THE ANTECEDENTS AND CONSEQUENCES OF PERSONAL CONTROL

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ABSTRACT

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The purpose of this study was to increase our understanding of the construct of personal control in organizations. Personal control was defined as one's perception of freedom in and control over work activities, events and outcomes. The important antecedents and consequences of the three dimensions of control (i.e. outcome control, activity control and perceived influence) were identified in a review of the research literature and used to develop and test a mediational model of personal control in a field setting.

Questionnaire responses of 423 faculty (24 percent return rate) and 655 clerical workers (40 percent return rate) were analyzed using correlation and regression analyses. An examination of the personal control scale intercorrelations and their pattern of correlations with the antecedent and outcome variables supported the multidimensional conceptualization of personal control.

The importance of personal control was demonstrated by the high correlations between the personal control scales and the outcome variables (e.g. satisfaction, psychological strain and turnover intention). Further, the multidimensional conceptualization of personal control explained more

variance in the outcome variables than any of the personal control scales alone. However, only partial support was found for the mediational model of personal control.

Finally, the limitations, as well as the theoretical and practical implications of the study, were discussed and recommendations were made regarding future research involving personal control.

To Laura
and in memory of my grandmother, Florence McCune

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CHAPTER I

INTRODUCTION

The Importance of Control

Theorists and researchers have long attested to the importance of the feeling of control. Angyal (1941) proposed that human beings have a tendency toward self-determination in that they strive to resist external influences and attempt to control the physical and social forces in their environment. Woodworth (1958) observed that individuals seem to exert a great deal of effort toward producing effects on their environment even when these effects do not satisfy basic needs. Drawing on the work of Anygal and Woodworth, White (1959) theorized that individuals have an innate need to strive for "competence" through effective interactions with their environment. According to White, when individuals are able to produce changes in their environment, they experience feelings of satisfaction and efficacy. May (1972) asserted that one needs a sense of mastery over one's fate to maintain feelings of self-esteem and well-being. Thus, the perception of control has been theorized to be an important human need or value that is necessary for one's sense of well-being.

Laboratory researchers have demonstrated the importance of control with a variety of different research paradigms. Overmier and Seligman (1967) found that laboratory animals exposed to inescapable electric shocks exhibited a severe aversive affective and behavioral reaction (i.e. learned

helplessness). Several different types of manipulations have been used to elicit the learned helplessness reaction, including long periods of restraint and monotony, punishment of an appetitive response, and punishment of mistakes on insoluble problems (Mineka and Kihlstrom, 1978). The factor common to all of these manipulations involves the organism's loss of the ability to control an important environmental outcome. The explanation most often offered for these results is that the organism learns it cannot control (i.e. avoid or escape) the aversive events, and even when environmental contingencies change making control possible, the organism does not recognize the change in contingency and passively accepts its fate. Thus, the animal learns it is "helpless."

Researchers have also investigated the learned helplessness phenomena with human subjects. Fosco and Geer (1971) manipulated the amount of control that their subjects had by varying the number of insoluble problems each one received. Subjects were administered an electric shock for each problem they were unable to solve. Thus, the high-control groups were able to avoid more shocks than the low-control groups. The results indicated that the low-control groups performed significantly poorer on soluble problems given after the experimental manipulation than the high-control groups. In similar studies, low-control subjects reported feeling frustrated and helpless (Roth and Bootzin, 1974); and helpless, passive and hostile (Krantz, Glass and

Snyder, 1974). Thus, laboratory research with both animals and humans indicates that exposure to low-control environments can result in negative affective and behavioral reactions.

The learned helplessness research, while demonstrating the negative effects of low-control environments, provides little direct evidence of the importance of individuals' feelings of control (i.e. personal control). Geer, Davidson and Gatchel (1970) investigated the effects of personal control in a study ostensibly designed to measure subjects' reaction times. In the first phase of the experiment, subjects were told to press a button at the onset of receiving a painful 6-second electric shock. In the second phase, the perceived control group was told that the duration of the electric shock would be decreased if they were able to decrease their reaction time. The control group was told that the duration of the electric shock would be decreased for the remainder of the study. The duration of the electric shock was reduced to 3 seconds for both groups in the second phase of the experiment. The results indicated that the perceived control group had significantly lower levels of autonomic arousal in the second phase than did the control group. Thus, the belief that one is able to modify or reduce the occurrence of an aversive event, whether or not that belief is true, appears to ameliorate the effects of aversive stimulation.

Other researchers have investigated the positive ef-

fects of perceived control over aversive events. Glass and Singer (1972) manipulated perceived control by informing the perceived-control group that they could terminate the occurrences of highly aversive noise for the remainder of the session by pushing a button. The control group was provided no such button or instructions. The researcher asked the perceived-control group not to use the button (and few did), so the button represented potential control. The results indicated that the perceived-control group had higher performance levels on proofreading tasks and reduced physiological reactions to the noise. In a similar study, Pennebaker, Burham, Schaeffer and Harper (1977) found that the perceived-control group reported fewer physical symptoms than the control group reported. These results provide evidence of the importance of perceived control to individuals' performance and well-being.

In sum, the perception of control over one's environment has been theorized to be an important human need. Further laboratory researchers have demonstrated the negative effects of exposure to low-control environments, as well as the positive effects of individuals' perceived control over aversive events. These research results suggest that personal control could be an important variable in understanding organizational behavior.

Organizational Research

The concept of control has assumed a somewhat different meaning in organizational research than the one used by

psychological theorists and laboratory researchers. Tannenbaum (1962) defined control as any process in which an individual, group or organization determines (i.e. intentionally affects) what another individual, group or organization will do. In contrast, Tannenbaum conceptualized freedom as the extent to which an individual determines his or her own behavior. Using Tannenbaum's terms, the psychological theorists and laboratory researchers, for the most part, defined control as freedom. The organizational researchers, in contrast, define control as control.

Organizational researchers tend to view control from the organization's perspective in the sense that organizations attempt to control the activities and outcomes of its organizational members (Ouchi and Maguire, 1975). The purpose of organizational control is to maintain order, coordinate activities, ensure conformance to rules and facilitate achievement of organizational goals (Tannenbaum, 1962). The traditional management approach has been to direct and control employees as much as possible to ensure a stable and certain work flow. Time clocks, regulations, close supervision and simplified jobs are among the methods utilized to achieve stability and control. Thus, the control of organizational members is an accepted and necessary function of management.

A trend toward allowing employees greater discretion, however, has developed over the past three decades. Lawler (1976) has warned that some organizational control systems can produce dysfunctional effects, including employee re-

sistance to the programs, rigid bureaucratic behavior, and strategic behavior. In his study of alienation in organizations, Blauner (1964) found that bureaucratization, centralization and rigid rules led workers to perceive little control over the methods they use to do their work, resulting in a sense of powerlessness and alienation. Drawing on Blauner's research results and generalizing from the learned helplessness research conducted with both animal and human subjects, Martinko and Gardner (1982) developed a model of the determinants of organizationally induced helplessness (OIH). The OIH model proposes that certain organizational conditions, including centralized decision making, noncontingent reward systems, unrealistic work goals and low-scope jobs, are primary determinants of passive and maladaptive behavior in organizations. Thus, considerable evidence suggests that too much organizational control and not enough freedom in organizations may result in negative affective and behavioral reactions among organizational members.

The importance of control in organizations, however, is not limited to the proposal that excessive control produces aversive effects among organizational members. Humanistic theorists have argued for a more democratic or participative style of management to provide workers with the opportunity to satisfy higher order needs on the job (Likert, 1961; McGregor, 1960). Further, organizational researchers have recommended increasing the amount of control employees have over a variety of work functions, in-

cluding decision-making operations (Vroom, 1960), the setting of performance goals (French, Kay and Meyer, 1966), the selection of work methods and work pace (Hackman and Oldham, 1980) and the choice of work rewards (Lawler, 1971, 1981). Several popular organizational development techniques (e.g. quality circles and semi-autonomous work groups) provide workers with increased control over their worklives (French and Bell, 1984). Some countries have even adopted legislation mandating organizations to establish work councils and other participative work structures (Jenkins, 1973).

In sum, a trend away from excessive organizational control of employees has developed along with a tendency for organizations to provide greater freedom for its members.

It seemed likely that this trend toward increased freedom and control for organizational members would be accompanied by an increased awareness and concern for organizational members' perception of control over their work environment (i.e. personal control). This does not appear to be the case. Despite the centrality of personal control in this trend, little research involving individuals' perception of control has been conducted in organizations. The importance imputed to perceived control by psychological theorists and laboratory researchers further suggests the need for more research involving personal control. The present study will focus on the elucidation of the construct of personal control in organizations.

Personal Control in Organizations

A major problem impeding the research involving control is the variety of different meanings used to define personal control. Personal control will be defined in this study as an individual's perception of freedom in, and control over his or her immediate environment. This definition combines aspects of White's (1959) need for competence, Tannenbaum's (1962) definition of freedom and the laboratory researcher's conceptualization of personal control (e.g. Glass and Singer, 1972). In an organization, personal control would likely include one's perception of freedom from the control of others, as well as his or her perception of control over work activities, materials and the rewards received for work.

While this definition of personal control provides a useful starting point, it is not sufficiently detailed for it to be operationalized. Several theorists, however, have developed well-defined conceptualizations of related variables--perceived freedom (Steiner, 1970) and personal control (Bazerman, 1982). Perceived freedom is comprised of two independent dimensions--perceived outcome freedom and perceived decision freedom. Perceived outcome freedom involves one's judgment of the availability and desirabiltiy of the outcomes he wishes to obtain. Perceived decision freedom concerns one's perception of volition when deciding whether or not to seek a specific outcome and when choosing whether to seek one outcome rather than another. Steiner

(1970) viewed perceived freedom from an exchange theory perspective and proposed that high perceived freedom existed when an individual perceived that his or her desired activities and outcomes were unimpeded by the necessity to expend energy or endure social sanctions.

Bazerman (1982) conceptualized personal control as being composed of two unique dimensions--activity control and outcome control. Activity control involves the discretion an organization provides the individual concerning the methods to use to perform his or her job. Outcome control is the degree to which outcomes are contingent on performance. Bazerman used Lawler's (1973) conceptualization of expectancy theory to describe the two components of outcome control: 1) the effort to performance and 2) the performance to outcome expectancies.

Bazerman's (1982) research focused on determining the optimal level of control that an organization should provide to an employee. He proposed that the optimal control state is one in which an individual's ability to use control is congruent with the amount of control provided him or her by the organization. In a laboratory study using college students, Bazerman found that performance was higher in the congruent condition than either the under-control or over-control conditions.

Bazerman's conceptualization of personal control provides a useful framework for the development and operationalization of the construct of personal control in an organ-

ization. Further, Steiner's two dimensions of perceived freedom are included in Bazerman's conceptualization of personal control, making Bazerman's the more complete definition. Bazerman's definition of personal control has the added benefit that constructs similar to its two dimensions of control--outcome control and activity control--have been operationalized and studied by other researchers.

Outcome control has been studied as a component of the expectancy theory of motivation (Lawler, 1973; Vroom, 1964). The concept of activity control is essentially the same as that of Hackman and Oldham's (1975) job characteristic of autonomy. Bazerman's definition of personal control is also consistent with the definition of personal control derived from the work of the psychological theorists and laboratory researchers. Thus, Bazerman's definition of personal control will be used to define and operationalize personal control in this study.

While outcome control and activity control appear to be important components of personal control, they do not fully characterize personal control in an organization. The missing component in Bazerman's conceptualization of personal control is perceived influence. James, Gent, Hater and Coray (1979) defined perceived influence as the amount of influence an employee perceives he or she has over his or her supervisor's decisions. Being able to influence the decisions that impact on one's job would appear to be an integral component of personal control.

Organizational researchers have explored the relationship between individuals' perceived influence resulting from participation in decision making and several individual and organizational outcomes (e.g. job satisfaction) (Tosi, 1970; Vroom, 1960). Tannenbaum (1962, 1966) also investigated organizational members' perceptions of influence in decision-making operations. Tannenbaum used managers' perceptions of influence to develop control graphs for organizations. These graphs illustrated the total amount of control in the organization, as well as the steepness of the organization's hierarchy of control. Tannenbaum's work, while interesting, is not relevant here since his conceptualization of control is used to describe and understand organizations rather than individuals.

Personal control will be defined as consisting of the following dimensions:

1. Outcome Control - the degree to which an individual believes he or she is able to cause or control important work outcomes and consists of:
    a) Effort to Performance Expectancy - an individual's subjectively-determined judgment of the probability that his or her effort will result in a certain level of performance.
    b) Performance to Outcome Expectancy - an individual's subjectively-determined judgment of the probability that a certain level of performance will lead to a particular outcome (Lawler, 1973).

2. Activity Control - the degree to which an individual perceives that his or her job provides substantial freedom, independence, and discretion in scheduling the work and in determining the procedures to be used in carrying it out (Hackman and Oldham, 1980).
3. Perceived Influence - the degree to which an individual perceives him or herself as having an influence on decisions made by their supervisors (James, et al., 1979; Vroom, 1960).

Purpose of Study

Personal control has been defined as one's perception of freedom in, and control over work activities, events and outcomes. Psychological theorists have proposed that personal control is an important human need. Laboratory researchers have demonstrated the negative effects of exposure to low-control environments, as well as the positive effects of perceived control over aversive environmental outcomes. A trend toward providing organizational members with more freedom and control over their worklives has developed over the past three years. Unfortunately, little research has investigated personal control in an organizational setting.

