job dimensions are each measured by a number of concepts. Skill variety, task identity, and task significance are each measured by a three-item scale taken from Hackman and Oldham's (1980) often used Job Diagnostic Survey (JDS). The responses for each three-item measure were added to form an index for each concept. Skill variety showed a reliability of .67. Task identity and task significance showed reliabilities of .71 and .60, respectively. Autonomy was also calculated by using a three-item index of questions from the JDS. The reliability of this index was .72. The feedback measure was an index of six items from the JDS that measured feedback from agents and feedback from the work itself. Together these six questions had a reliability of .81.

Participation in Decision-Making

This concept is measured by one question from Heller et al. (1988). The question focuses on the degree to which all people in a work team can contribute to decisions.

Task Rewards

Task significance and autonomy are two task rewards discussed in the "Job Dimensions" section above. The other task reward in this study is challenging work. Some
theorists believe that challenging work is a task reward (Buchanan, 1974; Katz & Van Maanan, 1977; Mottaz, 1988; Steers, 1977). However, Hackman and Oldham (1976) emphasize that the level of challenge that employees desire depends on each employee. In order to address the employees' desire for challenge, the question used in this study focuses on the respondents' satisfaction with the challenge in their job not the level of challenge in their job. This question is also taken from the JDS.

Social Rewards

One extrinsic social reward, supervisory support, was measured by a three-item scale developed by Caplan and French (1975). The responses were added together to create an index which measured support from team leaders. The reliability of this scale was .85. Support from co-workers was also measured by an index of three questions from Caplan and French (1975) with a reliability of .78. Perceived organizational support is measured by one item taken from Heller, Drenth, Koopman & Rus. (1988) which gauges a member's level of trust in the organization.

Organization Rewards

Satisfaction with pay is measured by an index of two questions from the JDS. The first focuses on the amount paid and the second with pay equity. The responses from
these questions were added together to represent satisfaction with pay and showed a reliability score of .75.

Education

One question measures education. It asks the respondent to record the highest grade level that they completed. If beyond high school, the respondent was asked to list degrees. The degrees were then coded with numerical values.

Limitations and Delimitations

While this study provides insight as to how commitment is determined, it does have limitations. The data were collected solely from a cross-sectional self-report questionnaire of employee attitudes. Although this form of data collection has many advantages, it is subject to a range of biases.

Sampling bias could be a limitation of the sample since only 78 percent of the employees returned surveys. Since the opinions of the remaining 22 percent are not represented, one can only assume that their answers are similar to the respondents who completed the survey (Babbie, 1988).

Aside from sampling error, response bias can also occur in surveys. Since information for all variables come from
the respondents in one time period, there is a chance that the variables could show a spurious correlation. This can happen because respondents may mark their answers consistently high on questions that use the same response format. Conversely, the respondent could have been disgruntled with the organization resulting in predominantly negative answers to the questions. Respondents may even want to give the most "socially desirable" response to a question instead of their own opinion (Podsakoff & Organ, 1986). It is also possible that respondents may have simply misunderstood a question that they answered.

To reduce the effect of marking answers consistently high, many of the concepts in this study were measured by more than one question usually including one that was worded in a reverse format. To deal with concerns regarding clarity of the questions, all items were pretested among a small group of employees from different jobs and educational levels in the organization.

To deal with concerns of reliability, all questions were taken from other studies that have shown them to be reliable. As a final check, each construct was tested for reliability.

Once these limitations are considered, this study can also be delimited--or applied to other similar environments. The need for a number of studies that measure the effects of various factors on commitment is necessary to bring about
any solid understanding of the process. Since different settings and organizations can affect how commitment develops, studies that attempt to explain this process using different samples are important.

