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Organizational commitment and its effects on behavior.

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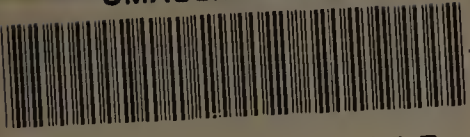
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ORGANIZATIONAL COMMITMENT
AND ITS EFFECTS ON BEHAVIOR

A Dissertation Presented

by

RANDALL B. BROWN

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

May, 1990

School of Management

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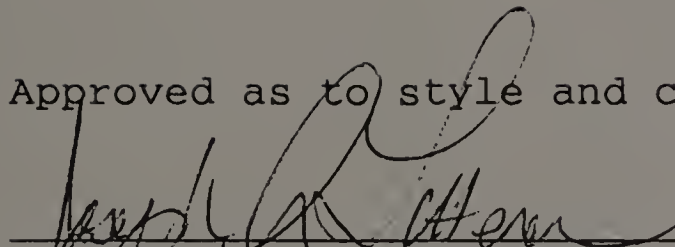
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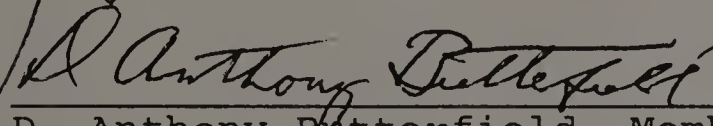
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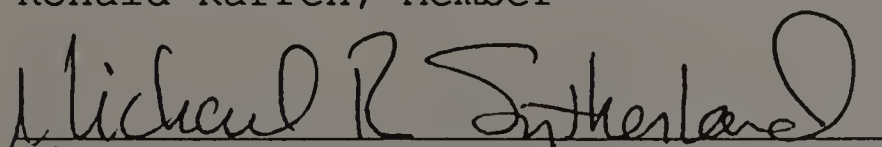
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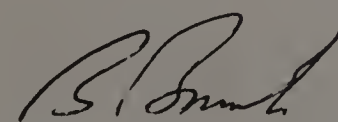
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This dissertation has been, without question, the single most challenging and complex project I have embarked upon in my entire experience in higher education. As I look back over the 2 plus years which the project consumed, I am struck by the number of different people without whose input, support, guidance, and encouragement this document would not have reached this final stage. My gratitude goes out to these various participants, advisors, friends, colleagues, and family members who so generously provided both ongoing encouragement and critical support at those times when the project was stalled or at some impasse where ultimate completion seemed in serious doubt.

The topic of the dissertation originated in a paper I wrote in year one for an introductory course taught by Jeff Kane. His positive feedback encouraged me to explore the topic further in an independent study with Karen Evans in the winter of 1987. Karen's further positive response and encouragement, together with several valuable discussions with Stan Young, led me to propose the concept of organizational commitment as a topic for my comprehensive exam paper.

At this point it was time to form a committee and expand sources of advice and council. Joe Litterer agreed to serve as chairman, Tony Butterfield and Ron Karren kindly accepted the roles of advisory members, and Mike Sutherland

agreed to act as outside member and research methods advisor. Throughout comprehensives, the dissertation proposal, and the dissertation itself, these same four individuals stuck with me, providing valuable advice, ideas, and timely feedback so as to help keep me moving in a direction that would ultimately prove successful. My thanks go to Joe for his invaluable help with the underlying concepts and his thoroughness in reviewing written work right to the end; to Tony for his willingness to read dozens of pages at a moment's notice and give timely and accurate feedback, to Ron for his initial ideas and many unique comments, and to Mike for his positive outlook and assistance on matters related to data analysis.

The time span of the dissertation itself - from the late Fall of 1987 to the present - has certainly been a busy and varied one. Progress on the dissertation, complete with setbacks, revisions, breakthroughs, and completed stages, has been accompanied by other changes including a move from the familiarities of Amherst to the west coast and a teaching position in the California State University system. In retrospect, it seems that the dissertation moved forward in sporadic bursts of accomplishment throughout this period. But whether it was during one of those bursts of progress or during a lull in which my energies were focused elsewhere or simply in limbo wondering what to do next, there was always someone I could turn to for encouragement or practical

advice on how to "re-start the engine". So, with a little help from my friends, I am now able to apply the finishing touches.

Like people who receive oscars, I would like to acknowledge and thank a number of people in these closing lines. Perhaps foremost, my thanks go to Dean Thomas O'Brien for his invaluable support in helping me secure two research sites in private industry, and also to the many persons at those organizations who so generously participated in the research, giving time, energy, and thought to the topic and the numerous questions. Richard Fein was also very helpful in providing me with contacts at alternate sites.

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Throughout the entire ordeal, perhaps my strongest source of motivation has been my family, friends, and colleagues whose ongoing support and encouragement kept me going and who, perhaps without knowing it, would not allow me to quit. To my friends and colleagues - Ruth, Mathias, Jan, Ginny, Mazamo, Susan, Anne, Pushi - thanks for your moral support and helpful tips. To my "outside" friends as well, who always gave me special encouragement - Marci, John, Ed, Gary, Therese, Sue - thanks for being there when I needed you. To the faculty and staff at the School of Business at Stanislaus, thank you for your interest and support. And to my dear mother, brothers, sister, nephews, and nieces back in Vermont, I would never have reached this point without those frequent visits north (which was why I selected Massachusetts in the first place).

In closing I would like to dedicate this dissertation to my late father, Franklin Q. Brown Jr., whose loving concern and friendly manner of persuasion was what got me started in the field of management fifteen years ago, and so who was ultimately responsible for my having to go through this ordeal in the first place.

ABSTRACT

ORGANIZATIONAL COMMITMENT AND ITS EFFECTS ON BEHAVIOR

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This study is an investigation into the complexities of organizational commitment and its effect(s) on people's behaviors. In recent management literature, the concept of organizational commitment has developed along two separate lines of research. One holds commitment to be a set of positive attitudes towards an organization with motivational effects on performance and membership. The other views commitment as an outcome of "investments" in a relationship which retrospectively bind the individual to continued membership.

Following an exploratory study into managers' views on "commitment", a measure of commitment to "goals" was added. All three types were compared to hypothesized outcome behaviors. An interactive effect between "calculative" commitment and "job alternatives" on "intent to remain" was included.

A questionnaire was used to measure individual commitment on the three commitment scales and reported behavior on seven outcome variables. All ten measures were operationalized by combining existing measure with ideas drawn from the exploratory study. The questionnaire was administered to 250 people at two private companies.

Factor analysis was conducted on related variable measures in order to examine discriminant validity. Correlation analysis, multiple regression, and LISREL analysis were conducted in order to test 26 separate hypotheses derived from two models.

All three types of commitment were confirmed as separate constructs. As expected, both "affective commitment" and "goal commitment" appeared to have positive relationships with performance variables. Also as expected, "affective" and "calculative commitment" proved to be strong predictors of "intent to remain". "Affective commitment" also a predicted low "search behavior" and high "desire to remain".

Contrary to expectations, the effect of "affective commitment" on performance variables was stronger than that of "goal commitment". Also contrary, "calculative commitment" had a positive relationship with "desire to remain" and low "search behavior". There was no evidence of an interactive effect between "calculative commitment" and "job alternatives".

The results confirm the power of "affective commitment" as a motivating phenomenon and suggest that its power exceeds that of commitment to "goals". Results also suggest that "calculative commitment" is related to desire to remain a member, though not with a willingness to expend extra job effort.

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CHAPTER I

INTRODUCTION

An important aspect of a manager's job in any organization involves motivating subordinates to perform in a manner consistent both with the requirements of the job and the overall objectives of the organization. In effect, the manager's task is to influence what March and Simon have referred to as an employee's "decision to perform" in ways that further organizational objectives (March & Simon, 1958). In addition, managers generally like to exert influence on a subordinate's decision with regards to membership in the organization - what March and Simon labelled the "decision to participate". This "decision" involves both the initial joining up process and subsequent decisions to remain with or leave the organization as opportunities arise. In the latter regard, the manager's goal is one of influencing subordinates to develop positive attachments to the organization such that they will want to remain members even in the face of competing job offers.

The concept of "organizational commitment" offers a potentially useful tool for managers to increase influence in both of the above "decisions". In the area of performance, a committed employee brings to the job, in theory, a sense of dedication and conscientiousness beyond that of the average worker who tends to operate from an

exchange perspective in which job efforts or contributions are weighed against compensation and benefits (Mowday et al., 1982; Scholl, 1981; Weiner, 1982).

According to the exchange perspective, an employee in an organization trades "contributions" for "inducements" (Barnard, 1938). The employee's objective is to maximize the ratio of inducements (rewards) to contributions (work). It logically follows that an employee so involved will tend to set a limit on contributions at whatever is sufficient to obtain the desired level of rewards, including such things as a promotion. Any efforts in support of the organization that would not result in some sort of recognition and reward would run counter to self-interest by lowering the inducement-contribution ratio.

A committed employee differs from an average employee in that he or she is willing to support the organization, the goals it pursues and the values that sustain it, through efforts that may not achieve immediate recognition or reward (Mowday et al., 1982). The committed employee operates out of sense of duty to do whatever is best for the organization even when it conflicts with immediate self-interest. The committed employee is a team player dedicated to the success of the group over and above the glory of the individual. Commitment, in this case, is seen as serving both a motivational and a control function.

In addition, a committed employee is seen as someone who is highly likely to remain with an organization through good times and bad (Bluedorn, 1982; Mowday et al., 1982; Williams & Hazer, 1986). Even in the face of attractive job offers, the committed employee can be expected to give undue consideration to the current employer out of a sense of loyalty stemming from identification and affective attachment. Furthermore, the committed employee is seen as much less likely to look for outside opportunities in the first place. His or her attention is inward-focused, bent on realizing full growth potential within the culture and boundaries of the current organization.

As Mowday et al. (1982) theorize, commitment constitutes a psychological state that develops slowly but endures longer than other phenomenon such as job satisfaction. A truly committed individual does not scale back or terminate a relationship the moment immediate benefits fall off. Commitment promotes endurance as in the case of a marriage commitment. In an organization, the inducements - contributions balance for any participant is something that undergoes continuous fluctuation during a person's tenure. According to March and Simon, dissatisfaction in a job can stem from a decrease in the inducements - contributions balance of an individual (March & Simon, 1958). Dissatisfaction, in turn, acts as a "cue" for "search behavior" or exploration of alternatives.

Subsequent exploration, in turn, leads to an adjustment of the inducements - contributions balance which reflects perceived reality in job markets. This new balance then affects an individual's "decision to participate" causing him or her to leave if an alternative opportunity seemingly offers more.

Commitment has the potential to intrude into this neat set of calculations and inhibit search behavior. The committed individual feels pledged to maintain the relationship even in the face of short-term dissatisfaction in the belief that the value of the ongoing relationship holds greater meaning than some temporary state of dissatisfaction. Before a committed individual can initiate an exploration of alternatives, it is necessary for that person to dissolve the commitment - a difficult and often emotionally painful process (Brickman, 1987). Thus, an additional psychological step stands between a committed individual and departure.

Because of these theoretical motivational qualities, organizational commitment stands out as a potentially valuable phenomenon worthy of understanding among managers of an organization. It can be seen not as a substitute for other motivational forces - material rewards, promotions, good leadership, etc. - but as an added component associated less with immediate instrumental concerns and more with a person's sense of social duty, purpose, and meaning through

work - what Sigmund Freud referred to as "arbeit" (Freud, 1923). In order to establish the theoretical usefulness of commitment, however, some level of empirical confirmation of its motivational qualities is required. The main objective of this study is to attempt to confirm these motivational qualities both in terms of performance and willingness to remain.

The main complicating factor in this endeavor - one which has affected previous studies - has to do with the basic concept itself beginning with how commitment should be defined and operationalized in an organizational setting. While much has been learned about the concept during the past twenty-five years, considerable debate persists over the definition of the basic concept, its object or objects in an organizational setting, how and why it develops in people, and its consequences for individual attitudes and behaviors.

At the heart of the debate has been the question of whether commitment should be defined primarily as an attitudinal phenomenon associated with a largely affective, and somewhat altruistic, pledge of support for an organization as previously discussed, or as a behavioral phenomenon associated with accumulated material and psychological investments in an organization that bind a person to future membership (Meyer & Allen 1983; Mowday et al., 1982; Salancik, 1977). Those who take exception to the

positive, attitudinal view (herein referred to as "affective commitment") tend to see commitment as a state of attachment that a person gradually arrives at through an accumulation of investments and decline of feasible alternatives. For reasons associated with this notion of investments, this second view has received the somewhat misleading label "calculative commitment" (Meyer & Allen 1983).

More recently, there has been movement towards acknowledging that there may be two valid ways of viewing commitment to an organization, but that these two types, while related, represent separate phenomena with different consequences for people's attitudes and behaviors (Meyer & Allen 1984; McGee & Ford 1986). According to this two factor approach, the two types of commitment (to be discussed in detail in the next chapter) tend to develop for different reasons. While both represent a commitment to an organization above and beyond the normal instrumental factors that bind a person to an organization, such as salary, each type exerts in theory a different influence on a person's motivation both to participate in and to perform for the organization. Thus, the first objective in this study will be to further explore this idea in order to delineate and precisely operationalize each type of commitment.

A second objective of this study is to explore this two-factor concept in connection with the different

behavioral influences that each type of commitment may exert. While related, the two types are believed to be sufficiently different as to allow for separate construct measurement (Meyer & Allen, 1984; McGee & Ford 1986). Hypotheses will be developed from a model that associates the two types of commitment with anticipated outcomes for each type. In testing these hypotheses, the consequences or outcomes of the "affective" type of commitment will be contrasted to those of the "calculative" type in an attempt to determine which is the primary factor of interest.

If organizational commitment in its "affective" form can be found to have the kind of motivational implications thought to be associated with commitment, then it opens up possibilities for organizations to develop programs that specifically target the growth and development of this type of commitment among participants. Much past research on commitment has focused on what certain antecedent factors might be (Angle & Perry, 1981; Bateman & Strasses, 1984; Mowday et al., 1982). This rather limited approach, geared towards examining and testing certain factors, could subsequently be drawn together into a comprehensive model of commitment encompassing both the development process and the outcome effects. A commitment model might then serve as a normative component of a larger model associated with employee motivation, in tandem with other motivational

factors such as material rewards, inspired leadership, threat of sanctions etc.

This study is an attempt to confirm theories pertaining to the above, namely that "affective commitment" can affect both the "decision to produce" and the "decision to participate" in an organization. Beginning with the basic concept of commitment itself, this dissertation attempts to "ground" theory pertaining to a two-factor approach to commitment in the common usage and understanding of the term "commitment". The second chapter continues with a review of the literature on commitment tracing the emergence of the dual typology of commitment and clarifying areas of confusion in past research. One objective is to help clarify the distinction between processes of commitment development and commitment itself. Chapter three then describes the model to be tested by the study and the variables that comprise the model.

Chapter four describes an initial field study aimed at gathering current data on organizational commitment and its consequences through a qualitative research process. In this first phase of the study, the "field" consists of several departments and groups of three private, U.S. corporations. Specifically, phase one consists of a series of interviews with managers and employees of the participating organizations aimed at:

1. Increasing an understanding of what organizational commitment means to practitioners in industry, with the goal of refining and developing relevant measures of commitment.

2. Increasing understanding of what the specific outcomes of commitment might be, in terms of attitudes and behaviors.

Chapter five describes phase two of the research, the design of which incorporates findings from phase one. Phase two of the research involves an empirical test of a revised "commitment model" as well as tests of the specific hypotheses derived from the model. It consists of a survey of employees at two of the participating organizations aimed specifically at:

3. Validating the commitment measures which have been developed and refined for the study from existing research and from phase one information.

4. Testing specific hypotheses dealing with relationships between each identified type of commitment and the consequences believed to be associated with that type.

Chapter six then examines the results from this empirical phase of the research. Chapter seven presents a comprehensive discussion of these results and their implications for both the hypotheses and the overall model.

The dissertation concludes with an interpretation of the findings and an assessment of the future value of organizational commitment as a concept worthy of attention from both a research and a management perspective.

CHAPTER II

THEORETICAL BACKGROUND ON ORGANIZATIONAL COMMITMENT

A. The Underlying Concept

The term "commitment", as it is both defined and used in the English language, holds more than one distinct meaning. Webster's Dictionary defines "commitment" as both a pledge or promise of support and as an engagement or involvement in some activity, institution, or cause. While related, these two meanings are different. As a pledge or promise, commitment represents a conscious and overt act that obligates a person to some future course of behavior. As an engagement or involvement, the meaning is less precise. Obviously there are involvements which lack the binding quality which one associates with commitment. Therefore, it can be inferred that this latter definition refers to a state of engagement or involvement characterized by some binding element, some implicit pledge, which would have the effect of severely limiting subsequent disengagement.

This distinction in meaning can be further illustrated by an examination of the way the term "commitment" gets used in everyday discourse. On the one hand commitment may be used to describe an overt promise to carry out some behavior in the future. In an extension of this idea, a person may

commit to ongoing support of some goal or cause out of a sense of belief in the worthiness of that goal or cause. Extending this notion one step further, a person might commit to ongoing support of some institution because the institution itself appears to pursue a set of valued goals.

On the other hand, commitment can be seen as a state of attachment to some course of activity resulting from past actions and choices not originally associated with a conscious pledge or promise. A committed person, in this case, is someone bound to completion or follow-through on a course of action as a result of having past some decisional point-of-no-return. To desist from the course of action appears to carry severe costs in terms of whatever time, effort, materials etc. have so far been invested. Continued pursuit of the activity constitutes a carrying out of the commitment.

For example, a general in a war becomes committed to waging a battle at some specific site because he has previously given a host of orders to deploy, position, and advanced his units towards an engagement. Even if he subsequently realizes that the emerging site favors his opponent, he is, in effect, "committed" to engage the opponent then and there or face other, more damaging consequences associated with attempting to change plans. Similarly, an unwary consumer may feel committed to following through on a purchase, having driven to a

particular store, engaged a salesperson in a lengthy discussion, tried out the product, and made favorable comments in response to the salesperson's inquiries about product features. In both cases the "commitment" stems from past actions and represents a state in which the costs of withdrawal (non-commitment) appear to outweigh the costs of continuation (commitment). In this context, commitment is often discussed in terms of escalating costs (Staw & Salancik, 1977).

In an organizational context, the first use of the term "commitment" can be applied to individuals who are seen as positively and implicitly pledged to the support of the organization, including its goals, values, and purpose, for reasons beyond those associated with extrinsic rewards. As such, commitment can be said to include support of organizational goals even in cases where such support might appear to run counter to immediate self-interest. This application of the term "commitment" is closely associated with one in the commitment literature referred to as at various times as "psychological" or "affective commitment" (Alutto et al., 1973; Meyer & Allen, 1984; Stebbins, 1971).

The second use of the term "commitment" is similar to one that appears in commitment literature under the label "calculative" or "continuance" commitment (Becker, 1960; Kanter, 1968; Meyer & Allen, 1984). Such factors as time expended finding and mastering a job, acquired benefits

associated with longevity, vacation accruals, acquaintances and friends at work, acquired status in an organization all represent past actions, decisions, and behaviors (sometimes called "investments") that may have a binding effect. The weight that an individual attaches to these investments - which would be lost or negated in the event of that person's leaving - represents the person's sense of "calculative commitment".

B. Background: Literature Review on Commitment

Commitment first appears in organizational literature in the early 60's, supplanting an earlier concept called "organizational loyalty". Among the first people to speculate about organizational commitment and its theoretical underpinnings were Becker (1960), Etzioni (1961), and Kanter (1968). Becker's approach, derived in part from theory in social-psychology, defined commitment in terms of an outcome associated with specific past behaviors. Becker referred to these past behaviors as "side-bets". They represented various investments that a person made in the course of holding a job - pension, friendships, vacation accruals - that could only be retained or recovered through continued membership. The more one had at stake in an organization - the more one had accrued - the greater the commitment.

In contrast to Becker, both Etzioni and Kanter presented typologies of commitment that included more than one type of commitment. Referring to "organizational involvement", Etzioni presented three categories or levels of involvement - moral, calculative, and coercive - which could be used to describe a person's relationship with an organization. In so doing, he added the constraint that a person could develop commitment in only one category, i.e. that the categories were mutually exclusive.

According to Etzioni, "moral involvement" represented "a positive and intense orientation towards the organization that is based upon an internalization of its goals, values, and norms and on an identification with authority" (Etzioni, 1961). He saw this type of involvement as linked to "normative control" among participants engaged in carrying out organizational objectives. In contrast, he saw "calculative involvement" as an exchange phenomenon in which person's evaluated their involvement in terms of benefits versus costs, or inducements versus contributions, much in the manner described by March and Simon (1958). He suggested that calculative involvement was linked to "compliance control" among participants.

By differentiating between moral and calculative involvement, Etzioni effectively cleared the way for competing theories of commitment to develop. In particular, he laid the theoretical groundwork for an alternative view

of commitment to compete with Becker's "calculative commitment".

Kanter (1968) presented a somewhat different three-part typology of commitment in which all three forms could be mutually reinforcing. She suggested "continuance", "control", and "cohesive" commitment. Continuance commitment involved a merging over time of interests between individual and organization such that the fates or futures of both parties gradually became linked. Control commitment had to do with getting individuals committed to the values, objectives, and norms of the organization such that they would willingly dedicate themselves to support of the organization, at the same time disavowing other competing value systems. Cohesive commitment referred to commitment to other persons in an organization.

The first two types of commitment mentioned by Kanter complement the "calculative" and "moral" involvement of Etzioni's scheme. The major contribution by Kanter was her emphasis on a behavioral development process for both types of commitment. Not only could a person become committed on a calculative or continuance basis through past actions and investments, the person could also become morally committed as a result of actions, choices, and behaviors that could be seen by others as public declarations of where that person stood and how he or she felt towards some object of commitment.

Kanter's contribution was especially important in helping to differentiate between commitment and its process of development. As the two competing theories of commitment - affective and calculative - evolved in the 70's, there also developed a tendency to associate a behavioral process of development only with "calculative commitment", in part because it had been so defined that way by Becker. Kanter pointed out, quite early on, that a behavioral process of development could apply to either type of commitment.

With the theoretical underpinnings of organizational commitment thus established during the 60's, researchers in the 70's devoted most of their efforts to concept refinement and empirical testing of the competing theories of commitment. For the most part, their efforts focused on the two forms of commitment already cited: "calculative" and "affective". Appendix A contains a list of recent definitions of organizational commitment associated with both types.

Research on "calculative commitment" focused on trying to prove Becker's theory. Various attempts were made to establish that "investments" and "side-bets" would correlate significantly with commitment when measured through surveys of individuals in organizations (Alutto et al., 1973; Farrell & Rusbult, 1981; Hrebiniak & Alutto, 1972; Ritzer & Trice, 1969). Although few definite conclusions could be drawn from this research, the "side-bet" theory remained as

the primary basis for research in the area of "calculative commitment" (Meyer & Allen, 1984; McGee & Ford, 1987). One of the major challenges that emerged, however, involved developing a measure of "calculative commitment" that would not be confused or confounded with measures of "affective commitment" that were being developed at the same time. Both the Ritzer-Trice measure and one by Hrebiniak and Alutto operationalized commitment in terms of a person's intentions to remain with or leave an organization under either existing or hypothetical conditions. As Stebbins (1971) pointed out, however, these kinds of measures were as likely to be tapping a "psychological" or affective form of commitment as a calculative form.

As a result, certain researchers turned their attention in the 1980's towards trying to develop a dual set of commitment measures that could distinguish between calculative and affective commitment (Meyer & Allen, 1984; McGee & Ford, 1986). In this endeavor, they were partially successful. The calculative measure developed by Meyer and Allen, consisting of two factors, proved to be uncorrelated with their affective measure in an initial study. However, as McGee and Ford subsequently discovered, each of the two factors was correlated with the affective measure but in a different direction. The net effects, therefore, were offsetting even though each factor was independently correlated with the affective measure. The challenge of

developing two reliable but distinct measures of commitment thus remains unsettled.

During the decade of the 70's, research on "affective commitment" took a slightly different approach from that of the research on "calculative commitment". Rather than trying to prove a theory, the focus was first on developing a solid definition and reliable construct measure and second on establishing correlates of commitment both on the antecedent and the outcome side of the construct. The objective was both to establish a rationale for studying commitment and to confirm various organizational and personal factors that would purportedly have a causal effect on commitment development.

Initially the "affective" concept emerged from the notion of "identification" of person with organization which itself was associated with Etzioni's "moral involvement" (Brown, 1969; Etzioni, 1961; Hall, Schneider, & Nygren, 1970; Hall & Schneider, 1972). Identification was felt to represent a stronger, psychologically-based bond between individual and organization than one based purely upon exchange principles. In 1974, Buchanan used the term "commitment" to describe such a bond which he characterized as a "partisan, affective attachment to the goals and values of the organization" consisting of a sense of "identification, involvement, and loyalty" (Buchanan, 1974).

Building on work by Buchanan and others, Mowday et al. (1979) developed during the seventies both a definition of commitment and a related 15 item measure called the "organizational commitment questionnaire" or OCQ. The definition stressed involvement in an organization, along with effort to support goals, acceptance of values, and desire to remain a member. The OCQ contained a mix of items aimed at capturing these three characteristics. Initial empirical tests of the construct showed evidence of high reliability and convergent validity (Mowday et al., 1979). Subsequently, it was adopted by most researchers interested in studying "affective commitment". (Angle & Perry, 1981; Bateman & Strasser, 1984; Lee & Mowday, 1988; Mowday et al., 1982).

Using this measure, Mowday et al. went on to examine antecedents and outcomes of commitment. They summarized their findings and those of others in a 1982 book on individual-organizational linkages (Mowday et al., 1982). Antecedents were grouped into four categories: 1. personal characteristics, 2. job or role-related characteristics, 3. work experiences, and 4. structural characteristics. In addition, they proposed a theory on development in which growth of commitment was related to a person's changing experiences over time with one organization. Antecedent categories were noted as having different effects on individuals at different periods in their careers with an

organization. Furthermore, the theory allowed for the influence of commitment behaviors on subsequent commitment - a behavioral phenomenon. While only limited empirical testing of the theory was done to verify its many relationships, it did provide a basis for subsequent work in the area of commitment development including further examination of the organizational commitment construct itself.

In terms of outcomes of commitment, Mowday et al. noted that while much had been established in the category of continued participation (absence of turnover), very little research had been successfully completed in the area of performance (Angle & Perry, 1981; Steers, 1977). This was somewhat surprising, given the way "affective commitment" had been defined. The failure to substantiate a positive relationship between "affective commitment" and performance called into question the value of this type of commitment as a motivational force related to performance.

Subsequent to Mowday et al.'s findings, others in the 1980's have continued to try to establish a connection between "affective commitment" and performance (Bateman & Strasser, 1984; O'Reilly & Chatman, 1986). Supportive evidence has, so far, been slim. O'Reilly and Chatman (1986) found significant correlations between a measure of "identification" similar to affective commitment and "pro-

social behavior" - a willingness to carry out voluntary tasks in support of an organization's overall continuity.

Because of the paucity of findings in the outcome category related to performance, a major purpose of this dissertation will be to try to establish a valid connection between "affective commitment" and willingness to actively support organizational goals. Failure to establish such a relationship would seriously undermine the usefulness of commitment as it applies to both management research and practice.

C. Calculative versus Affective Commitment

As noted in the introduction, one objective of this dissertation involves confirmation of theory having to do with the dual nature of organizational commitment. Included in this pursuit will be an attempt to establish distinct constructs that effectively represent "affective" and "calculative commitment". Phase one of the research will investigate, in part, the dual nature of the concept of commitment in organizations as perceived by organizational members.

In theory, the two concepts of commitment are dramatically different on a number of dimensions. Etzioni (1961) pointed out the fundamental dimension having to do with moral versus calculative involvement. On this

dimension, it is purportedly the nature of a person's involvement in an organization that ultimately colors the type of commitment that will emerge, if commitment does indeed emerge. The person whose involvement is characterized by shared values will tend towards a values based, "affective" type of commitment. A person whose involvement is mainly instrumental, focused on the various costs and benefits of the association, will be more likely to develop "calculative commitment".

A second dimension that helps differentiate between the two concepts has to do with choice. A person with "affective commitment" generally feels that he or she has, in the past, freely chosen a high level of involvement and in the present chooses to continue the involvement. In some cases, the individual's perceptions may be quite accurate, especially in those cases where positive experiences and thoughtful decisions have played a strong role in the person's career development. In other cases, the perception may be somewhat inaccurate, representing more of an illusion of choice. This would be the case of the "organization man" whose commitment stemmed more from a conformance to norms and expectations than from choice (Whyte, 1953). While there may be some real difference in the development processes between these two sub-types of commitment, in both instances individuals are likely to perceive their situation in a similar light, that is as stemming from their choices

and desires. Both types of individual would likely associated their involvement as freely chosen, or within their own locus of control.

"Calculative commitment", on the other hand, has been characterized by a perception of lack of choice in job options both in the present and future. How and why an individual feels a lack of choice may vary. Becker (1960) suggested the idea of "side-bets" or investments - acquired benefits that would be foregone if a job was given up. In cases involving investments, an individual may be inclined to forget that he voluntarily acquired benefits, foregoing at that time the option to explore elsewhere. Or, he was not then aware of the meaning these benefits would later acquire - that they would some day be seen as investments. In his eyes, therefore, his lack of choice today is not due to his own behavior so much as to circumstances (i.e. external locus of control). For this reason "calculative commitment" could also be referred to as "circumstantial" commitment.

In similar fashion, people who have remained in a job a long while may feel their options for other jobs to be limited - the plight of the middle-aged employee. Again, in reflecting on the past such persons would probably not see themselves as having made deliberate decisions to limit options. Instead, they would see the lack of choice as

associated with circumstances of age, life situation, and culture.

Other individuals may simply perceive a lack of choice because no other decent jobs are available in the local geographical environment. Still others may see themselves as never having had any real choice. One thing after another determined the course that their working life took. These people - perhaps factory workers in a depressed area - would tend to see their attachment or commitment to the organization as just another fact of a tough life. In so far as all of these "types" of committed individuals perceive an absence of choice on future decisions to participate, they can all be classified as committed in a "calculative" mode.

It is worth noting, at this point, that whereas there may be two different categorical types of commitment, any given individual need not be assigned to one or the other type. Many individuals - probably a majority in some organizations - will remain relatively uncommitted. Others may be committed simultaneously to some degree on both levels. However, in the latter case, it is probable that one or the other type of commitment will tend to dominate a person's psychological field and blot out a sense of the other. How a person's feels about the organization, and its relevant components, should influence the type of commitment which the person experiences.

Either way it is perceived, commitment results in some loss of "degrees of freedom" in a person's future options. People with "affective commitment" are generally not discouraged or dismayed by this state. They see themselves as having chosen it for good reasons. As Brickman (1987) notes in clarifying the distinction between "types" of commitment:

In an enduring commitment, people need and seek a sense of predecision freedom, not so much because they are interested in revoking their current choice or in pursuing alternatives but because they need to revive the sense that they are indeed committed to their current state and not just trapped by it - that is they have postdecision freedom. (1987, p.186)

This idea, then, of "postdecision freedom" really describes a feeling people have who are committed in a positive manner. While they do indeed have less future freedom, they tend to feel free due to the process by which they have adopted their sense of commitment - a voluntary process in their recollections. As Brickman (1987) points out, however, even this feeling of choice is more a matter of perception than reality.