Bazerman (1982) developed a multidimensional conceptualization of personal control, which was used to provide a framework for the operationalization of personal control in this study. It was necessary, however, to include the construct of perceived influence along with Bazerman's two dimensions of control to conform to this study's definition

of personal control derived from the work of psychological theorists (i.e. Tannenbaum, 1962; White, 1959) and laboratory researchers (e.g. Glass and Singer, 1972). Thus, personal control was defined as consisting of the following dimensions: outcome control, activity control and perceived influence.

Constructs similar to each of these dimensions of control have been studied by organizational behavior researchers. Researchers, however, have failed to recognize the similarity of these three constructs because of the different perspectives from which they were developed, operationalized, and investigated. Expectancy of control has been studied in the context of motivation theory, autonomy as a task characteristic, and perceived influence in regards to decision-making strategies. Further, few researchers have studied more than one of these dimensions of control at the same time. Thus, our knowledge of how the different aspects of control are interrelated, affect each other or complement each other is limited.

The purpose of the present study is to increase our understanding of personal control in organizations. Toward this end, the antecedents and consequences of each of the three dimensions of control will be identified through a review of the research literature. This information will be used along with the expanded version of Bazerman's multidimensional definition of personal control to develop a mediational model of personal control in organizations. Each of the

dimensions of control will be operationalized using existing or newly developed instruments. These instruments will be used to empirically test the model of personal control and to determine the relationships among the three dimensions of control.

It is hypothesized that the three dimensions of control are much more similar than one would expect, given the different theoretical orientations and practical applications associated with each. The extent to which these three control variables are interrelated will be determined.

The research literature involving each dimension of personal control will now be reviewed to determine:

1. how each dimension of control has been operationalized
2. the important antecedents of each dimension of personal control
3. the important personal and organizational outcomes of each dimension of personal control.

CHAPTER II

LITERATURE REVIEW

Outcome Control

Valence-Instrumentality-Expectancy (VIE) theory is a process theory of motivation because it describes a framework for understanding individuals' desire to exert effort in a particular situation. VIE theory hypothesizes that individuals decide whether to exert effort on the basis of expectancies of future outcomes. The basic premise of VIE theory is that an individual will tend to exert effort in a particular situation if the effort is expected to result in a level of performance that will be rewarded with a sufficiently attractive outcome. The general model (see Figure 1) is composed of a number of components: 1) Effort-to-Performance Expectancy ($E \rightarrow P$) is an individual's subjectively determined judgment of the probability that his or her effort will result in a certain level of performance, 2) Performance-to-Outcome Expectancy ($P \rightarrow O$) is an individual's subjectively determined judgment of the probability that a certain level of performance will lead to a particular outcome, and 3) Valence (V) is the amount of positive or negative value an individual places on the outcome. Thus, a person's motivation is a function of effort-to-performance expectancies, performance-to-outcome expectancies, and the valence of the outcomes (Nadler and Lawler, 1977). These elements combine in a multiplicative fashion where motivation $(M) = (E \rightarrow P) \times \sum [(P \rightarrow O)\ (V)]$.

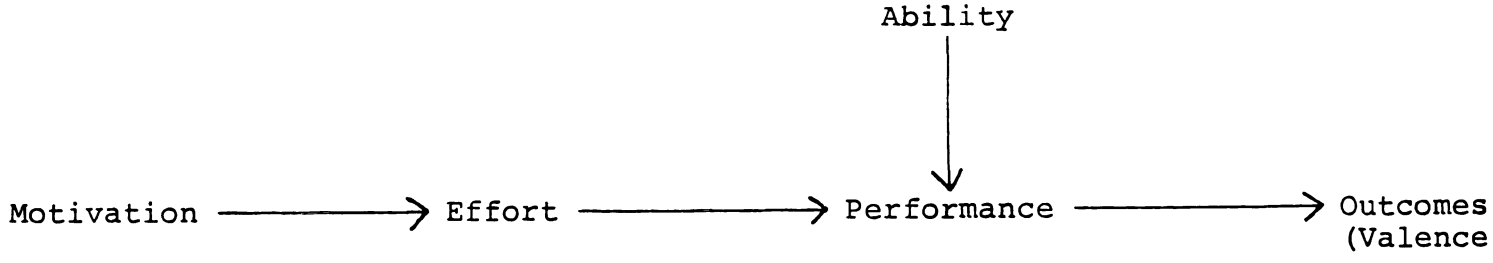

Figure 1. VIE Model (Nadler and Lawler, 1977)

The ideal motivational state, according to VIE theory, is one in which an individual believes him or herself capable of performing at a level that will bring about a highly valent outcome. In other words, the individual believes he or she can control the occurrence of an important outcome through his or her own behavior. Thus, the expectancy that one's effort will bring about an important outcome is an essential dimension of one's perception of control.

Antecedents of Outcome Control

Lawler proposed a model of the determinants of E $\longrightarrow$ P and P $\longrightarrow$ O expectancies. According to this model, the actual situation is the most important determinant of one's E $\longrightarrow$ P expectancy. Communication from others, past experiences in similar situations, and one's self-esteem would also affect one's E $\longrightarrow$ P expectancy (see Figure 2). P $\longrightarrow$ O expectancies are also influenced by the actual situation, communication from others, and past experiences in similar situations. Lawler (1973) proposed that a number of other variables were important, including the valence of the outcomes and the individual's locus of control (see Figure 3). Locus of control is conceptualized as a personality dimension that involves the generalized expectancy of whether one believes his or her actions will be rewarded. Rotter (1966) defined locus of control as:

> When a reinforcement is perceived by the subject as--not being entirely contingent upon

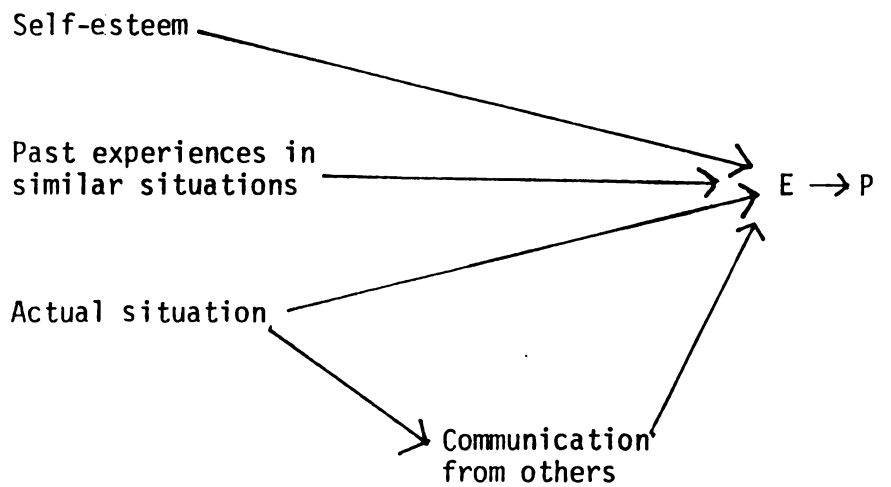

Figure 2. Determinants of E → P expectancies (Lawler, 1973)

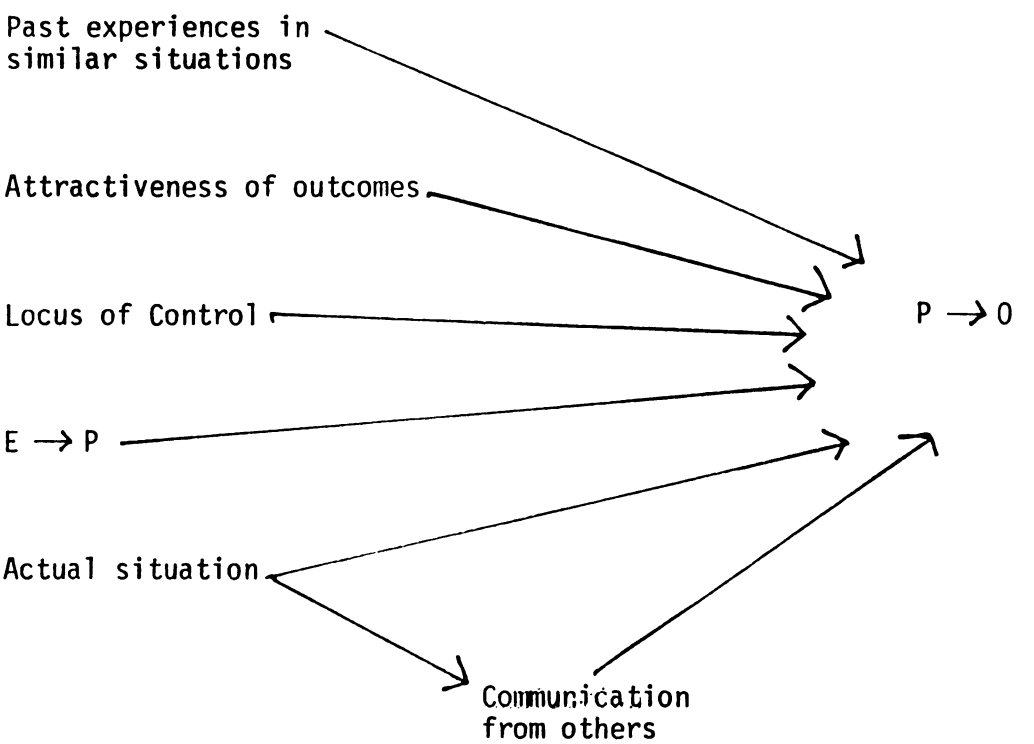

Figure 3. Determinants of P → O expectancies (Lawler, 1973)

> his action, then, in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him. When the event is interpreted in this way by an individual, we have labeled this a belief in external control. If the person perceived that the event is contingent upon his own behavior or his own relatively permanent characteristics, we have termed this a belief in internal control. (p. 1)

The locus of control measure is sometimes used to identify two contrasting personality types--low scores on this measure indicate that an individual has a high internal locus of control, while a high score on this measure identifies those individuals who exhibit a high external locus of control. Internal locus of control individuals (i.e. internals) tend to believe that they can control events and that they are personally responsible for the outcomes that they receive. External locus of control individuals (i.e. externals), in contrast, tend to believe that they cannot control events and attribute outcomes to luck, fate, or other forces external to them.

An individual's locus of control might influence his or her perception of outcome control in two ways. First, internals may perceive greater outcome control than externals exposed to the same situation since they see themselves as having greater control in general. Second, internals may tend to seek jobs or remain in jobs that provide opportunities for outcome control. Research results have consistently found a negative relationship between locus of control and expectancy (Spector, 1982).

Szilagyi and Sims (1975) investigated the relationship between locus of control and both E → P and P → O expectancies. The results indicated a consistent negative relationship between locus of control and both types of expectancies with correlations ranging from -.02 to -.25 for E → P expectancies and -.2 to -.39 for P → O expectancies for five levels of hospital employees. Lied and Pritchard (1976) reported similar findings with the exception that E → P expectancies had a higher correlation (i.e. -.40) with locus of control than did P → O expectancies (i.e. -.20). Kimmons and Greenhaus (1976) found that internals had higher mean P → O expectancy scores than did externals. Thus, locus of control appears to be an important antecedent of outcome control.

An additional personality variable related to one's perception of P → O expectancy should also be considered. A considerable body of research has found that individuals tend to have an exaggerated perception of the amount of control that they have over environmental outcomes. Henslin (1967) has observed that dice players clearly act as if they can control the outcome of the dice. They throw the dice differently when trying for certain numbers and believe that effort and concentration will pay off. Ward and Jenkins (1967) have demonstrated that people perceive causal relationships in the absence of objective contingency. This phenomenon has come to be called the "illusion of control" and is defined as:

> ...an expectancy of personal success probability inappropriately higher than the objective probability would warrant. (Langer, 1975, p. 311)

Not everyone appears to exhibit an illusion of control, however. Researchers have found that depressed individuals do not appear to have an illusion of control (Alloy and Abramson, 1979; Golin, Terrell and Johnson, 1977). Lewinsohn, Mischel, Chaplin and Barton (1980) found that depressed individuals rated their performance in an unstructured group discussion in a manner similar to that of independent observers. Nondepressed individuals, in contrast, rated themselves significantly more positively than the observers judged them to be. Lewinsohn, et al. (1980) concluded:

> Nondepressed people may thus be characterized with a halo or glow that involves an illusory self-enhancement in which one sees oneself more positively than others see one. (p. 210)

Alloy and Abramson (1979) found that nondepressed students overestimated how much control they had over objectively uncontrollable outcomes associated with a rate of success (e.g. winning money) and underestimated the amount of control they had over objectively controllable events that were associated with failure (e.g. losing money). Depressed students, on the other hand, accurately estimated the amount of control they had in each of these conditions.

This phenomena is not limited to chronically depressed individuals. Rather, it appears that one's current mood state has a major impact on one's perception of control. In a laboratory study, researchers studied the effects of

induced mood states (i.e. elated or depressed) on participants' perceptions of control over uncontrollable events (Alloy, Abramson and Viscusi, 1981). The results indicated that naturally depressed students who were temporarily made elated in the laboratory did exhibit an illusion of control when judging the amount of control that they had over uncontrollable events. In contrast, naturally nondepressed students who were temporarily made depressed showed no illusion of control and accurately judged their personal control over the event. Thus, the extent to which an individual feels depressed will lower his or her perceptions of outcome control. In sum, one's mood state, as well as the variables identified by Lawler (1973), may influence an individual's perception of outcome control.