This study also is important to consider for building commitment at other start-up SMWT sites. For any one of these start-up SMWT organizations employee commitment is central to its success. As Mowday et al. (1982) express, commitment is most important when an organization's circumstances are more uncertain.
CHAPTER III

FINDINGS

This chapter consists of two parts. In the first section, a series of analyses are performed including t-tests and multiple regressions. The results of these analyses are reported, and some points are made regarding their implications. A more thorough discussion is pursued in the second section.

Results

The first analysis performed in this study was a t-test that compares the responses of employees that were high in commitment—scores above four on a seven-point likert scale (n=170)—to those who were either neutral toward commitment or low in commitment (n=112). The two groups' mean responses to the factors in socio-technical and exchange theories were compared in this analysis to search for differences between them (table 1). Any large difference between the groups' mean scores on a particular factor would suggest that it is somehow associated with differences in commitment. Since each factor is a hypothesized determinant of commitment, one must assume that any large difference
Table 1: Mean Scores on Socio-Technical and Exchange Factors Comparing Employees With Strong Commitment to Those With Low Commitment+  

<table>
<thead>
<tr>
<th></th>
<th>Low Commitment (n=112)</th>
<th>High Commitment (n=170)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exchange Factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task Autonomy</td>
<td>4.7</td>
<td>5.3***</td>
</tr>
<tr>
<td>Task Significance</td>
<td>5.7</td>
<td>6.0**</td>
</tr>
<tr>
<td>Challenging Work</td>
<td>4.4</td>
<td>5.3***</td>
</tr>
<tr>
<td>Co-Worker Support</td>
<td>4.5</td>
<td>5.4***</td>
</tr>
<tr>
<td>Supervisory Support</td>
<td>3.8</td>
<td>4.8***</td>
</tr>
<tr>
<td>Organizational Support</td>
<td>3.7</td>
<td>5.3***</td>
</tr>
<tr>
<td>Pay and Benefits</td>
<td>3.9</td>
<td>4.5**</td>
</tr>
<tr>
<td>Education Level</td>
<td>14.3</td>
<td>13.8*</td>
</tr>
<tr>
<td><strong>Socio-Technical Factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skill Variety</td>
<td>5.2</td>
<td>5.3</td>
</tr>
<tr>
<td>Task Identity</td>
<td>4.5</td>
<td>4.8</td>
</tr>
<tr>
<td>Task Significance</td>
<td>5.7</td>
<td>6.0**</td>
</tr>
<tr>
<td>Autonomy</td>
<td>4.7</td>
<td>5.3***</td>
</tr>
<tr>
<td>Feedback</td>
<td>4.2</td>
<td>5.0***</td>
</tr>
<tr>
<td>Participation in Decision-Making</td>
<td>4.3</td>
<td>5.5***</td>
</tr>
</tbody>
</table>

+ All mean scores were converted to a 7-point scale except for education level.
* Significant at the .05 level.
** Significant at the .01 level.
*** Significant at the .001 level.
between two mean scores would suggest that factor is a determinant of commitment.

However, since the sample represents 78 percent of the population, any large difference in mean scores can also be attributed to a sampling error. A test of significance helps determine whether or not the differences in mean scores are representative of the entire plant or a result of this error (Babbie, 1989). In using means to explain differences in people who are highly committed to those who are not, the largest acceptable probability of this error is 5 in 100 ($p \leq .05$).

Examination of the means between employees who are highly committed to those who are not reveals that all of the mean scores differ as predicted. Highly committed employees exhibit greater levels of the measured exchange rewards and socio-technical job design factors. A closer look reveals that some factors exhibit wider differences than others.

Of the included socio-technical factors, the largest gap between the two groups is the measure of participation in decision-making. The highly committed group experiences a much higher level of participation in decision-making than the group low in commitment (5.5 compared to 4.3 on a seven-point scale). The highly committed group also experiences much more autonomy in their work (5.3 compared to 4.7). With significance levels of .001 for participation and
autonomy ($p \leq .001$), it is highly unlikely that the differences in means can be attributed to sampling error. According to Hackman and Oldham (1976), participation in decision-making and autonomy increase employees' felt responsibility. These findings support Salancik's (1977) theory that increasing employees' felt responsibility will increase their commitment.