Each (form of commitment) is also a form of illusion since there is usually both some element of choice and some element of coercion or external force in all behavior. What happens is that one of these elements comes to dominate the psychological field in which the activity is experienced, and the activity is thus felt as either entirely free or entirely coerced. (1987, p.173)

Thus, it is a "feeling" of freedom of choice that helps differentiate between the nature of the commitment, and makes it possible for researchers to describe one as "affective" and the other as "calculative".

A third dimension along which the two types of commitment can be differentiated is through an examination and identification of the object of commitment in each case. With "affective commitment", the object may begin as the career or the instrumental self-interests of the individual; but, as the individual identifies with the values of the organization, the ensuing commitment is to the organization that supports these values. Drawing on work by Kelman (1958), O'Reilly and Chatman have theorized that as the individual develops a sense of commitment, his or her job-related behavior shifts from a compliance based mode to one in which identification with the organization and internalization of organizational norms act as instruments of motivation and guidance (O'Reilly & Chatman, 1986). Gould sees "affective commitment" as providing a normative component of motivation in contrast to expectancies, associated with extrinsic rewards, which he sees as the corresponding instrumental component (Gould, 1979).

In the case of "calculative commitment", the object of commitment is generally some form of self-interest. The organization, as a vehicle for serving self-interest, is an object only in an indirect sense. The individual is

committed to a continuation of association with the organization because any other course of action might jeopardize the interests served by the association.

Drawing a connection between the idea of choice and what it is that a commitment is directed towards, Brickman (1987) notes:

In looking back, people say either that they really wanted to or that they really had no choice. Each of these represents a form of commitment. The former represents a commitment to the activity; the latter, a commitment to something other than the activity. Alternatively, the former represents a commitment to the activity as an end in itself; the latter, a commitment to the activity as a means to some other end.
(1987, p.173)

The "activity" in this case could be used to describe either a person's job (profession) or organization. In situations where a person feels a sense of choice ("affective commitment"), the object of commitment is the activity (the job, the organization, or both). In the no-choice case, the activity or organization is seen as a means to some other end.

A fourth dimension on which one can draw theoretical distinctions between the two forms of commitment concerns the process by which commitment develops - a process that has already been touched upon in the discussion of "choice" versus "no-choice". While it is not the purpose of this dissertation to empirically investigate this process, it is

helpful in differentiating between types of commitment to briefly examine the development process.

Previously, we noted the emphasis placed upon committing behaviors by persons in the field of social-psychology (Becker, 1960; Kanter, 1968). Another noted social-psychologist, Kiesler, defined commitment as "the pledging or binding of the individual to behavioral acts" (Kiesler & Sakumura, 1966). Salancik (1977) took this one step further noting that the implications of commitment for any behavior depended upon the degree to which a behavior could be perceived as: (1) explicit, (2) public, (3) non-revocable, and (4) voluntary. Salancik drew a distinction between this approach to commitment development, which he called "behavioral" and the "attitudinal" approach summarized by Mowday et al. (1982) involving antecedent groups.

In contrast to research using the "behavioral" approach, research using the "attitudinal" approach did not delve deeply into the development process. The inference was that certain organizational and work factors would lead to positive experiences and positive reactions by the individual employee such as high morale and job satisfaction. Over time, a combination of work factors and positive reactions would lead to development of an affective form of commitment.

The pattern that emerged was one linking a "behavioral" approach with a "calculative" form of commitment and an "attitudinal" approach with "affective commitment" (Salancik, 1977). In fact, as Mowday et al. (1982) alluded to, this is a misleading oversimplification. Kanter had earlier pointed out that different types of behavior could lead to different types of commitment (Kanter, 1968). The public adoption of and avowal of company policies and norms could, for example, lead to a form of psychological commitment much closer in definition to "affective commitment" than to "calculative commitment".

Perhaps a more logical approach is one which views both behaviors and attitudes as leading to either type of commitment depending upon individual circumstances. According to this perspective, behaviors are the primary cause of commitment while attitudes guide the way a person subsequently perceives the commitment. According to Brickman (1987): "Commitments begin when positive, extrinsic rewards encourage individuals to pursue a particular activity". In other words, the process begins in a calculative mode and involves behaviors or "pursuits" related to certain personal goals. Beyond this point, the growth process may be shaped both by behaviors and by emerging attitudes associated with experiences - most likely some combination of the two. To the extent that positive attitudes prevail in a person's psychological field, the

resultant commitment is likely to be perceived as an affective form of commitment. In the absence of positive attitudes or high morale, a person is likely to view commitment in a calculative mode - a comparison of the costs and benefits of continued membership versus the risks and potential rewards of change.

D. Revised Definitions of Commitment

Most management research on commitment has used an "affective" or values-related concept of the term as the focal concept. Several definitions of commitment have been proposed in recent literature which are quite similar (Appendix A). Perhaps the most widely accepted definition to date is one offered by Mowday, Steers, and Porter (1979) associated with the OCQ. While this definition is rather ponderous, it provides a good base for a more refined definition of "affective commitment". According to these authors, organizational commitment can be defined as:

...the relative strength of an individual's identification with and involvement in a particular organization. Conceptually it can be characterized by at least three factors: (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; and, (c) a strong desire to maintain membership in the organization. (1979, p.2)

This definition equates with the dictionary definition, in part, except that the idea of "involvement" is linked with the idea of "identification". In order to be considered committed, one need be more than involved. One must also strongly identify with the organization, accepting its goals and values and demonstrating this through supportive behavior.

The widespread acceptance of this definition is indicated by the degree to which the OCQ has been used in recent research. The only thing missing might be an indication of feeling in the definition. There are a couple of reasons for including such an expression in the definition. In the first place, several items on the OCQ seem to convey feeling or affect. For example, the statement, "I am extremely glad that I chose this organization to work for over others I was considering at the time I joined" expresses affect towards the organization. "I really care about the fate of this organization" likewise reflects concern. A second reason for including an indicator of affect is that it appears in other, often-cited definitions. Buchanan, for example, defines commitment as, "a partisan, affective attachment to the goals and values of an organization, to one's role in relation to goals and values, and to the organization for its own sake apart from its purely instrumental worth" (Buchanan, 1974).

Building on these concepts, the following definition of "affective commitment" is proposed for this study:

A cognitive and affective psychological attachment to an organization characterized by heavy involvement in the organization, support of its goals and values, and identification with its culture, its people, and its continuing existence apart from its instrumental value.

This definition portrays commitment as a bond or attachment with substance provided by positive attitudes and feelings, identification, and a sense of pledged support. It incorporates two basic components: attachment strengthened by pledged support, and positive identification strengthened by attitudes and feelings.

In contrast to this positive type of commitment, "calculative commitment" can be defined as follows:

An attachment to an organization, built up over time through a composite of decisions, personal developments, investments, and acquired benefits, which retrospectively binds an individual to an organization by raising both the perceived benefits of remaining with an organization and the perceived risks or costs associated with leaving.

Based upon descriptions by Becker (1960) and Hrebiniak and Alutto (1971), this definition emphasizes the role of prior behavior and circumstance in the development of this form of commitment. However, unlike the case with "affective commitment", a person tends not to associate prior binding behaviors with choosing a commitment. There

is, therefore, a lack of both predecision and postdecision freedom. The notion of sacrifice, associated with a pledge, is absent as well. Self-interest remains the guiding criterion. The individual sees him- or herself as committed to the extent that other courses of action - alternative employment - no longer appear to be viable options.

E. Outcomes of Commitment

In addition to the conceptual differences between commitment types noted in the preceding section, each type is associated, in theory, with different outcome behaviors. Mowday et al. (1982), whose primary focus is on "affective commitment", cite five outcomes that have received research attention: job performance, tenure with the organization, absenteeism, tardiness, and turnover. Research on "calculative commitment", on the other hand, has focused almost exclusively on its effect on continued participation in an organization (Farrell & Rusbult, 1981; Ritzer & Trice, 1971). For both types of commitment, the focus of this project will be both on the job performance and the participation (turnover) categories of outcomes.

1. Affective Commitment

With "affective commitment", the process of understanding outcome behaviors begins with the definition of the concept as previously discussed. According to this definition, commitment involves a pledge of support beyond what is normally expected in an exchange relationship. As such, it implies a motivational effect on individual behavior sufficient to honor the commitment. This effect on motivation is purported to be different from one associated with expectancies (Scholl, 1981; Wiener, 1982). An example might be a verbal commitment, by an employee, to look out for the interests of co-workers. If that employee were to subsequently hear a phone ring after hours on the desk of a co-worker and answer that phone even though he was eager to get home, that act would represent a carrying out of the commitment.

Generally the case is more complex than this example. For one thing a voluntary and overt pledge of all-out support is rarely made to a private organization. Instead a person builds commitment through some combination of positive attitudes and committing behaviors (Salancik, 1977). In the case of "affective commitment", certain behaviors which help build commitment are similar to the behaviors one would expect from a committed individual. What occurs, according to Mowday et al. (1982), is a

commitment cycle in which certain attitudes and behaviors combine initially to produce a growing sense of commitment which in turn contributes to a person's motivation to act in support of organizational goals and values. These subsequent acts, reflective of a growing commitment, can have the effect of further committing the individual to ongoing support of the organization through cognitive adjustment processes (Cialdini et al., 1975; Festinger, 1957; Salancik, 1977).

An example of this cycle would be the refusal of an alternative offer of work. A person might be inclined to turn down the offer by a certain liking for the present job, some verbal encouragement from fellow workers to stay, and/or the immediate inconvenience of having to relocate. The choice of turning down the job, however, is likely to be perceived both by the individual and others around him or her as a declaration of attachment and support for the current employer. As such that choice may have a further binding psychological effect. As so illustrated, the act of refusing an attractive alternative can be both a cause of and an effect of commitment.

The focus of this project is specifically on the outcome side of this cycle, if indeed such a cycle exists. In order to help avoid any confusion implied by a cyclical-process model, the emphasis on the outcome variables will be, for the most part, on a person's behavioral intention

with regards to future action and choice. In laying the groundwork for the inclusion of specific variables, however, discussion will emphasize the actual behaviors that have received research attention as outcomes of one type of commitment or the other.

a. Performance Variables. The primary means of supporting the goals in most organizations is through job performance - carrying out a defined set of tasks to the best of one's abilities. In commenting on the relationship between commitment and actual performance, Mowday et al. (1982) note that the effect of commitment will be only on the **effort** a person puts in to accomplishing job objectives. In this vein they state, "...we would expect commitment to influence the amount of effort an employee puts forth on the job and this effort should have some influence on actual performance". This would include not only performing that job according to the formal requirements of the job but also "going the extra mile" in order to do what is best for the company in any particular situation.

O'Reilly and Chatman (1986) and Smith et al. (1983) took a slightly different approach. Referring to work by Katz (1964) on three basic types of behavior essential to an organization, they focused on the third type - what Katz called "innovative and spontaneous activity that goes beyond role prescriptions" - as a likely effect of commitment. O'Reilly and Chatman labelled this "extra-role" behavior.

Particularly important to this concept is the idea that a person apply thought and effort beyond that for which he or she would normally expect extrinsic reward.

Past research on commitment, using the OCQ as a dependent measure, has approached this question of how to measure effort and performance in different ways (Angle & Perry, 1981; Clegg, 1983; Lee, 1971; Mowday et al., 1974; Mowday et al., 1979; O'Reilly & Chatman, 1986; Porter et al., 1976; Rhodes & Steers, 1981; Steers, 1977). Two recent studies used performance evaluations of employees to get at motivation and effort (Angle & Perry, 1981; Steers, 1977). Other studies have used a self-report variable called "extra-role" or "pro-social behavior" to try to capture the degree to which a person puts forth voluntary effort in support of general objectives (O'Reilly & Chatman, 1986; Smith et al., 1983). Still other studies have focused on attendance and punctuality as indicators of support for organizational goals and values (Angle & Perry, 1981; Hammer et al., 1981; Rhodes & Steers, 1981).

Only in one study were the findings of any significance: O'Reilly and Chatman found a relationship between a measure of "identification", similar to "affective commitment", and "extra-role behavior". Some positive but weak relationships were found between affective commitment and performance measures in the Steers and the Angle and Perry studies. Steers concluded, however, that, "no direct

or consistent association exists between commitment and subsequent job performance for (present) samples".

Findings on the relationship between commitment and employee lateness and attendance were mixed. Both Steers (1977) and Angle and Perry (1981) found no significant relationships between commitment and attendance. Angle and Perry, however, did find inverse significance between commitment and lateness. In worker-owned organizations, Hammer et al. (1981) found a significant positive relationship between commitment and attendance, but Rhodes and Steers (1981) found the same relationship to be negative.

Several factors may help explain this paucity of significant findings. One of the problems plaguing studies on outcomes of commitment has been methodological: getting reliable data on the rated performance and other behaviors of specific individuals. In cases where objective outcome measures have been used, each respondent must be identifiable in order to match commitment with outcomes. This calls into question the validity of the independent measures. Would a respondent really answer truthfully to questions concerning his commitment or loyalty to the organization if he knew that his name could be associated to these responses? Self-report data, on the other hand, while it may be reliable, exposes the study to the risks of common method variance (response bias).

A second problem may have to do with the OCQ itself. With its emphasis on liking for the organization, it may capture as "committed" a group of individuals who feel positively towards their organizations but are not really internally committed to giving full support. In commenting on his results, Steers (1977) states that the organizations he studied may have retained more "security-minded 'settlers' who were loyal but to whom high performance was not role relevant".

A third problem has to do with the many other factors, other than effort, which can affect performance: personal factors such as ability, training, age, education, intelligence, and environmental factors such as leadership, reward systems, job demands, and work conditions. Within the context of these other factors, any effect of commitment on actual performance may become largely obscured. Steps taken in the present study to avoid these problems will be explained in the following chapter.

b. Participation Variables. In addition to its effects on a person's "decision to perform", "affective commitment" should have its other major influence on that person's "decision to participate". Much past research dealing with consequences of "affective commitment" has concentrated on turnover-related variables. In three studies using longitudinal designs, actual turnover has been found to be inversely related to commitment (Porter et al.,

1974; Porter et al., 1976; Steers, 1977). In cross-sectional designs, commitment was compared to behavioral intention variables such as "intent to remain" or "intent to leave" (Angle & Perry, 1981; Arnold & Feldman, 1982; Bluedorn, 1983; Koch & Steers, 1978; Michaels & Spector, 1981; Mowday et al., 1979). In all studies, commitment was found to be either positively associated with "intent to remain" or negatively associated with "intent to leave".

Whereas the relationship between "affective commitment" and "intention to remain" is, therefore, well established, the use of a pure "intent" variable does not provide much information about how a person feels about his or her choice. The person who is stuck in an organization - i.e. sees no other alternatives - is at least as likely to report intent to remain as is a person who, with or without other job possibilities, feels a sense of affective commitment. Yet from an organizational point of view, a person with a desire to remain along with an intention to remain is probably a more valuable member than one with only intent. Steers (1977) accounted for this distinction in his model of organizational commitment in which he describes intent to remain and desire to remain as separate outcome variables.

One problem in trying to measure desire to remain is that it be interpreted by respondents as equivalent to a basic intent. This may have been a problem in Steers' research, which used a single item measure for each

variable. Findings were similar with regard to both desire and intent. In order to avoid this potential bias, a person's desire to remain can be appraised by asking about that person's intention to remain under hypothetical conditions which would make it beneficial, from an instrumental perspective, to leave. Under such conditions, the person with "affective commitment" should tend to resist the incentive to leave while someone with little commitment (or with "calculative commitment") should favor leaving. Hypothetical conditions aimed at differentiating between individuals could include unfavorable conditions for the organization, such as financial strain, or favorable external conditions such as a better paying job opportunity, a more challenging job, or a job in a more dynamic, growth-oriented institution.

An alternative way to measure both a person's intention to remain and desire to remain is to assess the degree to which that person is or has been actively searching for an alternative place to work. Mobley (1977) first drew this distinction between intent to leave and intent to search for alternatives. It was later operationalized in a study by Arnold and Feldman (1982). Someone who desires to remain should report little or no search behavior. On the other hand, someone with no commitment who would like to leave, or someone with partial calculative commitment, who otherwise is bored or burned-out in the job, would be more likely to

report search behavior. The act of searching could also be indicative of a decline of commitment for a previously committed individual. Degrees of search behavior should, therefore, be indicative of both a growing intention to leave and a lack of desire to remain with an organization.

2. Calculative Commitment

Past research suggests that the motivational effect of "calculative commitment" is different from that of "affective commitment" (O'Reilly & Chatman, 1986). In the case of calculative commitment, a person's self-interest is really the paramount object of commitment while the organization serves mainly as a vehicle for serving that self-interest. For a person so committed, self-interest appears to be best served by remaining with the organization so as to profit from the various investments, which in turn implies doing whatever is necessary to maintain membership in the organization but no more.

Research in the 70's which focused on this form of commitment produced mixed results. The majority of evidence was in support of Becker's original contention that investments and "side-bets" had the effect of binding a person to his or her organization (Alutto et al., 1973; Farrell & Rusbult, 1981; Hrebiniak & Alutto, 1972; Ritzer & Trice, 1969; Shoemaker et al., 1977). In all cases,

however, calculative commitment was defined as the dependent variable. Because of the way it was operationalized - in some studies as an intention to remain or leave and in others more as a conditional intent or desire to stay or leave - it becomes difficult to say what was really being measured in these studies. In studies by Alutto et al. and Farrell and Rusbult, investments were shown to have a positive effect on commitment, operationalized as an intention to remain. In the Ritzer and Trice study and Shoemaker et al. study, the evidence was that commitment, measured as a dependent variable, was more related to "social-psychological" antecedents versus investments, indicating that the concept being measured was more akin to an affective form of commitment (Shoemaker et al., 1977). This was likely due to the fact that the measure used was more a measure of a person's desire to remain with an organization (conditional intent) than one of pure intent to remain.

The major sticking point with all of these studies had to do with the question of how to define and operationalize calculative commitment. The practice of using "intent" or "desire to remain" variables represented a surrogate means of measurement. In theory, at least, such surrogate measures would have been better cast as outcomes of commitment than as direct measures.

Calculative commitment can be more accurately defined in terms of past, not future, acts - foregone alternatives, close personal relationships that have developed, accumulated benefits - which in retrospect increase the potential costs of leaving as well as the returns associated with staying. To the extent that a person's sense of investment in an organization can be defined and measured, this sense of investment should represent "calculative commitment". For this reason, it is intended to use a measure of commitment which aims at assessing a person's sense of investment. A focus on self-interest, associated with calculative commitment, then serves as a guide in identifying and clarifying the likely outcome behaviors.

In the first place, "calculative commitment", when pre-eminent in a person's psychological field, should positively affect that person's intention to remain with an organization. It is by so doing that the person is able to "cash in on" investments and avoid either high costs or unacceptable risks associated with leaving. On the other hand, there is nothing in the definition of "calculative commitment" which suggests that a person so committed should have a strong desire to remain. Thus any hypothetical condition which would offer a person a change in jobs for the better without a great sacrifice in investments should have an appeal. Such a person might also be as inclined to search for or scan for job alternatives as someone with

little commitment of any kind. Whether or not such a person searched for alternatives would depend more upon the strength of the investment and a perception as to whether or not it could be replaced through a new job.

The existence of job alternatives might be expected to have a more complex effect on a person with "calculative commitment". Since a person with "calculative commitment" lacks, in theory, a strong desire to remain, the existence of any reasonable job alternative should weaken that person's intention to remain. For the person with "affective commitment", who already feels a sense of choice, the perception of alternative jobs should have little effect on that person's intentions regarding continued participation. The presence of job alternatives could, therefore, help to differentiate between the two types of commitment by moderating the effect of "calculative commitment" on an individual's intention to stay with an organization.

In the category of performance, "calculative commitment" should affect a person's motivation to perform only to the extent that the committed person will do what is necessary to remain in the organization - average work - and little more. This follows from an understanding of calculative commitment as a means of recovering various "investments". Such work behavior should closely approximate Kelman's notion of "compliance" behavior,

defined as behavior which is linked to the attainment of "specific rewards and approval" and the avoidance of "specific punishments and disapproval" (Kelman, 1958). Therefore, there should be no discernable effect by "calculative commitment" upon either extra job effort or the kinds of extra-role behaviors described by Katz as "innovative and spontaneous activity that goes beyond role prescriptions" (Katz, 1964).

F. Conclusion

This chapter outlined the background on theory having to do with organizational commitment. Its primary focus was on the two-factor approach to commitment that has emerged from two quite different schools of thought on just what the term "commitment" means when used in an organizational context. It is this difference and its implications for outcomes of commitment that is the central focus of this study.

On the one hand, there is "affective" organizational commitment, seen as an attitudinal phenomenon stemming from a mix of personality traits, experiences in an organization, and job-related factors. On the other hand, there is "calculative commitment", seen as a logical outcome of certain patterns of behavior over time, which patterns result in the accumulation of "investment credits" with one

particular organization. This study will attempt to develop reliable measures of both these concepts derived from the preceding two definitions.

In theory, these two concepts of commitment should have differing effects on individual behavior. With "affective commitment", the primary effect should be on a person's willingness to support organizational goals both through performance and through continued participation. Because previous studies have failed to establish a link between "affective commitment" and performance, a major objective of this study will be to test for such a link. The only expected effect of "calculative commitment" would be on a person's intention with regards to continued participation. The second objective of this study will be to use past research to develop reliable outcome measures associated with each concept and test for relationships between the two concepts and their expected outcomes.

CHAPTER III

METHODOLOGY

As mentioned in chapter 1, the primary objectives of the study are twofold: 1. to clarify and empirically differentiate between separate concepts of commitment, and 2. to develop and test hypotheses linking each type of commitment to related outcome behaviors.

Although there has been a substantial amount of research on the general topic of commitment, as well as on the difference in basic concepts between "affective" and "calculative commitment", no single study has attempted to work with more than one type of commitment and commitment outcomes at the same time. Furthermore, the studies that have attempted to differentiate between an affective and a calculative type of commitment have met with only partial success (Ford & McGee, 1987; Meyer & Allen, 1984).

The rationale for including two types of commitment in a cause and effect study lies in the clarification this approach would provide to theory on organizational commitment as a motivational concept with different behavioral implications associated with type of commitment. If it can be established that different types of commitment exist that have different effects on motivation and behavior, then research can proceed to the equally important task of investigating the process of commitment development,

where the focus would be on the type (or types) of commitment that are associated with desirable outcomes.

Due primarily to persistent ambiguities associated with the two types of commitment, a decision was made to conduct this study in two phases. Whereas quantitative empirical research was carried out in the second phase of the study, an investigative first phase was designed and implemented to help clarify issues surrounding the fundamental question of how people in organizations view the concept of organizational commitment. The findings in phase one, drawn from a series of sixteen interviews with managers of private organizations, were then used to refine both variable selection and construct measurement for phase two, as well as the exact wording of hypotheses tested in phase two. The expectation was that a more thorough understanding of the concept, based largely upon the perceptions of people actually working in private organizations today, would lead to a better design for the empirical phase of the study and greater chance for successful results.

The exact methodology and the results of phase one will be described in the next chapter. Prior to the implementation of this phase, the framework of the overall study was laid out in such a way as to include the variables of interest in a model purporting to explain the hypothesized relationships between the two types of commitment - affective and calculative - and their related

outcome behaviors. This model is displayed in Figure 1. The research plan called for a questionnaire designed to tap each of the variables of interest displayed in the model. A discussion of the variables selected for the study and shown in the model follows.

A. Independent Variables

1. Affective Commitment

According to the definition, derived in part from earlier definitions of "affective" and "value" commitment, affective organizational commitment is characterized by support of the goals and values of the organization as well as a desire to maintain membership in the organization. The most popular measure of "affective commitment" in the past decade has been the "Organizational Commitment Questionnaire" developed by Mowday et al. (1979). Purportedly, the "OCQ" captures both of the characteristics cited above, along with a willingness to expend effort in support of these goals. In that this measure has received considerable verification in terms of reliability and validity, it served as a logical starting point for development of an affective scale appropriate to the purposes of this project (Mowday et al., 1982).

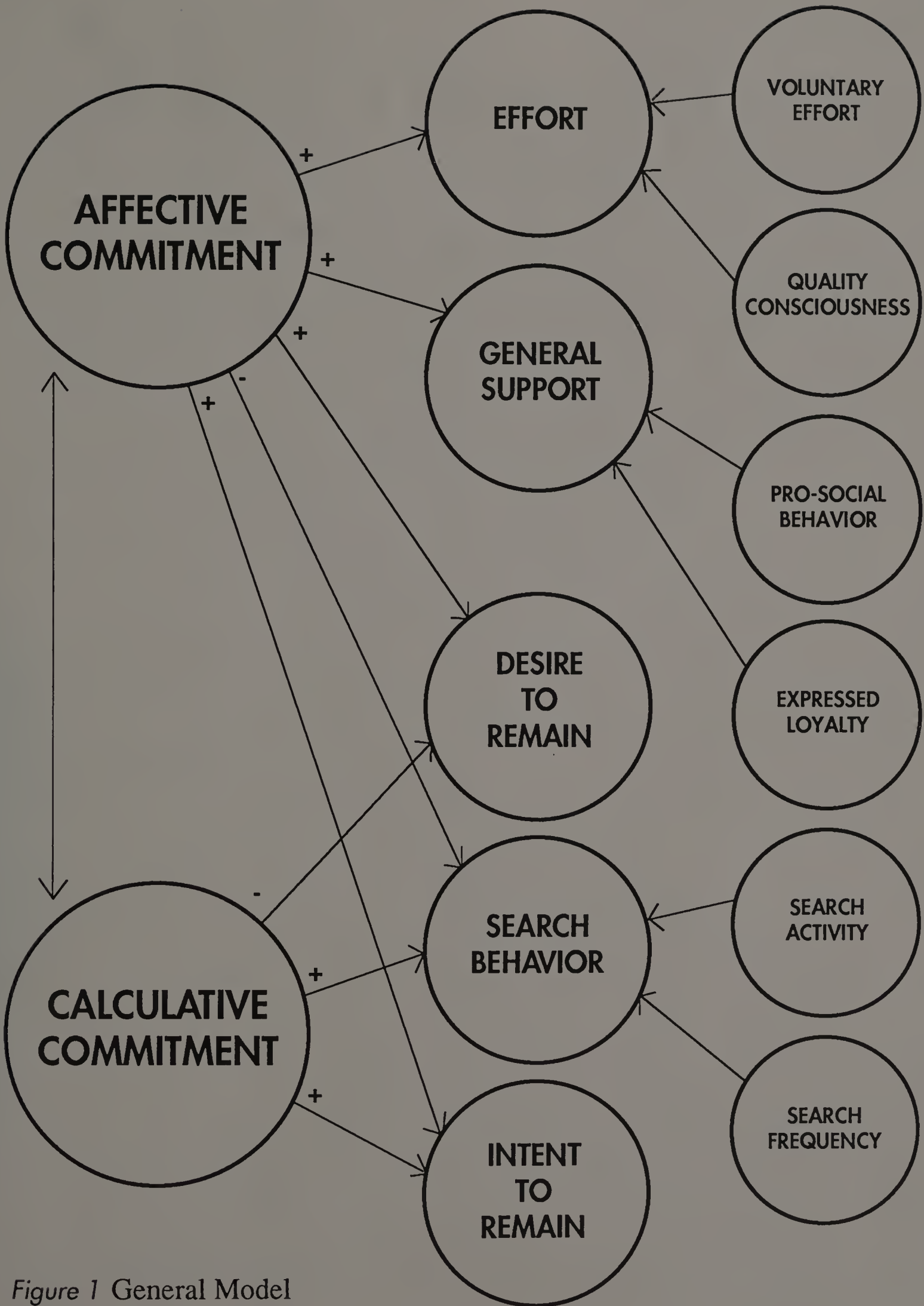


Figure 1 General Model

Other scales considered were the "affective commitment scale" (AFS) developed by Meyer and Allen (1984) and two subscales related to "identification" and "internalization" used by O'Reilly and Chatman (1987). The Meyer and Allen AFS, based upon Buchanan's definition of commitment (Buchanan, 1984), consists of eight items strongly suggestive of liking for and attachment to the organization. The O'Reilly and Chatman scale, on the other hand, emphasizes identification with organizational values and internalization of both goals and values. Both of these scales appeared to capture, in part, the concept of "affective commitment" as defined in the preceding chapter. All three "affective commitment" scales are displayed in Appendix B.

2. Calculative Commitment

The best measures of "calculative commitment" have been Meyer and Allen's "calculative commitment scale" (CCS) and an investment scale developed by Rusbult and Farrell (1983) and subsequently validated by Koslowski et al. (1987). Others, such as the Ritzer-Trice scale, rely upon outcome behaviors and so were not considered. The two more relevant scales of calculative commitment are displayed in Appendix C. As in the case of "affective commitment", the

"calculative commitment" scale was not finalized until after completion of phase one of the research.

Because the "calculative commitment" concept is associated with various investments and long tenure in an organization, certain factual information, used by Rusbult and Farrell (1983) as surrogate measures of investments, was included in the study. This information consisted of:

1. length of service in the organization,
2. annual vacation accruals,
3. participation in company savings plan,
4. participation in company stock ownership plan,
5. age,
6. gender,
7. marriage status,
8. ownership of home,
9. number of school age children, and
10. attachment to residential community.

The purpose was to compare this information to the "calculative commitment" measure in order to see which surrogate measures best reflected the construct.

In order to finalize two commitment scales for use in the study, all existing measures were examined in light of findings from phase one of the research. Items from five scales were included in the two measures adopted for this study, although no one scale was included in its entirety. Appendix D, part 1 presents the adopted versions of the affective and calculative scales used in the survey plus the factual questions related to investments.

B. Dependent Variables

Construct measures for the dependent variables were also drawn both from existing measures where established measures existed and from applicable information taken from phase one.

1. Performance Variables

According to theory, commitment inspires effort above and beyond that which is due to motivation from other instrumental forces - expectancies, career advancement, force of leadership, threat of sanctions, etc. (Mowday et al., 1982). As such, one way to try to measure performance-related outcomes is to assess the degree to which a person is willing to apply extra effort in an assigned job role.

Using a survey format, the research plan called for a measure of "voluntary effort" or effort above and beyond that which would normally be expected to fulfill an exchange contract. As no existing self-report measures were available, a measure was created which combined general statements of extra effort with statements designed to reflect only compliance behavior. As before, the measure was refined using information from phase one of the research.

The use of a self-report measure brought with it certain limitations, the main one having to do with the validity of such a measure. Would individuals really accurately report the effort they put forth in their jobs? To help control for this potential bias, respondents were twice assured that all responses would be both anonymous and confidential. It was felt that an awareness of this fact would undermine any rationale for giving distorted responses. As for unconscious distortions in responses, it was felt that while there might be a tendency for people to estimate their degree of effort on the high side, the upward shift would be approximately the same for most respondents.