Consequences of Outcome Control

Organizational behaviorists have conducted considerable research concerning the consequences of individuals' expectations of control rather than the effects of control on the individuals. Nadler and Lawler (1977) have developed a model relating VIE components to effort, performance, and satisfaction (see Figure 4). The model proposes that effort is the prime consequence of the VIE components. Performance, however, is the result of the combined forces of ability, effort, and problem solving strategy employed. Satisfaction is hypothesized to result from the intrinsic and extrinsic rewards received for one's performance. Thus, according to this model, one's expectancies of control will

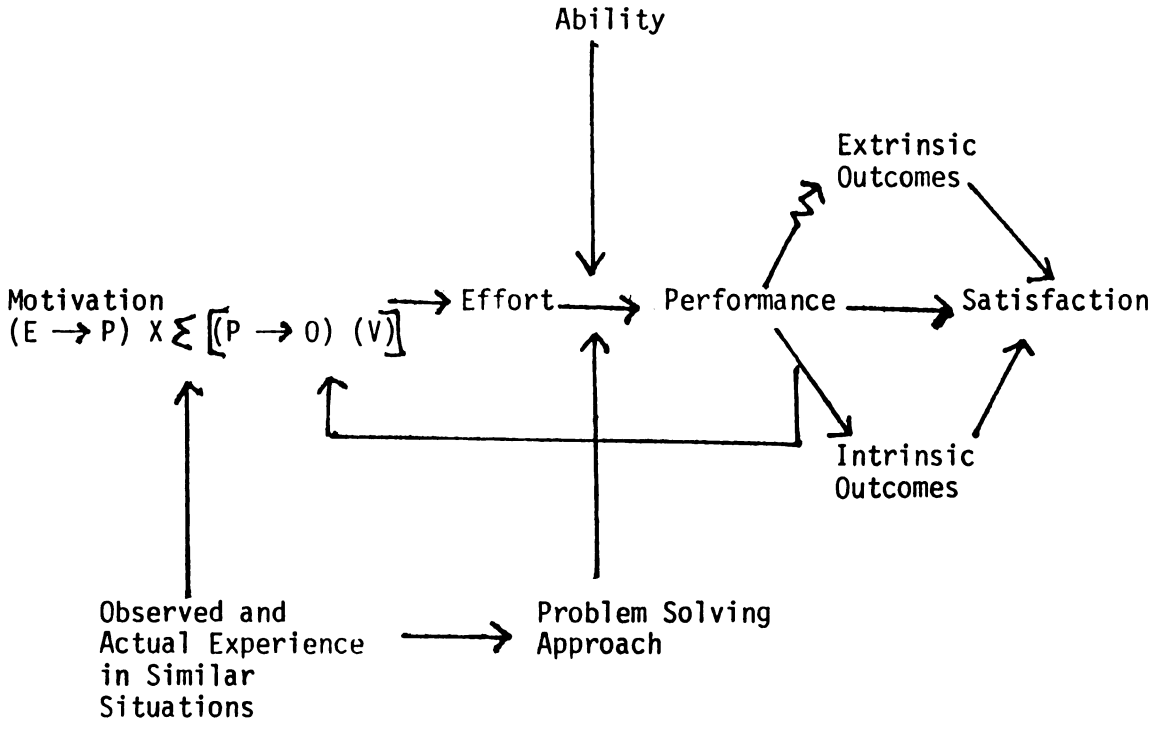

Figure 4. VIE Model (Nadler and Lawler, 1977)

be most highly related to one's effort and less strongly related to either performance or satisfaction.

Campbell and Pritchard (1976), in a review of the research evidence involving VIE theory, concluded that:

> While a multiplicative combination of expectancy, instrumentality and outcome valence typically yields a higher correlation than that for the individual components or simpler combination of components, the differences are usually not very great. Expectancy or instrumentality usually accounts for most of the variance that is to be accounted for and multiplying by valence seldom makes much difference. (p. 237)

Thus, only research involving E → P or P → O expectancies will be reviewed. This is also appropriate since E → P and P → O expectancies are the VIE components directly related to outcome control.

Shuster, Clark and Rogers (1971) found that subjects who were higher in E → P expectancies had higher performance than did subjects with low E → P expectancies. In an experimental study, Arvey (1972) manipulated E → P expectancies and found that subjects in the low E → P expectancy condition performed poorer than did subjects in the high E → P expectancy condition.

A number of researchers have also demonstrated the importance of P → O expectancies. Georgopoulous, Mahoney and Jones (1957) surveyed production employees that were on a work incentive program. The results indicated that employees who perceived a high relationship between performance and work outcomes had higher levels of productivity.

Porter and Lawler (1968) found a positive relationship

between P → O expectancies and ratings of performance and an even higher correlation between P → O expectancies and a measure of effort. In a study involving a simulated work organization, Jorgenson, Dunnette and Pritchard (1973) manipulated P → O expectancies by paying participants either on an hourly basis or piece rate basis. Results indicated that participants paid on a piece rate basis (high P → O) performed higher than did participants paid on an hourly basis (low P → O). Further, participants who shifted from hourly pay to piece rate pay showed an immediate increase in performance. This increased level of performance was maintained for the remainder of this study.

In sum, expectancies of control can result in increased effort on the job and, to a less extent, improved performance and satisfaction.

Activity Control (Autonomy)

Activity control has been most frequently defined in the OB literature as one's control over his or her work activities (i.e. autonomy). Most of the research concerning autonomy has been in relation to job or task characteristics. Herzberg (1966) proposed that jobs could be made more meaningful and satisfying through vertical job loading (i.e. job enrichment). One of Herzberg's principles of enrichment concerned job freedom, which involved providing additional authority to an employee over his or her work activity. Job freedom was hypothesized to involve the "motivators" of responsibility, achievement, and recognition (Herzberg, 1966). Turner and Lawrence (1965) proposed that the levels of specific task characteristics present in a job were related to the attitudes and behaviors of the workers performing that job. The task characteristics identified were: autonomy, variety, required job interaction, optional job interaction, knowledge and skills and responsibility. Autonomy was theorized to relate to an individual's perception of personal responsibility for the successes and failures that occur as the result of his or her work. Turner and Lawrence (1965) found that a summary measure of the six task characteristics scores (i.e. Requisite Task Attribute Index) was related to job satisfaction and attendance, although this relationship held only for workers from small towns. These results have spurred a considerable amount of research involving

job characteristics, as well as a search for variables that moderate the relationship between task characteristics and worker reactions.

Hackman and Oldham (1976) have provided the most complete model specifying the relationship between job characteristics, individual differences, and work attitudes and behaviors. The Job Characteristics (JC) model proposes that the core job dimensions influence the critical psychological states, which in turn cause the personal and work outcomes (see Figure 5). The employee's Growth Need Strength (GNS) moderates the relationships both at the link between job core dimensions and psychological states and between the three psychological states and the personal and work outcomes. While Hackman and Oldham (1976) include five job core dimensions, only one is relevant to personal control--autonomy.

Autonomy is the degree to which the job provides substantial freedom, independence, and discretion in scheduling and carrying out the work procedures. The JC model hypothesizes that autonomy leads to the psychological state of experienced responsibility for outcomes of the work. Experienced responsibility, in turn, along with the other two psychological states, causes the personal and work outcomes. These outcomes include high satisfaction, work quality, and motivation, as well as low absenteeism and turnover.

Hackman and Oldham (1976) conceptualized the core job

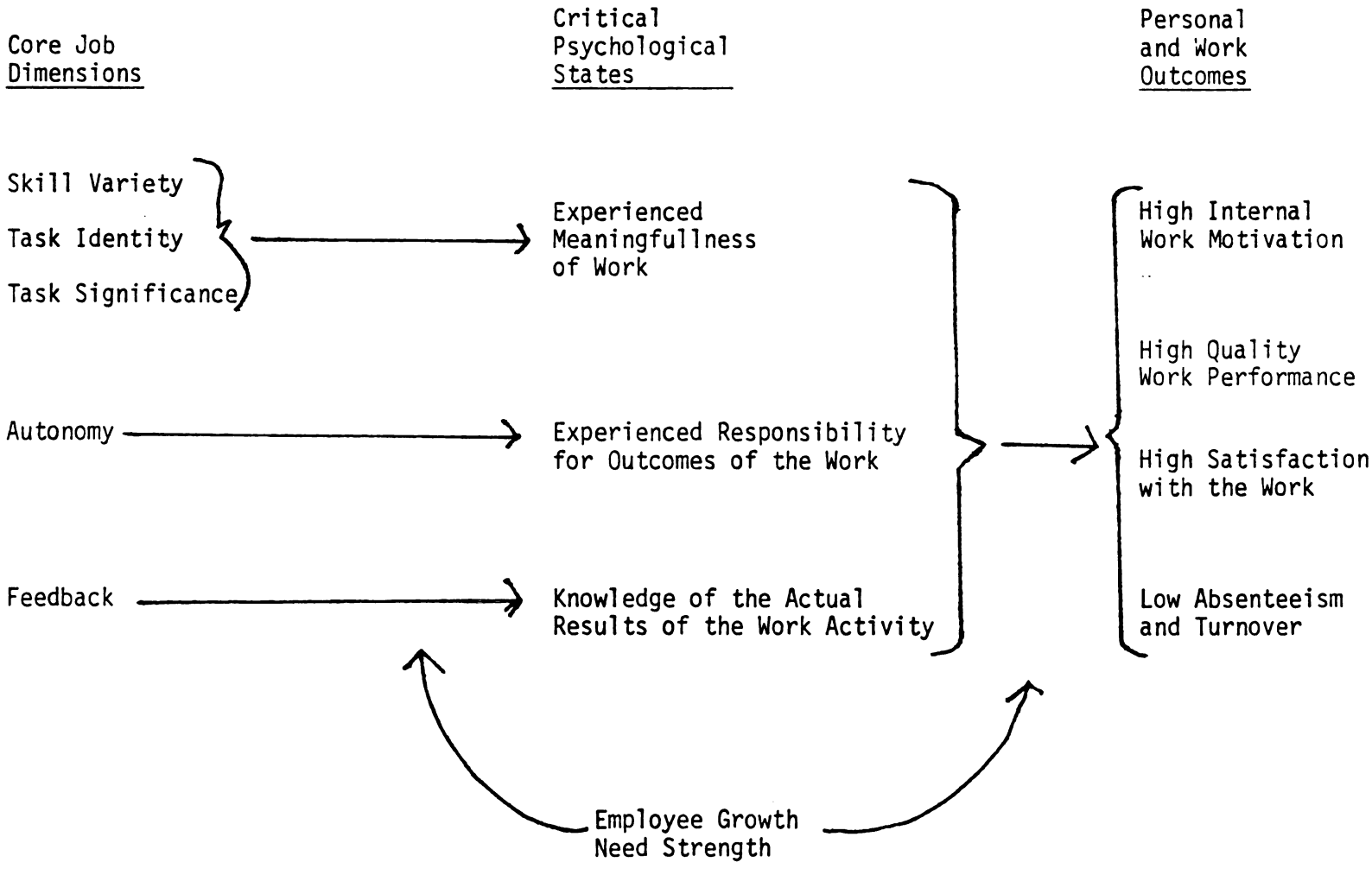

Figure 5. The Job Characteristics Model (Hackman and Oldham, 1976)

dimensions as objective characteristics of a job, yet job core dimensions have been most frequently operationalized as workers' perceptions of job core dimensions. The most frequently used instruments to measure job characteristics--the Job Diagnostic Survey (JDS) (Hackman and Oldham, 1975) and the Job Characteristics Inventory (JCI) (Sims, Szilagyi and Keller, 1977)--assess individuals' perceptions of job characteristics. Thus, the operationalization of autonomy in the OB literature coincides with the conceptualization of activity control defined above as one dimension of personal control.

Antecedents of Activity Control

The JC model begins with the individual's perception of task characteristics and, thus, fails to specify the determinants of those perceptions. The assumed antecedents of one's task perception, however, are the actual characteristics of the tasks that comprise one's job. Hackman and Oldham (1980) have suggested some of the actual task characteristics relevant to each job core dimension in their job enrichment Implementing Principles. The Implementing Principles describe the actual steps one would perform to enrich a particular job. Two Implementing Principles are hypothesized to increase the amount of autonomy in a job--establishing client relations and vertically loading the job. Establishing client relations involves arranging the job in order that the employee has the responsibility to decide how to handle the requests and concerns of the client. Vertically loading a job involves providing the

individual with responsibility and authority usually reserved for higher levels of management. Some suggested methods for vertically loading a job include providing the individual with discretion in setting schedules, determining work methods, and deciding when and how to check the quality of the work produced, as well as allowing the individual to make decisions concerning work hours, breaks, and work priorities (Hackman and Oldham, 1980). Thus, a job that provides the worker a substantial amount of discretion in work decisions and procedures and responsibility for the outcomes of work will be high in autonomy and should be perceived as such.

Evidence exists, however, indicating that different individuals may view the same job differently in regards to level of job characteristics (Schwab and Cummings, 1976). The JC model, unfortunately, does not specify the process by which an individual forms his or her perception of a task. A number of antecedents of task perceptions have been identified by researchers in the past few years. These antecedents include the actual task, individual differences, social cues, and organizational or situational variables.

An individual's perception of autonomy should be most directly influenced by the actual amount of activity control he or she has been able to exercise on the job in the past. Thus, an individual who has been allowed to decide how and when the work will be performed and has been held

accountable for the outcomes of work should perceive his or her job as high in activity control. The amount of activity control one has been able to exercise on the job is a function of job characteristics, type of supervision, and individual differences. The technological requirements of some jobs would prevent the worker from exercising discretion in work procedures or work pace. For example, machine-paced jobs provide little discretion to workers with regard to work procedure or work pace. The type of supervision may also limit the extent to which an individual is able to exercise autonomy on the job. Frequent directions and continual checking by a supervisor will result in a job with low autonomy and little employee responsibility for the work outcomes.