The group high in commitment also shows a much higher level of feedback in their job ($5.0$ compared to $4.2$, $p \leq .001$). Feedback gives employees knowledge of their results. Hackman and Oldham (1976) assert that this knowledge motivates employees to perform well since knowledge of their performance affects their self-concepts. Knowledge of good performance leads to a better self concept which in turn leads to higher commitment.

Little support was found for a connection between commitment and the factors that represent experienced meaningfulness of the work. The mean for task significance was slightly higher among highly committed employees ($p \leq .01$). Skill variety ($5.3$ compared to $5.2$) and task identity ($4.8$ compared to $4.5$) showed no significant differences.

Differences in the rewards of exchange theory were more frequent in this analysis. The intrinsic task rewards were higher for the highly committed employees. In addition to task significance and autonomy discussed above, challenging
work demonstrated the largest difference in task rewards between the groups (5.3 for the highly committed group compared to 4.4 for the low in commitment group, \( p \leq .001 \)). This finding supports the notion that challenging work as a reward increases commitment.

The largest differences occurred in the social reward category. Organizational support (5.3 compared to 3.7, \( p \leq .001 \)), supervisory support (4.8 compared to 3.8, \( p \leq .001 \)) and co-worker support (5.4 compared to 4.5, \( p \leq .001 \)) are much higher among highly committed employees.

Supporting an earlier hypothesis, satisfaction with pay and benefits is also higher among those employees with higher commitment (4.5 compared to 3.9, \( p \leq .01 \)). A difference in education also exists between the two groups. As hypothesized, employees who have more education are less committed to the organization (13.8 years compared to 14.3, \( p \leq .05 \)).

In summary, all of the hypothesized relationships between rewards and levels of organizational commitment were found after examining the means. These findings support the assumptions of exchange theory as it relates to commitment. Support for socio-technical theory as it applies to commitment is less conclusive, however. While the factors that lead to increased knowledge of the results and increased responsibility are associated with higher commitment, most factors that lead to increased meaningfulness are not.
While these findings do offer some basis to evaluate each framework as it relates to commitment, multiple regression analysis provides much more information. Multiple regression measures the overall effect of the hypothesized determinants on commitment. This analysis not only calculates how much variance in commitment is explained by the hypothesized determinants, it also calculates the relative strength of each determinant toward the overall explanatory power— or "fit"— of the model (Lewis-Beck, 1989).

To assess and compare the fits of socio-technical theory and exchange theory to commitment, a series of multiple regressions were performed. The first regression assessed the fit of socio-technical theory and the second did the same for exchange theory. These models were then combined in a third multiple regression to assess the effect of all independent variables on commitment (table 2).

After performing a multiple regression including all the factors of socio-technical theory, we can see that the explanatory power of this model is not very strong. Together all variables account for less than 24 percent of the variance in commitment (adjusted $R^2 = .237$). Of the variables with significant betas, participation in decision-making is the strongest factor as a determinant of commitment ($b = .262$, $p < .001$). Feedback ($b = .171$, $p < .01$)
Table 2: Multiple Regression Analyses for Socio-Technical and Exchange Theories.