In addition to an "effort" measure, the research design included a measure aimed at capturing the kind of innovative or extra-role behavior described by Katz (1964). Smith (1985), for example, used a form of "voluntary attendance" - attendance on a day following a major snowstorm - as indicative of such behavior. O'Reilly and Chatman (1986) used a self-report measure of "pro-social behavior". Since no special circumstances were anticipated in this study, the more relevant items from the O'Reilly and Chatman measure were included in the study as a means of capturing a type of behavior felt to be outside of the normal exchange framework of expectations.

Two other constructs, also aimed at tapping extra or incremental effort and support, were included in the

performance category of outcome variables. These two consisted of: the degree to which a person paid strict attention to the quality of work accomplished - "quality consciousness" - and the degree to which a person was willing to speak up for and otherwise support the organization outside of the working environment - "expressed loyalty". These two constructs were felt to represent behaviors above and beyond those normally expected in a typical exchange relationship.

In summary, the four performance variables consisted of the following:

a. Voluntary Effort. Effort in support of organizational goals and values that would not generally be perceived as instrumental in securing additional rewards. The measure consisted of statements which reflected an unusually high amount of effort in job performance as well as reverse scored items designed to reflect "compliance behavior" (Kelman, 1958).

b. Pro-social Behavior. Based upon a measure of "citizenship behavior" developed by Smith, Organ, and Near (1983), this measure was designed to assess the degree to which a person engaged in certain "extra-role" behaviors. Extra-role behaviors were defined as those which stand apart from specific role requirements and are either helpful to others in the organization, directly or indirectly, or to the organization as a whole. Pro-social behavior included

helping to familiarize someone with the organization, or volunteering to support a non-work related social function.

c. Quality Consciousness. Special effort to ensure that only the best quality of work, even beyond what would pass as acceptable, is produced for the organization. Included in this measure were indicators of a willingness to ensure that no sub-standard or marginally acceptable work is performed. Typical behaviors included double checking all work, reporting observed or overheard instances of quality defects, or assisting in the development of better quality control measures.

d. Expressed Loyalty. Special effort to speak up for and otherwise support the organization outside of the work environment. In recruiting new employees and in maintaining a good public image, an organization will have enhanced prospects of success if its current employees speak well of it both within and without the boundaries of the organization. Accordingly, this category was designed to capture a person's willingness to provide such support. It included such behaviors as talking up the organization to friends, acquaintances, or relatives, advising well-qualified outsiders to consider joining the organization, and speaking up for the organization's position on matters related to public policy and civic relations. Appendix D, part 2 contains the actual performance-related measures used in the phase 2 survey.

2. Participation Variables

According to a body of work, summarized by Mowday et al. (1982), commitment also affects a person's "decision to participate" in an organization. With affective commitment, the effect should be primarily on the incremental variance in a person's attachment above and apart from variance associated with a future stream of instrumental gains. With calculative commitment, on the other hand, the effect should be on the variance related to instrumental gains, in particular to variance associated with the recovery of investments and "side-bets".

This study used the three variables discussed in the previous chapter to measure attachment to an organization - "intent to remain", "desire to remain", and "search behavior". In the past, only "intent to remain" has received extensive research attention. Because an objective of this study is to differentiate between the effects of affective and calculative commitment, the two additional variables were included as a means of exploring the difference in the nature of the effects of the two types of commitment.

a. Intent to Remain. A straightforward assessment of a person's intention to remain with an organization. This variable was operationalized by asking about the likelihood of a person being with an organization at different points

in the future as well as by asking for that person's sense of anticipation regarding future membership. Recent studies using such a variable were by Ferris and Aranya (1983), Caldwell and O'Reilly (1981), Michaels and Spector (1980), and O'Reilly and Chatman (1986). Items used in the construction of this measure were based upon the items in these studies.

b. Desire to Remain. An assessment of a person's willingness to stay or leave under hypothetical conditions that made leaving more attractive and staying less attractive. This variable was operationalized through a series of statements which asked a person's intention of remaining if either certain conditions within the organization were to change or certain external opportunities arose both of which appeared to make leaving more attractive.

c. Search Behavior. A measure of a person's reported actual behavior over the course of the past twelve months having to do with searching for alternative work. Mobley (1977) and Caldwell and O'Reilly (1983) both drew a distinction between this variable and intention to leave a firm. Following their lead, this variable included questions regarding a person's activities over the past year that had to do with exploring for alternative work. The measure was operationalized in two parts. The first, "search activity", addressed the issue of whether or not a

person had engaged in a specific type of search behavior. The second, labelled "search frequency", inquired as to the extent to which a person had so engaged for persons who responded affirmatively to the first part. Appendix D, part 3 contains the participation-related measures used in the survey.

C. Moderator Variable

Also included in the study, in connection with the distinction made between affective and calculative commitment, was a moderator variable - "perceived job alternatives". It was felt that the availability of alternative jobs to a particular individual would moderate or weaken the effect of calculative commitment on that person's intention to remain. This was because the effect depended largely upon a perceived absence of choice in the first place. Because the nature of the effect of "affective commitment" on "intention to remain" was entirely different, it was felt that the existence of job alternatives would not moderate this effect. Hence the moderator could be used to help differentiate between the effects of the two types of commitment. Appendix D, part IV contains the moderator variable measure.

Because many of the variables to be used in this study were made up of measures specifically constructed for the

study, two steps were taken to increase the chance for construct reliability and validity: (1) As previously mentioned, the findings from phase one were used to refine and amend the proposed measures. Relevant opinions from practicing managers and employees were thus included in the make-up of all variables. (2) All variables were subjected to a pre-test. Pre-test results were then subjected to both factor analysis and reliability tests in order to identify the items in each measure which best appeared to capture the construct. Only the best items were retained in the actual survey.

CHAPTER IV

RESEARCH PHASE ONE: INVESTIGATING CONCEPTS AND RELATIONSHIPS

A. Introduction: Research Design

The general objective of phase one was to investigate the concept of commitment, including both antecedents and outcomes, through an interview process with members of large, private organizations. In order to accomplish this, a plan was formulated which included an interview format, a series of specific questions related to organizational commitment, and a methodology of analysis. Respondents were then selected from three site organizations through a contact person at each organization. In all three cases the selection of respondents was based both upon a person's reputation as someone concerned about or interested in the research topic and the person's availability for interview. Although this selection process was not random, the researcher was allowed, at two of the sites, to choose from a list of candidates.

A specific number of respondents was not selected a priori. Rather, the plan was to interview five to six persons at each site initially and to increase this number if it appeared that the subject had not been well covered. The subject was to be considered well covered when later

respondents began largely reiterating ideas covered by earlier respondents.

Interview questions were directed towards three aspects of the general topic "organizational commitment": (1) a definition or description of commitment: what does it mean to be committed and what is it that a person becomes committed to? (2) the commitment development process: what is the rationale behind commitment, and how does commitment develop? and (3) outcomes of commitment: what are the consequences, in terms of individual attitudes and behaviors, of commitment?

Each participant was given a handout at least three days prior to the interview alerting them to the general topic - organizational commitment - and the three major issues. This approach allowed respondents time to think over the topic and collect thoughts prior to the interview without unduly directing those thoughts or biasing the interview towards any particular view of commitment.

The actual research consisted of a series of sixteen 30-40 minute interviews with members of three large corporations, conducted over a four week period in the summer of 1988. Of the persons interviewed, fourteen were in management or managerial staff positions and two held professional, non-managerial positions. The breakdown of

interviewees by hierarchical level was:

Vice Presidents:	3
Department Directors:	4
Group Managers:	5
Staff:	2
Professional, non-management:	2

Functional areas represented in the sampling included finance, sales and marketing, manufacturing, research and development, M.I.S., international, and human resource management. Within each functional area, personal job titles and descriptions varied widely from vice president to manager of specific functions such as "sales training" and "human resource development".

Interviews were conducted in a loosely structured manner in which the interviewee was initially asked to select any one of the three questions and proceed from there. Follow-up questions were asked by the interviewer in order to clarify information and encourage elaboration on key points. As the interview proceeded, the interviewer directed questions to any uncovered topic areas in order to insure full coverage by each respondent. Written notes were taken on key points during the interviews; in addition all interviews were tape recorded with the consent of the person being interviewed.

In order to analyze and interpret the collection of interviews, notes taken during the interviews were

supplemented and amended with information from the recordings. Completed "scripts" of each interview were then analyzed and compared for the purpose of extracting those thoughts and ideas - themes - which appeared common to several respondents as well as the "nuggets" of especially germane information mentioned by individuals. Frequently, the nuggets were part of a theme and served as a graphic representation or example of a thought on commitment.

The first step in the analysis process was to go over all scripts sequentially, labelling the information as to which question it pertained. Beginning with the first question - defining commitment - scripts were then sequentially compared for common ideas on commitment. Through such a comparison process, themes on the meaning of commitment were extracted from the data and ranked according to both the extent to which each was cited and the importance assigned to it by a respondent.

Whereas some degree of subjectivity was involved in this extraction process, the ranking of "types" of commitment was simplified by the fact that most respondents held a rather clear-cut, primary view of commitment upon which they elaborated before moving on to consider the possibility of other types of commitment. A primary view was granted more weight in the extraction process than was a secondary view. Following the development of definition-related themes, the process was repeated for each of the

other two questions related to outcomes of commitment and commitment development. Finally both themes and information "nuggets" were compared to the commitment model already developed and the individual variables in the model. Appropriate modifications, noted at the end of the chapter, followed. (Note: while the primary research focus is on commitment and its outcomes, the topic of commitment development was included in the interviews in order to round out the topic and avoid overlooking important data. Frequently a discussion of this process and the factors behind it led to a clarification of the commitment and a recognition that different shades or types of commitment might be possible.)

One issue of concern, using this approach, is the degree to which the interpretation of findings can be generalized to all types of people in private organizations. During the interviews, almost all respondents talked both in terms of what commitment meant to them personally and to those who worked directly for them. Because most of the persons interviewed were in professional positions, including the two non-management subjects, their views related to people with a generally high level of education and/or training. Only in two cases did respondents discuss the topic as it applied to factory or blue collar workers. Persons from the human resources department, however, appeared to take a more general position when discussing

commitment among employees and frequently referred to "rank and file" workers or "worker bees". Therefore, while thoughts and opinions from these interviews were slanted towards professional employees, there were indications that the characteristics of commitment also applied to non-professional, blue collar workers.

B. Findings

1. Defining Commitment

On the central issue of defining or describing organizational commitment, six views emerged all of which had something in common with existing definitions. The most fundamental way in which commitment was defined was as a full acceptance of the goals, values, and interests of the organization and a willingness to support these goals and values even at the expense of immediate self-interest. All but two of the respondents made direct reference to this view of commitment.

The perspective embodied here was one of dedication to the organization as part of the employment agreement that one entered upon joining. The committed employee was seen as someone pledged to supporting, through that person's role, the goals and interests of the organization, trusting

that such a level of support would be in his or her own best, long-term interest.

Six respondents noted that commitment included in part a willingness to put aside personal considerations or self-interest for the sake of the goals of the organization whenever a situation so demanded. Hence a committed person was someone imbued with the spirit that the good of the organization came before pursuit of one's own interests. However, these people also felt that self-interest should not be neglected, only that it should take second billing in cases where a conflict existed. An illustration given involved two department heads, committed to the company and yet competing for the same limited resources, who arrive at a solution which most benefited the company even though it might mean that one would lose resources, and perhaps a performance bonus, to the other. It was seen as the committed individual's responsibility that he or she keep others informed of such actions so that they would not be mistaken for lack of initiative or weakness. A "good soldier", so described, would not automatically get rewarded.

Some of the phrases used to describe commitment in this manner were: (1) "buying into the goals of the organization"; (2) "looking out for the interests of the organization"; (3) "understanding and acceptance of company's position"; (4) "willingness to go the extra mile

(for the company)"; (5) "a pledge to support the goals and values of the organization"; (6) "putting the good of the organization before the good of the self"; (7) "commitment to doing your best work for the company"; (8) "(willingness to) put aside personal objectives for (the good of) the company"; (9) "acceptance of and support of the organizational mission". The object of commitment, in this view, appears to be the goals, plans, and interests an individual is asked to support as conveyed through initial interviews, follow-up management, job descriptions, company norms, company communications, etc.

Closely related to this view of commitment was a variation similar to an "organization man" syndrome (Whyte, 1956). This type of commitment was referred to as "blind loyalty" in two cases and as "unconscious commitment" and "blind faith" in two others. The terms "a good soldier" and "wed to a company" were used to characterize persons so committed. This variation was not held as a primary view by any respondent but was presented instead as a potentially dysfunctional variation useful for helping to clarify what was meant by the former type of commitment - "goal commitment", for reference purposes. In contrast, a goal committed person was seen as someone highly supportive of the organization but also highly aware of the ethical implications involved in supporting certain goals,

strategies, and policies. "Blind loyalty", on the other hand, seemed to mean: blind to value considerations.

Several respondents who described commitment in the "goal commitment" mode focused on the notion of an underlying contract - that commitment to an organization was, in fact, a "two-way street". This same expression appeared in seven interviews. The terms "conscious commitment" and "self-commitment" were also used to set off a primary view of commitment from one of "blind loyalty".

These expressions are indicative of a second variation on "goal commitment" which was conveyed through similar phrases in seven of the interviews. In commenting upon their primary view, seven respondents noted that true commitment involved a sharing of goals and values, or a compatibility between the goals of the company and those of the individual. In so qualifying commitment, they used such phrases as: (1) "(a) goodness-of-fit in goals"; (2) "a meshing of values"; (3) "commitment to mutually compatible goals"; (4) "commitment to the long-term well-being of both the self and the organization through attention to goals"; (5) "(a) win-win situation"; (6) "matching personal goals to organizational goals"; (7) "(the) blending of self-interests and interests of the company"; (8) "new-breed commitment"; (9) "commitment to one's own goals...in concert with those of the organization". Under this view of commitment, the object of commitment is broader and takes in the goals and

general welfare of both the organization and the participating individual.

Three other views of commitment deserve mention, as each was cited by more than one respondent. The first defines commitment as an overall affective attachment to the organization as a whole, a concept similar to that described in much of the commitment literature (Angle & Perry, 1981; Meyer & Allen, 1984; Mowday et al., 1982). Referred to as "global commitment", "systemic commitment", "general commitment", and company "loyalty", this type was characterized by four respondents as having to do with membership in a company and a desire to remain with that company. Phrases used to describe commitment in this manner include: (1) "a bond between the individual and the organization which develops over time"; (2) "a willingness to stay at an organization in the face of competing offers"; (3) "attachment to the culture, attachment to the company in general"; (4) "a sense of identification with the organization". Only one respondent offered this view as his primary view of commitment, and even he cited "goal commitment" as having greater relevance for employees. The object of commitment, in this view, appears to be the organization as a whole, although as attachment/belonging was the main issue, the object could perhaps be more accurately described as the ongoing relationship between the two parties.

Stemming from this question of "what is it that a person commits to?", nine respondents cited "people" in an organization as a likely object of both identification and commitment. These people saw commitment to a group of fellow employees or to leaders an intermediate step in serving the goals of the organization. The following phrases were typical of this view of commitment: (1) "(commitment as) membership in the successful family structure; (2) commitment to other people to help meet goals; (3) people working together for common goals; (4) interpersonal commitment - bonding among people who work together over time; (5) (commitment to) a group of individuals working for a shared purpose; (6) links between people in a hierarchy; (7) team commitment".

The final view of commitment, mentioned by three respondents, was one of commitment as an absence of choice or absence of alternatives with regards to membership. Cast in negative tones by all three, this view was ascribed to certain long-term employees, or "lifers" in the words of one respondent, who "put in their eight hours" and little more. Other terms used to characterize this state were "sustained inertia", "resistance to change", and "commitment (with a small 'c'" - the attachment that remained after a person had lost enthusiasm for a job.

2. Outcomes of Commitment

In discussing outcomes, only one respondent drew a distinction between different types of commitment and outcomes. Others did not link specific outcomes to specific types of commitment. Instead, they appeared to discuss outcomes associated with their primary view of commitment. Because in all but one case this definition involved some variation of "goal commitment", the outcomes discussed below apply foremost to that concept of commitment.

The clear consensus that emerged was that commitment had a positive effect upon, or positive association with, attitudes and behaviors that were beneficial to the organization. In the category of behaviors, the most frequently mentioned types of behavior were those related to performance effort, level of involvement, willingness to support other people, general support of the organization, and desire to remain a member. Comments related to each of these behavior categories were: 1. Effort: "attention to detail; enlightened competency; putting in additional time; giving more than you get; self-motivated, driven; taking full responsibility for the job being correctly performed; self-starting; presenting solutions, instead of problems; longer hours, no complaints". 2. Involvement: "busy agenda, busy days; busy traffic patterns - association with a lot of different people; willingness to work beyond job

description; involvement outside of the department".

3. General support: "looking out for interests of the company; willingness to get to know people, what they're involved in; ability to understand changes and new policies; punctuality; willingness to represent company outside (the organization); lower absenteeism; ideas; helping achieve success; upholding corporate interests". 4. Support of others: "willingness to help others and give of own time; looking out for interests of subordinates; better teamwork among personnel". 5. Membership: "a long-term career with the company; lower turnover".

Also cited by two persons were specific benefits accruing to the organization from a highly committed workforce. Comments in this category included: "continuity in the area of planning and implementation; better teamwork among personnel; smooth product flows (between) work stations; financial benefits associated with low turnover. Under attitudes, the following comments were indicative of the types of attitudes a committed individual might hold: "acceptance of change; positive (attitudes); level of zeal; team attitude; higher morale".

In contrast to the attitudes and behaviors associated with committed employees were a number of outcomes felt to be associated with a lack of commitment. Typical of those mentioned were: "low-motivated performance; non-productivity; fighting new structures and policies; waiting

it out; complacency; trying to look good". For the organization as a whole, low commitment was seen as contributing to "a low profitability, high turnover spiral".

C. Interpretation and Implications

1. Commitment and Commitment Development

The most common view of commitment - "goal commitment" - matches the first factor of the Mowday et al. (1979) definition of commitment. Perhaps the most commonly used definition in recent research, the Mowday definition holds commitment to be, in part, "a strong belief in and acceptance of the organization's goals and values". A second factor of the Mowday et al. definition - "a willingness to exert considerable effort on behalf of the organization" - also fits with "goal commitment", although as Reichers (1985) pointed out, the wording of this factor positions it more as an outcome of commitment than commitment itself.

The main difference between these findings and the first factor of the Mowday definition has to do with the qualification that several respondents placed on commitment - that it be part of an extended contract, a "two-way street", in which both parties display commitment to each other. This qualification, however, appears to have more to

do with the rationale behind someone becoming committed than with a definition or description of organizational commitment.

According to the current popular view on commitment development, espoused by Mowday et al. (1982), commitment is seen as a psychological state of attachment held by an employee for various reasons. Four categories of factors help produce this state: "personal characteristics; role-related characteristics; structural characteristics; and work experience". Commitment, therefore, develops from: basic personality, positive work experiences, job and company characteristics that helped produce these experiences, or some combination of the three. The committed individual is characterized as one who serves the goals and objectives laid out by his or her superiors, without a great deal of attention to self-interest. The related outcome behavior is best described as "giving more than you get".

According to this view, a company seeks commitment from employees by first trying to select commitment-prone employees. Subsequently, it seeks to win commitment from employees through policies, leadership, programs, and special actions designed to enhance employee involvement and satisfaction. In other words, the organization seeks to convert members to a commitment posture by doing whatever it can to promote positive work experiences among its

employees. In return, employees give unquestioning support to the company. One respondent noted: "Employee commitment begins with commitment of the company to the employee". Another characterized this approach as one of "enlightened management" in contrast to "maximum extraction" in which managers gain only compliance through a "hammering out" process of supervision.

In many ways, this approach is reflective of the "human relations" model of management (Katz & Kahn, 1978). If people are treated with concern in their job roles, one response may be the emergence of commitment.

In this research project, many specific factors were mentioned in connection with commitment development that were similar to factors previously researched. These included: (1) "recognition and intrinsic rewards"; (2) "straight talk" or open and honest communication from management; (3) "promotions from within"; (4) "concerned leadership"; (5) "fair and equitable" reward policies; (6) "participation on a broad scale"; (7) "adoption of employee preferences", such as flex time, company outlet store; (8) special events like an annual picnic, tournament, dinner for retired as well as current employees; (9) "flat structure (with) line-of-sight communications". The employee response to good treatment was summed up as "high morale", "trust", and "positive feeling" for the

organization - a "reservoir of positive equity" - which in turn was felt to generate positive commitment.

An alternative view on commitment development, expressed by those who spoke of commitment in terms of shared goals and interests, associates development with the notion of an extended contract. Commitment was seen as based in an exchange relationship in a manner similar to that described by Brickman (1987) who said: "Commitments begin when positive, extrinsic rewards encourage individuals to pursue a particular activity". As a relationship develops, the parties involved discover that it is possible for both to get more from the relationship if both are willing to give more. Commitment, in effect, represents a "bargain" - a mutual dedication to the success and well-being of both parties based on mutual action and trust. To the extent that both parties uphold their side of the bargain, the relationship provides increasing gains to both parties. The focus of each party is on doing what is best for the other rather than adhering to specific guidelines such as contained in a job description or absentee policy.

Persons who described commitment in this style also cited "trust" and "liking (for the job)" in association with commitment, but talked about a different process by which such feelings emerged. Great emphasis was placed on the role of mutual expectations and how these expectations were realized, as a precursor to commitment. Mentioned as

antecedents were such things as (1) "a feeling that personal goals were being met"; (2) "respect of employees, no games"; (3) "opportunities to perform, advancement opportunities"; (4) "unbiased commitment to fairness (in rewards)"; (5) "sharing of company success"; (6) "(absence of) politics"; (7) "adoption of (certain) employee values"; (8) "clearly defined role expectations". Many of these factors were mentioned in connection with the joining up process - what an organization led new employees to believe they could expect if they performed according to expectations. By continually meeting these expectations, in effect fulfilling its end of the bargain, the organization earned the right to expect full employee commitment to its goals and interests in accordance with the initial verbal agreement.

An absence of commitment, according to this view, was associated with commitment "inhibitors" - factors which undermined feelings of equity, trust, and enthusiasm for the company. Factors mentioned in this category included, "lack of recognition (and) misdirected recognition; popularity contests; perceived inequities; sudden lay-offs; politics; incomplete communication; hammering on (people); (and) inter-departmental friction".

In terms of development, then, the popular view appears to be associated with a cause-effect process in which commitment results from programs designed to stimulate

commitment in conjunction with positive work experiences. The alternative perspective views commitments as an extension of an exchange between two parties that evolves simultaneously, with each party conscious of the terms involved - the joint expectations - and the degree to which expectations are met. Commitment grows in part out of behaviors - meeting the terms of agreement - and in part from the perception that the other party is willing to meet the agreement.

In discussing the ways in which commitment may develop, several respondents made reference to what Salancik (1977) and Mowday et al. (1982) referred to as a "behavioral" process of development. The techniques associated with behavioral development could be loosely grouped into two categories: one included specific programs, policies, or management techniques aimed at developing "identification" with the organization and feelings of comradeship with other members; the other consisted of getting persons to engage in specific behaviors that a manager would associate with being committed.

Typical of factors mentioned in the first category were: "team-building exercises; company training programs; interdepartmental gatherings and meetings; feedback sessions; development of a common language between groups of specialists; consensual decision-making". Respondents were not always sure how these contributed to commitment

development but felt that they helped build a "company personality" or a "team esprit". One respondent noted that commitment existed "within the culture of the organization", while another talked about the importance of "sub-cultural links". A third stressed the importance of getting employees to develop a sense of "identification with the organization" that would replace or supercede "commitment to a profession". The feeling was that if a company could successfully promote a cohesive culture among members, or draw new members into an existing culture that was supportive of the organization, it would be promoting commitment.

In the second category were mentioned specific behaviors, plus certain techniques designed to foster such behaviors, that directly supported the goals of a department or group, without necessarily serving the immediate interest of the employee. As two respondents noted, the objective was to get individuals to voluntarily perform tasks upon which they would not be directly measured or evaluated and which might add to their total job time, but which would likely contribute in some way to the successful operation of the group or department. If these persons, generally new employees, could be so persuaded, it was felt that their attitude would grow beyond one of pure self-interest to encompass the interest of the group or department as a whole.

Some of the techniques a manager could use to encourage these committing behaviors were: asking new employees to develop a list of things they might initiate that would contribute to the organization apart from their job description; providing examples of the kinds of desired behaviors seen as helpful to others in the organization but not necessarily immediately helpful to personal objectives; and, specifying departmental expectations that covered behaviors not directly related to individual job performance, such as helping new employees, making contacts with others in the larger organization during training sessions, suggesting new ideas or techniques within the department. To the extent that a manager could get an employee to "buy into (these) suggestions", and actually carry them out unsupervised, the manager would gain that employee's psychological commitment.

The findings suggest that there are at least two dimensions on which the development process could be differentiated. The first pertained to the origins of commitment - out of what sort of a relationship does it spring, psychological or exchange; the second pertained to an attitudinal versus a behavioral process of development - to what extent does commitment flow from experiences and to what extent from committing behaviors. In past research, as Salancik (1977) points out, the tendency was to link the attitudinal process with a psychological basis. Persons

responded with positive attitude formation because they felt psychologically good about the way their job was working out. The behavioral process, on the other hand, was seen as exchange-based. Behaviors stemming from expectations led to attitude changes which constituted commitment. The findings here seem to fit this pattern, although it is difficult to draw firm conclusions.

2. Goal Commitment

In recent literature, the most popular construct measure for commitment has been the OCQ, developed by Mowday et al. (1979) from their three-factor definition of commitment (see Appendix B). The findings of this study raise certain questions related to this construct. In the first place, the measure emphasizes use of the term "organization" as the object of commitment. Persons interviewed, however, referred more to goals and values of the organization or people in the organization. Secondly, while the findings here appear to support two of the factors purportedly represented in the OCQ - goals and effort - it is questionable to what degree these factors actually get measured. The word "goals", for instance, does not appear anywhere in the construct, while "values" appears only once. Instead, most items on the OCQ seem to assess attitudes and feelings towards the organization - a liking for it. These

items help explain why the concept has been called "affective commitment" by some (Meyer & Allen, 1984; Scholl, 1981). One conclusion that can be drawn from a perusal of the fifteen items is that the type of commitment measured by this instrument is the general, affective commitment to the organization as a whole, closely linked to the idea of membership, rather than that directed specifically to the goals and objectives pursued within one's department or division.

The findings suggest that a revised measure of commitment should include the following: (1) greater emphasis on attitudes towards the goals, interests, and values of the organization, (2) less emphasis on hypothetical outcomes of commitment, and (3) some indication of a feeling that joint interests are being met, that a "fit" exists between the goals of both parties. Following the lead suggested by Reichers (1986), such a measure should be conceived separately from a more general "affective" measure, as the object of the commitment is different in each case.

3. Goal Commitment: Outcomes

Commitment outcomes were largely in line with theoretical predictions (Mowday et al., 1982; Steers, 1977). Mowday et al. suggested that outcomes would include both a

desire and an intention to remain, performance effort, attendance, and punctuality. The findings here supported theory linking commitment to most of these outcomes.

In addition other outcomes were conceptually enriched. Enrichment occurred in the categories: "involvement", "support of people", and "general organizational support". To some extent these three fit in the category of what has been called "extra-role" or "pro-social" behavior (Smith et al., 1983). But because of the specific nature of many of the comments, it is difficult to classify them into pre-determined groups. They fit better into a two category schema suggested by Katz (1964): (1) effort within job role, including attention to quality, extra hours, attendance, and punctuality; and, (2) extra-role support and involvement, including support of people, defense of organizational positions, support of change, new ideas.

The outcome having to do with both a desire and an intention to remain presents more of a dilemma for research. Because it was cited by several persons, it would be presumptive to link it only with "global" commitment. More likely, this outcome is somewhat organizational specific. In cases where the goals and values of the organization support length of service and a career within the organization - in other words where longevity is encouraged through culture of the company - these outcomes should relate to "goal commitment". However, in high-turnover or

"revolving door" companies, it would be illogical to expect a relationship between "goal commitment" and a desire to remain a long-term member, other than an artifactual one for persons who already have long tenure with the firm.

4. "Global" (Affective) Commitment

The view of commitment as "global" or "general" appears to be consistent with the third factor of the Mowday et al. (1979) definition - "a strong desire to maintain membership in the organization". More than that, however, it represents, as one person stated, "(a set of) emotional bonds formed by the individual to different parts of the organization" - bonds which would likely develop and grow with time spent in the organization. One might liken this type of commitment to the kinds of bonds a person may develop, over time, to a community in which that person lives. Such community commitment can be seen as a composite of commitments to various individuals, groups, organizations (schools, church, clubs), and favored environments (parks, countryside), among other things. Commitment, in this sense, represents a kind of emotional price a person must pay if he or she decides to move from a community, or, similarly, detach from an organization. In this sense it begins to seem like a psychological "investment" related, in part, to "calculative commitment".

Quite likely, most commitment measures, including the "OCQ" and the Meyer and Allen "affective commitment scale" (ACS), have been capturing a large portion of this type of feeling towards an organization in trying to measure "organizational commitment" (Meyer & Allen, 1984). The ACS, for example, uses the terms "emotionally attached" and "part of the family" to help measure commitment. The OCQ also asks a number of questions aimed at assessing a person's general attitudes and feelings towards the organization - whether they are glad they joined in the first place, whether they care about the fate of the organization. It should come as no surprise, therefore, that high correlations have been found between these measures and both an intention to remain with an organization and (inversely) actual turnover (Lee & Mowday, 1987; Mowday et al., 1982; Steers, 1977), while insignificant relationships have been found between these measures and individual productivity (Mowday et al., 1982).

One question raised by this research is: does this membership relationship have as much relevance today for management practitioners as it did in the past? None of the persons interviewed specifically linked this type of commitment to desired outcomes. In other words, no one cited the Japanese model of long-term employment as a value for their company. The one person who defined commitment primarily in global terms saw it as a potentially detracting

state for both individual and organization. From this person's point of view, commitment to remain was seen as having a potentially limiting effect on a person's professional "growth and development" as well as on his or her ability to realistically appraise the job world. Furthermore, it was seen as reducing the likelihood that a person might find the best fit for himself or herself in terms of job and subsequently realize full productive potential. From the organization's point of view, excessive attachment was seen as contributing to a lack of fresh ideas and "new blood", "(lack of) innovation", and "stagnation and complacency".

Does this imply that there is little value to continuity in relationships between individuals and organizations? Not necessarily. Obviously excessive turnover is a problem for many organizations, and furthermore no organization likes to lose its exceptional employees. But to the extent that an organization seeks to retain valued employees, particularly newer ones, it attempts to incorporate those desires, through expressed values, into the goals and cultural values of the organization. It does this through communication, through an explicit laying out of expectations from the outset, and through the way it evaluates, rewards, and otherwise manages its personnel. Therefore, to the extent that a person becomes committed to supporting the goals and values of the organization - i.e. develops "goal commitment"

- that person's future choices will be guided by the specific nature of those goals and values.

In a high turnover company, such as an advertising firm, a consulting company, or a software firm, one would expect to find committed employees who have little intention of making a career with the firm. In a low turnover company, on the other hand, where longevity is something of mutual or shared value - a fine glassware company or small-town papermill, for example - the committed employee would likely be someone who valued long-term membership. For this reason, a commitment measure oriented towards the goals and values of an organization would not only be most likely to measure relevant commitment, it would also likely explain the relationship to those outcomes desired by the organization, provided the organization was functioning as intended.