Certain individual differences variables may also influence the amount of autonomy an individual has been able to experience on the job. Three variables seem likely to influence the amount of activity control one is allowed on the job--tenure, ability, and desire for autonomy. The longer a competent worker remains on a job, the greater are the chances that he or she will be allowed more discretion and control over the work methods. Also, it is possible that supervisors will provide greater autonomy to those workers with the greatest ability and job skills. This might come about by supervisors rewarding subordinates' good performance with increased autonomy. Finally, it is likely that an individual with a high need for autonomy will seek op-

portunities to fulfill these needs. Individuals with a low need for autonomy, on the other hand, may avoid or turn down opportunities for increased autonomy.

A number of researchers have recognized the fact that an individual's perception of activity control is influenced by factors other than the objectively defined task. Szilagyi and Holland (1981) studied the effects of changes in social density on employees' attitudes and perceptions. A change in social density was defined as an increase or decrease of greater than two employees per 50-foot walking distance. The results indicated that an increase in social density caused a decrease in employee perceptions of autonomy, while a decrease in social density resulted in an increase in perceived autonomy (Szilagyi and Holland, 1981).

Oldham and Hackman (1981) investigated the relationship between organizational structure variables and worker perceptions of task characteristics. The results indicated that workers' perception of autonomy was negatively related to measures of centralization and formalization of the organization. In a study of the relationship between organization structure, job characteristics, and worker satisfaction and performance variables, Brass (1981) found significant positive relationships between criticality of the task, subunit centrality, and perceptions of autonomy. Thus, the task itself, physical work conditions, and organizational variables have been found to be related to an individual's perception of autonomy. It is obvious that

these different variables provide information to the individual which influences his or her formulation of task perceptions. Another source of information that is believed to influence task perception involves social cues.

Salancik and Pfeffer (1978) proposed that individuals are likely to use social information when developing their perceptions of job characteristics. O'Reilly and Caldwell (1979) found that informational cues indicating whether a task was enriched or not enriched had a stronger influence on job perception than did the actual objective task characteristics. O'Connor and Barrett (1980) found that an individual difference variable (i.e. field dependence/independence) influenced how the participants formed their perceptions of the job. Field dependent participants seemed to focus more directly on socially induced informational cues, while field independent participants were more strongly influenced by the physical aspects of the job in formulating their task perceptions (O'Connor and Barrett, 1980). The results are in line with James et al.'s (1979) findings that subordinates differentially attended to environmental cues (i.e. supervisor's behavior) depending on their own needs in their formulation of perceptions of influence.

Another individual difference variable that may influence one's perception of autonomy is locus of control. Spector (1982) proposed that internals should perceive their job as offering greater autonomy due to their generalized expectancy of control over their environment. Ex-

ternals, on the other hand, should perceive their job as offering less autonomy. Kimmons and Greenhaus (1976) found that internals reported having more autonomy than did externals in a sample of 191 managers.

A recent study investigating the causality of the task perception-job satisfaction relationship is also relevant here. Caldwell and O'Reilly (1982) had participants imagine that they held the job described in a detailed job description and that they were either satisfied or dissatisfied with that job. Those participants who had imagined that they were satisfied with the job reported higher levels of job characteristics, including autonomy, than did the dissatisfied participants, thus providing some support for Zajonc's (1980) contention that affective judgments may precede the cognitive perceptions (e.g. task perceptions) in time. Individuals' current mood states have also been found to influence the accuracy of estimates of positive feedback received on a task (Buchward, 1977) and judgments regarding the degree of control exerted over events (Alloy, Abramson and Viscusi, 1981). Thus, an individual's affective evaluation of the job or even his or her current mood state might influence his or her perceptions of job characteristics.

In sum, the manner in which an individual formulates his or her perception of autonomy is not well understood. What is certain is that a number of factors (see Figure 6) in one's work (and probably non-work) environment provide

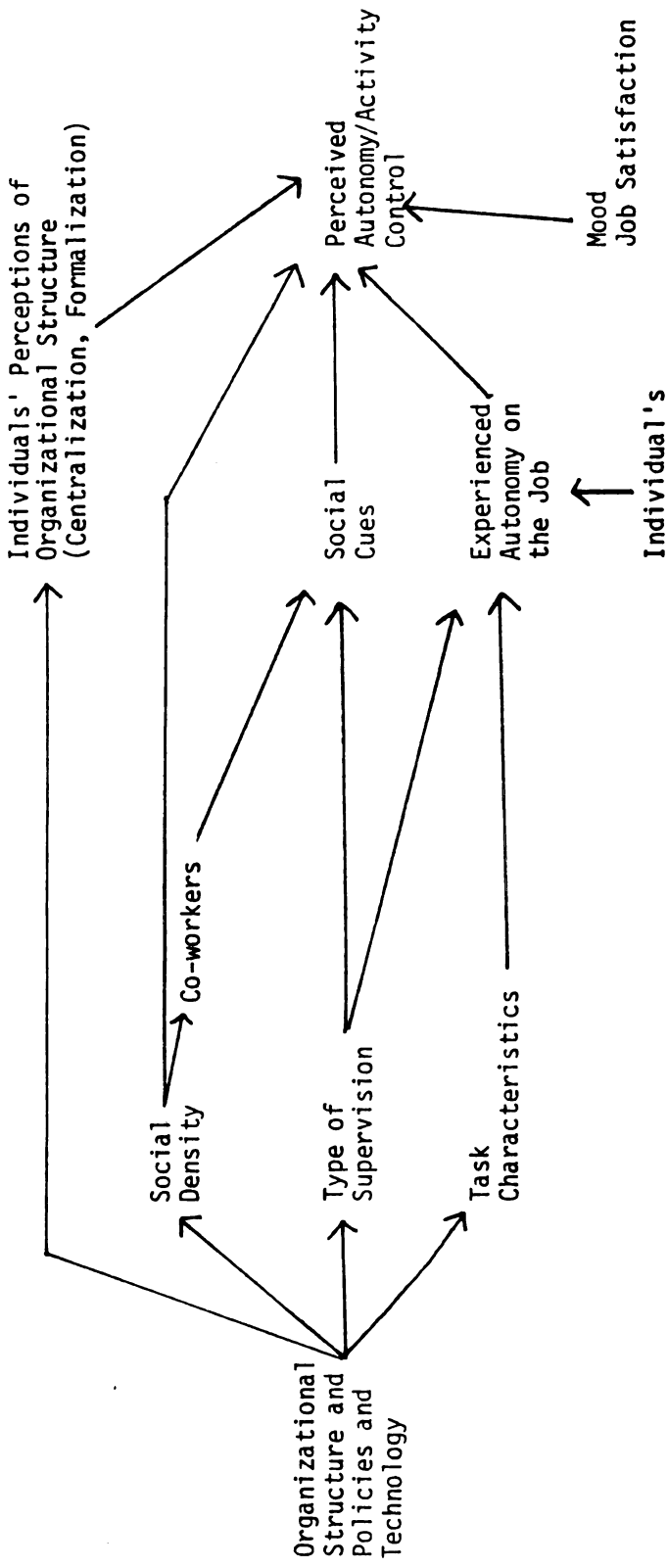

Figure 6. The antecedents of activity control

information concerning activity control to the individual. Further, research indicates that individuals selectively attend to the presence of specific types (e.g. opportunities for influences) of information based on their own needs and beliefs and to different sources of information (e.g. social versus task) depending on their personality type (e.g. field dependent/independent). Thus, an individual perceives and weighs the existing autonomy cues depending on his or her personal characteristics in forming perceptions of autonomy.

Consequences of Activity Control

The JC model proposes that autonomy leads to the psychological state of experienced responsibility for outcomes of the work. This psychological state, together with the other two critical psychological states, is hypothesized to lead to a number of positive work outcomes. These outcomes include high internal work motivation, high "growth" satisfaction, high general job satisfaction, and high work effectiveness. High work effectiveness involves quality and quantity of work, as well as attendance at work (Hackman and Oldham, 1980).

The JC model does not hypothesize the relationship of autonomy to the employees' personal and work outcomes independent of the other job core dimensions. Thus, it is speculative to propose that autonomy is more highly related to one outcome over another. Further, researchers have tended to combine the five job core dimension scales into

an overall measure of job complexity, thus further clouding the issue of the independent contributions of perceived autonomy.

The theoretical importance of autonomy in relation to the other job core dimensions, however, is indicated in the formula for the Motivating Potential Score (MPS) (Hackman and Oldham, 1976). The MPS specifies how the job core dimensions scores should be combined to produce an overall rating of the motivating potential of a particular job. The MPS is defined as:

$$MPS = \frac{\text{Skill Variety} + \text{Task Identity} + \text{Task Significance}}{3} \times \text{Autonomy} \times \text{Feedback}$$

As can be seen by this formula, a very low score on autonomy would result in an MPS close to zero. Thus, autonomy is an essential component of an intrinsically motivating job. Research findings, however, have indicated that equal weighting of the individual job core dimension scores has been at least as effective as the MPS formula in explaining response variance (Dunham, 1976; Hackman and Oldham, 1976). These findings question the JC model's theoretical proposition of the noncompensatory nature of the key job core dimensions, as well as the unique importance of autonomy.

The determination of the consequences of activity control is further hampered by the method with which researchers report job design research results. Job design researchers tend to report only the job complexity score

(i.e. combined sum of job core dimension scores) or the MPS score, thus precluding the determination of the individual contribution of autonomy to the dependent variables studied. This procedure is usually a response to the low reliability (i.e. internal consistency) and high intercorrelations of the job characteristics subscales. A number of researchers, however, have reported data relevant to the effects of autonomy independent of the other job core dimensions. Only these studies will be reviewed.

Hackman and Oldham (1975, 1976) found a significant positive relationship between autonomy and a measure of overall satisfaction. In another study using the Job Diagnostic Survey (JDS) to measure autonomy, Rousseau (1977) also found a significant positive relationship between autonomy and overall job satisfaction. Brief and Aldag (1978) used the Job Characteristics Inventory (JCI) to measure autonomy and replicated these earlier findings. Autonomy has also been found to be related to other types of satisfaction--growth satisfaction (Hackman and Oldham, 1975, 1976), satisfaction with work (Brief, Aldag and Jacox, 1978; Keller, Szilagyi and Holland, 1978; Sims and Szilagyi, 1976), satisfaction with pay, promotion, supervision and co-workers (Sims and Szilagyi, 1976). Thus, considerable research evidence indicates a strong relationship between autonomy and satisfaction. The validity of these data, however, is questionable due to the methodological flaws in some of the studies. Since autonomy and

satisfaction were both measured via the same questionnaire in a large portion of these studies, one must seriously consider the possibility of common method variance (Roberts and Glick, 1981).

Autonomy has been demonstrated to be related to a number of other outcome variables. Hackman and Oldham (1975, 1976), in a test of the JC model, have found a significant positive relationship between perceived autonomy and internal work motivation. Rousseau (1977) found that autonomy was positively related to job involvement and negatively related to a measure of alienation. Moch (1980) also found a significant relationship between autonomy and job involvement. Keller, Szilagyi and Holland (1976) found a significant negative relationship between autonomy and measures of role strain (i.e. role ambiguity and role conflict). Finally, Hackman and Oldham (1976) found autonomy positively related to work effectiveness and negatively related to absenteeism.

Perceived Influence

Perceived influence concerns the degree to which an individual perceives him or herself as having an influence on the decisions made by their supervisors (James, et al., 1979; Vroom, 1960). Research involving psychological influence can be classified into three distinct categories on the basis of how influence was operationalized in the study. The first classification consists of research that studied the effects of different amounts of objectively defined participation in decision making. These studies tended to be of an experimental nature, comparing conditions of participation versus nonparticipation (e.g. Coch and French, 1948). The second group of studies involved one's perception of influence and its relationship to satisfaction and performance variables (e.g. Vroom, 1960). The third classification of studies involved research that used a "discrepancy" measure of influence obtained by subtracting one's ratings of perception of actual influence from his or her ratings of the desired amount of influence in decison making (e.g. Alutto and Belasco, 1972). Major research studies in each of these areas will be reviewed.

Objectively Defined Influence

One of the earliest studies involving objectively defined levels of influence was Lewin, Lippit and White's 1938 comparison of "autocratic" and "democratic" children's activities groups. In the autocratic group the adult determined the activities of the children and gave frequent

directions. In contrast, the democratic group used group decision making with the adult acting in only an advisory role. A suprising result was that the autocratic group showed a marked decrease in productivity when the adult was not present, while the democratic group showed no change. Further, some children in the autocratic group exhibited signs of apathy, dependence, frustration, and aggression toward their leader. These symptoms are remarkably similar to those later labeled as "resistance" in studies involving employees' reactions to organizational change (Coch and French, 1948).

Two organizational studies provided further evidence concerning the positive effects of allowing employees to participate in decisions that influence their workplace. Coch and French (1948) studied the effects of different levels of employee participation in production changes in a manufacturing organization. The full and partial participation groups showed faster production recovery rates, higher production rates, lower turnover, and less aggression toward supervisors than the nonparticipation group. Morse and Reimer (1956) introduced planned changes in the level of involvement that groups of clerical workers had in decisions made by their supervisors. In the Autonomy Program the role of the workers in decision-making operations was increased, while the hierarchical program increased management's role in decision-making operations. The results indicated that the hierarchical groups had a greater

increase in productivity than the autonomy groups; however, the autonomy groups had a much higher level of work satisfaction than did the hierarchical groups.