<table>
<thead>
<tr>
<th>Socio-Technical Factors</th>
<th>( b )</th>
<th>( B^1 )</th>
<th>( b )</th>
<th>( B^2 )</th>
<th>( b )</th>
<th>( B^3 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skill Variety</td>
<td>-.002</td>
<td>-.001</td>
<td>---</td>
<td>---</td>
<td>-.008</td>
<td>-.006</td>
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<tr>
<td>Task Identity</td>
<td>.037</td>
<td>.042</td>
<td>---</td>
<td>---</td>
<td>-.001</td>
<td>-.001</td>
</tr>
<tr>
<td>Task Significance</td>
<td>.160</td>
<td>.122*</td>
<td>---</td>
<td>---</td>
<td>.112</td>
<td>.087</td>
</tr>
<tr>
<td>Autonomy</td>
<td>.137</td>
<td>.139**</td>
<td>---</td>
<td>---</td>
<td>.143</td>
<td>.145**</td>
</tr>
<tr>
<td>Feedback</td>
<td>.097</td>
<td>.171**</td>
<td>---</td>
<td>---</td>
<td>-.003</td>
<td>-.005</td>
</tr>
<tr>
<td>Participation/Decisions</td>
<td>.648</td>
<td>.262***</td>
<td>---</td>
<td>---</td>
<td>.045</td>
<td>.016</td>
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<td>Org. Support</td>
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<tr>
<td>Pay and Benefits</td>
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<tr>
<td>Education Level</td>
</tr>
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</table>

+ \( n=282 \)
1 Adjusted \( R^2=.237 \)
2 Adjusted \( R^2=.412 \)
3 Adjusted \( R^2=.388 \)
* Significant at the .05 level.
** Significant at the .01 level.
*** Significant at the .001 level.
and autonomy ($b=.139, \ p < .01$) are the next most important variables in this model. Like the t-tests, this analysis suggests that factors that increase felt responsibility and knowledge of results increase an employee’s level of commitment. Task significance ($b=.122, \ p < .05$) is also an important determinant of commitment in this model. Although skill variety and task identity carry no weight in this model, the effect of task significance suggests that the meaningfulness of work has a positive influence on commitment.

Factors in exchange theory are the independent variables in the second multiple regression analysis. The adjusted $R^2$ in this model (.412) demonstrates that the factors in exchange theory have a much better fit than those in socio-technical theory as a framework to explain commitment. By viewing the significant variables in the equation, it is evident that two variables, perceived organizational support ($b=.371, \ p \leq .001$) and autonomy ($b=.147, \ p \leq .01$) greatly affect commitment. Aside from these two variables, no other variables of the exchange theory model have a significant impact on commitment.

The third regression analysis combines all of the factors in socio-technical and exchange theory as determinants of commitment. The effects of this combined model is interesting in a few respects. First, this model explains less variance in commitment than the exchange model
(adjusted $R^2 = .388$). The addition of socio-technical factors to the factors of exchange theory provide us with a model that does not fit the concept of organizational commitment as well as the exchange theory factors alone.

Other items of interest include the changes in the significance levels and betas of the factors included in the combined model. Many socio-technical factors that were once found significant in explaining commitment lost substantial explanatory power when combined with exchange factors. Participation in decision-making went from being the most important factor in the socio-technical framework to one of little importance. Feedback also lost all significance in the combined equation. Task significance, the only variable representing experienced meaningfulness found to affect commitment, no longer represented an important variable when added to the combined model. By contrast, there was very little change in the factors representing the exchange framework. Organizational support ($b = .350, p \leq .001$) and autonomy ($b = .145, p \leq .001$) remained strong as the most important variables in the regression equation while the other exchange factors remained weak in their association with commitment.
By comparing factors of socio-technical theory and factors of exchange theory in a series of regression analyses, it would first appear that exchange theory, with an adjusted $R^2$ of .412, is a better framework to use to explain the process of commitment. This, however, is misleading considering the individual factors used in each model. Specifically, only two variables in the exchange theory model, autonomy and perceived organizational support, were found to be significant. Furthermore, autonomy was also a variable in the socio-technical theory. This leaves only one variable unique to exchange theory that was found to be significant.

As a result, it is not possible to evaluate either of these frameworks from the findings in this study. The findings do, however, offer some insight toward organizational commitment and its determinants. The following discussion relates specifically to the determinants of commitment and the rationale behind their impact.