On the topic of outcomes, what helped distinguish this type of commitment from "goal commitment" lay primarily in the area of motivational implications. While the primary motivation behind "goal commitment" was in supporting immediate departmental goals, the motivation associated with long-term "global" commitment lay in supporting the culture of the organization over time through ongoing participation in that culture. Because the emphasis was on continuity and long-term support, motivation to remain a member was associated with this "global" type of commitment.

5. Interpersonal or "Cohesive" Commitment

Commitment in terms of bonding to other persons in an organization is reminiscent of what Kanter (1968) termed "cohesive commitment". While it is often difficult to grasp what is meant by "organizational commitment", it is easier to comprehend commitment to other individuals, as that is something most people, through interpersonal relationships, have long been familiar with on some level. This "team commitment" appeared to consist of support for members of the team and the team's joint goals and values. Most persons who commented on this commitment - nine in all - referred to it in connection with development of commitment. The building of teamwork and group solidarity was seen as a means of orienting people towards the greater good of the group or the department in place of more narrowly described self-interests. Persons so oriented would experience not only greater longer-term material rewards associated with group success, they would also gain increased intrinsic satisfaction through cooperation and improved group relationships.

It is important to note that all persons who recognized this interpersonal form of commitment either perceived it as a separate type of commitment or as a contributing factor to commitment. When perceived as a separate type, this interpersonal commitment became an end in itself, acting as

a bond between individual and organization and helping to convey, through team spirit, a sense of shared values. When seen as a contributing factor to commitment, it was viewed as contributing to "goal commitment", helping to instill awareness of and support of organizational goals in lieu of personal goals.

Past research, related to commitment, has indicated positive effects of cohesion among employees (Buchanan, 1974; Shelton, 1971). But a cohesive group has the potential to detract from company objectives as much as contribute to them, depending upon the attitude of the group towards the organization. In this research, the general opinion towards this type of commitment, best illustrated by the terms "teamwork" and "team commitment", was positive - it was seen as supportive of "goal commitment". It should be noted, however, that it received greatest emphasis from the higher level managers interviewed, whose concern was often with developing interdepartmental cooperation among themselves and their immediate subordinates. As such, the "employees" referred to by these subjects were seen as highly motivated professionals concerned with their performance evaluations, bonuses, advancements, etc., in some cases too concerned. Developing teamwork was seen as a way to develop commitment to broader organizational objectives and to help stem dysfunctional rivalries that

might occur between group managers over such things as budgets, quotas, bonuses, etc.

The implications are that in the world of management, organizational development programs, aimed at fostering teamwork or interpersonal cohesion of any kind, need to be appraised ahead of time in light of specific objectives, the existing culture, and the current outlook of the persons to be involved. There may also be occasion, as noted by two respondents, when the objective involves shaking up cohesive sub-cultures in order to promote change and weed out complacency and stagnation.

6. Calculative Commitment

Commitment defined as "commitment with a small 'c'" appears similar, in certain respects, to what has been described in literature as "calculative" or "continuance" commitment" (Meyer & Allen, 1983; Ritzer & Trice, 1971). According to the literature, this type of commitment implies an absence of choice on future options due to past actions and behaviors. The types of actions and behaviors referred to generally involve an accumulation of benefits - "investments" and "side-bets" - which act as constraints on the options a person sees for him or herself for the future.

The original "calculative" construct, as described in the literature (Alutto et al., 1973; Ritzer & Trice, 1971)

appeared to have been partitioned by respondents in this project when discussing attachments to the organization as a whole. Because subjects, with one exception, viewed commitment as something positive for both individual and organization, they tended to think of emotional bonds - relationships, feelings of self-worth, security - in positive terms. Thus psychological investments were linked to the concept of "global" commitment. The remaining aspects of attachment - pure length of service, accrued benefits, absence of alternatives - captured by the phrases "commitment with a small 'c'" and "sustained inertia" - were then set off in a negative light.

This type of commitment was associated with an intention to remain with an organization. Although of some interest to researchers, it appears to have lost much of its interest to management practitioners in today's uncertain environment where flexibility in staffing is perceived to have greater benefit than "locking in" a long-term work-force. Organizations concerned with competitiveness in today's environment may, in fact, be more interested in policies and practices that could help limit this type of commitment. In this regard, policies and practices that helped build employee skills and versatility might serve the interests of both parties, by contributing to the competence and self-confidence of the individual and the output and flexibility of the organization.

In summary, from both a practitioner's and a researcher's perspective, it appears as if the time to re-think what it means to be committed to an organization may be overdue. Rather than continue to focus on commitment as a state of affective attachment, the findings here suggest that the focus should shift to the specific goals, objectives, plans, and policies that an organization wishes to achieve. In light of these findings, commitment and its outcomes were examined in an expanded approach in the questionnaire stage of this research.

D. Conclusion and Implications for Phase Two

The noteworthy findings from phase one of this project were:

1. Commitment from the point of view of people working in organizations was generally defined in specific terms oriented to the goals and values of the organization. Furthermore, even when defined in "goal" terms, it could be conceptually divided depending upon whether one viewed it as a psychological state of loyalty and support or as a conscious extension of an exchange relationship manifested through increased involvement and support.

2. "Affective commitment" was most nearly described as "global" or "general" commitment and characterized as a set of affective or emotional bonds to the organization. As

such it was conceptually linked more with a desire to remain a member of an organization than with effort in job performance.

3. "Calculative" or "continuance" commitment was perceived to be of little positive significance and had the potential to detract from both organizational flexibility and responsiveness, and individual mobility and achievement.

4. "Cohesive" or interpersonal commitment was seen as an important concept in its own right for improving a work environment, developing a team mentality, and possibly enhancing individual commitment to goals as well as to organizational membership.

5. Commitment outcomes were largely defined in terms of performance, general support, organizational involvement, and desire to remain a member as anticipated.

Based upon these findings, the model in Figure 1 was modified so as to incorporate relevant new information and establish a framework from which specific hypotheses could be derived. Figure 2 displays the revised model which incorporated the following changes:

1. A separate measure of "goal commitment" was incorporated into the model to make up for the deficiency of this factor in existing affective commitment measures. The measure was derived from descriptive phrases taken from the interviews together with the few items in existing "affective commitment" measures which appeared to be

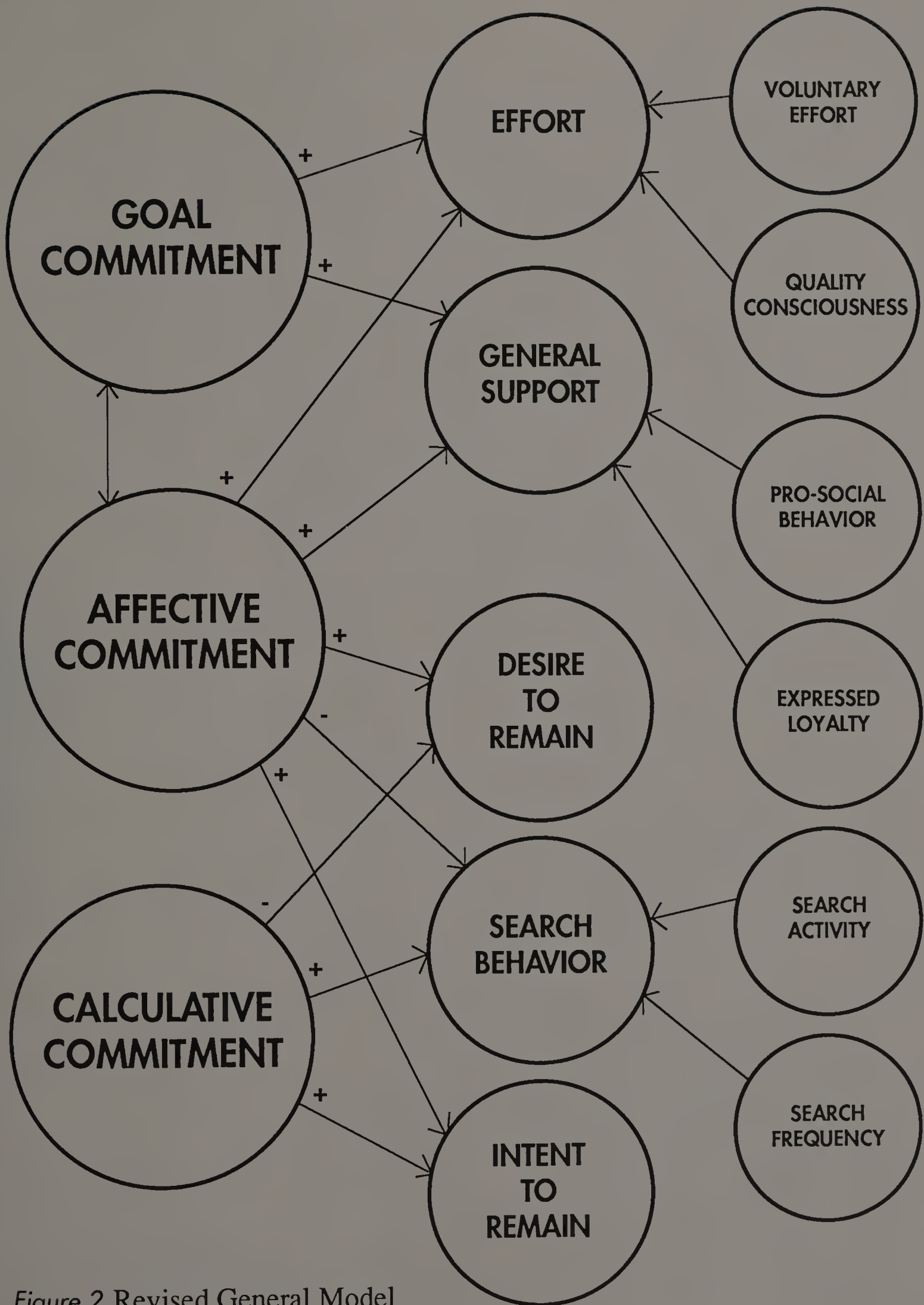


Figure 2 Revised General Model

associated with organizational goals and values. This measure is displayed in Appendix D, part 5. It was felt that the "goal commitment" measure would be associated primarily those performance related outcome measures having to do with the job itself - "voluntary effort" and "quality consciousness". Secondary effects of "goal commitment" would be on the general support variables - "pro-social behavior" and "expressed loyalty".

2. The proposed measure of "affective commitment" was modified in such a way as to delete the few items believed to be associated with goals. New items associated with emotional or affective attachment to an organization were then added to bolster the measure. It was felt that the new "affective commitment" measure would be associated primarily with membership in the organization and those performance-related outcomes having to do with general support - "pro-social behavior" and "expressed loyalty". Secondary effects of "affective commitment" would be on "voluntary effort" and "quality consciousness".

3. Minor modifications were made in the dependent measures to incorporate specific comments relating to outcomes made by various respondents during the interviews. Dependent measures were then linked according to theoretical association with the three commitment variables.

Consideration was given to including a measure of "cohesive" or "interpersonal" commitment in the study.

However, it was not included primarily because there was little theoretical basis to link "cohesive" commitment with existing outcome variables. In the phase one findings, it was more often described as a precursor or contributor to "goal commitment".

CHAPTER V

RESEARCH PHASE TWO: METHODOLOGY

A. Hypotheses

Following completion of phase one, phase two of the research was implemented with the express purpose of testing the revised model shown in Figure 2 and the separate hypotheses derived from the paired relationships described by the model. In addition, the question of whether different types of commitment, such as those described in phase one, existed independent of one another was addressed. The following hypotheses constituted the set to be tested:

1. Commitment Variables

H1. Different types of commitment exist independent of one another. Specifically, three described types of commitment - "affective commitment", "calculative commitment", and "goal commitment", - can be operationalized and measured as independent constructs. Because of the positive nature of the former two - "affective commitment" and "goal commitment" - these two are expected to show positive correlation. No relationship is expected between either of these two and "calculative commitment".

2. Goal Commitment

H2-H3. A positive relationship will be found to exist between "goal commitment" and each of the following:

(H2). "voluntary effort".

(H3). "quality consciousness".

H4-H5. A positive relationship will be found to exist between "goal commitment" and each of the following:

(H4). "pro-social behavior"

(H5). "expressed loyalty and support".

H6. Because the primary effect of "goal commitment" is expected to be on performance variables, the strength of the relationships in both H2 and H3 is predicted to be greater than those in both H4 and H5.

3. Affective Commitment

H7-H8. A positive relationship will be found to exist between "affective commitment" and each of the following:

(H7). "pro-social" or "extra-role" behavior.

(H8). "expressed loyalty and support".

H9-H10. A positive relationship will be found to exist between "affective commitment" and each of the following:

(H9). "voluntary effort"

(H10). "quality consciousness".

H11. Because the primary effect of "affective commitment" is expected to be on "general support variables", the strength of the relationships in both H7 and H8 is predicted to be greater than those in both H9 and H10.

H12-H13. A positive relationship will be found to exist between "affective commitment" and each of the following:

(H12). "intent to remain"

(H13). "desire to remain"

H14-H15. A negative relationship will be found to exist between "affective commitment" and each of the following:

(H14). "search behavior"

(H15). "search frequency"

4. Goal Commitment and Affective Commitment

H16. Because of the nature of the two constructs, the magnitudes of their effects on performance-related outcome variables is expected to differ. In the case of "voluntary effort" and "quality consciousness", it is predicted that the magnitude of the effects of "goal commitment" on these variables will be greater than corresponding effects of "affective commitment".

H17. In the case of the outcome variables "pro-social behavior" and "expressed loyalty", it is predicted that the magnitude of the effects of "affective commitment" on these

two outcome variables will be greater than the corresponding effects of "goal commitment".

5. Calculative Commitment

Because the effects of "calculative commitment" are expected to be on participation variables and not performance variables, no positive relationships are anticipated between "calculative commitment" and the four performance variables.

H18. A positive relationship will be found to exist between "calculative commitment" and "intent to remain".

H19. A negative relationship will be found to exist between "calculative commitment" and "desire to remain".

H20-H21. A positive relationship will be found to exist between "calculative commitment" and each of the following:

(H20). "search activity".

(H21). "search frequency".

H22. The variable "job alternatives" will moderate the effect of "calculative commitment" on "intent to remain" such that there will be a significant decrease in the relationship between "calculative commitment" and "intent to remain" when the effects of "job alternatives" on "intent to remain" are partialled out of that relationship.

The objective of phase two was to confirm through, empirical measurement and testing, both the separate hypotheses and the overall model.

B. Administration of Questionnaires

Using the variable measures previously developed, a questionnaire was designed so as to obtain self-report measures of each variable. The majority of items in the questionnaire were scored using a seven-point Likert scale ranging from "strongly agree" to "strongly disagree". For items related to "search behavior", a dichotomous "yes/no" scale was used with a frequency measure attached to each item that received a "yes" response. Specific demographic data, related to the "investment" concept, were collected at the end of the questionnaire.

Following a 24 subject pre-test, which resulted in a paring down of items on certain variables, the questionnaire was administered to a sample of employees at two large, private corporations with offices and manufacturing facilities in New England. The corporations which agreed to serve as research sites had been previously selected on the basis of size, accessibility, interest in the topic, and most importantly willingness to support the research through active participation. In all, six organizations were approached with the research plan, and three initially

agreed to participate. Following the completion of phase one, one corporation dropped out due to reservations concerning an outside questionnaire when unexpected changes were taking place.

Questionnaires were sent to a total of 385 subjects within the two sites. All questionnaires at one site and approximately 85% at the second were distributed through internal mail but intended for completion at the respondent's convenience. The remaining 15% at the second site were mailed to field personnel included in the sample. Follow-up "reminder" cards were sent to each subject approximately 10 working days after the questionnaires had been distributed.

Persons included in the sample selection at both sites were all non-union personnel involved in either managerial, professional non-managerial, administrative, or, to a limited extent, "blue collar" positions. Both organizations were resistant to the idea of including union personnel for various reasons, including management-union formalities and the likelihood of a low return rate given the length and complexity of the questionnaire. Names were selected by random sampling procedures from employee lists provided by each organization.

Of the 385 questionnaires sent, a total of 250 usable questionnaires were returned and included for analysis, yielding a response rate of 65%. Each questionnaire packet

included the following: (1) a short letter from the researcher explaining the external research nature of the project, (2) a stamped, pre-addressed envelope, (3) a state lottery ticket and \$1 bill, and (4) a brief letter from the employing organization explaining its role in supporting but not sponsoring the research. The purpose of these inclusions was threefold: to assure respondents of confidentiality and anonymity in order to encourage honest item responses; to defuse suspicions that the questionnaires were for internal company purposes; and to prompt a high return rate.

C. Analysis of Data

From the completed questionnaires, the following raw data was collected for each subject: (1) goal commitment scores, (2) affective commitment scores, (3) calculative commitment scores, (4) voluntary effort scores, (5) quality consciousness scores, (6) pro-social behavior scores, (7) expressed loyalty scores, (8) intent to remain scores, (9) desire to remain scores, (10) search behavior scores, (11) search frequency scores, (12) job alternatives scores, and (13) scores on the 10 demographic items related to investments: time in organization; vacation accruals; participation in company savings plan; participation in company stock plan; age (in 5 year blocks); sex; perceived

mobility; marriage status; home ownership status; number of school-age children.

Using this raw data, the following analytical procedures were performed with the aid of the SPSSx:

1. Descriptive statistics both on all items and on all variable scores: Variable scores were computed using the average score of items for a particular variable. The purpose was both to check the means and standard deviations of all variables in order to ensure that the program of computing variable scores was being properly implemented, as well as to get an idea of the nature of distributions for each item.

2. Reliability estimates for each confirmed variable scale: Reliabilities were calculated using the SPSSx Alpha model which computed a coefficient alpha for each scale. The objective of checking reliability was to confirm that the scales developed and used for each variable constituted a reliable measure for the construct in question. Coefficient alpha's and median correlations were also examined to ensure homogeneity of scale items.

3. Factor analysis of all variables: The objectives of the factor analysis were: (a). To establish the convergent validity of the construct scale for each variable; items which failed to achieve a .4 loading or higher on a measure were dropped from that scale (Carmines & Zeller, 1979). (b). To establish the discriminant validity of each

construct. Of particular importance here was establishing that the three types of commitment - goal, affective, and calculative - were, in fact, separate constructs and not related parts of a general construct. The same purpose applied as well to the dependent variables, in particular those associated with effort and performance. Only to the extent that the factor analysis confirmed the existence of a variable as a separate factor or construct would that variable be so labelled and used in subsequent procedures.

4. Pearson correlations of all variables, using the average scores of items for each variable: The purpose of correlation analysis was to examine correlations between the independent and the dependent variables, in order to confirm or disconfirm the existence of significant correlations where predicted by the hypotheses. Additionally, correlations within the two sets of variables - commitment and outcomes - were expected to shed light on the similarities and differences between constructs. For example, the expectation was for no significant correlations to exist between calculative commitment and the other two commitment constructs. Results from the correlation analysis were used to support or disconfirm all hypotheses with the exception of H22 which involved an interaction effect.

5. Regression analysis: Independent variables were entered in a stepwise regression equation for each of the

dependent variables in order to examine which independent variable served as best predictor, and which other independent variables added significantly in prediction ability to the variance of a dependent variable. A separate analysis on "intent to remain" also included demographic variables felt to represent different types of investments in organization membership. The dependent variable "search behavior" was treated as a special case. This variable was assessed through five measures each of which asked a slightly different question. Subjects provided two responses to each measure, the first being a simple yes or no and the second consisting of a frequency report. As a dependent variable, the five yes/no responses were analyzed as a composite measure by averaging. The frequencies, on the other hand, were handled in two ways. Initially each item was treated as a separate dependent variable in all analyses. Subsequently, the five items were recalibrated to a five point Likert scale and combined into a single "search behavior" measure.

6. Significance of difference test between dependent "r's": This relatively simple variation of a t-test was used to test for differences in certain correlation coefficients. Hypotheses 6, 11, 16, and 17 all referred to differences in effects of certain commitment variables on certain outcome variables. This test helped explore these

hypotheses by examining the significance of differences in the relevant correlation coefficients.

7. Partial correlation analysis, multiple regression, and analysis of variance: These three procedures were used to test for the significance of an interaction effect between "calculative commitment" and "job alternatives" upon the dependent variable "intent to remain". The prediction, according to H22, was that an interaction effect would exist and would reduce the net effect of "calculative commitment" upon the variable "intent to remain"; or, that once the effects of "job alternatives" upon "intent to remain" had been partialled out of a correlation, the net effect of "calculative commitment" upon "intent to remain" would be reduced.

8. Path Analysis and LISREL: LISREL was used to further examine the relationships of interest because of its power to estimate relationships without the inclusion of measurement error. Relationships in the model were estimated as free parameters; other non-hypothesized relationships were fixed at zero. LISREL was also used to examine the fit of the entire model. The purpose here was to determine if the paths described by the model constituted a better explanation of the relationships between the various latent constructs than a different set of paths brought about by changing the model to achieve a superior fit.

CHAPTER VI

DATA ANALYSIS AND RESULTS

Raw data scores from the returned surveys were collected over an eight week period, tabulated, and entered into a computer file for inclusion in subsequent statistical analyses. Once the data had been "cleaned" and a number of partially completed questionnaires deleted, a usable set of 250 surveys was subjected to various analytic procedures.

A. Descriptive Analysis: Frequencies

Initially, means, standard deviations, medians, frequencies, and measures of skewness were computed for all scale items on all variables in order to scan all items and check for accuracy of input, coding of data, mean responses, and the nature of item distributions. Occasional single missing values were encountered in the surveys. In dealing with these values, a manual process was used to compute an average of responses for the scale with the missing value on a case by case basis. This average response was then substituted for the missing value in those cases where only one scale item was missing. This allowed all but a few cases to be included in most analyses. In cases where more than one scale item was missing, these were coded as missing

values and subsequently deleted on a listwise deletion of case basis.

In analyzing data, individual scale items were used in determining scale reliabilities and in subsequent factor analysis and LISREL analysis. For all other procedures - correlation analysis, regression analysis, and analysis of variance - average scale scores were used based on the items selected for each particular scale. Appendix E reports the means, standard deviations, and medians for all survey items as well as the means, standard deviations, and skewness index for the scale scores. (Items that were inversely worded are displayed in recoded form for interpretation purposes).

In general, subjects' responses to items appeared skewed toward the high ends of the scales as indicated by the item means and skewness indices. The overall mean response for all items coded to a seven point Likert scale was 5.02. Skewness indices, computed for total variable scores, indicated that several variables had skewed distributions significantly different from normal. This departure from normality was most likely due to the positive - negative attitudinal implications of the majority of scale items. In order to check the effects of skewness on results, a square-root transformation was performed on all Likert scale items. The transformed data were then subjected to both a factor analysis and a correlation

analysis and results compared to similar procedures using non-transformed data. Because only minor differences appeared in the results, it was decided to use the data as reported for all subsequent procedures except LISREL. Because LISREL is reported to be sensitive to skewed data, square-root transformed data were used as "raw data".

B. Descriptive Analysis: Scale Reliabilities

Scale reliabilities were calculated for all scales using the Cronbach Alpha procedure on the SPSSx statistical software package. These initial reliability estimates were particularly important since all scales had been at least partially designed specifically for this study and were, therefore, previously untested. Table 1 reports the scale reliabilities and the items included in each scale.

Of the 12 scales used in the study, all but two exhibited good internal consistency ($\alpha > .70$). Of the two remaining scales, the calculative commitment scale was satisfactory at $\alpha = .64$, even though below the desired $\alpha = .70$. The scale for "quality consciousness" showed weak internal consistency with $\alpha = .50$. This scale, with only four items, was subsequently reduced to two items when it failed to emerge as a single factor under principal components analysis. Although the reliability of the truncated scale ($\alpha = .25$) was obviously too low to support any claims of

TABLE 1
SCALE RELIABILITIES

I. Commitment Variables

A. "Affective Commitment" Scale

Alpha = .886 Number of items = 10

AC1 AC2 AC3 AC4 AC5 AC6 AC7 AC8 AC11 AC12

B. "Goal Commitment" Scale

Alpha = .850 Number of items = 11

G01 G02 G03 G04 G05 G06 G08 G09 G010 G011 G012

C. "Calculative Commitment" Scale

Alpha = .648 Number of items = 6

CC1 CC5 CC6 CC7 CC8 CC10

II. Outcome Variables: Performance-Related

A. "Voluntary Effort" Scale

Alpha = .854 Number of items = 8

VE1 VE2 VE3 VE4 VE5 VE6 VE7 VE8

B. "Quality Consciousness" Scale

Alpha = .236 Number of items = 2

QC1 QC4

C. "Pro-Social Behavior" Scale

Alpha = .707 Number of items = 5

PB1 PB2 PB3 PB4 PB5

D. "Expressed Loyalty and Support" Scale

Alpha = .894 Number of items = 6

EL1 EL2 EL3 EL4 EL5 EL6

cont., next page

TABLE 1 - Continued

III. Outcome Variables: Participation-Related

A. "Intent to Remain" Scale

Alpha = .880 Number of items = 7

IR1 IR2 IR3 IR4 IR5 IR6 IR7

B. "Desire to Remain" Scale

Alpha = .843 Number of items = 4

DR2 DR3 DR4 DR5

C. "Search Activity" Scale

Alpha = .858 Number of items = 5

SA1 SA2 SA3 SA4 SA5

D. "Search Frequency" Scale

1. Recoded by square-root transformation

Alpha = .742 Number of items = 5

SF1 SF2 SF3 SF4 SF5

2. Recoded to five-point likert scale

Alpha = .847 Number of items = 5

SF1 SF2 SF3 SF4 SF5

IV. Interaction Variable

"Perceived Job Alternatives" Scale

Alpha = .790 Number of items = 6

JA1 JA2 JA3 JA4 JA5 JA6

reliability for the scale, it was retained as a two-item scale for informational purposes only.

In computing reliability coefficients for each scale, a procedure was used which provided estimates of the relative value of each item on a scale in contributing to overall scale reliability. Those items which detracted from the overall reliability were listed as suspect. As part of a data trimming process, suspect items were deleted from the scale if, following factor analysis, these items failed to load on an interpretable factor.

C. Factor Analysis

Factor analysis, using a principal components procedure, was used to examine the dimensionality of both the independent and the dependent variables as perceived by the respondents in the sample. The objective of factor analysis is to attain parsimony or economy of description through the analysis of relationships among items of related constructs, followed by the resolution of items into a smaller number of factors (Harmon, 1967). In this study, the theoretical model involved a number of latent or unobservable constructs hypothesized to be related in a causal fashion. Factor analysis was also used, therefore, as a means of confirming or disconfirming the unidimensionality and internal validity of the latent

constructs on both the independent and dependent side of the model.

Using the principal components procedure of SPSSx, variables were subjected to factor analysis in related groupings or clusters of similar constructs. The objective was to confirm the separate existence of each construct apart from other similar constructs under consideration in the model. This was especially important for the commitment constructs where no reliable distinction in scales for different types of commitment had previously been established. Following this guideline, three groups or clusters of variables were factor analyzed. These were: (1) commitment variables, (2) performance related outcome variables, and (3) participation related outcome variables.

The principal components method was selected for this study in order to include all variance in the analysis. Because the objective of the factor analysis was not specifically to economize on description of data but rather to confirm the existence of independent or uncorrelated factors, it was felt that common factor analysis procedures might result in lost information. In order to gain the best description of emerging factors, rotation of the factors was carried out following the initial estimates. Although it was expected that there be some correlation among factors within each grouping, varimax rotation was used in order to obtain uncorrelated or orthogonal factors. This orthogonal

procedure avoided problems of interpretation stemming from the hypothesis that organizational commitment is a concept that exists in distinctive forms related to more narrowly defined objects. Among the dependent variables, it also helped identify more specific outcomes that might be related to one type of commitment but not another.

Factor analysis was performed twice on each grouping of variables. In the first run, all original questionnaire items were included in the analysis. Results were examined and compared to the estimates of reliabilities for each construct. At this point, those items which both failed to load significantly on an interpretable factor and also contributed to reduction in scale reliability were dropped from the scale. A loading of less than .4 was considered non-significant (Gorsuch, 1974).

In subjecting the three groupings of variables to factor analysis, it was important to ensure that the sample size be of sufficient magnitude to handle the number of item variables entered simultaneously. Failure to adhere to the 5-1 rule of subjects to items, as recommended by Gorsuch (1974), could result in an ill-conditioned correlation matrix and unreliable factor solutions. In this analysis, the largest grouping of variables contained 34 items. Applying the 5-1 rule, this required a minimum sample size of 170 - well below the actual sample size of 250.

1. Commitment variables

In the first grouping of variables, the objective of analysis was twofold: (1) to confirm unidimensionality of a pared-down scale of measurement items for each of the commitment constructs; and, (2) to support the discriminant validity of each scale as separate from the other commitment scales.

Commitment scale items were subjected to two runs of principal components analysis and varimax rotation. The second run, which excluded items previously classified as unreliable, is reported here. Communalities estimates, eigenvalues, and percentage of explained variance for all commitment variables are displayed in Table 2. The rotated factor matrix for commitment variables is presented in Table 3.

The expected number of factors was three. However, the solution produced six interpretable factors with an eigenvalue > 1 . Factor one consisted of the ten "affective commitment" items retained after the preliminary factor analysis. Two "goal commitment" items, with cross-loadings, also loaded on this factor. All of the "affective commitment" items exhibited loadings of .5 or higher indicating that the measure was fairly robust.

The second factor included eight of the eleven "goal commitment" items entered in the analysis. All items

TABLE 2

COMMUNALITY ESTIMATES AND EIGENVALUES FOR
COMMITMENT VARIABLES

<u>VARIABLE</u>	<u>COMMUNALITY</u>	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>VARIANCE</u>	
				<u>PERCENT</u>	<u>CUM.PERCENT</u>
AC1	.630	1	7.60	30.4	30.4
AC2	.651	2	2.23	8.9	39.3
AC3	.520	3	1.98	7.9	47.3
AC4	.461	4	1.49	6.0	53.2
AC5	.402	5	1.24	4.9	58.2
AC6	.469				
AC8	.606				
AC11	.733				
AC12	.502				
CC1	.541				
CC5	.538				
CC6	.569				
CC7	.814				
CC8	.810				
CC10	.455				
GO2	.656				
GO3	.728				
GO4	.288				
GO5	.593				
GO6	.440				
GO8	.536				
GO9	.590				
GO10	.571				
GO11	.732				
GO12	.707				

'AC' = "affective commitment" item

'CC' = "calculative commitment" item

'GO' = "goal commitment" item

TABLE 3

FACTOR ANALYSIS OF COMMITMENT VARIABLES

Factor Loadings

Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
AC2 .78	GO1 .47	GO3 .83	CC1 .72	CC7 .88
AC11 .76	GO6 .47	GO2 .76	CC6 .67	CC8 .87
AC1 .74	GO11 .81	GO5 .73	CC10 .65	
AC8 .71	GO12 .74		CC5 .63	
AC6 .64	GO9 .72			
AC3 .63	GO10 .70			
AC4 .62	GO8 .56			
AC7 .60	GO4 .47			
AC12 .59				
AC5 .50				
GO1 .48				
GO6 .47				

'AC' = affective commitment item

'GO' = goal commitment item

'CC' = calculative commitment item

exhibited loadings greater than .46 indicating a reasonably strong factor, although as noted two items also loaded less strongly on the "affective" factor.