A recent organizational study, however, has raised questions regarding these earlier findings. Lischerhorn and Wall (1975) conducted an experimental field study comparing participation groups (i.e. Action Planning Groups) to nonparticipation control groups. Action Planning Groups (APGs) consisted of 6 to 14 men, their supervisor, and one management representative. Each group met informally every three weeks to discuss grievances, make suggestions or to ask questions. Management guaranteed to provide answers to all issues raised by the meetings which followed. A comparison of worker attitudes in the participation and nonparticipation groups was conducted. The results indicated that the increased opportunity to participate did not result in a significant increase in worker satisfaction with the organization, pay, opportunities for promotion, the job itself, immediate supervisors or coworkers. Worker attitudes toward middle management, however, did improve through involvement in APGs.

In sum, attempts to increase the actual amount of employee involvement in decision making have not always resulted in greater work satisfaction or increased job performance. The equivocality of these results may be due, in part, to an insufficient increase in the participants' perception of influence resulting from the experimental manip-

ulation. Thus, it is important to review the research findings concerning perceived influence.

Perceived Influence

Vroom (1960) was the first to study the correlates of individuals' perception of influence (i.e. psychological participation). In a study with 108 supervisors, Vroom found a significant positive relationship between the supervisors' perception of psychological participation and a measure of job satisfaction and work performance. Further, Vroom discovered that the magnitude of these relationships was moderated by two personality variables--authoritarianism and need for independence. In a replication of this study, Tosi (1970) found a significant positive relationship between psychological participation and job satisfaction but not with the performance measure. In addition, Tosi was unable to replicate the moderator effects of authoritarianism and need for independence. James, et al., (1979) suggested that psychological participation be renamed psychological influence since the construct involves the perception of influence in participative decision making. James et al., (1979) examined the relationship between individuals' ratings of psychological influence and three classes of variables--situational, subordinate person, and subordinate-psychological climate. The results indicated that perceptions of psychological influence were related to person variables (e.g. anxiety and rigidity) and situational vari-

ables (e.g. supervisor behaviors).

Discrepancy Measures of Perceived Influence

Alutto and Belasco (1972) argue that it is reasonable to assume that not everyone desires an increased involvement in company decision-making operations. Thus, the crucial variable for determining the effects of participation is the discrepancy between actual and desired opportunities for participating rather than one's perception of or actual involvement in decision making (Alutto and Belasco, 1972). Following this line of thought, Alutto and Belasco (1972) developed a continuum of participation consisting of three conditions: (a) decisional deprivation-actual participation in fewer decisions than one desires, (b) decisional equilibrium-actual participation in as many decisions as one desires, and (c) decisional saturation-actual participation in a greater number of decisions than one desires. The basic assumption of this line of research is that congruence between one's desired participation and actual participation is the desired state. Decisional deprivation or saturation, on the other hand, should lead to more negative job attitudes and higher levels of job tension (Alutto and Acito, 1974).

Driscoll (1978), in a study of college faculty, found that the greater the participants' congruence between desired and actual participation, the greater was their satisfaction with the organization and with the participation

itself. Alutto and Vredenburgh (1977) found that decisionally deprived nurses had higher job tension and greater career dissatisfaction than those nurses with decisional equilibrium. In a study of project engineers, Ivancevich (1979) found a significant relationship between decisional deprivation and measures of physical stress and job tension. Thus, decisional deprivation does appear to be related to negative work attitudes and increased tension on the job.

It is important to note, however, that the use of discrepancy scores has been questioned by a number of researchers (Cronbach and Furby, 1970; Johns, 1981), thus limiting the interpretability of these results.

Antecedents of Perceived Influence

The most direct antecedent of an individual's perception of influence is his or her actual involvement in participative decison-making (PDM) activities. PDM, however, is not a unitary well-defined construct. Rather, researchers have defined and operationalized PDM in a variety of different ways (Dachler and Wilpert, 1978). Locke and Schweiger (1979), however, have identified a number of dimensions along which PDM may vary--degree, content, scope, and type, thus providing a basis with which to organize a discussion of the antecedents of influence.

Participation can vary in the degree to which an individual is allowed or encouraged to become involved in

the decision-making process of his or her supervisor. Tannenbaum and Schmidt (1973) have developed a Leader Behavior Continuum (LBC) (see Figure 7) which lists the entire range of possible leader-subordinate influence relations. The continuum ranges from a boss-centered or authoritarian leadership approach in which the manager makes the decsion and then announces it to the subordinates, to a subordinate-centered or participative approach, whereby the subordinates function autonomously within limits defined by the manager. Tannenbaum and Schmidt describe a full range of management behavior that falls between these two extremes. Heller, Drenth, Koopman and Rus (1977) have developed a similar continuum. Their six position Influence and Power Continuum (IPC) describes the varying levels of subordinate influence in decision-making activities:

The IPC consists of six levels:

1. No Information

   No detailed information about the decision is made available.

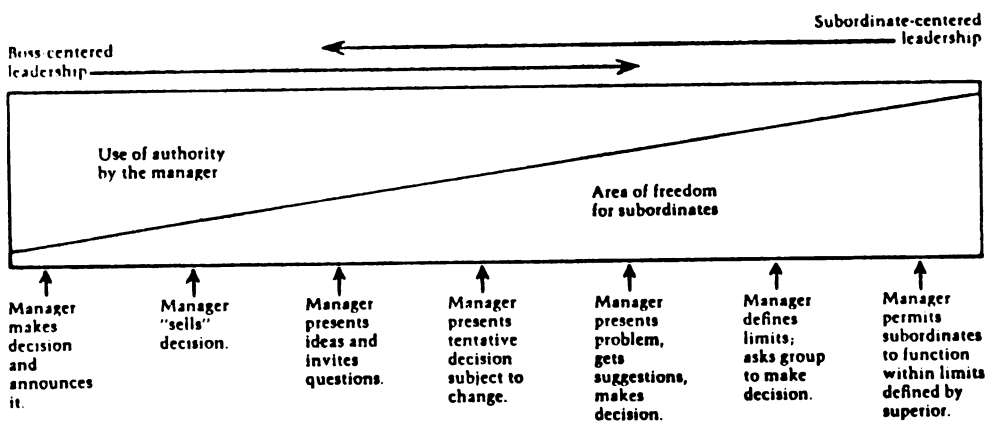

Figure 7. Leader Behavior Continuum (Tannenbaum and Schmidt, 1973)

2. Information

Fairly detailed information about the decision is made available.

3. Opportunity to Give Advice

Before the decision is made, the supervisor explains the problem and asks advice. The supervisor then makes the decision by him or herself.

4. Advice is Taken into Consideration

As above, but your superior's final choice usually reflects the advice he or she has received.

5. Joint Decision Making

Your superior and his or her subordinate(s) together analyze the problem and come to a decision. Your supervisor usually has as much influence over the final choice as his or her subordinate(s). In fact, one could say everybody in principle has equal influence (one person, one vote).

6. Complete Control

You or members of your work group are given the authority to deal with this decision on your own. Superiors would intervene only in exceptional circumstances. Naturally, every now and then you or the group are expected to account for the action taken (Heller, Drenth, Koopman and Rus, 1977, p. 572).

The IPC appears to be a more complete scale of participation than the LBC since it contains two levels of three hierarchically-arranged factors--information, advice,

and decision making, whereas the LBC contains levels within only one dimension (i.e. decision making).

Little research has empirically assessed the relationship between degree of participation and perceived influence. One would assume a positive linear relationship between the amount of involvement one has in PDM and his or her perception of influence, although it is possible that certain personal variables might moderate this relationship. For example, an individual with an external locus of control should generally perceive less influence than an individual with an internal locus of control exposed to the same level of PDM.

A second dimension on which participation may vary is the content of the issue involved in the decision. Locke and Schweiger (1977) have identified four categories of decision types:

1. Work Itself - job design, work methods, job pace and production level.
2. Work Conditions - work hours, rest breaks, lighting, and other physical work arrangements.
3. Routine Personnel Functions - selection, compensation, training and performance appraisal issues.
4. Company Policies - including layoffs, fringe benefits, general wage levels, dividend and general policy making.

It is important to note that the first two decision categories--the work itself and work conditions--consist pri-

marily of decisions involving how one goes about performing his or her job. Thus, these two categories of decisions are related to activity control rather than perceived influence. This distinction is a necessary one in the attempt to maintain conceptual distinction between the constructs of activity control and perceived influence.

Perceived influence has been operationalized by asking employees to rate the amount of influence they have in general without reference to specific decisions (e.g. Vroom, 1960; Tosi, 1970). A number of researchers, however, have assessed individuals' perceptions of influence over specific work decisions (e.g. Alutto and Belasco, 1972; Hrebiniak, 1974). Ivancevich (1979) even conducted extensive interviews to determine a relevant and meaningful set of decision situations in his study with project engineers. However, no research has attempted to determine the relationship between decision content and perceived influence. Those researchers who have specified the different decision situations employed in their study have, for the most part, collapsed the responses on the different decision types into one overall score (usually a discrepancy score determined by subtracting the number of decision situations in which the participant actually participates from the number of decision situations in which the participant wished he or she participated). Thus, information concerning the relationship of the actual content of decisions in which one is allowed to participate and the individual's

perception of influence has not been established. Such a distinction is made in the operationalizations of activity control and perceived influence in this study. Activity control involves one's perception of control of the activities and decisions concerning the work itself and work conditions. Perceived influence concerns one's perception of involvement in decisions related to routine personnel functions and company policies.

The third dimension on which participation may vary concerns the scope of the participation. Locke and Schweiger (1979) have defined scope as "the stage of problem solving at which PDM occurs" (p. 276). Although little empirical research has addressed this issue, one study has explored the participation scope--perceived influence relationship. Cooper and Wood (1974) compared partial participation conditions with a complete participation condition in a laboratory study of group decision making. Participants were assigned to one of the following conditions: (a) generation of alternative solutions, (b) evaluation of alternative solutions, (c) choice of alternative solutions, or (d) generation, evaluation, and choice of alternative solutions (i.e. complete participation). The results indicated that those participants in the choice and complete participation conditions had significantly higher perceptions of participation and influence in the decision-making process, as well as greater levels of task perception than did those participants in either the generation or evalua-

tion conditions. Thus, it may be necessary to actually allow subordinates to make some decisions if one wishes to significantly increase their levels of perceived influence.

The final dimension along which participation may vary is type of participation. Locke and Schweiger (1979) have identified three different types of PDM--forced or voluntary, formal or informal, and direct or indirect. A forced PDM program is one that is mandated by law or union contract (e.g., codetermination), while a voluntary program would involve a management-initiated program to which employees agree to join (e.g. Scanlon plan). A formal PDM program involves an officially recognized bargaining committee (e.g. union), whereas an informal PDM relationship is usually based on a personal relationship between the supervisor and subordinate. Finally, the distinction between direct and indirect PDM concerns whether one has direct involvement in decision making or has a representative participate in his or her behalf. The nature of each PDM type might be related to one's perception of influence. For example, a forced, formal, or direct PDM program may be more likely to be related to a higher level of perceived influence than voluntary, informal, or indirect PDM programs, although no research has directly tested this hypothesis.

In sum, actual involvement in decision-making activities is the most likely and direct antecedent of perceived

influence. Unfortunately, little is known concerning the importance of the different dimensions of participation to one's perception of influence. It is likely, however, that the degree, content, scope, and type of participation will impact on an individual's perception of influence. Further, one's locus of control might also influence one's level of perceived influence.

Consequences of Perceived Influence

The most frequently studied variable in relation to perceived influence is employee satisfaction. Vroom (1960) found a significant positive relationship between the participants' perception of influence and a measure of attitudes toward the job. In a replication of Vroom's study, Tosi (1970) found similar positive results. Cooper and Wood (1972) assigned participants to experimental conditions involving different phases of decision-making activities--generation, evaluation, and choice. The results indicated that satisfaction was highest in those conditions (e.g. choice and complete participation) which produced the highest ratings on perceived influence. Wood (1972) has found a significant positive relationship between perceived participation in an experimental task and satisfaction with the decision, leader, method, relations, own role, influence, accomplishments, and overall satisfaction. Morse and Reimer (1956) compared groups of clerical workers after their involvement in decision making had been either in-

creased or decreased. A manipulation check showed that perceptions of influence had changed in the expected direction for each group. Further, those participants whose involvement in decision making had been increased had significantly higher job satisfaction than the participants whose involvement was decreased.

A number of researchers have found a consistent relationship between perceived decision-making deprivation and worker dissatisfaction. Alutto and Acito (1974) found that decisionally deprived blue collar workers reported lower satisfaction with work, supervision, and promotion than workers who perceived their decision-making involvement as adequate. Ivancevich (1979) found that the greater the reported decisional deprivation, the lower was the satisfaction with supervision and with work. In a study involving college faculty, Driscoll (1978) found that the greater the congruence between desired and perceived participation in decision making, the greater was the satisfaction with both the organization and the participation itself. Thus, considerable research has shown that one's perception of influence is related to satisfaction at work.

A second important variable frequently investigated in relation to perceived influence involves employee involvement and commitment to his or her work. In a study of the Tennessee Valley Association (TVA), Patchen (1970) found that involvement in decision making was related to an increase in individuals' integration into the organization.

Siegel and Ruh (1973) found a high positive correlation between employees' level of perceived control and a measure of job involvement. Alutto and Acito (1974) found that decisionally deprived employees were less committed to the job and company than were decisionally satisfied employees. Alutto and Belasco (1972), however, found no relationship between decisional deprivation and organizational commitment. Hrebiniak (1974) found that decisional deprivation had little impact on employees' organizational commitment. In a study of hospital nurses, Alutto and Vredenburgh (1977) found no relationship between decisional deprivation and either organizational or professional commitment. In sum, the relationship between perceived influence and commitment appears to be equivocal. A possible explanation for the mixed results is that researchers have failed to sufficiently discriminate among the various types of commitment or the specific areas of influence. An increased involvement in decisions that influence one's work should have a greater impact on one's job involvement than his or her organizational commitment. Following the same line of reasoning, an increase in participative decision making involving organizational policies might be more likely to increase one's organizational commitment; however, there is no reason to believe that it will significantly affect his or her job involvement. Thus, future research should ensure a match in the domains of influence and commitment investigated.