The t-tests revealed many differences between employees with strong commitment to the organization and those with low commitment. As hypothesized, employees with strong commitment also experienced higher levels of the factors in socio-technical theory and the rewards in exchange theory.
The succeeding regression analyses were used to determine which of the factors made the greatest impact on commitment. The importance of perceived organizational support was central to the strength of the exchange model. This finding is consistent with those made in other studies (Blau, 1964; Cook & Wall, 1980; DeCotiis & Summers 1987; Eisenberger et al., 1990; Meyer & Allen, 1988; Organ & Konovsky, 1989). Furthermore, this factor maintained its strength in the combined equation while the socio-technical factors lost strength. This result suggests that perceived organizational support may act as an intervening variable in the combined model of commitment. In other words, factors such as task significance, feedback and participation in decision-making may have had an impact on perceived organizational support which, in turn, has an impact on organizational commitment (Babbie, 1989).

Task significance, which increases the meaningfulness of an employee's work, could also increase the organizational support that an employee perceives. If the organization is willing to give someone a job that is important to the lives of others, that person is likely to feel that the organization supports them. When the organization puts in the time and effort to provide feedback to employees, they can also gain a perception that the organization supports them.
The same holds true for participation in decision-making. When an organization allows its employees to participate in making important decisions, employees are likely to feel that the organization is supportive of them. In fact, the importance of organizational support is key in the relationship between participation in decision-making and organizational commitment. As Orsburn et al. (1990) point out, organizational support takes on added significance in companies that use self-managing work team designs:

employees need to know that management is serious about wanting people to take risks and express their opinions, and not just using a new trick to get more work out of fewer people. (p. 25).

To foster an environment of cooperation and participative decision-making, it is important for an organization to demonstrate its support toward employees (Orsburn et al., 1990). In accordance with exchange theory, perceived organizational support is a reward that employees value and reciprocate with increased commitment. The importance of perceived organizational support is key to explaining commitment in this sample.

Autonomy was the other determinant of commitment. This factor is important as a reward because it provides employees with freedom and individuality over how they
schedule and perform their work. A number of studies have shown that organizations giving their employees this freedom are compensated with highly committed employees (Mottaz, 1988; Spector, 1986). However, autonomy was the only task reward found to significantly affect commitment in the exchange model and combined model. These findings contrast with those made by Mottaz (1988). In his study, the task rewards that were included in this study played the most vital role. Challenging work (which he labeled task involvement), autonomy, and task significance were far more powerful than any social or organizational reward variables, whereas in this study, task significance and challenging work show no significant relationship to commitment. Since that study did not include perceived support in its analysis, these findings are not necessarily contradictory. However, the findings in this study do suggest that perceived support is the most important determinant of commitment—at least for this sample. These findings are also contrary to those of Steers (1977). In that study, challenging work was more important than organizational support although both were found to be significant. As discussed by Mowday et al. (1982) these differences can be attributed to differences in the organizations sampled.

Other social rewards—team leader support and co-worker support—were not important contributors to either the exchange model or combined model. While the significance of
these concepts has been established in other studies (Fukami and Larson, 1984; Meyer and Allen, 1988; Mottaz, 1988; Steers 1977) none have demonstrated the strength that organizational support has toward commitment. Meyer and Allen (1988) found peer cohesion—a factor related to social interaction and support—and organizational support to both be important in their longitudinal study, but these factors were never found to be significant in the same time interval. It is also possible that the respondents may equate support from supervisors as support from the organization since the supervisor is the most identifiable representative of the organization. Other studies have found inconsistent links between co-worker related social rewards and commitment across different samples (Steers, 1977). While some studies have found co-worker and supervisory support to be important in their samples, the effect of these factors on this sample is negligible.

Neither pay satisfaction nor educational level showed any strong contribution to the model's predictive power. Pay is often described as a hygiene factor: one that can demotivate employees if it is too low but does not add to their motivation when it is adequate. Although the t-test showed a difference in pay satisfaction between highly committed employees and those with low commitment, the regression results suggest that this difference does not determine commitment. In other studies of organizational
commitment, pay has rarely been linked as a determinant. Intrinsic rewards are often found to be the most important determinants of commitment, not extrinsic rewards such as pay and benefits.