Three "goal commitment" items formed a separate third factor. Examination of the items showed that all reflected a notion of self-sacrifice - sublimating personal interests to organizational interests - in contrast to other "goal commitment" items which reflected a joint attention to both personal and organizational goals. Both factors were retained in the measure in order to include both points of view, even though the factor solution suggests that the two ideas were perceived differently.

The fourth and fifth factors consisted of those "calculative commitment" items that were retained after the initial factor analysis. Factor five best captured the notion of investment in an organization while factor six contained the two items pertaining to attachment to one's community. Because both of these factors represented investments in not moving (changing organizations) and because together all six items produced the highest scale reliability, they were retained in a single "calculative commitment" scale.

Overall, the first hypothesis pertaining to different types of commitment received substantial support from this analysis. Strongest support was for the distinction between "affective commitment" and "goal commitment" as two

different constructs in the minds of respondents. Although there were some cross-loadings of items, the fact that the large majority of items representing these constructs formed separate orthogonal factors indicates that a cognitive distinction can be drawn between the concepts behind the items.

Significant support was also found for the distinction between these two types of commitment and items representing "calculative commitment". No significant cross-loading of items existed between the "calculative commitment" factor and either of the other two factors. The main problem encountered with the distinction in constructs had to do with the difficulty of developing and implementing a reliable scale for "calculative commitment" that avoided the use of outcome behavioral intentions (intention and/or desire to remain an organization) in the scale. Of the original set of ten items intended to measure this construct, only six were retained and even these six represented a composite measure made up of two factors.

Using the results from the factor analysis in combination with scale reliabilities, pared-down scales for each construct were arrived at for use in subsequent data analysis. Items retained in the reduced scales for the commitment variables, as well as for the outcome variables, are listed in Appendix F.

2. Outcome Variables

For each of the two groupings of outcome variables, a similar two-step factor analysis was performed. Table 4 reports the communality estimates, eigenvalues, and percent of variance accounted for by each factor for the first grouping, the performance outcome variables.

a. Performance Variables. The rotated factor matrix for performance items is presented in Table 5. For this group of variables, the expected number of factors was four. As shown, SPSSx produced a five factor rotated solution. For the most part, items loaded on expected factors. The strongest factor, representing "expressed loyalty", included all six loyalty items. The weakest factor, representing "quality consciousness", included only two items. (Two other "quality consciousness" items had previously been deleted after failing to load on an appropriate factor).

"Voluntary effort" items formed two factors effectively representing positively worded "extra effort" items and the "compliance behavior" items. Two "compliance" items also produced significant loadings on the "effort" factor. Although originally intended as a single construct, these two factors were retained as separate constructs in subsequent data analysis because of the distinction between items indicated by the varimax rotation.

TABLE 4

COMMUNALITY ESTIMATES AND EIGENVALUES FOR
PERFORMANCE VARIABLES

VARIABLE	COMMUNALITY	FACTOR	EIGENVALUE	VARIANCE	
				PERCENT	CUM. PERCENT
VE1	.737	1	7.53	35.9	35.9
VE2	.702	2	2.09	9.9	45.8
VE3	.607	3	1.54	7.3	53.1
VE4	.687	4	1.20	5.7	58.8
VE5	.571	5	1.11	5.3	64.1
VE6	.655				
VE7	.785				
VE8	.704				
PB1	.521				
PB2	.536				
PB3	.520				
PB4	.605				
PB5	.426				
QC1	.581				
QC4	.588				
EL1	.685				
EL2	.511				
EL3	.790				
EL4	.757				
EL5	.681				
EL6	.811				

'VE' = "voluntary effort" item
 'PB' = "pro-social behavior" item
 'QC' = "quality consciousness" item
 'EL' = "expressed loyalty" item

TABLE 5

FACTOR ANALYSIS OF PERFORMANCE VARIABLES

Factor Loadings									
Factor 1		Factor 2		Factor 3		Factor 4		Factor 5	
EL6	.86	VE4	.75	PB4	.76	VE6	.64	QC4	.76
EL3	.85	VE2	.75	PB1	.65	VE8	.82	QC1	.67
EL4	.81	VE1	.73	PB2	.62	VE7	.82		
EL1	.78	VE3	.68	PB3	.58	VE5	(.49)		
EL5	.71	VE5	.53	PB5	.46				
EL2	.67	(VE6	.44)						

'EL' = "expressed loyalty"

'VE' = "voluntary effort"

'PB' = "pro-social behavior"

'QC' = "quality consciousness"

() indicates a secondary loading

Five pro-social behavior items came together to form the fourth factor. No item produced a significant cross-loading. The remaining pro-social item loaded on the factor representing "compliance behavior" probably due to its negative wording.

With the exception of items representing "quality consciousness", the large majority of performance items formed recognizable factors according to the scales designed to measure the concepts. Factor analysis provided additional support for both the reliability and the discriminant validity of the designed scales.

b. Participation Variables. Three measures had been designed for the purpose of assessing individual intention regarding continued participation in the organization. Two of these - "intent to remain" and "desire to remain" - used 7 point Likert scales and hence were easily ordered into a factor analysis. The remaining measure - "search behavior" - was constructed in such a way as to necessitate an intermediate step in order to be able to include the entire measure in a factor analysis.

Because of the way it was set up, as a two-step response, the five search behavior items were treated as two separate measures. The first measure, consisting of dichotomous yes-no responses to the five questions, was coded as a dummy variable and entered as such into the factor analysis.

The second measure, consisting of search frequencies for those individuals whose initial response was a "yes" on the first step of the response, presented more of a problem. For one thing, the distribution of responses was highly skewed, in that well over half of all respondents had answered "no" on the first step and hence showed zero search frequency. Additionally, the range of responses was different for each question due to the nature of the question. This not only made it difficult to subject these frequencies to factor analysis, it precluded summing up the five items into a single scale for subsequent data analysis without first carrying out a transformation of the data.

In order to deal with these complications, two procedures were implemented. In the first, the raw data was subjected to a square root transformation prior to a factor analysis. Although the resulting data still violated the requirement of normal distribution of data, it was a substantial improvement over the untransformed data. In the second procedure, the raw data was first converted into a five-point Likert scale by assigning a "1" to a "no" response and grouping the remaining responses into one of four categories representing "low search activity", "moderately low search activity", "moderately high search activity", and "high search activity" on a percentage basis for each question. Each of these procedures was then

separately subjected to a factor analysis that included the other two participation variables.

Communality estimates, eigenvalues, and percentage of explained variance are presented in Table 6 for the participation variables. Table 7 and Table 8 present the results of the two factor analyses using the two different transformations for search behavior variables.

As can be seen from a comparison of the tables, the results from the two analyses were remarkably similar. Both analyses produced five factor solutions. The first factor in both cases included all but two search behavior items. All loadings were relatively high at .6 or above. Also in both cases, the two excluded items, pertaining to the first search behavior question, jointly formed the fifth factor in the rotated solution. This question, asking whether a person had actually consulted with a job placement service in the past year, apparently represented a distinctive type of behavior in any general job scanning process. Only the fifth question, dealing with actual hours spent searching, was considered in a similar light as shown by the cross-loadings of the two items representing this question on the fifth factor.

The second factor, in both cases, included five of the original seven "intent to remain" items. The other two items were dropped due to a combination of weak loadings and low communalities. These two items were more extreme in

TABLE 6

COMMUNALITY ESTIMATES AND EIGENVALUES FOR
PARTICIPATION VARIABLES

VARIABLE	COMMUNALITY	FACTOR	EIGENVALUE	VARIANCE	
				PERCENT	CUM.PERCENT
IR1	.795	1	8.91	46.9	46.9
IR2	.700	2	2.20	11.6	58.5
IR5	.741	3	1.67	8.8	67.3
IR6	.835	4	1.15	6.0	73.4
IR7	.727				
DR2	.711				
DR3	.715				
DR4	.799				
DR5	.622				
SA1	.881				
SA2	.694				
SA3	.669				
SA4	.646				
SA5	.756				
SF1	.855				
SF2	.666				
SF3	.714				
SF4	.673				
SF5	.740				

'IR' = "intention to remain" item

'DR' = "desire to remain" item

'SA' = "search activity" item

'SF' = "search frequency" item

note: "search frequency" items coded to a five-point Likert scale for this analysis. A similar analysis, using "search frequency" items subjected to square-root transformation of data produced similar results.

TABLE 7

FACTOR ANALYSIS OF PARTICIPATION VARIABLES (1)*

Factor Loadings			
Factor 1	Factor 2	Factor 3	Factor 4
SA2 .80	IR6 .83	DR4 .85	SA1 .86
SF2 .80	IR1 .80	DR5 .78	SF1 .83
SF3 .75	IR7 .78	DR2 .75	(SA5 .58)
SA3 .71	IR5 .78	DR3 .73	(SF5 .51)
SF4 .69	IR2 .68		
SA4 .68			
SF5 .65			
SA5 .60			

* Note: "SF" coded to a 5-point Likert scale

'SA' = "search activity"

'SF' = "search frequency"

'IR' = "intention to remain"

'DR' = "desire to remain"

() indicates a secondary loading

TABLE 8

FACTOR ANALYSIS OF PARTICIPATION VARIABLES (2)**

Factor Loadings			
Factor 1	Factor 2	Factor 3	Factor 4
SA2 .79	IR6 .84	DR4 .85	SA1 .86
SF2 .79	IR1 .80	DR5 .78	SF1 .86
SF3 .71	IR7 .79	DR2 .75	(SA5 .58)
SA3 .68	IR5 .78	DR3 .73	(SF5 .45)
SF4 .68	IR2 .68		
SF5 .67			
SA4 .66			
SA5 .60			

** Note: "SF" subjected to square-root data transformation

'SA' = "search activity"

'SF' = "search frequency"

'IR' = "intention to remain"

'DR' = "desire to remain"

() indicates a secondary loading

their language regarding permanent membership in the organization. The remaining five items all exhibited loadings of .68 and higher.

The third factor consisted of four of the six original "desire to remain" items. The remaining two items had been dropped after the initial factor run. One loaded on the second factor while the other loaded on an uninterpretable fifth factor. All four items on this factor showed high loadings of .73 and above.

In general, factor analysis appeared to confirm the discriminant validity of the participation measures. The only question raised was how to deal with question "1" of the "search activity - search frequency" scale, which included two items forming a separate factor. Because these items both served to increase the reliability of their respective scales - "search activity" and "search frequency" - they were retained in the two measures during subsequent data analysis.

D. Pearson Correlations

In order to examine the relationships between types of commitment and theoretical outcome constructs, as specified in the hypotheses, four different data analysis procedures were carried out. These included: correlation of measures,

regression analysis, partial correlation analysis, and analysis of linear structural relationships (LISREL).

Initially a correlation matrix was calculated which included all commitment and all outcome variables. Scores were computed by first averaging the item responses for each variable on a case by case basis. Thus, a single score for each variable ("affective commitment", "intent to remain", etc.) was computed for each of the 250 cases. These scores were then entered into a correlation matrix which included a total of thirteen variables. This matrix is presented in Table 9.

Addressing first the issue of relationships among commitment variables, a strong, positive correlation ($r=.64$) was found to exist between "affective" and "goal commitment". This appeared to indicate that while these constructs can be constituted as separate factors, the items that made up each factor were perceived by respondents as closely related.

In contrast, only a minor relationship was found to exist between "calculative commitment" and "affective commitment" and none between "calculative commitment" and "goal commitment". Respondents appeared to report some connection between the positive, "choice" concept and the neutral, "no-choice" concept of "calculative commitment".

With regards to commitment and outcomes, significant, positive relationships were found to exist, as predicted,

TABLE 9

PEARSON CORRELATION COEFFICIENTS, ALL VARIABLES

	AC	GO	CC	VE	QC	PB	EL
AC	1.000						
GO	.642**	1.000					
CC	.115*	.081	1.000				
VE	.533**	.577**	.121*	1.000			
QC	.042	.161**	.003	.185*	1.000		
PB	.395**	.393**	.161**	.556**	.230**	1.000	
EL	.765**	.674**	.103	.554**	.132*	.460**	1.000
IR	.541**	.386**	.384**	.335**	-.046	.205**	.439**
DR	.342**	.312**	.304**	.297**	-.039	.154**	.352**
SB	-.512**	-.394**	-.172**	-.283**	.034	-.130	-.450**
SF	-.557**	-.452**	-.214**	-.305**	.050	-.149**	-.476**
JA	.060	.001	-.143*	.018	.050	.079	.126*
	IR	DR	SB	SF	JA		
IR	1.000						
DR	.466**	1.000					
SB	-.586**	-.405**	1.000				
SF	-.613**	-.391**	.931**	1.000			
JA	-.113*	-.046	.044	.016	1.000		

'AC' = "affective commitment"

'GO' = "goal commitment"

'CC' = "calculative commitment"

'VE' = "voluntary effort"

'QC' = "quality consciousness"

'PB' = "pro-social behavior"

'EL' = "expressed loyalty"

'IR' = "intent to remain"

'DR' = "desire to remain"

'SB' = "search behavior"

'SF' = "search frequency"

'JA' = "job alternatives"

* = significant at the .05 level

** = significant at the .01 level

between "goal commitment" and all performance-related measures. It was predicted that the strong relationships would exist between "goal commitment" and the two direct performance measures - "voluntary effort" and "quality consciousness". While the correlation with "voluntary effort" was quite strong ($r=.58$), the correlation with "quality consciousness" was much lower than predicted ($r=.17$). Lower, positive relationships were predicted between "goal commitment" and the two support measures - "pro-social behavior" and "expressed loyalty". In fact, the two correlation coefficients ($r=.39$ and $r=.67$ respectively) signified that strong relationships existed. In contrast to the prediction in H6, the relationship with "expressed loyalty" was higher than that for both "voluntary effort" and "quality consciousness".

In the case of "affective commitment", it was predicted that the stronger positive relationships would be with the two support measures, while lower, positive relationships would exist with the two performance variables. Relatively strong relationships were found, as predicted, between "affective commitment" and both "pro-social behavior" and "expressed loyalty" ($r=.40$ and $r=.76$ respectively). As for the performance variables, a strong correlation was found with "voluntary effort" ($r=.53$), while the relationship between "affective commitment" and "quality consciousness" was non-significant.

The results suggest that both "goal" and "affective commitment" are related to individual performance in so far as can be determined from self-report measures of both sets of variables. To a slight degree, the "goal commitment" measure correlated better with the direct effort variables while the affective measure correlated more strongly with the two support measures.

Contrary to prediction, there were significant, though weak, positive correlations between "calculative commitment" and both "voluntary effort" and "pro-social behavior" ($r=.12$ and $r=.16$ respectively). Persons who reported themselves as more heavily invested in their organizations also reported some degree of willingness to expend extra effort. In contrast, however, to the size of the correlations between the other two commitment measures and the performance variables, these relationships were weak.

Turning to the participation outcome variables, strong, positive correlations existed between "affective commitment" and both "intent to remain" and "desire to remain" as predicted ($r=.54$ and $r=.34$ respectively). In addition, there were strong, negative relationships between this form of commitment and the two measures of search behavior - "search activity" and "search frequency" ($r=-.51$ and $r=-.55$ respectively). Persons who reported a high level of "affective commitment" were prone to report that they would like to remain and indeed intended to remain with their

current organizations. Furthermore, they were not actively searching for other job opportunities.

Significant correlations were also found between "goal commitment" and the four measures of participation, although none had been predicted. The correlations between "goal commitment" and "intent to remain" and "desire to remain" were $r=.40$ and $r=.30$ respectively. The negative correlations between this commitment construct and the "search activity" and "search frequency" variables were $r=-.39$ and $r=-.42$ respectively - smaller than comparable correlations for "affective commitment" but still strong. In this case, those persons who reported support for their organization's goals and values also reported both a desire and an intention to remain a member of that organization.

Also as predicted was a strong, positive correlation between "calculative commitment" and "intent to remain" ($r=.40$), indicating that those persons who reported a sense of "calculative commitment" also were prone to remaining with their current organizations. Counter to prediction, a positive correlation of $r=.31$ was found to exist between "calculative commitment" and "desire to remain" where none had been expected. For the two search behavior variables, negative correlations were found ($r=-.17$ and $r=-.20$) where positive correlations had been predicted. Apparently, persons who reported some degree of "calculative commitment" also felt a desire to remain a member of their current

organization. And, they reported a lack of engagement in a job search process.

E. Regression Analysis

To help in identifying the relative significance of the relationship between each of the commitment variables and the outcome variables, multiple regressions were carried out on each outcome variable. In each case, the outcome variable of interest was treated as the dependent variable and all three commitment variables entered into the equation as independent variables. Stepwise regression was used to order the entry of independent variables into the equation. Results of the eight multiple regressions are reported in Table 10. Results include the Beta estimate and F statistic for each regression.

For the four performance variables, the order of entry of independent variables was as expected. For both "voluntary effort" and "quality consciousness", the independent variable "goal commitment" was entered on the first step of the regression. In the case of "voluntary effort", the explained variance was a relatively high $R^2=.32$, while in the case of "quality consciousness" the variance explained was minor $R^2=.02$. "Affective commitment" also entered into the equation for "voluntary effort" as a second independent variable, bringing the total explained

TABLE 10

MULTIPLE REGRESSION OF COMMITMENT VARIABLES
ON OUTCOME VARIABLES
(stepwise method)

1. Dependent Variable: "voluntary effort" .

Variable entered on step 1: "goal commitment"
 R² : .325
 Adjusted R² : .322
 Beta: .402
 F Significance: .001

Variable entered on step 2: "affective commitment"
 R² : .374
 Adjusted R² : .369
 Change in R² : .047
 Beta: .278
 F Significance: .001

2. Dependent Variable: "quality consciousness".

Variable entered on step 1: "goal commitment"
 R² : .020
 Adjusted R² : .016
 Beta: .142
 F Significance: .026

3. Dependent Variable: "pro-social behavior".

Variable entered on step 1: "affective commitment"
 R² : .151
 Adjusted R² : .147
 Beta: .236
 F Significance: .001

Variable entered on step 2: "goal commitment"
 R² : .186
 Adjusted R² : .180
 Change in R² : .033
 Beta: .233
 F Significance: .001

Variable entered on step 3: "calculative commitment"
 R² : .200
 Adjusted R² : .190
 Change in R² : .010
 Beta: .116
 F Significance: .001

cont., next page

TABLE 10 - Continued

4. Dependent Variable: "expressed loyalty".

Variable entered on step 1: "affective commitment"
 R²: .595
 Adjusted R²: .594
 Beta: .608
 F Significance: .001

Variable entered on step 2: "goal commitment"
 R²: .642
 Adjusted R²: .639
 Change in R²: .045
 Beta: .271
 F Significance: .001

5. Dependent Variable: "intent to remain".

Variable entered on step 1: "affective commitment"
 R²: .293
 Adjusted R²: .290
 Beta: .509
 F Significance: .001

Variable entered on step 2: "calculative commitment"
 R²: .405
 Adjusted R²: .400
 Change in R²: .110
 Beta: .336
 F Significance: .001

6. Dependent Variable: "desire to remain"

Variable entered on step 1: "affective commitment"
 R²: .113
 Adjusted R²: .109
 Beta: .308
 F Significance: .001

Variable entered on step 2: "calculative commitment"
 R²: .201
 Adjusted R²: .194
 Change in R : .085
 Beta: .297
 F Significance: .001

cont., next page

TABLE 10 - Continued

7. Dependent Variable: "search activity".

Variable entered on step 1: "affective commitment"
 R²: .255
 Adjusted R²: .252
 Beta: -.494
 F Significance: .001

Variable entered on step 2: "calculative commitment"
 R²: .269
 Adjusted R²: .263
 Change in R²: .011
 Beta: -.116
 F Significance: .001

8. Dependent Variable: "search frequency".

Variable entered on step 1: "affective commitment"
 R²: .315
 Adjusted R²: .313
 Beta: -.445
 F Significance: .001

Variable entered on step 2: "calculative commitment"
 R²: .338
 Adjusted R²: .333
 Change in R²: .020
 Beta: -.148
 F Significance: .001

Variable entered on step 3: "goal commitment"
 R²: .357
 Adjusted R²: .349
 Change in R²: .016
 Beta: -.169
 F Significance: .001

variance to $R^2=.37$. Thus "goal commitment" appeared to be the best predictor variable for both job performance-related outcome variables, and "affective" commitment also appeared to contribute significantly to "voluntary effort".

For the two support variables - "pro-social behavior" and "expressed loyalty" - "affective commitment" was entered on the first step of both equations followed in both cases by "goal commitment". For "pro-social behavior", "affective commitment" explained 15% of the total variance while "goal commitment" explained an additional 4% for a total $R^2=.19$. The variable "calculative commitment" also entered the equation, unexpectedly, on the third step, explaining an additional 1% of the variance. For "expressed loyalty", "affective commitment" explained 60% of the variance while "goal commitment" contributed an incremental 4% for a total $R^2=.64$. For the two dependent organizational support variables, therefore, "affective commitment" appeared to serve as the best predictor variable.

In the case of the four participation variables, the order of entry of variables in the equations was generally as expected. For the variable "intent to remain", "affective commitment" entered on the first step followed by "calculative commitment". "Affective commitment" explained 29% of the variance while "calculative commitment" explained an additional 12% making the total explained variance a fairly strong $R^2=.41$.

The order of entry was the same for "desire to remain", which was not wholly as expected. It was not anticipated that a relationship would exist between "calculative commitment" and the dependent variable "desire to remain". As it turned out, "calculative commitment" explained an incremental 9% of variance on top of the 11% explained by "affective commitment" (total $R^2=.20$). Thus, while "affective" commitment best predicted both a person's intention and desire to remain with his or her organization, "calculative" commitment also added significantly to the portion of explained variance in the dependent variables.

For the two search behavior variables, it was expected that only "affective commitment" would significantly explain the inverse of (or lack of) "search behavior". In both cases, "affective commitment" was entered first in the equations, explaining 26% of the variance of "search activity" and 32% of the variance of "search frequency". However, "calculative commitment" also contributed to an explanation of the variance. In the two cases, "calculative commitment" added 1% and 2% respectively to explained variance. The Beta coefficients for both independent variables in both equations were negative. This was as expected for "affective commitment", but for "calculative commitment" the expectation had called for a positive Beta. Also in the case of "search frequency", the variable "goal commitment" unexpectedly contributed an additional 2% of

explained variance, bringing the total for that variable to $R^2=.36$. Generally speaking, a person's sense of "affective commitment" appeared to best predict a lack of reported search behavior by those surveyed, but "calculative commitment" added significantly to the prediction.

F. Significance of Difference between Dependent "r's"

Because certain hypotheses predicted a stronger relationship between one pair of variables than another pair, it was necessary to test the difference in findings wherever possible. Accordingly, t-tests were performed on the Pearson correlation coefficients of the relevant pairs of variables to test for significant differences in the predicted direction. Because each of these tests pertained to a specific hypothesis, the results will be discussed in the following chapter where each hypothesis is considered separately.

G. Multiple Regression and ANOVA

In order to investigate a hypothesized moderating effect by "job alternatives" upon the relationship between "calculative commitment" and "intent to remain", both a multiple regression using an interaction term and an analysis of variance were performed on the three variables

in question. If "job alternatives" did have a significant moderating effect on the relationship between "calculative commitment" and "intent to remain", it would be reflected in the interaction between "calculative commitment" and "job alternatives". This interaction term should have a significant effect on the dependent variable - "intent to remain" in addition to a positive main effect by "calculative commitment" and a negative main effect by "job alternatives".

Looking at the results of the regression, presented in Table 11, there was no evidence of a significant interaction effect. On the dependent variable "intent to remain", only the direct effect of "calculative commitment" was significant. Also contrary to what was expected, there was no significant negative relationship between "job alternatives" and "intent to remain", although the entry of "job alternatives" into the regression equation did lead to a drop of .02 in explained variance.

ANOVA results generally support the regression results and are reported in Appendix G. Again, there was no significant interaction effect between "calculative commitment" and "job alternatives". And, only the main effect of "calculative commitment" on "intent to remain" was significant. The conclusion, therefore, is that "job alternatives" does not moderate the effect of "calculative commitment" on "intent to remain".

TABLE 11

MULTIPLE REGRESSION OF CALCULATIVE COMMITMENT AND JOB
ALTERNATIVES ON INTENT TO REMAIN
(all variables entered)

Dependent Variable: "intent to remain".

Variable entered step 1: "calculative commitment"

R²: .145
Adjusted R²: .142
Beta: .381
F Significance: .001

Variable entered step 2: "job alternatives"

R²: .146
Adjusted R²: .140
Change in R²: -.02
Beta: -.037
F Significance: .001

Variable entered step 3: "calculative commitment" x
"job alternatives"

R²: .150
Adjusted R²: .139
Change in R²: -.01
Beta: .304
F Significance: .001

H. Analysis of Linear Structural Relations (LISREL)

LISREL was used to further explore the relationships between commitment and outcome variables as well as to examine the fit of the model shown in Figure 2. Because of complexities involved in using LISREL, two approaches were used each of which served as partial verification of the other. In the first approach a two-step process was used involving a measurement model followed by a structural model. The structural model used as input data the correlation matrix of eight variables produced by the measurement model. A second approach estimated both measurement and structural parameters in one process. Both approaches used data transformed by square-root to help avoid skewness.

1. LISREL Analysis: Two-Stage Approach

Testing the measurement model constituted confirmatory factor analysis of the variables. Items representing eight variables - three commitment variables, the three performance variables, "intent to remain", and "search activity" - were entered into the analysis. In order to obtain meaningful results using LISREL, it was necessary to pare down the number of variables in the model as well as the number of items associated with each variable. All

three commitment variables and the three performance variables were kept, but only two participation variables were retained. It was felt that these two - "intent to remain" and "search activity" - would adequately capture the two concepts without cluttering the model. Appendix H, part I displays the variables and items entered in the analysis. Figure 3 displays the full LISREL model.

Initial first stage results indicated some problems with the fit of the model. In LISREL, a chi-square test is used to compare the goodness-of-fit between the covariance matrix for the observed (sample) data and the covariance matrix derived from a theoretically specified model. According to Dillon and Goldstein (1984), "The null hypothesis is that the overidentified model fits the data, so that large probability levels associated with the test statistic indicate that the model fits the data". The probability level of chi-square in this test is the probability of obtaining a chi-square value larger (i.e. worse) than the value actually obtained given that the model is correct. The higher the probability, therefore, the better the current fit. For the initial analysis, the chi-square test statistic was 905.8 with 599 degrees of freedom (probability of .0001).

The problem with the fit appeared to result from two causes: (1). Unanticipated correlations between survey items used as indicators. A LISREL model will be strong if



Figure 3 Lisrel Model

correlations are reproduced between the latent constructs but not between pairs of items used to measure different constructs. Because all items were assessed in a single questionnaire, it was felt that a common method variance or bias contributed to these unanticipated correlations between pairs of related items, both within a single variable measure and across measures. In addition, in the way certain items were worded there were cases of logical association between what two supposedly unrelated questions were asking. Together, these factors likely contributed to correlations between item residuals which weakened the fit of the model. (2). A lack of normality in the distribution of the majority of items. As previously noted under descriptive analysis, items appeared to be skewed towards the high end of the Likert scale. According to Joreskog and Sorbom (1982), "the chi-square measure...is very sensitive to departures from multivariate normality of the observed variables".

Joreskog and Sorbom recommend inspection of normalized residuals and modification indices as a guide for ways to improve the fit of the model (Joreskog & Sorbom, 1982). Several modification indices, associated with the residuals matrix (θ delta) had values greater than 4. (The number in the modification index indicates the reduction in chi-squared to be obtained by relaxing the related parameter). This index gave some indication as to which parameters,

involving paired residuals, could be relaxed in order to improve the fit of the model.

A second LISREL measurement model was then run with correlated error terms between selected items. Appendix H, part II reports those pairs of items estimated in the theta delta matrix. Prior to a parameter being relaxed, the pairs of items involved were compared on a qualitative basis for a logical connection between what each item was asking. Those item pairs having a modification index $>.5$ for which a logical association could be defended were allowed to have correlated error terms. The second measurement model produced a far superior fit of the data. Appendix H, part III presents selected results from this analysis. This model produced a chi-square of 577.5 with 572 degrees of freedom (probability level=.428). The correlation matrix of the eight variables was subsequently used as data for the structural model tested in the second stage of the analysis.

In the structural model, the relationships between exogenous (commitment) and endogenous (outcome) variables were examined. Relationships to be estimated were based upon the commitment model (figure 3). Parameters associated with these relationships were designated free. All others were fixed. Appendix H, part IV reports selected results from this analysis.

As in the case of the measurement model, the structural model proved difficult to fit in the initial analysis. In

this case the difficulty stemmed from correlations among the endogenous variables. In order to obtain a superior fit, it was necessary to relax parameters within the psi matrix - the matrix of residuals of endogenous variables. Logically, correlations could be expected among the performance variables and among the participation variables but not between the two groups. When parameters within each group were relaxed, the fit of the model was dramatically improved. As indicated in the appendix, the chi-square measure with 7 degrees of freedom was 8.15 (probability =.32). The overall goodness-of-fit measure was .99, and the root mean square residual was .016. Together, these three measures indicate a reasonably good fit for the model.

Based upon the chi-square index, the null hypothesis, that the data fits the model, cannot be rejected. The failure to reject the null does not prove the worth of the model, especially since the probability of .32 reflects only the probability of obtaining a worse fit given that the model is correct. It does, however, provide evidence that the covariance matrix based upon the model and the covariance matrix reproduced by the sample data are similar. Given this support, the parameter estimates indicating the relationships among the variables can be interpreted with a reasonable degree of confidence.

2. LISREL Analysis: Single-Stage Approach

The procedure followed in the one-stage approach was much the same as that described above with the exception that there could be no correlated residuals between items representing exogenous variables and those representing endogenous variables. Following an initial test indicating poor fit (chi-square probability of $P=.000$), parameters were relaxed within the two error matrices (theta delta and theta epsilon) on the joint conditions that a logical connection could be established between items and a significant reduction in chi-square could be expected. A revised test of the model resulted in a chi-square of 611 with 581 d.f. (probability level = .21). Other measures of fit were: goodness-of-fit index of .886, and root mean square residual of .009.

Although not as good a fit as that obtained through the two-stage process, the results indicated an acceptable model. The probability obtained ($P=.21$), while not high, was considerably above the critical cut-off (.05) suggested by Bentler and Bonnet (1980). Because this single-stage approach followed the recommended procedure for LISREL, the resulting parameter estimates were felt to be of greater reliability. (All subsequent references to LISREL results pertain to single-stage results unless otherwise noted). Data from the two-stage approach were used primarily as a

check upon the results obtained here. Appendix I reports selected results from the single-stage analysis as well as item-pairs selected for residual correlation in this analysis.