Another line of research concerns the relationship between perceived influence and role conflict and role ambiguity. Schuler (1977) found that the greater involvement in decision making, the lower were the levels of role conflict and role ambiguity. In a study involving clerical, blue collar, and professional employees, Morris, Steers and Koch (1979) found that participation was the best predictor of role conflict and the second best predictor of role ambiguity. In a longitudinal field experiment, Jackson (1983) found that participation had a significant negative effect on role conflict and ambiguity and a positive effect on perceived influence.

Schuler (1980) has developed a model relating participation to role and expectancy perceptions (see Figure 8). According to this model, participation in decision making provides the individual with information concerning his or her work role, job requirements, and work outcomes, thus clarifying his or her work role and outcome expectancies. Schuler hypothesizes that a number of individual and organizational variables will influence one's perception of role conflict and role ambiguity and expectancy of outcomes. Finally, Schuler's model proposes a link between employees' perceptions and expectations and their satisfaction with both work and supervision. Schuler (1980) tested this model in a study involving three different organizational levels--upper level management, middle level management, and clerical and blue collar workers of two different or-

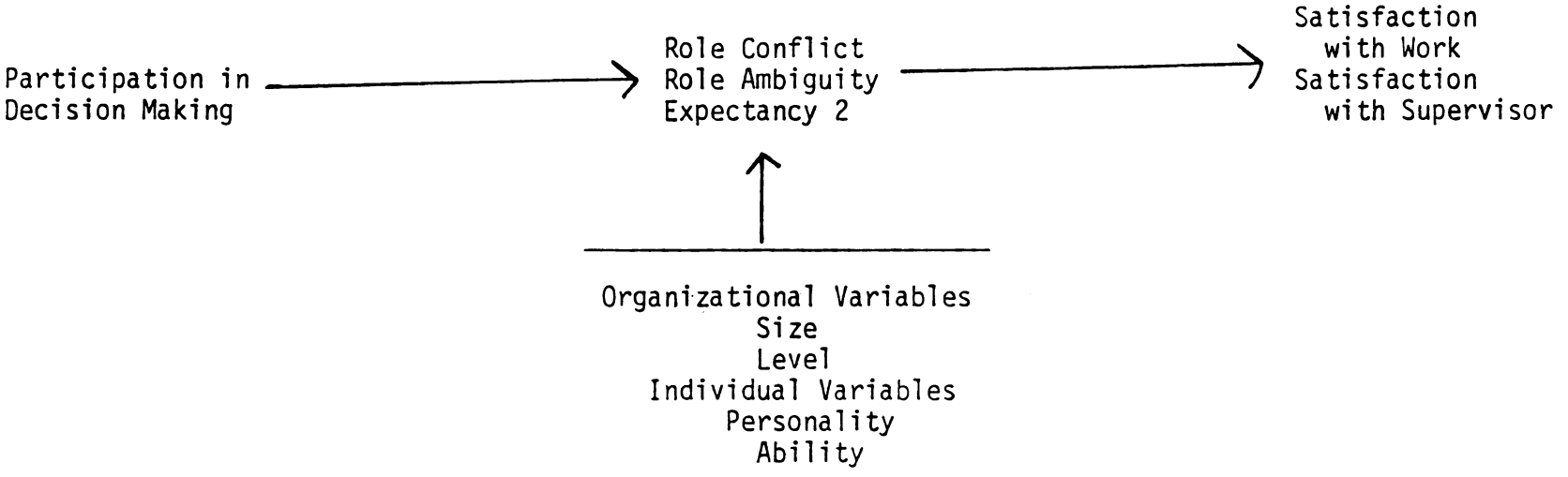

Figure 8. Hypothesized relationships of individual and organizational variables and role and expectancy perceptions and satisfaction and the appropriateness of participation in decision making (Schuler, 1980)

ganizations. The results indicated that participation in decision making was negatively related to role conflict and ambiguity and positively related to the performance-reward expectancy, thus providing initial support for Schuler's model.

A third line of research has investigated the relationship of perceived influence to physical and psychological strain. Alutto and Vredenburgh (1977) found a positive relationship between decisional deprivation and job tension. Ivancevich (1979) found that the greater the amount of decisional deprivation, the greater was the physical stress and job tension. In a study involving two different samples of employees, Caplan, Cobb, French, Harrison and Pinneau (1975) investigated the relationship between perceived participation and several measures of stress. The results indicated that perceived participation had a significant negative relationship with depression in both samples and a significant negative relationship with anxiety and somatic complaints in only one of the samples.

Margolis, Droes and Quinn (1974) studied the relationship of six potential stressors with ten measures of physical and psychological strain. The six stressors used were nonparticipation in decisions affecting one's job, role ambiguity, underutilization of abilities, overload, resource inadequacy, and insecurity about future employment. The ten measures of strain included overall physical health, depressed mood, self-esteem, and job satisfaction. Non-

participation was significantly related to all ten of the strain measures. Further, nonparticipation had a higher correlation than any of the other stressors studied with eight of the ten strain measures.

Zaleznik, Kets de Vries and Howard (1977) investigated the determinants of job stress reported by members of three different occupational groups--operations, staff, and management--in a large Canadian service organization. The operations and staff groups both reported higher levels of stress than the management group. An analysis of the self-reports of job experience of the three groups of employees indicated that the operations and staff groups felt frustrated by their lack of influence on decisions that affected their work. The group of managers, in contrast, did not share these low perceptions of influence since they had considerable authority over the decision-making operations. Thus, the inability to influence decisions that affect one's worklife can have a considerable impact on one's physical and mental health.

A final variable investigated in relation to perceived influence is attitude toward unions. The basic premise underlying this research is that an individual with little influence in organizational decision making would view unionization as a possible means of increasing his or her control over organizational decisions. Alutto and Belasco (1972) collected information concerning the attitudinal dispositions of school teachers toward unions, strikes, and

collective bargaining. They also measured the teachers' perceived level of decisional deprivation. The results indicated a strong positive relationship between decisional deprivation and attitudes toward unions, strikes and collective bargaining. In a study involving hospital employees, Hrebiniak (1974) had respondents rate the amount of influence that they would like to have, as well as the amount of influence they would like their unit leader to have. Respondents' perceptions of involvement in departmental decision making were also measured. The study found that decisionally-deprived individuals wanted greater influence for themselves and less influence for their unit leaders. Thus, the desire for increased influence and positive attitudes toward unions has been found to be related to decisional deprivation.

In sum, considerable research evidence exists that indicates a strong positive relationship between perceived influence and job satisfaction, and measures of physical and psychological strain. Role conflict and ambiguity have also been consistently found to be related to perceived influence. The relationship between perceived influence and job involvement, organizational commitment and attitudes toward unions appears to be more equivocal.

Summary and Research Plan

The literature involving the three dimensions of personal control--outcome control, activity control, and perceived influence--has been reviewed to determine how each construct has been operationalized by organizational behavior researchers and to identify the important antecedents and consequences of each dimension of personal control.

Table 1 summarizes the literature review presented in this paper and describes how each personal control dimension has been operationalized. Outcome control has been most frequently operationalized using a self-report measure of individuals' perceptions of Effort to Performance or Performance to Outcome expectancies. Neither the Effort to Performance nor the Performance to Outcome expectancy scale, however, seems fully appropriate to measure outcome control. Outcome control, as defined in this paper, involves an individual's perception of causing, controlling, or influencing the outcomes that he or she receives on the job. Effort to Performance expectancies provide an indication of one's perception of control over only one aspect of his or her work environment (i.e. performance). Performance to Outcome expectancies, on the other hand, are more indicative of the predictability with which one is rewarded for performance rather than one's perception of control over those outcomes. To overcome these limitations, outcome control was operationalized in this study using a self-report measure of individuals' perceptions of Effort to Outcome expec-

Table 1

Summary of the Literature Reviewing the Relationship Between Antecedent and Outcome Variables and the Personal Control Dimensions.

Personal Control Dimension	How Operationalized	Research Results	Researchers
1. Outcome Control	inflated expectancy of control (i.e. illusion of control)	negatively related to depressed mood	Alloy and Abramson, 1979; Golin, Terrell and Johnson, 1977; Lewinsohn, Mischel, Chaplin and Barton, 1980
	E $\rightarrow$ P, P $\rightarrow$ O or E $\rightarrow$ O expectancies	positively related to locus of control	Lied and Pritchard, 1976; Kimmons and Greenhaus, 1976; Szilagyi and Sims, 1975
		positively related to effort	Hackman and Porter, 1968; Porter and Lawler, 1968; Schuster, Clark and Rogers, 1971
		positively related to performance	Georgopoulous, Mahoney and Jones, 1967; Porter and Lawler, 1968; Schuster, Clark and Rogers, 1971
2. Activity Control	JDS or JCI Autonomy Scale	positively related to field dependence	O'Connor and Barrett, 1980
		positively related to locus of control	Kimmons and Greenhaus, 1976
		negatively related to social density	Szilagyi and Holland, 1981

Table 1 (continued)

Personal Control Dimension	How Operationalized	Research Results	Researchers
2. Activity Control (continued)		positively related to satisfaction	Brief and Aldag, 1976; Hackman and Oldham, 1975, 1976; Sims and Szilagyi, 1976
		positively related to internal work motivation	Hackman and Oldham, 1975, 1976
		negatively related to job involvement	Moch, 1980; Rousseau, 1977
		negatively related to role strain	Keller, Szilagyi and Holland, 1976
		negatively related to absenteeism	Hackman and Oldham, 1976
		positively related to work effectiveness	Hackman and Oldham, 1976
3. Perceived Influence	manipulation increasing decision-making control	positively related to satisfaction	Cooper, 1972; Cooper and Wood, 1972
		negatively related to job apathy	Coch and French, 1948
		negatively related to turnover	Coch and French, 1948
		positively related to productivity	Coch and French, 1948; Lewin, Lippit and White, 1938

Table 1 (continued)

Personal Control Dimension	How Operationalized	Research Results	Researchers
3. Perceived Influence (continued)	measure of perceived influence	positively related to job satisfaction	Tosi, 1970; Vroom, 1960
		positively related to job involvement	Patchen, 1970; Siegel and Ruh, 1974
		negatively related to physical and psychological strain	Caplan, Cobb, French, Harrison and Pinneau, 1975; Margolies, Droes and Quinn, 1974
		positively related to job performance	Vroom, 1960
	measure of decisional deprivation	negatively related to job satisfaction	Alutto and Acito, 1974; Driscoll, 1978; Ivancevich, 1979
		negatively related to job involvement	Alutto and Acito, 1974
		negatively related to organizational commitment	Alutto and Belasco, 1972
		positively related to physical and psychological strain	Alutto and Vredenburgh, 1977
		positively related to union attitudes	Alutto and Belasco, 1972

tancies. A measure of Effort to Outcome expectancies provides an indication of one's belief that his or her effort will lead to certain outcomes. Thus, Effort to Outcome expectancies more closely approximate outcome control than either Effort to Performance or Performance to Outcome expectancies.

The JDS and JCI autonomy scales were the most commonly used measures of activity control. Both the JDS and JCI autonomy scales are self-report measures of individuals' perceptions of the level of autonomy in their jobs. Autonomy has been defined as one's perception of freedom in scheduling the work and determining the procedures to carry it out (Hackman and Oldham, 1975). The JDS and JCI autonomy scales assess one's perception of a generalized notion of freedom or independence on the job and, as such, may not fully capture the perception of activity control. Therefore, a scale was designed to assess an individual's perception of control over specific work activities related to how an individual determines and carries out his or her work.

Two categories of Locke and Schweiger's (1977) categorization of work activities are relevant to activity control--the work itself and working conditions. The work decisions selected for this scale were derived from these categories and include:

1. the speed with which you do your work
2. the setting of work deadlines

3. the selection of work tasks that you perform
4. when you take your rest breaks
5. the choice of methods to do your work
6. the layout of your workspace
7. the setting of performance goals
8. the choice of equipment to do your work
9. determining the order in which you will do your work
10. the specific hours you work each day.

Subjects were asked to rate the amount of control they have over these ten work activities on a five-option scale ranging from no control to complete control. Thus, activity control was operationalized in this study by assessing individuals' perceptions of control over specific activities and decisions related to how one goes about performing his or her job.

Perceived influence has been operationalized in several different ways in the research literature. Researchers have manipulated the actual amount of influence individuals had in organizational decision-making operations and observed the results (e.g. Coch and French, 1948). Perceived influence has also been operationalized using a self-report measure of perceived influence (e.g. Vroom, 1960), as well as discrepancy scores of an individual's actual-versus-desired involvement in organizational decision-making operations (e.g. Alutto and Belasco, 1972). Several researchers have warned of the reliability and validity problems associated with the use of discrepancy measures (Cronbach and

Furby, 1971; Johns, 1981). Further, since personal control has been defined in this paper as one's perception of control over his or her immediate environment, it was appropriate that perceived influence be operationalized as a perceptual measure in this study.

The most commonly used perceptual measure of influence was Vroom's (1960) measure of psychological participation. The psychological participation scale assesses one's perception of influence over the decisions made by his or her supervisor. The scale, however, does not include specific decisions in which one might be involved. Therefore, a measure of one's perception of involvement in and control over specific work decisions was developed for the same reasons that the activity control scale was developed. Basically, it was believed that the existing scale was too general and that assessing one's perception of influence by summing his or her perceptions of influence over a variety of specific work decisions would be a more accurate measure of perceived influence. Further, individual items in the new scale can be used to determine one's perception of influence over a particular decision area. This could be used to focus management's effort in attempting to increase employee involvement in decision-making operations to those areas that are most deficient.