Educational level has not been consistently linked to commitment across different samples. In this sample, the education level was high for all employees because of the organization's hiring standards. Although a small difference in education was shown between employees with high commitment and those with low commitment, the regression analysis shows that the difference is not an important determinant of commitment in this sample.
CHAPTER V

CONCLUSION

The evolutionary process of job design has led to the current interest in the self-managing work team (SMWT) design structure. The socio-technical model, by which SMWT design was conceptualized and developed, was not very strong in explaining the variance in commitment. In the combined model, autonomy was the only socio-technical factor that showed a significant impact on commitment (Autonomy and task significance are discussed later from the perspective of exchange theory).

The lack of significance for feedback and participation in decision-making in the combined model can be best attributed to the importance of perceived organizational support as an intervening factor. The lack of significance attributed to skill variety and task identity is not entirely surprising since these variables have not been empirically linked to commitment in previous studies. These results do not suggest that socio-technical theory is not applicable to SMWT organizations, only that the factors listed in Hackman and Oldham's (1976) model are not useful in explaining organizational commitment.

The exchange theory model, on the other hand, showed much more power in its ability to explain commitment. This
finding advances the use of this framework in commitment studies. According to this theory, commitment results from the feelings of obligation that employees have toward the organization after receiving rewards from it. Autonomy and perceived organizational support are the two rewards that affected commitment to the organization in this study.

Contrary to other commitment studies, no other factors had a significant impact on commitment. Co-worker and supervisor support may not have affected commitment because of the strong relation of perceived organizational support to commitment. Respondents answering the questionnaire may equate strong support from leaders and co-workers to support from the organization as a whole. Organizational rewards such as pay and benefits also showed no significant impact on commitment. This does not suggest that pay is not important in gaining committed employees. It is not realistic to think that employees would be committed to an organization if their pay did not satisfy their basic needs. What this does suggest, however, is that at some point the power of pay is overshadowed by employees' higher level needs. Task significance and challenging work were two task rewards that showed no significant effect on commitment. The reason for the lack of connection between commitment and these well-founded determinants may be best explained by the work of Mowday et al. (1982): different organizational
structures have an impact on the relative importance of determinants tested in commitment studies.

Why this organizational structure should make autonomy and perceived organizational support the most important factors can be explained, surprisingly enough, through the socio-technical perspective. Structural designers using this perspective advocate the creation of a structure that meets the requirements of production and the psychological and social needs of workers. Autonomy is an important dimension of this manufacturing plant's design because the uncertainty of its environment promotes the need for flexibility even at the production-worker level. Autonomy also meets the workers' needs for freedom and individuality in doing their work similar to the experiences of craftsmen in the Middle Ages.

Perceived organizational support is another important dimension of SMWT design. Employees who are asked to make decisions are also being asked to take risks since bad decisions may result in negative consequences. As stated by Orsburn et al. (1990), employees who are required to make decisions must have the knowledge that they are supported by the organization.

Since the exchange theory model only explained 41 percent of the variance in commitment, a question remains as to what the remaining 59 percent can be attributed to. It is possible that personal factors such as job involvement,
which have shown strong linkage to commitment in other studies, make up the remaining variance. Other work situations beyond the scope of this study, such as orientation or training experiences, may make up some of the remaining variance.

As they appear in this study, however, the findings have important implications for commitment studies and for organizations using SMWTs. First, these findings show that autonomy and perceived organizational support are important determinants of commitment that maintain their significance across a range of samples. SMWT organizations, on the other hand, need to understand the importance of these factors in their attempts to develop an effective structure. Commitment is often touted as a key to the success of SMWT designs. The presence of perceived organizational support and the allowance for autonomy will help ensure commitment through the process of implementing a SMWT design.