The estimates for the parameters of interest from both methods of analysis are shown in Table 12. Many results were strikingly different from those obtained in SPSSx analytic procedures. Between the commitment and the performance variables, the Beta estimates were much higher for "affective commitment" than for "goal commitment". The same was true for the participation variables. In fact, the estimates between "goal commitment" and all dependent measures, with the exception of "expressed loyalty", failed to reach significance. In the measurement model, the correlation between these two commitment constructs was slightly higher than that obtained through correlation analysis ($r=.70$ v. $r=.64$) indicating some degree of multicollinearity.

As for "calculative commitment", its regression coefficient on "intent to remain" was higher than that of "affective commitment". On the other hand, the small negative coefficient between "calculative commitment" and "search activity" was insignificant. The measurement model correlation matrix indicated a relationship between "calculative commitment" and both "affective" and "goalcommitment" ($r=.47$ and $r=.37$ respectively). These

TABLE 12

SELECTED LISREL RESULTS

I. SINGLE-STAGE LISREL ANALYSIS

A. Path Coefficients
(Betas)

	VE	PB	EL	IR	SB
Affective Commitment:	.463	.525	.589	.260	-.382
Goal Commitment:	.145	-.026	.246	-	-.114
Calculative Commitment:	-	-	-	.597	-.241

B. T-Values

	VE	PB	EL	IR	SB
Affective Commitment:	4.46*	4.08*	6.37*	2.01*	2.90*
Goal Commitment:	1.41	.22	2.73*	-	1.15
Calculative Commitment:	-	-	-	2.89*	1.70

C. Squared Multiple Correlations for Structural Equations
(percentage of explained variance)

VE	PB	EL	IR	SB
.332	.257	.615	.619	.422

II. TWO-STAGE LISREL ANALYSIS

A. Path Coefficients
(Betas)

	VE	PB	EL	IR	SB
Affective Commitment:	.466	.538	.613	.383	-.432
Goal Commitment:	.159	-.062	.246	-	-.135
Calculative Commitmen:	-	-	-	.445	-.169

B. T-Values

	VE	PB	EL	IR	SB
Affective Commitment:	6.44*	7.01*	11.53*	7.49*	6.21*
Goal Commitment:	2.21*	-.81	4.63*	-	2.21*
Calculative Commitment:	-	-	-	9.06*	3.11*

C. Squared Multiple Correlations for Structural Equations
(percentage of explained variance)

VE	PB	EL	IR	SB
.344	.250	.648	.500	.401

* indicates significance at $p=.05$

correlations were based upon factors and hence could be expected to be more pronounced than those obtained in correlation analysis. Nevertheless, the strength of the associations was unexpected.

These estimates imply the following: (1) that "affective commitment" has a consistent relationship with all five outcome variables; (2) compared to the "goal commitment" measure, "affective commitment" is a superior predictor of all three performance variables; (3) "calculative commitment" is the best predictor of "intent to remain"; and, (4) "affective commitment" best predicts no or low "search activity". In contrast then to the results of the correlation analysis and the regression analysis, "affective commitment" appears to have a far stronger relationship to performance outcomes than does "goal commitment".

I. Summary

This chapter contained a presentation of the procedures used for data analysis and the results obtained from these procedures. Descriptive analysis provided a general examination of the data, including a look at scale means, standard deviations, scale reliabilities, and some indication of strong versus weak scale items. Factor analysis provided confirmation of the existence of the

separate constructs in the eyes of the survey respondents. Correlation analysis and regression analysis provided support for the existence of relationships between variables and the order of significance of these relationships. Analysis of variance addressed the question of an interaction effect between two of the variables. LISREL provided further evidence of the reliability of certain scale items as good construct measures and provided qualified support for the overall model (figure 2).

Subjects generally responded to questions in a positive manner as indicated by the scale means of most of the variables. Unfortunately, this resulted in a certain skewness in the data towards the upper end of the scales. Squared transformation of data on a trial basis, however, did not appear to result in better solutions for most tests but was used in LISREL.

Factor analysis helped confirm the existence of separate commitment constructs. In addition, factor analysis confirmed, with one exception, the discriminant validity of the different outcome measures, both in the performance and participation categories.

Correlation analysis and regression analysis provided support for most of the hypothesized relationships. Persons with high "goal commitment" and high "affective commitment" were inclined to report themselves as better performers, in three of the four performance categories. Additionally,

they were likely to report a strong intention to remain with their organization, a wish to remain, and an absence of any search behavior during the preceding year. Persons with high "calculative commitment", on the other hand, were no different from others in the area of job performance and organizational support. They were, however, more likely to report both an intention and a desire to remain with their current organization, and they were less likely to have engaged in search behavior than those with little or no "calculative commitment".

Partial correlation analysis, involving "calculative commitment" and the moderator variable "job alternatives", helped refute the hypothesis that "job alternatives" had any moderating effect on the relationship between "calculative commitment" and "intent to remain". This hypothesis was based upon the assumption that persons with "calculative commitment" would respond positively to opportunities to free themselves from this state of commitment. This did not appear to be true.

LISREL analysis provided a more in-depth look at all the relationships in the model as well as the strength of the model as a whole. LISREL results suggested that the model was too rigid to fit the data initially. It suggested the need to relax correlations among the residuals of both item indicators and variables in order to better account for variances in the measures. With a better fit established,

it then provided more reliable information on relationships between variables. Results contradicted several conclusions drawn from preceding analyses having to do with differences in the effects of "affective commitment" and "goal commitment" on outcome variables. At the same time, they provided confirmation to theory suggesting that "affective commitment" affected both performance and participation decisions while "calculative commitment" had an effect on participation decisions only.

CHAPTER VII

DISCUSSION OF FINDINGS

The five different types of analysis which were applied to the collected data resulted in information which lends varying degrees of support to the individual hypotheses and to the commitment model as a whole. This chapter presents a discussion of these results, their implications with regards to the separate hypotheses, and an interpretation of the findings as pertains to the entire commitment model.

A. Differences in Commitment Constructs

Hypothesis 1 stated that organizational commitment could be conceptualized in three different forms - "affective", "goal", and "calculative". This idea was based in part upon the way in which Mowday et al. (1979) defined commitment as a three factor construct and in part upon Reichers' theory that organizational commitment was a multi-dimensional construct consisting of independent multiple commitments within an organization (Reichers, 1986). Based upon the findings in phase one, three types of commitment were included in the second phase.

1. Affective Commitment

Factor analysis, using principle components with varimax rotation, produced an orthogonal solution of five factors for the 25 items representing the three constructs. The first factor, consisting entirely of "affective commitment" items, appeared to confirm the unidimensionality of that factor. This factor also captured 30.4% of the total variance of the solution as indicated in Table 2. The scale reliability for these nine items was: $\alpha=.88$.

Of the nine affective items included in the analysis, five were taken from the OCQ (Mowday et al., 1979) and four were items derived from phase one. The items selected from the OCQ, as well as those added to round out the measure, were chosen to represent the "global commitment" idea as presented by the phase one respondents. As such, items were selected which appeared to reflect a positive sense of affect towards the organization as a whole, in the hope that such items might capture what one respondent termed "a set of emotional bonds formed by the individual to different parts of the organization".

In so far as the items did truly measure that concept, the idea of "affective commitment", as a general or "global" sense of attachment to an organization, received substantial support as a separate and unidimensional construct. There was a small relationship between "affective commitment" and

"calculative commitment" as indicated both by the cross-loading of related items in factor analysis, the Pearson correlation of $r=.11$, and the LISREL factor correlation of $r=.47$. Both of these correlations need to be appraised in light of possible common method variance on the instrument. In other words, these relationships may be positively biased.

Indications of a connection between affective and goal commitment were stronger. Evidence for this relationship included the relatively high Pearson correlation ($r=.65$), the cross-loading of items in factor analysis, and the LISREL correlation coefficient of $r=.71$. Four "AC" items loaded onto the "goal" scale with loadings between .3 and .4, while two "GO" items loaded onto the "affective" scale in the same range. Item "GO6" loaded equally on both measures as shown in Table 3.

Together, these results suggest a degree of overlap between the two concepts. Factor analysis indicates that a portion of the correlation between the two measures was likely due to conceptual overlap. More to the point, however, the strong, positive correlation between "affective commitment" and "goal commitment" suggests that, in the two organizations surveyed, there existed a psychological link between support for the goals of an organization and affective attachment to that organization as a place to work.

This is hardly surprising; after all Mowday et al. (1982) had built this connection directly into their definition of commitment. An individual who had positive feeling for an organization but felt little or no concern for its goals would be an unusual case. On the other hand, individuals certainly exist in organizations who have a fondness for salient parts of an organization - co-workers, job activity, physical surroundings - and yet disagree with certain goals and policies they are asked to support. Thus, the distinction between the two concepts has a theoretical basis. The findings suggest this difference need be recognized and accounted for in defining what is meant by "organizational commitment".

The strength of the relationship, however, was surprising. Again, just what portion of this relationship should be attributed to common method variance cannot be determined. Certainly some of the correlation was due to the difficulty of operationalizing these two related constructs in such a way as to enable subjects to draw a clear distinction between a focus on goals and a focus on the organization apart from its goals. If one allows for the likelihood of bias, the true correlation would most likely stand at a more modest figure. Even so, as these findings suggest, the goals which an organization pursues are, to a large degree, manifestations of the organization itself. Thus despite the apparent distinctions made by

persons interviewed in phase one between "goal commitment" and "affective" or "global" commitment, in the eyes of phase two respondents these two concepts appeared to be closely related.

2. Goal Commitment

Turning to the "goal commitment" construct, it proved to be a reliable measure ($\alpha=.85$) and, while closely related to "affective commitment", not closely related to "calculative commitment" ($r=.08$). The implication of this finding is that a clear distinction exists between support of an organizations goals and a sense of "investment" in that organization as a long-term member. Apparently, there are individuals who feel commitment to an organization in the "no-choice" sense but who feel little empathy with the goals and plans of that organization.

One unexpected finding regarding "goal commitment" was that the scale used was not unidimensional. Of the ten items entered into factor analysis, seven grouped together as one factor while three formed a separate factor with no cross-loadings above the .3 level between factors. Because the variance explained by the two factors was 9% and 8% respectively, both were considered significant and interpretable factors. As previously noted, the three items that split off were indicative of a willingness to put

organizational goals and interests ahead of personal goals and interests - an idea derived from phase one interviews. In contrast, the seven other items had been designed with the purpose of including a sense of "two-way" or mutual commitment of both parties to each other. The fact that these two related concepts were perceived as distinctively different by subjects was contrary to expectations but logical in hindsight.

3. Calculative Commitment

In the case of "calculative commitment", the findings from both correlation and factor analysis support the distinctiveness of the construct and the theory behind it. Subjects perceived the items related to investments as only partially related to those having to do with either goals or affective attachments. In so doing, they helped provide empirical support to theory suggesting that at least two fundamentally different types of commitment exist, as discussed in the second chapter, with each type based upon a different interpretation of the concept of commitment. The fact that there was a connection between the three concepts herein examined may be due in part to a carry-over effect of both "affective commitment" and "goal commitment" onto persons with high investments, meaning that persons with earlier high levels of positive commitment may have stayed

on with the company, gradually building "calculative commitment". The positive relationship, therefore, might be artifactual.

There was difficulty involved in operationalizing the calculative construct so as to produce a reliable, single-factor measure. Only four of the original ten items converged as a single, meaningful factor representing 6% of total variance. Two other items, pertaining to attachments to one's community at large, understandably split off into a second factor explaining 5% additional variance. All six items together produced a reliability of $\alpha=.65$ - higher than an alpha of either factor by itself but still below a desired level of $\alpha=.70$.

The problem stemmed from difficulty in developing questionnaire items which reliably captured the idea of investments without referring to an intent to leave or remain with an organization. The best existing measure, the Meyer and Allen CCS (1983), made almost constant reference to the idea of leaving. While efforts were made here to add items that avoided reference to leaving, many items were subsequently deleted due to failure to load on a central factor. Any future research in this area will have to deal first with the problem of augmenting the four items that made up the primary calculative factor.

An alternative approach, explored here, would be to use measures of specific investments as surrogate measures of

"calculative commitment". The measures herein used included ten factual and demographic questions collected at the end of the questionnaire (see appendix D, part 5). To examine the usefulness of these items, all were first subjected to correlation analysis with "calculative commitment". The items with significant correlations were then entered, along with "calculative commitment", into a stepwise regression on the dependent variable "intent to remain".

Correlation analysis resulted in four of the investment variables having significant, positive relationships with "calculative commitment". These were: (1) tenure or length of service ($r=.40$), (2) vacation days per year ($r=.36$), (3) age ($r=.23$), and (4) number of school age children living at home ($r=.20$). The results seemed to indicate that "calculative commitment" was associated with older employees with more years of service, greater vacation accruals, and children living at home. Stepwise regression of all five variables (including "calculative commitment") on "intent to remain" resulted in "calculative commitment" being entered first followed only by "age". Apparently, the variance in the other investment variables was accounted for by the combination of "calculative commitment" and "age".

"Calculative commitment" explained 15.1% of the variance in "intent to remain" and "age" accounted for an additional 3%.

These tests provided support for the validity of the "calculative commitment" measure. Not only was it related

to surrogate measures of investment, it was able to explain the same portion of variance in "intent to remain" as were the investment measures. In general "calculative commitment" increases with both age and time in an organization as could be expected.

Allowing, then, for some difficulties in measuring the concept "calculative commitment", the findings suggest that it represents a distinct construct with a weak connection to "affective commitment". Theoretically a cognitive construct, it appears that "calculative commitment" may encompass some affective sense of investment as well. Because the items in the construct do not specify the nature of investments, it is quite likely that subjects included thoughts of emotional investments as well, when responding to certain items. Thus, while the effects of "calculative commitment" may be a calculating process, the essence of this type of commitment may be both cognitive and affective.

Considering information related to all three commitment constructs, the findings provided general support for H1. Three distinct concepts of commitment did appear to exist in people's minds with varying degrees of association among constructs. Most significant was confirmation of the existence of the two basic types - "affective" and "calculative" - as discussed at length in the second chapter. These two types, however, do not seem to be mutually exclusive as described in the second chapter. On

the contrary, there appears to be a definite connection between the two basic types of commitment, providing support for Kanter's assertion that people may acquire different types of commitment concurrently (Kanter, 1968).

B. Goal Commitment and Outcome Variables

Hypotheses 2 through 6 referred to the relationships between "goal commitment" and "voluntary effort, "quality consciousness", "pro-social behavior", and "expressed loyalty". Mixed support was found for H2 which predicted a positive relationship between "goal commitment" and "voluntary effort". Support for the relationship was provided by the strong bivariate correlation ($r=.58$) between the two constructs as well as the entry of "goal commitment" first in stepwise regression on "effort". However, the LISREL results undercut these findings. In the single-stage model, the path coefficient between "goal commitment" and "voluntary effort" was $\beta=.15$ (non-significant at $p=.05$). (In the two-stage model, $\beta=.16$, $P=.05$). Therefore, while "goal commitment" appeared to have some effect on "voluntary effort", it was far weaker than initially expected and of questionable significance.

Support for H3, which predicted a strong relationship between "goal commitment" and "quality consciousness" was weak. The bivariate correlation was significant at $r=.17$

but the two-item measure was of such dubious reliability as to cast doubt on that relationship. Due to the failure to come up with a reliable measure of "quality consciousness", this hypothesis did not really get tested. The variable was not included in LISREL analysis.

Hypotheses 4 and 5 pertained to the relationships between "goal commitment" and "pro-social behavior" and "expressed loyalty" and predicted positive relationships. In the case of "expressed loyalty" the relationship was higher than predicted. The Pearson correlation coefficient ($r=.39$) and the LISREL path coefficient ($\beta=.25$) both indicate a strong, positive relationship. Apparently support for organizational goals positively affects a person's willingness to vocalize such support and otherwise help out outside of the dictates of one's job within the organization. In the case of "pro-social behavior", mixed results made it difficult to draw a firm conclusion. The correlation coefficient ($r=.39$) suggested a moderate relationship, but this was contradicted by the LISREL path coefficient which was negative though insignificant ($\beta=-.03$). The most likely case is that a relationship exists somewhere between these two points - positive but low. Apparently support for organizational goals does not have much effect on a person's willingness to engage in extra-role activities that may require additional time and effort. Persons may tend to see such support as counter to their own

interests, especially if it takes away from their own work-related goals or assists someone whom they see as a potential competitor.

H6, which predicted stronger relationships between "goal commitment" and both "voluntary effort" and "quality consciousness" than for "expressed loyalty" and "pro-social behavior", was only confirmed in part. "Quality consciousness" was disregarded. Otherwise, "expressed loyalty" had the strongest relationship with "goal commitment" ($r=.67$, $\beta=.25$) followed by "voluntary effort" ($r=.58$, $\beta=.15$) and "pro-social behavior" ($r=.39$, $\beta=ns$). A t-test of the significance of difference in "r's" indicated that the difference between the goal commitment - expressed loyalty correlation ($r=.67$) and the goal commitment - voluntary effort correlation ($r=.58$) was significant ($p=.05$). Apparently persons committed to an organization's goals were most willing to vocalize such support outside of an organization.

Seen from an exchange perspective, this may stem from the fact that such support would normally require little added effort or "contribution" from a person. This fact sets this variable off from the other two which both require action or added effort. Of the other pair of relationships, that with "voluntary effort" was stronger, as predicted, than that for "pro-social behavior" and significant ($p=.01$).

"Goal commitment" was not predicted to have an effect on a person's decision to participate. Pearson correlation analysis results seemed to suggest that there was a connection between "goal commitment" and the participation variables. Correlations with "intent to remain", "desire to remain", "search activity", and "search frequency" were $r=.39$, $r=.30$, $r=-.39$, and $r=-.45$ respectively. In the LISREL model, the coefficients between "goal commitment" and the two participation variables were fixed at zero according to the specifications of the model. The results indicated that these two parameters should not be relaxed (i.e. that setting the parameters free and estimating the paths would not significantly improve the fit of the model). Thus, while the evidence was mixed, there was some indication that an affinity to organizational goals is related to a person's intentions and desires to remain a member.

It is difficult to fully account for this finding. As in other cases, the magnitude of the correlations could have been partly the result of common method variance. Another explanation in this case could be organization specific. Neither of the two organizations surveyed has a reputation as a high turnover company. There may exist, within the culture of these organizations, some degree of expectation that continued participation equates with support of the organization's goals and mission.

In hindsight, it might have been more logical to assume that support for an organization's goals implies willingness to remain a member of the firm, unless persons interviewed at that firm indicated otherwise (i.e. as in the case of a "revolving door" company). Most organizations offer career development support for professional employees in hopes of retaining their more valued members. This expectation tends to increase proportionate to the amount of training and development expended upon an employee. The high-turnover company, with its emphasis on staffing flexibility, is more likely the exception than the rule.

C. Affective Commitment and Outcome Variables

Hypotheses 7, 8, 9, 10, and 11 pertained to relationships between "affective commitment" and the four performance outcome variables. In this case, the relationships with all outcome variables were significant and strong, with the exception of "quality consciousness" which remained indeterminate.

H7 and H8 predicted that positive relationships would be found between "affective commitment" and both "pro-social-behavior" and "expressed loyalty". Support was strong for both of these predictions: (1) for "pro-social behavior, correlation of $r=.40$, LISREL path coefficient $\beta=.51$; (2) for "expressed loyalty", high correlation $r=.76$,

path coefficient $\beta=.58$. Persons with "affective commitment" reported themselves as willing to support the organization apart from the guidelines of their job roles.

H9 predicted a positive relationship between "affective commitment" and "voluntary effort". The results indicate a strong relationship in the predicted direction (correlation $r=.53$; LISREL path coefficient $\beta=.43$). Apparently persons who expressed a high level of liking for and identification with their organization also reported a high level of job effort beyond that called for by a purely economic contract.

H10 referred to "quality consciousness". No significant relationship was indicated by the correlation coefficient in this case, although the reliability of the "quality" measure was so poor as to render the comparison meaningless.

H11 predicted that the relationships between "affective commitment" and the two support variables - "expressed loyalty" and "pro-social behavior" - would be stronger than the corresponding relationship with the performance variable ("voluntary effort"). According to the LISREL results, this appeared to be the case. The Beta coefficient was smallest in the case of "voluntary effort". In the case of "expressed loyalty", this ordering was confirmed by a t-test on the difference in correlation coefficients ($p=.01$). However, the correlation coefficient between "affective commitment" and "voluntary effort" was higher than that with

"pro-social behavior" ($r=.53$ v. $r=.40$). And a t-test of this difference in correlation coefficients indicated the difference to be highly significant ($p=.01$). Therefore, some doubt was cast on the ordering suggested by the LISREL results, although the power of the covariance analysis used in LISREL tends to lessen such doubt. What was more certain was that in all three cases, the apparent relationships with "affective commitment" were soundly positive and significant.

These findings lend support to theory on "affective commitment" as expressed by those individuals who have described it in affective psychological terms (Buchanan, 1974; Mowday et al., 1982; O'Reilly & Chatman, 1986; Scholl, 1981). According to this theory, affective organizational commitment would exert some kind of positive influence on a person's performance motivation apart from influences stemming from instrumental rewards or future rewards. However, only in the O'Reilly and Chatman study had any relationship between a commitment-based measure ("identification") and an extra-role outcome behavior been established as significant.

The findings here provide both general support for existing theory and directed support for areas that remained in doubt in the O'Reilly and Chatman study. In this study, measures of "identification" and "internalization" were used to represent two levels or variations of commitment, the

former having to do with desire for affiliation with an organization and the latter related to an adoption of organizational goals and values. Only in the case of the former - identification - was a significant relationship established with "pro-social behavior".

In the current study, no attempt was made to differentiate between "identification" and "value internalization". Instead both concepts were seen as reflective of "affective commitment" and scale items from both were used to bolster the "affective commitment" scale (O'Reilly & Chatman, 1986). Positive findings, therefore, not only replicated and strengthened the O'Reilly and Chatman findings having to do with "pro-social behavior", they showed that the influence of "affective commitment" extended to two other types of extra-role behavior as well - "voluntary" (or extraordinary) job effort and external support of the organization ("expressed loyalty").

Hypotheses 12, 13, 14, and 15 pertained to the relationship between "affective commitment" and the four participation variables: "intent to remain, "desire to remain", "search activity", and "search frequency". As predicted in these hypotheses, the evidence points to strong positive relationships with the first two outcome variables and strong, negative relationships with the two search behavior variables.

Support for H12 - "intent to remain" - includes the correlation ($r=.54$) and the LISREL path coefficient of $\beta=.26$. In stepwise regression, "affective commitment" was entered first into the equation explaining 29.5% of the variance with "intent to remain". For H13 involving "desire to remain", the evidence was also significant though slightly weaker: a correlation of $r=.34$, and a first entry into the regression equation with "desire to remain" as the dependent variable ($R^2=.12$).

In the case H14 and H15, pertaining to the search behavior variables, the findings were: (1) "search activity" ($r=-.51$), LISREL path coefficient ($\beta=-.38$), and first selection as predictor in stepwise regression ($R^2=26.4$); (2) "search frequency" ($r=-.56$). In regression analysis, the five "search frequency" items were run separately as dependent variables. "Affective commitment" was selected first in the equation in all five cases explaining, in order, 36%, 10%, 26%, 24%, and 29% of the variance in search frequency variables.

In combination, this evidence lends further support to theory holding that "affective commitment" has a direct effect on people's participation behaviors. It supports theory, already well backed, stating that commitment positively influences a person's decision to remain. It strengthens this theory by showing that people tend to do so out of a desire to stay more than out of an inability to

leave. Persons lacking a desire could be expected to change their minds if conditions for leaving were favorable, as noted in the "desire to remain" measure. Furthermore, persons lacking a strong wish to stay could be expected to engage in some degree of search behavior. The negative relationship found here suggests that persons so committed do not even bother looking into alternative job possibilities.

D. Goal Commitment versus Affective Commitment

H16 and H17 addressed the question of which type of commitment, goal or affective, best explained the performance-related outcome variables. H16 predicted that "goal commitment" would have the stronger relationships with "voluntary effort" and "quality consciousness", while H17 predicted that "affective commitment" would have the stronger relationships with "pro-social behavior" and "expressed loyalty".

Addressing H17 first, the evidence of the findings was that "affective commitment" was the best predictor and explainer of both "pro-social behavior" and "expressed loyalty". Comparing the LISREL results, the Beta coefficients for the two outcome variables were $\beta=.53$ and $\beta=.59$ respectively in the case of "affective commitment", while in the case of "goal commitment" they were $\beta=-.03$

(non-significant) and $\beta=.25$. Similarly, "affective commitment" had a significantly higher correlation coefficient with "expressed loyalty" than did "goal commitment" ($r=.76$ v. $r=.67$, $p=.01$). (For "pro-social behavior" the correlation coefficients were roughly the same). Thus H17 appeared to be largely confirmed.

In the case of H16, the results were less clear but they seemed to contradict the prediction in the hypothesis. Initially, results of the correlation analysis indicated that "goal commitment" was the better predictor of "voluntary effort". It was entered first in a stepwise regression with "voluntary effort" as the dependent variable. In addition, the correlation coefficient between "goal commitment" and "voluntary effort" was higher than that for "affective commitment" ($r=.58$ v. $r=.53$) although the difference was not significant ($p=.05$).

The LISREL analysis provided a quite different picture. The Beta coefficient in the case of "affective commitment" was far stronger than the coefficient related to "goal commitment" ($\beta=.43$ v. $\beta=.15$). Given the power of LISREL and the size of the difference in magnitude between these coefficients, "affective commitment" appeared to be the superior explainer of "voluntary effort". Persons with a strong emotional attachment to their organizations reported a higher degree of effort at their jobs than did persons committed strictly to the goals of that organization.

E. Calculative Commitment

In keeping with theory that "calculative commitment" does not affect performance, "calculative commitment" was not expected to have significant effects on performance outcome variables, hence no predictions were made pertaining to these variables. Disregarding "quality consciousness", small, positive correlations between "calculative commitment" and the other three outcome variables were evident, however. Persons with a sense of "calculative commitment" reported some willingness to engage in supportive behavior but only to a small degree above what might be expected from persons operating from an exchange perspective. Perhaps this finding reflects an attitude of helpfulness held by persons who have come to terms with their future with an organization which meets most of their needs. It may also indicate a performance safety margin - a willingness to put forth an increment of extra effort as a means of protecting one's longevity and the investments associated with that longevity.

Hypotheses 18, 19, 20, and 21 pertained to relationships between "calculative commitment" and the four participation variables. In these cases, H18, which predicted a positive relationship between "calculative commitment" and "intent to remain" received strongest support. Both the correlation coefficient ($r=.40$), and the

LISREL path coefficient ($\beta=.60$) were high in the predicted direction. In LISREL, the path coefficient was noticeably higher than the corresponding coefficient for "affective commitment" ($\beta=.26$). This finding suggests that "calculative commitment", as per theory, has a strong binding effect on participation without a commensurate effect on performance.

On the other hand, this binding effect is hypothesized to be without positive force, that is without desire. Evidence partly contradicted the hypotheses having to do with this theory - H19, H20, and H21. Not only was the correlation positive with "desire to remain" ($r=.31$), the independent variable "calculative commitment" entered second in the stepwise regression behind "affective commitment" in predicting "desire to remain". It was ahead of "goal commitment", explaining an incremental 8% of total variance. The two search behavior variables, also indicative of desire to remain, both were negatively correlated with "calculative commitment" ($r=-.17$ and $r=-.21$), contradicting hypotheses 20 and 21. (The LISREL path coefficient between "calculative commitment" and "search activity" was moderate in magnitude [$\beta=.24$] but not significant at $p=.05$)

Also, in contrast to the prediction in H22, there was no significant moderating effect by "job alternatives" on the relationship between "calculative commitment" and "intent to remain" as would be expected if a desire to

remain were lacking. (The expectation, in this case, had to do with the feeling that persons who felt a sense of no-choice "calculative commitment" would change their plans regarding future membership if they perceived alternative job opportunities as being available to them. The findings suggest that such was not the case.)

In general, the outcomes suggest that in addition to its relationship with "intent to remain", "calculative commitment" also has some positive effect on a person's desire to stay with an organization. Explanations for this effect could have to do with a person's length of service in an organization. The longer a person remained a member, the more likely that person might make cognitive adjustments to his or her future association in order to ease any cognitive dissonance associated with having made sub-optimal or "satisficing" choices in the past. According to this theory, a person's reasoning would follow the line, "I'm still here, therefore I must want to be here". On a more instrumental basis, a person's desire may simply reflect a wish to protect and recover investments made over the course of the person's career with the company.

The theory that persons with "calculative commitment" are predisposed to feeling trapped in an organization is seriously called into question by these findings. Just because a person has moved past some decisional point-of-no-return is apparently no cause to believe that the person is

dissatisfied with that state. More likely, as these findings suggest, the person has accepted the state and may even have adopted favorable attitudes towards the institution. Such a condition would compare favorably to Kanter's description of "continuance commitment" in which both persons and organizations form interests and investments in each other over time which make the idea of separation seem increasingly risky for both parties (Kanter, 1968).

Some negative variation of "calculative commitment" may exist - a concept perhaps closer to what Etzioni (1961) referred as "alienative involvement". If so, it was not captured by the "calculative commitment" measure in this study and does not appear to reflect a notion of investments. More probably, a negative concept would stem from a feeling of absence of choice right from the time a person joined an organization. The term "commitment" would represent a poor choice of terminology to describe such a state of attachment, better characterized as entrapment or confinement.

F. Summary and Implications for Overall Model

As this discussion points out, certain hypotheses were confirmed by the study, others were largely disconfirmed, and still others had mixed results. Table 13 presents a summary of these results for all hypotheses. The question

that remains is: what is the net effect of these individual findings on the commitment model as a whole?

Perhaps most significantly, the role of "goal commitment" as a significant predictor of performance behavior is called into question. Its weakness as a predictor, relative to "affective commitment", suggests that its effect on effort needs to be re-examined. Possibly, "goal commitment" is more the product of an exchange-based cognitive acceptance of an unwritten contract between employee and employer, perceived as tied to rewards or inducements. In other words, it is seen by subjects as part of a "bargain" between employer and employee and, thereby, linked more to expected effort than to extra effort. As such, it may serve as a basis for a long-term employment relationship, provided each party honors the unwritten contract and nurtures trust in the other. If this is true, "goal commitment" might act more as an antecedent to "affective commitment" than as a motivator of extra effort. However, within the confines of the present study, it is best deleted from the model.