The decision areas selected for use in the perceived influence scale were derived from the remaining two categories of Locke and Schweiger's (1976) list--routine per-

sonnel functions and company policies. All of the decision areas selected affect one's worklife, however, decisions related to how one performs his or her job were excluded to maintain a conceptual distinction with the activity control scale. The decision areas selected were:

1. hiring new employees
2. your promotion
3. your performance appraisal
4. training new employees
5. your pay raise
6. discipline procedures
7. evaluation of other personnel
8. allocation of department budget
9. assignment of personnel
10. department layoff policy
11. department policy making
12. department wage level
13. department promotion procedures
14. department performance appraisal procedures.

The perceived influence instrument had subjects rate their past level of involvement in the 14 decison areas using the following scale developed by Heller, Drenth, Koopman and Rus (1977):

1. No advance information was provided to you concerning the decision.
2. You were informed in advance of the decision to be made.

3. You were able to voice your opinion concerning the decision.
4. Your opinion concerning the decision was taken into account in the decision-making process.
5. The decision was made jointly with equal authority between yourself and your supervisor.
6. The decision was entirely your own with no involvement from anyone else.

The Heller et al. scale provides a decided advantage over the response format utilized in Vroom's psychological participation scale. The Vroom measure uses a five-point scale ranging from very little to very much. In contrast, the Heller et al. scale provides specific behavioral indicators to anchor each scale value.

In sum, the three dimensions of personal control will be operationalized using perceptual self-report measures. Outcome control will be assessed using an Effort to Outcome expectancies scale derived from Lawler's (1980) scale. Activity control and perceived influence will be measured using newly developed scales that assess control or influence over specific work activities or decisions.

A major hypothesis of this study was that the three organizational behavior variables--expectancy of control, autonomy, and perceived influence--are much more similar than one would expect given the different theoretical orientations and practical applications associated with each construct. It was proposed that these constructs are related

since they each involve an important aspect of one's perception of control in a work organization. The research literature involving these constructs was examined to identify the important antecedents and consequences of each of these dimensions of personal control. An examination of the relationships between each personal control construct and its antecedent and outcome variables was made to determine the similarities and differences among the personal control constructs and to guide the development of a model of personal control.

It is important to note that no study has examined the relationships between the different personal control variables. Thus, little is known regarding the interrelationship of these three variables. Evidence concerning the similarities and differences among the personal control dimensions, however, can be inferred on the basis of their relationships with other variables. Nunnally (1967) proposed that a test of how similar different measures are is the extent to which they have a similar pattern of relationships with external variables.

Table 2 provides a summary of the relationships between antecedent and outcome variables and each of the personal control variables. An "X" on this chart indicates that a relationship between that particular personal control variable and that antecedent or outcome variable has been suggested by theory or demonstrated through research results. Table 2 shows different patterns of relationships for each

Table 2

Summary of the Literature Reviewing the Relationship Between Antecedent and Outcome Variables and the Personal Control Dimensions.

	PERSONAL CONTROL DIMENSIONS		
	Outcome Control	Activity Control	Perceived Influence
ANTECEDENT VARIABLES			
Mood	X	X	
Locus of Control	X	X	
Field Dependence		X	
E → P Perceptions	X		
Valence of Outcomes	X		
Self-Esteem	X		
Physical Environment		X	
Organizational Structure	X	X	
PDM Dimensions			X
Type of Supervision	X	X	X
Communication	X	X	
Social Density		X	
OUTCOME VARIABLES			
Satisfaction	X	X	X
Job Involvement		X	X
Organizational Commitment			X
Union Attitudes			X
Stress Related Physical Strain Emotional Strain			X
Effort/Motivation	X	X	
Turnover Intention			X
Attendance Behavior		X	
Productivity	X	X	X

personal control variable with the antecedent and outcome variables, thus providing some evidence that the personal control dimensions are different constructs. On the other hand, the overlapping relationships the personal control variables have with some of the external variables provides evidence of the similarity among the personal control dimensions. In sum, the results of the literature review provides some support that expectancy of control, autonomy, and perceived influence are related variables.

Figure 9 illustrates a mediational model of personal control that the present study will empirically test in a field setting. The antecedent variables consist of two types of variables--personality and situational variables. The personality variables include mood and locus of control, while job status (i.e. high control or low control) constituted the situational variable. Each of the antecedent variables are proposed to affect the mediating variables (i.e. outcome control, activity control, and perceived influence). The personal control variables, in turn, are related to the outcome variables: intrinsic and extrinsic satisfaction, job involvement, organizational commitment, physical and psychological strain, work effort, union attitudes, and turnover intentions.

The personal control constructs are proposed to be related but not identical constructs. Therefore, they should have similar patterns of relationships with the antecedent and outcome variables but not identical ones. Table 3 il-

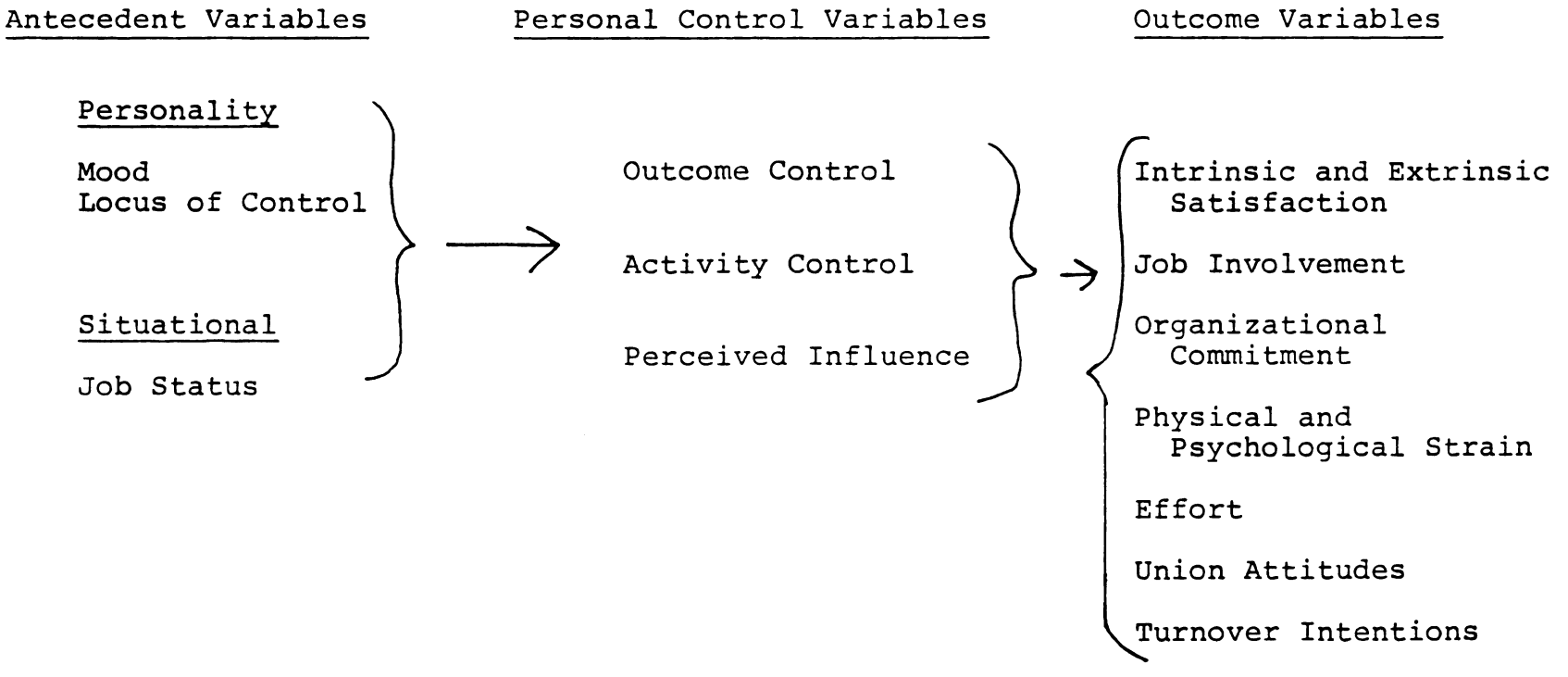

Figure 9. Model of the antecedents and outcomes of personal control

Table 3

Hypothesized Relationships Between Antecedent, Personal Control and Outcome Variables

	Personal Control Variables		
Antecedent Variables	Outcome Control	Activity Control	Perceived Influence
Mood	-	-	-
Locus of Control	-	-	-
Job Status	-	-	-
Outcome Variables			
Intrinsic Satisfaction	NR	+	NR
Extrinisc Satisfaction	+	NR	+
Job Involvement	+	+	NR
Organizational Commitment	+	+	+
Effort/Motivation	+	+	NR
Physical/Psychological Strain	-	-	-
Union Attitudes	-	NR	-
Turnover Intention	NR	NR	-

lustrates the hypothesized relationships of each personal control construct with the antecedent and outcome variables employed in this study. A "+" symbol on this chart indicates that a positive relationship is hypothesized between that antecedent or outcome variable and the personal control dimension, a "-" symbol signifies that a negative relationship is believed to exist, and an "NR" indicates that no relationship is hypothesized to exist. An explanation of the rationale used in determining the hypothesized relationship between the personal control dimensions and each antecedent and outcome variable is given below.

Mood

Considerable research indicates that one's mood state is highly related to his or her perception of control (e.g. Alloy and Abramson, 1979). In a laboratory study, naturally depressed students who were temporarily made elated in the laboratory exhibited an illusion of control when judging the amount of control that they had over uncontrollable events (Alloy, Abramson and Viscusi, 1981). In contrast, natrually nondepressed students who were temporarily made depressed showed no illusion of control and accurately judged their personal control over the event. Thus, the extent to which an individual feels depressed will lower his or her perceptions of outcome control.

Allen and Greenberger (1980) have suggested an explanation for this relationship: "It is probable that positive affect and high control have been frequently associated in

an individual's past experience. Therefore, when a person experiences positive affect, it is likely that he or she will also perceive greater personal control than when in a negative mood." (p. 89.) Thus, a negative relationship is proposed between (depressed) mood and outcome control.

It is likely that mood is also related to activity control and perceived influence since they both involve one's perception of control. Caldwell and O'Reilly (1982) found an indicator of positive affect (i.e. job satisfaction) to be causally related to perceptions of autonomy. Thus, mood is proposed to be negatively related to all three dimensions of control.

Locus of Control

Locus of control involves the generalized expectancy of control over one's environment and, as such, should be positively related to all three dimensions of control. A number of studies have provided empirical evidence of positive relationships between locus of control and both activity control (e.g. Szilagyi and Sims, 1975) and outcome control (Kimmons and Greenhaus, 1976). No study has examined the relationship between locus of control and perceived influence; however, such a relationship seems likely. An "internal" individual would probably see him or herself as having greater influence in decision-making operations than would an "external" person. Therefore, locus of control is hypothesized to be positively related to all three dimensions of control.

Job Status

An important antecedent of one's perception of control in an organization is the actual amount of control provided him or her on the job. The amount of control afforded individuals in different jobs varies according to the type of job and the status associated with that position in the organization. The two jobs chosen for this study--faculty members and clerical workers--were selected because of the large discrepancy in the amount of control individuals in each group have over their work lives. In general, faculty members have a great deal of freedom and control over many aspects of their job. In addition, faculty members have some influence in departmental decision-making operations by serving on committees and voting at department meetings. Clerical workers, in contrast, are characterized by strict work rules, close supervision, and little personal discretion in how to perform their jobs. Job status (coded 1 for faculty members and 2 for clerical workers) should be negatively related with all three dimensions of control.

Satisfaction

Job satisfaction has been theoretically or empirically linked to each of the personal control variables. Thus, it would be difficult to propose which dimensions of personal control would be more highly related to satisfaction. Conceptualization and measurement of both intrinsic and extrinsic satisfaction, however, may provide a useful means of differentiating between the personal control dimensions.

Intrinsic satisfaction is theorized to result primarily from satisfying work activities, while extrinsic satisfaction is related to one's contentment with factors external to work activities (e.g. pay and supervision). Control over outcomes or influence in decisions, therefore, should not be related to feelings of intrinsic satisfaction. Activity control, on the other hand, should be highly related to intrinsic job satisfaction since activity control implies control over intrinsic job factors.

Outcome control and perceived influence, however, should be positively related to extrinsic satisfaction since they imply control over at least some of these extrinsic job factors. Outcome control, however, only involves control over outcomes related to one's job, while perceived influence includes influence over factors unrelated to one's job (e.g. company policy). Therefore, outcome control should be more highly correlated with extrinsic satisfaction than would perceived influence.

Job Involvement

Job involvement involves one's psychological identification with a particular job and is determined, to some extent, by the individual's perceptions of the need-satisfying potentialities (both intrinsic and extrinsic) of the job (Kanungo, 1982). An individual with a high level of activity control is responsible for his or her work and has the freedom to perform the job as he or she

desires. Such an individual should, therefore, be highly involved in his or her job.

Moch (1977) found a high positive relationship between activity control and job involvement. No research has investigated the link between outcome control and job involvement, although such a relationship seems likely. An individual with high outcome control should be involved in his or her job since it fulfills certain needs. Perceived influence should have less of a relationship with job involvement since influence involves control over decisions related to one's worklife rather than his or her job itself. Thus, job involvement should be most highly related to activity control, somewhat less highly related to outcome control, and not related to perceived influence.