These results demonstrate the need for commitment studies to be conducted across different types of organizations (Mowday et al., 1982; Reichers, 1985). It is important to know that the determinants of commitment in the SMWT structure may differ from other structures. Additional research into this area will help determine the generalizability of this study's findings.
APPENDIX
**Affective Commitment** (.75)

--I do not feel a strong sense of belonging to this organization. [R]

--This organization has a great deal of personal meaning to me.

--I do not feel "emotionally attached" to this organization. [R]

**Skill Variety** (.67)

--The job requires me to use a number of complex skills.

--The job is quite simple and repetitive. [R]

--To what extent does your job require you to do many different things at work, using a variety of your skills and talents? 1

**Task Identity** (.71)

--To what extent does your job involve doing a complete piece of work that does not have to be finished by other people and/or machines? 1

--The job provides me the chance to completely finish the pieces of work I begin.

--The job is arranged so that I do not have the chance to do an entire piece of work from beginning to end. [R]

---All questions are scored on a seven-point likert scale. The scale ranges from strongly disagree to strongly agree unless noted otherwise.

1 Scale ranging from very little to very much.

2 Scale ranging from extremely dissatisfied to extremely satisfied.

() Reliability measure for each concept.

[R] Denotes reverse scoring for question.
Task Significance (.60)

--To what extent are the results of your work likely to significantly affect the lives of other people?¹

--This is a job where a lot of other people can be affected by how well the work gets done.

--The job itself is not very significant or important in the broader scheme of things. [R]

Autonomy (.72)

--The job gives me a lot of freedom in how I do the work.

--The job does not allow me to use my own initiative or judgement in carrying out the work.

--To what extent does your job permit you to decide on your own how to go about doing the work? [R]¹

Feedback (.81)

--The kind of work I do provides many chances for me to figure out how well I am doing.

--Team leaders and co-workers often let me know how well they think I am performing the job.

--The work itself provides very few clues about whether I am performing well. [R]

--The team leaders and co-workers on this job almost never give me any feedback about how well I am doing in my work.

All questions are scored on a seven-point likert scale. The scale ranges from strongly disagree to strongly agree unless noted otherwise.

1 Scale ranging from very little to very much.
2 Scale ranging from extremely dissatisfied to extremely satisfied.
( ) Reliability measure for each concept.
[R] Denotes reverse scoring for question.
Feedback (continued)

--To what extent does doing the job itself provide clues about how well you are doing?¹

--To what extent do team leaders or co-workers let you know how well you are doing on your job?¹

Participation in Decision-Making

--To what extent does everyone in your work team have a say in the decisions your team makes?¹

Challenging Work

--The amount of challenge in my job.²

Co-Worker Support (.78)

--To what extent do the people you work with go out of their way to make your work life easier?¹

--If I got into difficulties at work I know the people I work with would try to help me out.

--I can trust the people I work with to lend me a hand if I need it.

Team Leader Support (.85)

--It is easy to talk with my team leader.

--I can rely on my team leader when things get tough at work.

All questions are scored on a seven-point likert scale. The scale ranges from strongly disagree to strongly agree unless noted otherwise.

1 Scale ranging from very little to very much.
2 Scale ranging from extremely dissatisfied to extremely satisfied.

( ) Reliability measure for each concept.
[R] Denotes reverse scoring for question.
Team Leader Support (continued)

--My team leader goes out of his/her way to make my work life easier.

Organizational Support

--I feel quite confident that this organization will always try to treat me fairly.

Pay Satisfaction (.75)

--The amount of pay and benefits I receive.²

--The extent to which I am fairly paid for what I contribute to this organization.

All questions are scored on a seven-point likert scale. The scale ranges from strongly disagree to strongly agree unless noted otherwise.

1 Scale ranging from very little to very much.
2 Scale ranging from extremely dissatisfied to extremely satisfied.

( ) Reliability measure for each concept.
[R] Denotes reverse scoring for question.
REFERENCES