Secondly, the proposed effect of "calculative commitment" on outcomes needs to be modified. Its effects on intention to remain were largely confirmed by findings; however, other unexpected effects were indicated. "Calculative commitment" appeared to have a minor effect on "pro-social behavior" although this was not confirmed by

TABLE 13

SUMMARY OF HYPOTHESES

<u>Hypothesis</u>	<u>Findings: Degree of Support or Non-Support</u>
1. Three distinct commitment constructs exist.	Moderate Support: factor analysis and Cronbach's alpha
2. Goal Commitment (+) Voluntary Effort	Weak Support: Pearson correlation and Beta coefficient (LISREL)
3. Goal Commitment (+) Quality Consciousness	Weak Support but Indeterminate
4. Goal Commitment (+) Pro-social Behavior	Weak Support: Pearson Correlation and Beta coefficient
5. Goal Commitment (+) Expressed Loyalty	Strong Support: Pearson correlation and Beta coefficient
6. GO + VE & GO + QC > GO + PB & GO + EL	Mixed results: Pearson correlation, multiple regression, and Beta coefficients
7. Affective Commitment (+) Pro-social Behavior	Strong Support: Pearson correlation, multiple regression, and Beta coefficient
8. Affective Commitment (+) Expressed Loyalty	Strong Support: Pearson correlation, multiple regression, and Beta coefficient
9. Affective Commitment (+) Voluntary Effort	Strong Support: Pearson correlation and Beta coefficient
10. Affective Commitment (+) Quality Consciousness	Indeterminate and No Support
11. AC + PB & AC + EL > AC + VE & AC + QC	Mixed results: Pearson correlation and Beta coefficients

cont., next page

TABLE 13 - Continued

<u>Hypothesis</u>	<u>Findings: Degree of Support or Non-Support</u>
12. Affective Commitment (+) Intent to remain	Strong Support: Pearson correlation, Beta coefficient, and multiple regression
13. Affective Commitment (+) Desire to Remain	Moderate Support: Pearson correlation, multiple regression
14. Affective Commitment (-) Search Activity	Strong Support: Pearson correlation, Beta coefficient, and multiple regression
15. Affective Commitment (-) Search Frequency	Strong Support: Pearson correlation, multiple regression
16. GO + VE & GO + QC > AC + VE & AC + QC	Moderate Contradiction: Beta coefficients, Pearson correlations
17. AC + PB & AC + EL > GO + PB & GO + EL	Strong Support: Pearson correlation, Beta coefficients
18. Calculative Commitment (+) Intent to Remain	Strong Support: Pearson correlation, Beta coefficient
19. Calculative Commitment (-) Desire to Remain	Moderate Contradiction: Pearson correlation, multiple regression
20. Calculative Commitment (+) Search Activity	Moderate Contradiction: correlation and LISREL
21. Calculative Commitment (+) Search Frequency	Moderate Contradiction: Pearson correlation
22. JA will moderate the effect of CC on IR	Non-Support: multiple regression partial correlations, ANOVA

LISREL. Its more significant effect appeared to be on a person's desire to remain with an organization. Not only did people with "calculative commitment" report a desire to remain, they also reported low search behavior. Apparently the notion of commitment by virtue of investment is not necessarily linked with feelings of entrapment and restlessness. On the contrary, the findings suggest that persons with "calculative commitment" may feel a certain loyalty to their organization that is manifested in both a wish to remain and some willingness to help out with auxiliary duties from time to time (pro-social behavior).

This characteristic of "calculative commitment" is further reflected in its correlation with "affective commitment" ($r=.11$). The findings indicate that the two constructs are independent but somewhat related. As Kanter (1968) theorized, the two may represent different types of commitment that a person can experience simultaneously. These findings suggest that a tendency exists for persons who experience one type to experience a modest degree of the other type as well.

Thirdly, the types of outcome behaviors that a state of commitment is likely to produce need some re-examination. While most variables were confirmed by the study as both interpretable and relevant to the subjects, one variable having to do with attention to quality in work was unexpectedly disconfirmed both as a workable factor and as

an outcome. The results clearly suggest that this variable, "quality consciousness", be dropped from the model. Perhaps in future research this variable could be reformulated in terms of a person's willingness to perform excellent work in the absence of direct supervision. A revised model of organizational commitment and its effects on outcome behaviors is displayed in Figure 4.

Otherwise, hypotheses confirmed support for the model. "Affective commitment" was found to have significant relationships with both the performance-related and the participation related outcome variable. Its role as a highly significant predictor of different performance-related behaviors not only provides substantial support for the theory behind the concept, it also emphasizes the potential benefits of an affective form of attachment versus a more cognitive form as operationalized through "goal commitment". "Calculative commitment", on the other hand, was almost exclusively associated only with participation variables. Thus its role as a motivator of continued membership but not performance was strongly supported. As suggested in the introduction, "calculative commitment" appears to be mainly a cognitive based phenomenon linked to an assessment of rewards versus costs on future decisions. However, it appears to include some degree of affective association as evidenced by the strength of its relationship with an individual's desire to remain with an organization.

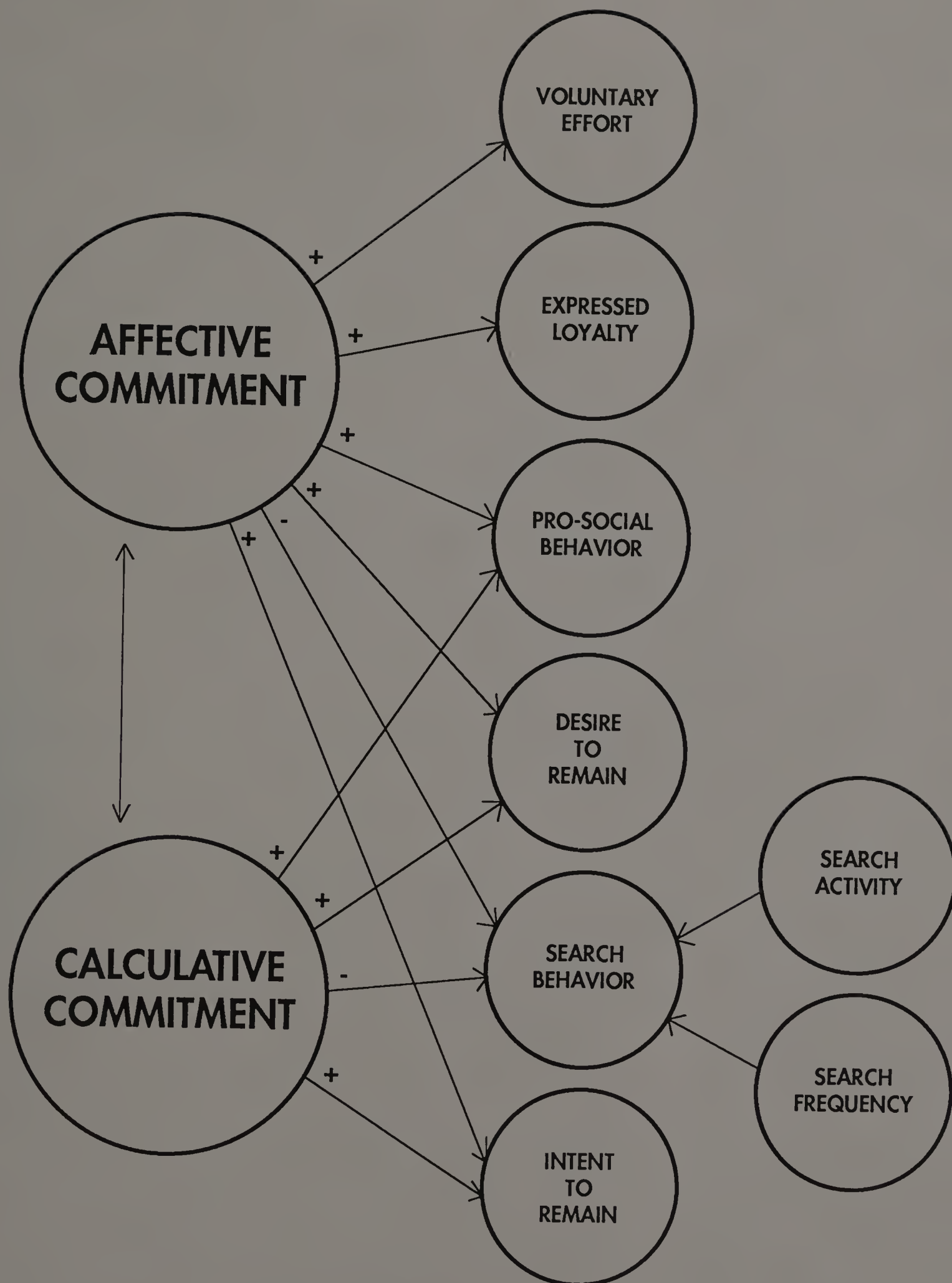


Figure 4 Suggested Commitment Model

CHAPTER VIII

CONCLUSIONS

A. Affective Commitment and Goal Commitment

An interpretation of the results of this study must necessarily take into consideration findings from both the field interview phase and the questionnaire phase of the research. This task is complicated by the fact that to some degree the findings in phase two of the research failed to support all of what was theorized by persons interviewed in phase one.

Persons interviewed in phase one defined commitment primarily in terms of organizational goals and values. And they linked this view of commitment with performance-related motivation. They saw a more general form of organizational commitment ("global commitment") as primarily associated with ongoing membership. Survey results, however, indicated that the affective concept of commitment had stronger motivational implications both in terms of performance and participation. Apparently persons who responded to the survey did not associate the "goal" orientation with the types of performance behaviors to the extent that the managers interviewed in phase one did. Or, alternately phrased, the "affective commitment" construct did a better job of explaining reported motivation than did the "goal

commitment" construct. The question then remains as to which view of commitment most nearly reflects the construct of interest to both researchers and practitioners.

Putting aside for the moment reservations having to do with the two methodologies, the results would seem to favor the "affective commitment" construct in terms of its motivational implications. In phase one of the research, those who stressed the concept of "goal commitment" did so in the belief that persons so committed would exert greater effort on behalf of organizational objectives. They felt that a goal orientation on the part of employees was most conducive to strong effort and performance. They generally did not downgrade an affective notion of commitment; they either ignored it or cast it in terms of a general commitment concept with implications more for participation than performance.

In phase two, the connection between commitment measures and self-appraisal of effort was empirically documented. And, although there were mixed results, the weight of the evidence suggested that persons reporting high levels of "affective commitment" were more inclined to exert the desired effort in all categories than were those reporting high "goal commitment".

The question this raises is: why did so many of the managers interviewed in phase one emphasize this goal orientation in lieu of affective attachment to the

organization as an entity in itself? Answers to this question are speculative at best. In the first place the question of defining commitment appears to demand an object. Goals and values represent a well-established set of objects, as evidenced by the definitions of commitment (see appendix A), while the concept "organization" is more nebulous. At the same time, terms like "goals" and "values" are part of a familiar vocabulary - "buzzwords" - to most managers.

Perhaps more to the point, however, the research nature of the interview, the setting, the accoutrements (notes, tape recorder), the relative formality, and the questions themselves all emphasized a rational approach to the subject, one likely to have prompted a rational, cognitive-based response. The concept of organizational goals, expressed in such familiar terms as "mission"/"goals and values"/"objectives"/"results-oriented", offered a fitting object for such a response. Once so oriented towards "rational" concepts, persons interviewed may have overlook the potential of an affective form of commitment - one associated more with feeling and general loyalty than with goals and objectives - to inspire persons towards excellence in job performance. Most respondents did emphasize, at some point, concern for people, teamwork, and other affective practices but generally in connection with antecedents of commitment.

A third explanation for this difference in focus may have to do with the changing basis of relationships between people and organizations. All three organizations appeared to be facing or to have recently faced problems associated with downsizing or cut backs in staffing. Being somewhat familiar with the difficulties involved in having to lay off or retire employees who are doing what they were hired to do, the managers making lay-off decisions may have felt a desire to change the rules of the game so to speak - to shift the employee-organization relationship towards an exchange, goal-oriented basis and away from an affective attachment based on long-term mutual commitments increasingly difficult for the company to maintain.

Two respondents commented on the problem associated with trying to get persons with less initiative to voluntarily leave, while keeping those with strong initiative and drive to stay. Again the emphasis was on active support of goals versus an attachment to the organization at large. Their comments may have in part reflected a fear of managers in troubled companies - that they find themselves saddled with an attached but dependent group of longer-term employees who mean well but who lack the independent drive and goal orientation of a newer "whiz-kid" - in short, persons who lack both the abilities and the drive of the purely goal-committed individual.

Finally, one respondent commented specifically on his reservations with "affective commitment". He acknowledged its motivational implications but felt that it had long-run drawbacks especially for persons in technological areas. Persons were likely to form binding attachments early in their professional careers and miss the opportunity for exposure and experience which they would get by changing firms. In the long-run, he felt this limitation was detrimental to both the individual and the organization in terms of what even a committed person could contribute.

His comments helped shed light on an important aspect of the study - the difference between effort, emphasized in the study, and actual performance. He was, in effect, saying that performance, the desired contribution from members, is a result of both effort and ability and that affective attachments may limit performance by restricting the development of ability. It would be presumptive, however, to treat his viewpoint as more widely shared among respondents. The general emphasis, in both phases of the study, was on motivation and effort.

Whatever the explanations, most respondents in phase one appeared to have overlooked the rather strong, motivational implications of an affective or emotional form of commitment which the results of phase two support. Perhaps the really significant finding of the study is that the most effective commitments are those which encompass or

include affect towards the object of the commitment. Organizations interested in developing greater employee motivation could take a cue from this and focus on programs that might lead to the development of "affective commitment". At the same time, they might want to de-emphasize or play down an emphasis on goals in that such an emphasis may act to keep people's attention - the way they perceive their relationship with the organization - in an exchange mode of perception.

The question of what to do with the "goal" component of commitment remains. Logic might dictate that support of organizational goals be positioned as an outcome of commitment. However, if this were the case then the relationship between goals and effort should be stronger than that found in the LISREL analysis.

Mowday et al. (1982) believed that support of goals was one of three components of "affective commitment". The strong correlations between the "affective" and "goal" measures provide some support for this view. However, the fact that these two represented different factors, contrary to the definition which viewed them as one factor, together with the fact that the "affective" measure directly explained most of the variance in effort motivation, calls into question the position taken by Mowday et al. (1982). "Goal commitment" not only appears as a separate factor, it appears to have more of an indirect or unexplained effect on

motivation. Or, its effect is subsumed by "affective commitment".

The explanation for this may better be found by examining what it means to be committed to an organization in a positive manner versus committed to the organization's goals. If someone feels "affective commitment" towards an organization, that person in all probability will actively support its goals through both effort at job performance and meeting other expectations. If, on the other hand, the person has made a commitment to support the goals as part of an employment agreement but feels little affect towards the organization, he or she may do what is expected but consciously try to resist a larger commitment to the organization in the interests of maintaining career flexibility. And that resistance, that holding back, would likely show up in lower reported levels of "voluntary effort", lower levels of general support, and less of an intention to remain a member in the future. Commitment to goals, in other words, may be seen as part of the "contract" or "agreement" between employer and employee and as such linked more to expected effort than to extra or voluntary effort.

In this connection, it makes more sense to view support of organizational goals as an antecedent to "affective commitment" in line with the ideas presented by the two non-management professionals interviewed in phase one. These

two individuals emphasized that goal commitment constituted a two-way exchange of expectations - mutual concern for goals - between individual and organization. Commitment and its related outcome behaviors were seen as contingent upon short-term fulfillment of expectations.

In effect, they seemed to be saying that commitment to the organization was contingent upon the organization meeting its end of the contract. Attention to goals on the part of the employee constituted the "contribution" side of the agreement - a fulfillment by the employee of the contract. From this viewpoint, such a mutual meeting of goals can be seen as both a builder of trust and as a precursor to affective commitment, helping perhaps to wear down a person's desire to remain independent or detached.

This scenario would fit with the behavioral approach to commitment development as advocated by Salancik (1977). To the extent that employees could be induced to carry out the kinds of behaviors in line with company expectations, they would adjust psychologically to a commitment posture. This positioning would also fit with the Mowday et al. (1982) model which held the development process to be fully recursive in a cyclical fashion. In such a model, it is possible to see behaviors that support company goals and interests as constituting both causes and effects of commitment. The actual state of commitment, however, can still be described as an affective, psychological state.

The current popular definition espoused by Mowday et al. (1982) contains three factors of which commitment to goals is one factor. Although the speculation herein is that commitment to goals serves as an antecedent to "affective commitment", there is not enough evidence of this to argue that the Mowday definition is misleading or incorrect. The findings here, however, do suggest that a more parsimonious definition and construct measure - as employed in this study - capture quite adequately both the feeling of commitment and the motivational effects associated with that commitment.

B. Affective Commitment and Calculative Commitment

Conclusions pertaining to these two concepts also need to deal with differences found in the two phases of the study. It will be recalled that those persons interviewed in phase one, who made reference to a concept similar to "calculative commitment", saw little value to the concept. They defined it as orthogonal to the other forms of commitment, which in the absence of the others had little or no value in terms of outcomes to the organization. In other words, having described organizational commitment in positive terms, the few individuals who mentioned this other form of commitment saw it as a hollow shell ("commitment with a small 'c'"), something left over after the decline of

positive commitment that kept otherwise unmotivated individuals from leaving.

Somewhat in contrast, the phase two findings indicated that "calculative commitment" was not wholly without motivational implications in terms of effort. Weak, but significant relationships appeared to exist with "voluntary effort" and "expressed loyalty"; stronger significant relationships were found between "calculative commitment" and "pro-social behavior" and "desire to remain".

Based on these findings, a more likely conclusion to be drawn from phase two is that "calculative commitment" reflects an investment concept that contributes both to sustained membership and, less strongly, to motivation to actively support the organization. Because of the low reliability of the construct measure, however, it is difficult to draw firm conclusions with regards to the effect of "calculative commitment" on performance decisions.

One very significant question that these findings raise is: do "affective commitment" and "calculative commitment" represent two different types of commitment, as discussed in chapters 1 and 2, or are they "two sides of the same coin". Given the results obtained herein, it is difficult to hold onto the notion that they are completely disconnected. Not only were they significantly correlated both in the Pearson correlation and LISREL analyses, their effects on outcome behaviors were, in several instances, similar if different

in magnitude. Only in the area of effort did "affective commitment" have a uniquely significant effect.

More likely, therefore, "affective" and "calculative commitment" represent two poles of a phenomenon called commitment to an organization. If we think of commitment as a force binding a person to continuing course of action with regards to some object (an organization in this case), then this force can encompass both positive elements of choice as well as not-so-positive elements of lack of choice.

Brickman stated that, "commitment includes three elements: a positive element, a negative element, and a bond between the two"; and, "commitment is about the relationship between 'want to' and 'have to'" (Brickman, 1987).

In the present study, "affective commitment" was measured so as to represent the positive element, while "calculative commitment" was designed to capture a "have to" or "non-choice" element of commitment. Accordingly, the results suggest that the more a person sees his or her commitment in positive, affective terms associated with choice and wanting to be an active member, the more that person will exhibit or report positive, motivational qualities associated with performance. On the other hand, the more a person views his or her commitment as associated with investments and a feeling of "have to" maintain the course of action, the less that person will exhibit or report voluntary or "extra-role" motivation and performance.

The demographic measures - "age", "tenure", "vacation accruals" - indicate that persons with "calculative commitment" are generally older, longer-term workers in many cases nearing retirement, slowing down perhaps, and not willing to expend the same level of energy as they were used to in the past. In contrast to past theory on "calculative commitment", they do not appear to feel trapped by circumstances or past choices. Their responses indicate a desire to serve out their careers with the organization that they previously chose. Quite likely, although not directly investigated in this study, the manner in which such persons view their commitment has gradually shifted from the more positive, affective view to the calculative or "have-to" position over time. This shift may, in fact, represent a natural progression by persons who develop commitment to an organization. If this be the case, then the notion of two separate types of commitment, as suggested by Meyer and Allen (1984) and Ford and McGee (1986) needs to be revised to one of a changing face of commitment related to time and circumstances.

The fact that persons do, at some point, develop or arrive at this feeling of commitment, herein labelled "calculative", with its associated outcome behaviors and attitudes, poses a dilemma for managers of organizations. On the one hand, there must be a wish that some such persons would voluntarily move on and make way for more dynamic,

younger individuals. Such a wish was clearly implied in the descriptions of this form of commitment in phase one. On the other hand, it is somewhat natural to expect that as employees grow older their level of effort would decline, especially if it is apparent to them that they are no longer ascending career-wise. Not only would there be ethical issues involved in a move to weed out such persons whose performance met expectations, it would be bad for the company in terms of the message it would send to other employees. Furthermore, many of these individuals represent the success of earlier organizational efforts to retain people in the first place, that is to avoid excessive turnover.

Organizations that wish not to be saddled with a high proportion of such persons need to deemphasize long-term membership early on and encourage healthy turnover where it appears to be in the best interest of the individual. However, such a strategy would entail certain risks, one being that it lead to a higher than desired level of turnover with all the associated costs in terms of orientation and training.

An approach that companies could adopt, utilizing findings on "calculative commitment", would be to look for ways to limit the formation of "investments" by persons who choose to remain with the company in their early years. For example, they could alter policies having to do with

vacation accruals which generally grant, on an incremental basis, more time off to longer-term employees. For example, policies having to do with vacation accruals could be altered to provide more vacation time during a person's early years with the company. This change would both help limit the formation of an investment and stimulate development of "affective commitment" through its message of concern for the individual. Another policy, which might serve the same dual purpose, would be to encourage employee movement and job rotation within the organization. This policy might help stimulate perceptions of self-capability and choice by persons as they gain greater skills, which in turn could cause them to feel less dependent. And, it would also signify a concern for employee growth and development - the kind of concern cited in phase one as an antecedent of organizational commitment.

As reflected in findings pertaining to "affective commitment", however, any such policy would likely represent some trade off. This follows from the dual effect that "affective commitment" has on both performance and participation. Any policy that stimulates the growth of "affective commitment" is likely to cause members to also choose to remain with the organization. And while this certainly has positive outcomes in terms of continuity, reduced training costs, etc., it has some negative implications in terms of blocking the infusion of "new

blood" and fresh ideas from outside while stifling personal growth and development. Plus, it carries a risk that persons lose the drive associated with "affective commitment" over time and stay on out of a sense of "calculative commitment".

An objective of this study was to shed light on the nature and implications of different types of organizational commitment. Hopefully the information uncovered having to do with different types of commitment can aid decision makers in dealing with the kinds of policy decisions that may affect the nature and development process of different forms of commitment.

C. Limitations of the Methodology

The primary limitations of the methodology fall into three categories: (1) the use of a self-report instrument with a 7-point Likert scale; (2) the use of "customized" variable measures which have no previous history of reliability or validity; and (3) the quantitative procedures used in analysing the data.

1. Self-Report Limitations

The tendency for common method variance or bias to creep into a self-report instrument has already been

discussed. The fact that so many variables were skewed towards the top ends of the scales is indicative that persons may have been responding overly positively to questions that had obvious positive - negative overtones. This skewness, in and of itself, is not proof of method variance, though it serves as a warning. Because of the anonymous nature of the surveys, the danger was not so much that persons would deliberately misrepresent themselves, but that they would give answers consistent with a desired self-image, thus upwardly biased.

This type of bias can lead to multicollinearity among both independent and dependent variables. The magnitude of correlation coefficients within the two sets is perhaps the best indicator that common method variance did creep into the results. The problem this presents has to do with sorting out the covariation due to this variance from the true covariation of related variables. Since there is no scientific basis for this sorting, the approach used here was to equate credibility of results with higher P-values (.01 and .001 for significance tests).

A related limitation, also associated with the use of the Likert scale, has to do with possible patterned responses - a tendency for persons to respond automatically to questions, particularly later questions, without paying careful attention to what the question asks. Because this can bias the instrument unevenly, it can distort the

results. This problem stems initially from the interpretation different people put on numbers within the scale. Although the survey attempts to define these numbers, repeating the definition at the top of each page, there is no way of knowing if all persons interpret the score definitions equally. However, the problem becomes much more acute if individuals either change their interpretations as they proceed or if they fall into a patterned response mode mid-way through.

This limitation brings up some more general considerations having to do with the use of a Likert scale on a self-report measure. The scale purports to be an interval scale, but in so doing it assumes that persons filling out the survey read it as such, that is they interpret the qualitative difference between any two numbers to be the same as the difference between any two others. Parametric tests used to analyze the results are based upon the assumption that the scale is ordinal. As these tests were already weakened somewhat by skewness in the data, any further distortions could bias the results

A third limitation of the instrument has to do with what was actually measured versus what people in both research and management practice would like to know. The focus for commitment outcomes was on people's efforts in job performance, their membership intentions, and their desires to remain members. Most interested parties would like to

know the effect of commitment on actual job performance and actual participation decisions, i.e. turnover. Due to the methodology in this study, all conclusions rest on the assumption that relationships exist between people's effort and actual performance as well as between people's intentions and their actual decisions. Whereas a more inclusive approach would have had advantages, studies which have used such an approach incurred other limitations, the foremost having to do with the need for identifiable or coded responses. Additionally, because of the reluctance of managers in private organizations to release performance data on employees, these studies have involved largely the public and non-profit segments of organizations.

Finally there is the issue of causality. In any cross-sectional study, it is not possible to prove causality even using the power of linear structural analysis. The use of a self-report measure does not really affect this condition one way or the other. The fact is that without some longitudinal dimensionality in the study, one cannot say whether commitment affects the hypothesized outcomes or whether the kinds of behaviors characteristic of the outcomes actually produce a state of commitment. Based upon their own research and that of others, Mowday et al. (1982) concluded that the effects could be reciprocal, that is that commitment could affect behaviors which in turn would lead to increased levels of commitment. Salancik (1977) saw the

process as almost entirely behavioral, i.e. behaviors preceding commitment. Theory suggests that commitments precede the behaviors that serve to honor the commitments. This study used a model which was based upon this theory. However, this study only demonstrated that certain relationships appeared to exist. Anyone interested in building commitment in an organization would be wise not to ignore the behavioral approach outlined by Salancik (1977) which recognizes the powerful role that behaviors can play in affecting attitudes.

2. Limitations of the Variable Measures

This study, while not exploratory in nature, did attempt to cut new ground in the field of organizational commitment research. Because a major objective was to re-evaluate the ways in which commitment had previously been defined, it became necessary to use refined variable measures that fit with the findings from the first phase. Although many of the measures used borrowed heavily from existing measures, none had been previously used in entirety.

The reliability indices and the factor solutions seemed to indicate that all measures but two served as respectable measures of the variables which they purported to represent. Of the remaining two, one was dropped from the analysis and

the other - the "calculative commitment" scale - has already been discussed at length. Because all scales were based in part upon a series of interviews with corporation managers, the risk of a scale completely missing its objective was greatly reduced. The pre-test helped further strengthen the measures by weeding out many of the less reliable items.

Perhaps the question least settled has to do with the external validity of the "goal commitment" scale. Did this scale really represent commitment to the goals and values of the organization? An examination of the items in the scale would appear to so indicate. All but two items mentioned the word "goals" in some context. However, the scale did unexpectedly split into two factors, the smaller one reflective of a willingness to put self-interest aside. Apparently the scale was perceived to be comprised of two distinct concepts related to organizational goals.

3. Limitations of the Statistical Procedures

One of the noteworthy outcomes of the research was the difference in findings between the LISREL analysis and the SPSSx statistical procedures (correlation analysis, regression analysis). In weighing the differences, greater weight in terms of validity of findings was given the LISREL analysis. This preference was based upon a comparison of

the two statistical processes. In the SPSSx statistical procedures, variable scores represented a straight summation of selected item scores for each measure. No consideration was given to the relative value of each item in so far as it represented the construct, as indicated by prior factor analysis.

The LISREL analysis, on the other hand, took the raw data and attempted to reproduce a covariance matrix pre-established according to the hypotheses, seeking through an iterative process a best fit. In effect, LISREL used factor scores to describe relationships among variables which thereby apportioned greater weight to the questionnaire items which best measured each factor. This method, therefore, appeared to be more powerful in terms of data interpretation.

On the one hand, therefore, the use of LISREL appears to have made a critical contribution to the conclusions drawn from the study. Without LISREL, the conclusions become dramatically different. On the other hand, while greater confidence has been assigned to the LISREL results, it cannot be stated with complete confidence that the LISREL findings are superior to those of the correlation and regression analyses. The main reason for this has to do with whether or not the factor scores used in LISREL accurately reflect the intended construct. They only reflect the respondents' collective interpretation of the

various items that made up each construct. LISREL reported relationships among factors, not constructs. And these factors only include the common portion of variance of the items that made up each factor. We make the assumption that that common portion of variance is truly representative of the variable or construct in question. In addition, there were several instances of common variance between pairs of items that were necessary to account for through pairing of residuals in order to obtain a satisfactory fit of the data. The assumption made was that this variance was true error variance and did not include the construct in question.

The LISREL results are accepted for the following reasons: (1) an examination of the items used in the LISREL analysis appears to confirm that the items do reflect the intended concepts; (2) The portion of explained variance, as indicated by the squared multiple correlations for the items, was reasonably high (greater than .5) for all variables with one exception ("calculative commitment"); (3) the amount of variance explained by the correlated item residuals was generally small. Accounting for it in the model merely allowed for a clearer "picture" of what the data showed. Accordingly, it was felt that the use of LISREL helped provide great insight into the relationships between organizational commitment and its outcomes, with only minor limitations related to interpretation of the results.

D. Suggestions for Future Research

According to theory, organizational commitment offers an alternative approach both to employee motivation and management control apart from traditional forms associated with instrumental motivators (Gould, 1983; Wiener, 1981). Stemming from the "human resources" approach to management, this theory suggests that time and attention paid to building commitment among employees will pay off in economic terms. The committed employee is expected to give a superior performance at the job and to do so under conditions of loose supervision. The results herein provide support for this theory, particularly in the area of an individual's willingness to apply a high level of effort.

Two points have received substantial support in this study and can be used as bases for future research. These are: (1) that at least two different types of commitment exist with different motivational implications for each type; (2) that of these types, the form known as "affective commitment" seems to encompass the kinds of motivational outcomes related to effort and participation of most interest to researchers and practitioners.

These findings suggest two areas for future research. The first involves further investigation in the domain of commitment outcomes in order to verify causality between commitment and its hypothesized effects. Such research

would best utilize a longitudinal design in which both commitment and outcomes could be measured at different time periods. Even though such a design would still incur limitations such as those related to shifting degrees of commitment and performance due to other factors, it would help answer the question of whether commitment has a primary effect on desired "outcome" behaviors or whether the reverse scenario better accounts for the relationships observed in this study.

Such a finding would be of considerable use to management practitioners in helping identify where they should concentrate resources. In the event that employee behaviors were found to largely precede commitment, it would indicate that the effect of commitment was more on sustaining existing behaviors in the face of disruption rather than on encouraging new behaviors or higher levels of effort in support of the organization. The emphasis in building commitment, in such a case, should be highly behavioral - identifying and implementing techniques that would stimulate desired behaviors in such a way that the act of carrying out the behaviors would meet the three criteria outlined by Salancik (1977): visibility, irrevocability, and volitionality (of a behavior). If the reverse were more often the case - that desired behaviors followed commitment, as investigated in the current study - then organizational resources might better be directed towards programs and

policies designed to build employee affect and loyalty towards the organization.

In the meantime, the best theory as to direction of causality comes from Mowday et al. (1982) who provide some evidence to suggest that causality is reciprocal. Citing studies by Crampton et al. (1978) and Mowday & McDade (1980), they suggest that attitudinal commitment both causes behaviors and is affected by behaviors. If such is the case, then either of the above mentioned approaches would be worthy of further research aimed at investigating the strength of the causal effect in either direction.

The other direction for future research involves the topic of commitment development touched on in the preceding paragraph. As summarized by Mowday et al. (1982), considerable work has already been done in this area, though the focus has been mostly on individual factors and less on the process. Past research, as previously mentioned, has established categories of antecedents of "affective commitment" (Mowday et al., 1982). However, these static factors provide little insight as to the process by which commitment develops. As both Salancik (1977) and Mowday et al. (1982) have noted, it remains more important to examine the process by which commitment develops than to identify correlates such as "work experiences" and/or "personal characteristics". Because of the dynamic nature of the process of building commitment, a qualitative approach might

best fit the demands of this direction of research. A good starting point would be that noted by Brickman (1987) who said that commitment begins with the stimulus provided by positive, extrinsic rewards. Beyond that point, the sense of "affective commitment", found to be of motivational significance, can grow or stagnate and decline. Which course it takes may depend largely upon one's subsequent experiences in the organization and the relationship of experiences to expectations.

The minor amount of research conducted in phase one of this study pointed to increased levels of employee involvement in both job performance and planning as a means of extending this initial involvement. Persons who spoke in terms of an alternative approach to development noted that commitment follows from trust built upon a foundation of met expectations and agreements. Emphasis was placed both on antecedent factors - practices and policies which convey concern for people - and behavioral processes that would stimulate participation and involvement. For example group participation - teamwork building - was heavily cited as a means of increasing involvement and shifting people's focus to one of group-interest versus self-interest, or from personal perspective to "owner's perspective".

Thus the avenue of development seems to begin with a joining up process and proceeds as mutual trust is established and persons feel comfortable, safe, and

intrinsically rewarded through an increase in involvement and initiative. The particulars of what an organization's leaders can do to build this sense of trust while maintaining an efficient and effective complex of systems offer a rich field for organizational research.

E. Practical Implications of the Research

As mentioned in the introduction, an issue of ongoing concern to managers is employee motivation and control. In recent jargon, the term "owner's perspective" has emerged as a way to describe the outlook of the ideal employee. A person with an "owner's perspective" could be expected to perform a job, unsupervised, with all the extra attention, concern for detail, and tolerance of the unexpected as would a person whose financial future is directly linked to the company. For actual owners and their direct representatives, the managers, the challenge is to create or nurture such a perspective among the rank and file of employees. A body of employees so dedicated to the success of the organization would constitute one of the major factors of continuity and success in an increasingly turbulent and competitive world business environment.

The seemingly most obvious means of building an owner's perspective among employees is to share ownership through an ESOP or an employee buy-out. In reality, however, stock

ownership is often viewed less as ownership than as a cash bonus. After all, the employee's rarely acquire any actual decision power associated with ownership.* Another possibility is that the portion of stock becomes seen as one more "investment" in a firm, contributing to "calculative commitment", with little positive, motivational effect. The simple solution, therefore, is not necessarily the best.

The concept of organizational commitment offers a more difficult, more intangible alternative to the task of winning over employee's to the ideal perspective, but also a theoretically more enduring, dependable alternative. As the results here indicate, strong positive relationships appear to exist between the type of commitment known as "affective" and desirable outcome behaviors (motivation). Thus, the employee committed out of a sense of emotion or affective psychological attachment to an organization willingly adopts the attitudes and behaviors characteristic of someone with an "owner's perspective".

The results of this study do two things for managers and owners of organizations: (1) they provide strong evidence to suggest that a successful program in building employee commitment will likely pay off in terms of employee performance and retention. The word "likely" is used because the study investigated self-reported measures of both performance effort and intention to remain. Actual

*In cases where they have acquired power as well as ownership, such as Avis, results have often been very positive.

performance and actual extended tenure were not investigated. (2) they offer some rudiments of suggestions into the complex process of developing employee commitment. The first point has already been thoroughly addressed such that further comment would be redundant. Its main implications are that managers may proceed with programs designed to foster commitment with increased confidence and a sense of direction.

On the second point, one of the principal findings of this study - that "affective commitment" and not "goal commitment" best explains motivation and outcomes - may serve as a primary building block of any development program. Contrary to what persons interviewed in phase one felt, a focus on organizational goals may not be the best target for a development program. One reason may be that employees in an organization fully expect to be directed towards goals and results. This goal orientation then constitutes an expectation - a part of the exchange contract - that one assumes upon joining. Any programs designed to enhance employee awareness of or conscientiousness towards the goals and objectives of the organizations run the risk of being seen as attempts, or at worst manipulations, by managers to see that the company's interest in the contract is fulfilled no matter what.

This study suggests that commitment development should focus on building trust among employees as a means of

winning over both their "minds and hearts". Assuring employees that the company is concerned about their welfare and interests is one broad avenue of development repeatedly stressed in phase one. Sharing information and keeping employees informed of what managers are doing and why is another. These programs aim toward the "heart". Building a sense of identification with and "ownership" in plans and job designs was another means discussed in the first phase. These aim more towards the "mind". Programs aimed towards building a sense of cooperation and teamwork, getting persons to identify their personal interests with those of a larger group, were also discussed. These techniques, when successfully implemented, seem to target both heart and mind - the affect associated with trust and comradery and the cognition associated with the sharing of ideas and joining of mental forces.

Quite obviously these general suggestions serve only as beginning guideposts for any organization interested in commitment development. But by serving to orient managers so interested, they help prevent the design of poorly conceived, short-term oriented policies while pointing out the kinds of policies and policy objectives that managers are likely to encounter in researching and planning a high quality commitment development program.

APPENDICES

APPENDIX A

DEFINITIONS OF ORGANIZATIONAL COMMITMENT

- A partisan, affective attachment to the goals and values of an organization, to one's role in relation to goals and values, and to the organization for its own sake, apart from its instrumental worth. (Buchanan, '74 p.533)
- The binding of the individual to behavioral acts (Kiesler & Sakumura, '66 p.349)
- The willingness of social actors to give their energy and loyalty to social systems, the attachment of personality systems to social relations which are seen as self-expressive. (Kanter, '68 p.499)
- An attitude or an orientation toward the organization which links or attaches the identity of the person to the organization (Sheldon, '71 p.143)
- "Side-bets": commitments come into being when a person by making a "side-bet", links extraneous interest with a consistent line of activity (Becker, '60 p.32)
- A structural phenomenon which occurs as a result of individual-organizational transactions and alterations in side-bets or investments over time. (Hrebiniak & Alutto, '72 p.555)
- The nature of the relationship of the member to the system as a whole (Grusky, '66 p.489)
- (a) a belief in and acceptance of organizational goals and values, (b) a willingness to exert effort towards organizational goals and values, and (c) a strong desire to maintain organizational membership (Mowday, Porter, & Steers, '79 p.27)
- A state of being in which an individual becomes bound by his actions and through these actions to beliefs that sustain the activities and his own involvement. (Salancik, '77 p.62)
- A stabilizing force that acts to maintain behavioral direction when expectancy/equity are not met and do not function. (Scholl, '81 p.593)
- Commitment is defined as the ability to believe in the truth, importance, and interest value of what one is doing. (Kobasa, '82 p.708)

APPENDIX B

AFFECTIVE COMMITMENT SCALES

I. Organizational Commitment Scale (Mowday et al '79)

1. I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.
2. I talk up this organization to my friends as a great organization to work for.
3. I feel very little loyalty to this organization.
4. I would accept almost any type of job assignment in order to keep working for this organization.
5. I find that my values and the values of this organization are very similar.
6. I am proud to tell others that I am a part of this organization.
7. I could just as well be working for a different organization as long as the type of work were similar.
8. This organization really inspires the best in me in terms of job performance.
9. It would take very little change in my present circumstances to cause me to leave this organization.
10. I am extremely glad that I chose this organization to work for over others that I was considering at the time I joined.
11. There's not much to be gained by sticking with this organization indefinitely.
12. Often I find it difficult to agree with this organization's policies on important matters relating to its employees.
13. I really care about the fate of this organization.
14. For me, this is the best of all possible organizations for which to work.
15. Deciding to work for this organization was a definite mistake on my part.

cont., next page

APPENDIX B - Continued

II. Affective Commitment Scale (Meyer and Allen '84)

1. I do not feel a strong sense of belonging to this organization.
2. I do not feel "emotionally attached" to this organization.
3. This organization has a great deal of personal meaning for me.
4. I do not feel like "part of the family" at this organization.
5. I would be very happy to spend the rest of my career with this organization.
6. I enjoy discussing my organization with people outside it.
7. I really feel as if this organization's problems are my own.
8. I think I could easily become as attached to another organization as I am to this one.

III. Identification and Internalization Scale
(O'Reilly & Chatman'86)

1. If the values of this organization were different, I would not be as attached to this organization.
2. Since joining this organization, my personal values and those of the organization have become more similar.
3. The reason that I prefer this organization to others is because of what it stands for, its values.
4. My attachment to this organization is primarily based on the similarity of my values and those represented by the organization.
5. What this organization stands for is important to me.
6. I am proud to tell others that I am a part of this organization.

cont., next page

APPENDIX B - Continued

7. I talk up this organization to my friends as a great organization to work for.
8. I feel a sense of "ownership" for this organization rather than being just an employee.

APPENDIX C

CALCULATIVE COMMITMENT SCALES

I. Continuance Commitment Scale (Meyer and Allen '84)

1. Right now, staying with this organization is a matter of necessity as much as desire.
2. One of the main reasons that I continue to work for this organization is that leaving would require considerable personal sacrifice - another organization may not match the overall benefits I have.
3. I feel I have too few options to consider leaving this organization.
4. One of the few negative consequences of leaving this organization would be the scarcity of available alternatives.
5. It would be very hard for me to leave my organization right now, even if I wanted to.
6. Too much in my life would be disrupted if I decided to leave my organization now.
7. It wouldn't be too costly for me to leave my organization in the near future.
8. I am not afraid of what might happen if I quit my job without having another one lined up.

II. Investment Scale (Rusbult and Farrel '83)

1. In general, how much have you invested in this job?
2. All things considered, to what extent are there activities/ events/ persons/ objects/ associated with your job that you would lose if you were to leave?
3. How does your investment in this job compare to what most people have invested in their jobs?

APPENDIX D

QUESTIONNAIRE

Part I: Commitment Variables

A. Affective Commitment

1. I am extremely glad that I chose this organization to work for over others that I was considering at the time I joined.
2. Deciding to work for this organization was a definite mistake on my part.
3. I find that my values and the values of this organization - what it stands for and pursues - are very similar.
4. I feel very little loyalty to this organization.
5. I really care about the future of this organization.
6. There's not too much to be gained by sticking with this organization indefinitely.
7. It gives me a good feeling to know that I am a contributing member of this organization.
8. I feel a strong sense of belonging to this organization.
9. This is an organization that a person can trust to keep its word on important matters related to its employees.
10. I find meaning in my work here that would be hard to find at some other organization.
11. This is a good organization to be with for the long term.
12. I frequently like to imagine myself working someplace else.

B. Calculative Commitment

1. My life would be seriously disrupted if I decided to leave this organization now.
2. There is not much, other than personal choice, that binds me to this organization.

cont., next page

APPENDIX D - Continued

- 3. My continued connection to this organization is to a large extent affected by the difficulty of leaving.
- 4. Since being with this organization, I have acquired valuable knowledge about how to succeed here which would be lost if I were to leave.
- 5. One of the main reasons that I continue to work for this organization is that leaving would mean a major loss of acquired benefits.
- 6. I have a lot at stake in this organization.
- 7. I (and/or my immediate family) feel a strong attachment to the community in which I (we) live.
- 8. It would be difficult for me, for a number of reasons, to have to move to a new community.
- 9. To what extent have you received specific and non-transferable job training while at this organization?
- 10. All things considered, to what extent are there activities/ events/ persons/ objects/ benefits associated with your job that you would lose if you were to leave?

C. Investment Measures

1. How many years have you been with this organization?

less than 1 year _____	5 - 10 years _____
1 - 2 years _____	10 - 20 years _____
3 - 5 years _____	over 20 years _____

2. How many vacation days per year, not including regular holidays, are you currently allowed? (#days _____)

3. Do you participate in a company savings plan?

yes _____ no _____

4. Do you participate in an Employee Stock Ownership Plan?

yes _____ no _____

APPENDIX D - Continued

5. What is your age?

under 20 _____	35 - 39 _____	55 - 59 _____
20 - 24 _____	40 - 44 _____	60 - 64 _____
25 - 29 _____	45 - 49 _____	over 64 _____
30 - 34 _____	50 - 54 _____	

6. Do you own the house (condominium/ co-op) you now live in?

yes _____ no _____

7. Sex: M _____ F _____

8. Marital Status:

single _____

married _____

single sharing living quarters with partner _____

9. Does your spouse or partner also hold a full-time job?

yes _____ no _____ not applicable _____

10. How many children do you have between the ages of 6 and 18 (inclusive) living at home? (circle one number)

0 1 2 3 4 more than 4

Part II. Performance VariablesA. Voluntary Effort

1. I am willing to put forth extra effort in order to help this organization be successful.
2. I work hard in my job here, not just for what it will get for me but for what it will do for the organization as a whole.
3. I am willing to put in extra time and effort in my job here to see that it is done right.
4. As a "team player" for this organization, I'm willing to put my own interests aside when it comes to doing something that will help the entire "team" (department, work-group, office).

cont., next page

APPENDIX D - Continued

5. I see no reason to expend extra effort on behalf of this organization unless I am rewarded for it in some way.
6. As far as I'm concerned, there's no point in working harder than necessary to get your basic job done.
7. I try to anticipate and avoid situations where I will have to do more than my job calls for.
8. I believe in cutting corners wherever possible to avoid having to put in extra time and effort on a particular job or project.

B. Quality Consciousness

1. For me, an important part of doing a job is seeing to it that the job is done right.
2. I feel personally dedicated to helping this organization turn out the best products possible.
3. I see no reason to pay special attention to details of quality, unless I get directly rewarded for it.
4. I never knowingly allow a substandard part, product, or piece of work to leave my area of responsibility (unless it has been so noted).

C. Pro-social Behavior

1. I tend to volunteer for tasks in this organization that are not part of my normal job requirements.
2. I like to make suggestions and comments on how to improve or correct any deficiencies I note associated with this organization.
3. I am generally willing to attend functions that are not required but which benefit the organization in some way.
4. I go out of my way to help others in the organization.
5. I am willing to help a new employee get acquainted with the organization and how things are done here.
6. I am reluctant to help others if it means that I may have to work late to complete my own work.

cont., next page

APPENDIX D - ContinuedD. Expressed Loyalty

1. I am proud to tell outsiders that I am a part of this organization.
2. I would not advise someone who was looking for a good job to try to find employment here.
3. I talk up this organization to friends as a great place to work.
4. I am willing to speak up for this organization outside of work.
5. If someone asks me about this company's reputation, I emphasize the positives.
6. I would be glad to help in recruiting new employees for this organization.

Part III: Participation VariablesA. Intent to Remain

1. I anticipate staying with this organization at least for the next several years.
2. I anticipate staying with this organization until retirement.
3. I have no plans to actively search for job alternatives in the near future.
4. For better or for worse, I am with this organization as long as there's a job for me here.
5. How likely is it that you will be with this organization 6 months from now?
6. How likely is it that you will be with this organization next year?
7. How likely is it that you will be with this organization 5 years from now?

cont., next page

APPENDIX D - ContinuedB. Desire to Remain

1. If this organization were to suffer a business downturn, would you stay with the firm?
2. If you were offered a similar job with a slight increase in pay at a different organization in this area, would you accept?
3. If some organization were to offer you a more appealing job at your current salary, would you accept?
4. If you had the chance to move to a similar job at about the same pay but in a more dynamic, growth-oriented organization, would you take it?
5. If you were offered a similar job at about the same pay but in a more preferred geographic location, would you accept?
6. If you won the state lottery and were awarded an annual payment for the next 20 years equal to 1/2 your current salary, would you leave your current job?

C. Search Behavior

1. In the past year, have you talked with or consulted a job placement service of any kind about finding another job?

yes _____ no _____ If "yes", on how many occasions? _____

2. In the past year, have you seriously examined the classified job ads or any other job listings to see what possibilities might exist for you?

yes _____ no _____ If "yes", how often?

(write in whichever number is most appropriate)

times per week _____

times per month _____

times per year _____

3. Within the past year, have you seriously considered leaving this organization?

yes _____ no _____ If "yes", how often? _____ times

cont., next page

APPENDIX D - Continued

4. Within the past year, have you inquired or discussed with friends, relatives, acquaintances the possibility of your working elsewhere?

yes _____ no _____ If "yes", on how many occasions? _____

5. Approximately how much total time have you spent in the past year searching for an alternative job?

(write in whichever number is most appropriate)

none _____

hours _____

days _____

Part IV: Moderator Variable: Job Alternatives

1. I'm lucky in that there are a lot of jobs in the local environment, comparable to or better than this one, that I could obtain rather easily.
2. If order for me to change jobs without a downward move, I would have to move to a different community or part of the country.
3. In general, there is a scarcity of available, alternative jobs these days for someone with my background and skills.
4. All in all, what is the likelihood that you could find a comparable or better job in another company without moving?
5. All in all, what is the likelihood that you could find a comparable or better job in another company if you were willing to relocate?
6. Given your age, education, occupation, and the general economic conditions, what do you feel your chances are of finding a suitable position in some other organization?

cont., next page

APPENDIX D - ContinuedPart V: Goal Commitment

1. I believe in and fully accept the goals and plans of this organization as they affect me and my job requirements.
2. As far as I'm concerned, my personal goals come before company or departmental goals.
3. Whether or not I make a career with this organization, I will give top priority to the goals of the organization, even ahead of personal goals, as long as I am here.
4. I frequently find myself at odds with the plans, goals, and policies of my department.
5. I am generally willing to put my self-interest aside when it comes to furthering the goals and objectives of my department or division.
6. In my present position, I feel I am able to meet both my personal goals and those of my organization.
7. I am proud of the contributions I make, through my job, to the achievement of company goals.
8. To what extent do you personally identify with the goals, plans, and policies set forth within your department/division?
9. To what extent are your beliefs about how this organization should be run similar to those of your manager?
10. To what extent have clear-cut expectations concerning your job role at this organization been set forth to you?
11. To what extent do you privately accept these expectations as realistic or valid?
12. To what extent do you feel a good match exists between your goals and those of your organization in your current job?

APPENDIX E

ITEM AND SCALE SCORE FREQUENCIES

1. Affective Commitment	Mean	Std Dev	Median
AC1	5.69	1.28	6
AC2	6.15	1.35	7
AC3	4.86	1.44	5
AC4	5.45	1.79	6
AC5	6.04	1.30	6
AC6	4.81	1.98	6
AC7	5.86	1.32	6
AC8	4.98	1.58	5
AC9	4.01	1.84	4
AC10	4.05	1.79	4
AC11	4.92	1.53	5
AC12	4.39	1.82	4

Average AC1 to AC12 5.10 1.11 -
 Skewness: -.563 sig(.002)

2. Goal Commitment	Mean	Std Dev	Median
GO1	4.82	1.57	5
GO2	3.47	1.78	3
GO3	4.17	1.86	4
GO4	4.62	1.62	5
GO5	4.82	1.47	5
GO6	5.13	1.60	6
GO7	6.08	1.04	6
GO8	4.70	1.40	5
GO9	4.35	1.52	5
GO10	4.10	1.71	4
GO11	4.30	1.57	4
GO12	4.45	1.51	5

Average GO1 to GO12 4.58 .97 -
 Skewness: -.163 sig(.50)

APPENDIX E - Continued

3. Calculative Commitment	Mean	Std Dev	Median
CC1	4.42	1.90	5
CC2	4.40	1.86	5
CC3	3.50	1.88	3
CC4	3.27	1.79	3
CC5	3.84	2.03	4
CC6	4.52	1.71	5
CC7	5.17	1.81	6
CC8	4.58	2.11	5
CC9	3.46	1.73	3
CC10	4.15	1.51	4
Average CC1 to CC10	4.13	.90	-
Skewness: -.167	sig(.50)		
4. Voluntary Effort	Mean	Std Dev	Median
VE1	6.06	1.02	6
VE2	5.76	1.22	6
VE3	6.25	.921	6
VE4	5.70	1.09	6
VE5	5.36	1.68	6
VE6	6.03	1.29	6
VE7	6.03	1.23	6
VE8	6.18	1.24	7
Average VE1 to VE8	5.92	.85	-
Skewness: -.996	sig(.002)		
5. Quality Consciousness	Mean	Std Dev	Median
QC1	6.57	.70	7
QC2	6.08	1.05	6
QC3	6.25	1.31	7
QC4	6.02	1.56	7
Average QC1 to QC4	6.23	.75	-
Skewness: -1.099	sig(.002)		
6. Pro-Social behavior	Mean	Std Dev	Median
PB1	4.75	1.55	5
PB2	5.57	1.28	6
PB3	5.16	1.32	5
PB4	5.78	.95	6
PB5	6.22	.95	6
PB6	5.82	1.42	6
Average PB1 to PB6	5.55	.802	-
Skewness: -.492	sig(.002)		

cont., next page

APPENDIX E - Continued

7. Expressed Loyalty	Mean	Std Dev	Median
EL1	6.04	1.15	6
EL2	5.11	1.97	6
EL3	4.88	1.72	5
EL4	5.58	1.34	6
EL5	5.79	1.20	6
EL6	5.20	1.69	6
Average EL1 to EL6	5.43	1.25	-
Skewness: -.613	sig(.002)		
8. Intent to Remain	Mean	Std Dev	Median
IR1	5.53	1.52	6
IR2	4.35	1.89	4
IR3	4.45	2.14	5
IR4	3.89	2.02	4
IR5	6.38	.98	7
IR6	6.06	1.25	7
IR7	4.61	1.84	5
Average IR1 to IR7	5.04	1.31	-
Skewness: -.528	sig(.002)		
9. Desire to Remain	Mean	Std Dev	Median
DR1	5.09	1.44	5
DR2	4.59	1.69	5
DR3	4.24	1.75	4
DR4	3.91	1.64	4
DR5	4.50	1.76	5
DR6	5.11	1.89	6
Average DR1 ro DR6	4.58	1.21	-
Skewness: -.251	sig(.20)		
10. Search Activity	Mean	Std Dev	Median
SB1	.28	.45	-
SB2	.40	.49	-
SB3	.38	.49	-
SB4	.48	.50	-
SB5	.40	.49	-
Average SB1 to SB5	.39	.39	-
Skewness: .380	sig(.02)		

cont., next page

APPENDIX E - Continued

11. Search Frequency	Mean	Std Dev	Median
SF1	1.63	1.14	1
SF2	1.91	1.27	1
SF3	1.83	1.23	1
SF4	2.02	1.26	1
SF5	1.97	1.37	1

Average SF1 to SF5 1.85 .97 -
 Skewness: .900 sig(.002)

12. Job Alternatives	Mean	Std Dev	Median
JA1	3.41	1.72	3
JA2	4.66	1.92	5
JA3	4.82	1.88	6
JA4	4.52	1.62	5
JA5	5.70	1.38	6
JA6	5.56	1.32	6

Average JA1 to JA6 4.79 1.15 -
 Skewness: -.268 sig(.10)

APPENDIX F

SCALE ITEMS RETAINED FOLLOWING INITIAL DATA ANALYSIS

1. Affective Commitment Scale

AC1 AC2 AC3 AC4 AC5 AC6 AC8 AC11 AC12

2. Goal Commitment Scale

G02 G03 G04 G05 G06 G08 G09 G010 G011 G012

3. Calculative Commitment Scale

CC1 CC5 CC6 CC7 CC8 CC10

4. Voluntary Effort Scale

OE1 OE2 OE3 OE4 OE5

5. Quality Consciousness Scale

OQ1 OQ4

6. Pro-Social Behavior Scale

PB1 PB2 PB3 PB4 PB5

7. Expressed Loyalty Scale

EL1 EL2 EL3 EL4 EL5 EL6

8. Intent to Remain Scale

IR1 IR2 IR5 IR6 IR7

9. Desire to Remain Scale

DR2 DR3 DR4 DR5

10. Search Activity Scale

SA1 SA2 SA3 SA4 SA5

11. Search Frequency Scale

SF1 SF2 SF3 SF4 SF5

12. Job Alternatives Scale

JA1 JA2 JA3 JA4 JA5 JA6

APPENDIX G

ANALYSIS OF VARIANCE OF CALCULATIVE COMMITMENT AND JOB ALTERNATIVES ON PARTICIPATION VARIABLES

I. "Intent to Remain"
by "Calculative Commitment" and "Job Alternatives"

Source of Variation	Sum of Squares	DF	Mean Square	F	Sig.
Main Effects	58.60	11	5.33	3.63	.001
"Calculative Commitment"	50.30	5	10.06	6.85	.001
"Job Alternatives"	2.88	6	.48	.33	.922
2-way Interaction "Calculative Commitment" + "Job Alternatives"	29.34	20	1.47	1.00	.465
Explained	87.94	31	2.84	1.93	.004
Residual	317.29	216	1.47		
Total	405.23	247	1.64		

II. "Desire to Remain"
by "Calculative Commitment" and "job Alternatives"

Source of Variation	Sum of Squares	DF	Mean Square	F	Sig.
Main Effects	53.18	11	4.84	2.55	.005
"Calculative Commitment"	30.72	5	6.15	3.24	.008
"Job Alternatives"	20.76	6	3.46	1.82	.096
2-way Interaction "Calculative Commitment" + "Job Alternatives"	32.22	20	1.61	.85	.652
Explained	85.41	31	2.76	1.45	.067
Residual	409.81	216	1.90		
Total	495.22	247	2.01		

APPENDIX H

MULTIPLE REGRESSION OF CALCULATIVE COMMITMENT AND JOB
ALTERNATIVES ON INTENT TO REMAIN
(all variables entered)

Dependent Variable: "intent to remain".

Variable entered step 1: "calculative commitment"

R²: .145
Adjusted R²: .142
Beta: .381
F Significance: .001

Variable entered step 2: "job alternatives"

R²: .146
Adjusted R²: .140
Change in R²: -.02
Beta: -.037
F Significance: .001

Variable entered step 3: "calculative commitment" x "job
alternatives"

R²: .150
Adjusted R²: .139
Change in R²: -.01
Beta: .304
F Significance: .001

APPENDIX I

LISREL RESULTS: TWO-STAGE APPROACH

I. Constructs and Items Indicators used in LISREL

- | | |
|---|--|
| 1. Affective Commitment
AC1 AC2 AC4 AC6 AC8 AC11 | 5. Pro-Social Behavior
PB1 PB2 PB3 PB4 |
| 2. Goal Commitment
GO4 GO9 GO10 GO11 GO12 | 6. Expressed Loyalty
EL1 EL4 EL5 EL6 |
| 3. Calculative Commitment
CC1 CC2 CC6 CC10 | 7. Intent to Remain
IR1 IR2 IR5 IR6 IR7 |
| 4. Voluntary Effort
VE1 VE2 VE3 VE4 VE5 | 8. Search Activity
SA1 SA2 SA3 SA4 |

II. Items with Paired Residuals

A. Theta Delta Matrix

AC2 - AC1	AC6 - AC1	GO11 - GO10	CC2 - AC6	CC10 - CC2
VE3 - VE2	EL1 - VE4	EL6 - PB3	IR1 - VE2	IR2 - VE4
IR1 - EL6	IR2 - IR1	IR6 - IR5	IR7 - IR2	IR5 - IR1
IR6 - IR1	IR5 - IR2	IR6 - IR2	IR7 - IR5	IR7 - IR6
CC10 - CC2	AC8 - VE3	GO12 - PB2	CC10 - PB4	CC6 - VE2
AC8 - IR1	CC6 - IR2	AC1 - IR7	GO4 - PB3	

III. Measurement Model Results

A. Phi Matrix (Factor correlations)

	VE	PB	EL	IR	SB	AC	GO	CC
VE	1.00							
PB	.68	1.00						
EL	.63	.51	1.00					
IR	.41	.21	.45	1.00				
SB	-.31	-.12	-.53	-.67	1.00			
AC	.58	.50	.79	.60	-.61	1.00		
GO	.49	.32	.68	.45	-.51	.70	1.00	
CC	.28	.26	.35	.61	-.41	.47	.37	1.00

B. Overall Model Evaluation

Chi-Square with 573 d.f. = 580.8 (prob. level = .402)
 Goodness-of-Fit Index = .891
 Root Mean Square Residual = .109

APPENDIX I - Continued

C. Squared Multiple Correlations for Item Indicators

AC1	AC2	AC4	AC6	AC8	AC11			
.70	.58	.31	.37	.59	.67			
GO4	GO9	GO10	GO11	GO12	CC1	CC2	CC6	CC10
.39	.41	.39	.50	.52	.46	.15	.29	.18
VE1	VE2	VE3	VE4	VE5	PB1	PB2	PB3	PB4
.79	.67	.44	.51	.30	.47	.40	.38	.28
EL1	EL4	EL5	EL6					
.72	.69	.52	.73					
IR1	IR2	IR5	IR6	IR7	SB1	SB2	SB3	SB4
.81	.54	.58	.72	.62	.53	.39	.59	.55

IV. Structural Model Results

A. Gamma Matrix: Beta coefficients

	Affec. Commitment	Goal Commitment	Calc. Commitment
VE	.466	.159	-
PB	.538	-.062	-
EL	.613	.246	-
IR	.383	-	.445
SA	-.432	-.135	-.169

B. Gamma Matrix T-Values

	Affec. Commitment	Goal Commitment	Calc. Commitment
VE	6.44*	2.21*	-
PB	7.01*	-.806	-
EL	11.53*	4.636*	-
IR	7.49*	-	9.06*
SA	-6.21*	-2.21*	-3.11*

* significant at P=.05

cont., next page

APPENDIX I - Continued

C. Overall Model Evaluation

Chi-Square with 7 d.f. = 8.18 (prob. level = .320)

Goodness-of-Fit Index = .992

Root Mean Square Residual = .016

D. Squared Multiple Correlations for Structural Equations
(percent of explained variance)

VE	PB	EL	IR	SB
.344	.250	.648	.500	.401

APPENDIX J

LISREL RESULTS: SINGLE-STAGE APPROACH

I. Items with Paired Residuals

Theta Delta Matrix (exogenous variables)

AC2 - AC1 AC6 - AC1 GO11 - GO10 CC2 - AC6
 CC2 - AC11 CC10 - CC1 CC10 - CC2

Theta Epsilon Matrix (endogenous variables)

VE3 - VE2 PB3 - VE3 EL1 - VE4 EL5 - PB3 EL6 - PB3
 IR1 - VE2 IR1 - VE3 IR2 - VE4 SB4 - VE5 IR7 - PB4
 SB1 - EL1 IR1 - EL6 IR2 - IR1 IR6 - IR5 IR7 - IR2
 SB1 - EL6

II. Gamma Matrix: Beta coefficients

	Affec. Commitment	Goal Commitment	Calc. Commitment
VE	.463	.145	-
PB	.525	-.026	-
EL	.589	.246	-
IR	.260	-	.597
SB	-.382	-.114	-.241

III. Gamma Matrix T-tests

	Affec. Commitment	Goal Commitment	Calc. Commitment
VE	4.46*	1.41	-
PB	4.08*	-.22	-
EL	6.38*	2.73*	-
IR	2.01*	-	2.89*
SB	2.90*	1.17	1.70

*significant P=.05

IV. Overall Model Evaluation

Chi-Square with 581 d.f. = 608 (prob. level = .21)
 Goodness-of-Fit Index = .886
 Root Mean Square Residual = .009

IV. Squared Multiple Correlations for Structural Equations
 (percent of explained variance of endogenous variable)

	VE	PB	EL	IR	SB
	.332	.257	.615	.619	.422

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