Organizational Commitment

Organizational commitment involves acceptance of the organization's goals and values, a willingness to exert effort for the organization, and a desire to retain membership in the organization (Porter, Steers, Mowday and Boulian, 1974). In essence, commitment involves attachment to the organization. Perceived influence should have the greatest impact on one's attachment to an organization since involvement in decision making should lead an individual to feel greater ownership and acceptance of those decisions. Further, involvement in decision making implies that one has influence over the actual decision, and thus the decision, to some extent, is representative of his or her values and

beliefs. Alutto and Belasco (1972) have found a strong negative relationship between decisional deprivation and organizational commitment.

High levels of outcome control and activity control might lead an individual to enjoy working for the organization, thus increasing his or her desire to remain in the organization. Therefore, perceived influence is hypothesized to have the highest correlation with organizational commitment. Outcome control and activity control are expected to have lower, but positive, relationships with organizational commitment.

Effort/Motivation

Considerable theoretical and empirical research suggests a positive relationship between effort and both outcome and activity control. According to expectancy theorists, a high expectancy of receiving a highly valent reward for one's work will lead to a high level of work motivation. Job design theorists have proposed that activity control leads to perceived responsibility, which brings about high internal work motivation. Activity control increases one's level of effort through intrinsic satisfaction factors (i.e. autonomy). Outcome control, in contrast, motivates individuals through extrinsic satisfaction factors (e.g. pay). Therefore, an employee who prefers intrinsic factors would have higher correlations between activity control and effort than employees who more highly desire extrinsic factors. Regardless, a positive relationship is hypothesized between

effort and both outcome and activity control. There is no theoretical or empirical evidence to propose a relationship between perceived influence and effort.

Physical and Psychological Strain

The three dimensions of control are similar in that they all impact on one's general feeling of personal control. Considerable theoretical and empirical research suggests that this feeling of control is important for one's physical and mental well-being (Blauner, 1964; May, 1972). Thus, a negative relationship between the measures of strain and each dimension of control is possible. Given the populations chosen in this study (i.e. faculty and clerical workers), however, it seems unlikely that either activity control or outcome control levels would be sufficiently low to cause excessive strain. Therefore, a low positive relationship is expected between the measures of strain and both activity control and outcome control. In contrast, levels of perceived influence could be quite low, particularly among clerical workers. The inability to influence decisions that affect one's worklife can be quite stressful. Researchers have found a strong negative relationship between perceived influence and several different indicators of strain (Caplan, Cobb, French, Harrison and Pinneau, 1975). Alutto and Vredenburgh (1977) found a positive relationship between decisional deprivation and job tension. Therefore, strain should be most highly related to perceived influence and less so to activity or outcome control.

Union Attitudes

Unions are one means with which employees can increase the amount of control they have in an organization. While other factors also influence one's attitudes toward unions, the amount of control the individual is able to exercise within the organization should also impact on his or her union attitudes. Alutto and Belasco (1972) found a strong positive relationship between decisional deprivation and union attitudes. Therefore, a negative relationship is hypothesized between union attitudes and perceived influence. No research has investigated the relationship between outcome control or activity control and attitudes toward unions. For individuals with low levels of activity control, it is more likely that one would attempt to increase control through his or her supervisor rather than desiring union intervention. Thus, no relationship between activity control and union attitudes is hypothesized. Individuals with little outcome control, however, might see unions as a viable means of increasing the likelihood of their receiving certain desired outcomes from the organization (e.g. pay raises, promotions), since these outcomes are often part of collective bargaining agreements. Thus, a negative relationship is proposed between both outcome control and perceived influence and union attitudes, and no relationship is expected between activity control and union attitudes.

Turnover Intention

Turnover intention is most frequently a result of one's

dissatisfaction with some aspect of his or her job. As such, low levels of any of the personal control variables might lead one to think about changing his or her job. Little empirical research has investigated the relationship between any of the personal control variables and turnover intention. It is proposed that perceived influence will have the highest correlations with individuals' desires to leave an organization because it is more indicative of one's relationship to the organization than either activity or outcome control. Further, perceived influence is hypothesized to have the highest relationship with organizational commitment, which is also a predictor of turnover intention (Steers, 1977).

The purpose of the present study is to empirically examine the multidimensional conceptualization of personal control and to test the mediational model of personal control in a field setting. The psychometric properties of the newly developed instruments used to measure the personal control dimensions will be examined. In addition, the hypothesized relationships between each personal control dimension and the antecedent and outcome variables will be tested.

CHAPTER III

METHOD

Subjects

The sample consisted of two distinct populations of subjects--the faculty and clerical staff of a large midwestern university. The faculty sample included all full-time tenure track faculty members. The clerical sample consisted of all full-time clerical employees. Faculty or clerical staff members with formal supervisory or administrative duties were excluded from this study.

Procedure

Questionnaire packets containing a cover letter explaining the purpose of the study, the questionnaire, and a computer-scan answer sheet were mailed to 1,768 faculty and 1,624 clerical staff members. Questionnaire packets were mailed to each subject's work location and completed questionnaires were to be returned directly to the psychology department, thus ensuring the confidentiality of the responses. Anonymity of subjects was maintained since completed questionnaires did not contain their names or any identifying numbers. A follow-up letter was mailed to all subjects two weeks later to remind them to complete and return the questionnaires.

Instruments

Demographic Variables (See Appendix A)

The demographic variables consisted of length of time employed by the organization, sex, education and job level.

Length of time employed was measured using a six-option response scale: (1) less than 6 months, (2) 6 months to 1 year, (3) 1 to 5 years, (4) 6 to 10 years, (5) 11 to 20 years, (6) over 20 years. Respondents were asked to indicate their sex by responding with a 1 if male and a 2 if female. Education was measured on a scale with five response options: (1) high school graduate or less, (2) some college--no degree, (3) two-year college degree, (4) four-year college degree, (5) graduate degree. To determine job level it was necessary to ask different questions of the faculty and clerical staff members. Clerical positions in this organization are ordered in a civil service-type hierarchy of levels ranging from level 4 to level 12. The lower level positions consist primarily of highly supervised clerical positions. The middle levels include secretaries and administrative assistants, while the highest level positions consist of technical and highly responsible administrative jobs. Clerical employees were asked to indicate their job level on a scale of 4 to 12. Faculty members, on the other hand, were asked to indicate their rank on a four-option scale: (1) professor, (2) associate professor, (3) assistant professor, (4) instructor.

Antecedent Variables (See Appendix B)

Locus of control was assessed using an 11-item form of Rotter's original measure (1966) used previously by Schmitt, Coyle, Rauschenberger and White (1979) who reported an internal consistency reliability of .70. This short form con-

sists of the more adult and work-oriented items from the original form and utilizes five-point Likert-type scales ranging from strongly agree to strongly disagree. High scores on this scale indicate an external locus of control, while a low score is indicative of an internal locus of control. Participants' current mood state was assessed using a modified version of the Depression/Dejection scale of the Profile of Mood States (POMS) (McNair, Lorr, and Droppleman, 1971). This instrument asks subjects to rate the extent to which each of 15 adjectives describe how they currently feel using a five-point scale ranging from not at all descriptive to extremely descriptive. The items used included: "unhappy," "miserable" and "guilty." The modification to the scale involved changing the directions to read "how are you feeling today" rather than "how have you been feeling during the past week, including today." This modification was made in an attempt to assess one's current mood as he or she worked on the questionnaire rather than his or her personality. McNair, Lorr and Droppleman (1971) reported an internal consistency reliability of .95 for the POMS Depression/Dejection scale. The final antecedent variable utilized in this study was job status. The two populations chosen for this study--faculty members and clerical workers--were selected because of the large discrepancy in the amount of control individuals in each group have over their work life. In general, faculty members have a great deal of freedom and control over many aspects

of their job. In addition, faculty members have some influence in departmental decision-making operations by serving on committees and voting at department meetings. Clerical positions, in contrast, are characterized by strict work rules, close supervision and little personal discretion in how to perform their job. Respondents' job status was coded 1 for faculty members and 2 for clerical workers.

Personal Control Variables (See Appendix C)

Three different aspects of personal control were assessed: (1) outcome control, (2) activity control, and (3) perceived influence. Outcome control was measured using a modified version of Lawler's (1981) 11-item Performance to Outcome expectancy scale. The instructions were modified to change the scale to an Effort to Outcome expectancy measure. The revised instructions read, "Listed below are some things that could happen to people if they work hard at their job. How likely is it that each of these things would happen if you worked hard at your job?" Subjects indicated the likelihood of receiving each of 11 different work outcomes on a seven-option scale: (1) not at all likely, (2) unlikely, (3) somewhat likely, (4) likely, (5) quite likely, (6) very likely, (7) extremely likely.

Activity control was measured using three different scales: The Job Diagnostic Survey (JDS)-Autonomy scale (Hackman and Oldham, 1975), The Job Characteristics Inventory (JCI)-Autonomy scale (Sims, Szilagyi and Keller, 1976), and a

newly developed Activity Control scale. The JDS and JCI autonomy scales are each part of different multi-scale instruments designed to measure an individual's perception of job characteristics. The JDS autonomy scale contains three items, each employing a seven-point scale. Pierce and Dunham (1978) reported an internal consistency reliability of .79 for the JDS autonomy scale. The JCI autonomy scale consists of six items using a five-point scale. Pierce and Dunham (1978) reported an internal consistency reliability of .85 for the JCI autonomy scale. The activity control scale consisted of ten items assessing respondents perceptions of control over specific work activities. Respondents were asked to rate the amount of control they have using a five-option scale ranging from no control to complete control for each of ten work activities. These work activities included: "your pay raise," "discipline procedures" and "department wage level."

Perceived influence was assessed using two different instruments: Vroom's (1960) measure of psychological participation and a new measure of perceived influence. The psychological participation scale consists of four items, each employing a five-point scale. The scale assesses one's perception of influence over the decisions made by his or her immediate supervisor. James, Hater and Jones (1981) reported an internal consistency reliability of .82 for the psychological participation scale. The perceived influence instrument had subjects rate their past level of

involvement in 14 decision areas using a six-point scale developed by Heller, Drenth, Koopman and Rus (1977) ranging from "no advance information was provided to you concerning the decision" to "the decision was entirely your own with no involvement by your supervisor." The decision areas used were derived from Locke and Schweiger's (1977) categorization of work decisions and included: "your pay raise," "discipline procedures" and "department policy making."

Outcome Variables (See Appendix D)

The short form of the Minnesota Satisfaction Questionnaire (MSQ) was used to measure job satisfaction. This 20-item scale uses a five-option Likert-type scale that ranges from strongly agree to strongly disagree. The MSQ short form produces two subscales--a 12-item intrinsic satisfaction scale and an eight-item extrinsic satisfaction scale. Weiss, Dawis, England and Lofquist (1967) reported median coefficient alphas of .90 for the overall MSQ short form, .86 for the intrinsic satisfaction subscale, and .80 for the extrinsic satisfaction subscale across a variety of different samples.

Job involvement was measured using a ten-item scale developed by Kanungo (1981). Kanungo reported an internal consistency reliability of .90 for his job involvement scale. Organizational commitment was assessed using the 15-item Organizational Commitment Questionnaire (OCQ) de-

veloped by Porter, Steers, Mowday and Boulian (1974). Mowday, Steers and Porter (1979) reported a median internal consistency reliability of .90 for the OCQ across eight samples.

Physical and psychological strain were also assessed. The Physical Strain Index (PSI) asked subjects to indicate how frequently they were bothered by four physical problems (i.e. upset stomach, backache, headache and fatigue) on a five-option scale ranging from not at all to every day. The short form of the General Health Questionnaire (GHQ) (Goldberg, 1972) was used to assess psychological strain. This instrument asks subjects to respond to 12 questions using a five-option scale which ranges from not at all to much more than usual. Some examples of the questions asked are: "Lost much sleep over worry?," "Felt constantly under strain?," and "Been able to face up to your problems?". Banks, Clegg, Jackson, Kemp, Stafford and Well (1980) reported coefficient alphas ranging from .82 to .90 for six samples using the short form of the GHQ.

Attitudes toward union in general were assessed using the 20-item unionism-in-general scale of the Institute for Social Research Union Attitude Scale (Uphoff and Dunnette, 1956). This instrument asks subjects to respond to a number of positive and negative statements concerning unions on a five-point Likert-type scale ranging from strongly agree to strongly disagree. A coefficient alpha of .88 was reported for this scale by Schriesheim (1978). Effort/

motivation was measured using the four-item Job Motivation Index (Patchen, 1965). One additional item was added asking subjects to indicate the amount of uncompensated time that they spend at work on a five-option response scale ranging from almost every day to about once a month or less. Finally, turnover intention was measured using a single-item scale which asked subjects to indicate how they felt about leaving or staying with the organization on a five-option scale: (1) strongly inclined to leave, (2) inclined to leave, (3) don't know whether I want to stay or leave, (4) inclined to stay, (5) strongly inclined to stay.

Data Analysis

Chi Square tests were used to determine whether or not the sample obtained in this study is representative of the population from which it was drawn. Specifically, Chi Square tests determined whether the respondents differed significantly from the population from which they were drawn in terms of level of education, sex, time employed in the organization, and job level. Separate analyses were performed for the faculty and clerical samples.

The psychometric properties of the personal control scales were examined. Coefficient alphas were computed to determine the internal consistency reliability of each personal control scale. The comparability/distinctiveness of the new personal control scales were then examined in relation to the existing scales using several different analy-

ses. First, the intercorrelations among the six personal control scales were examined for evidence of convergent and discriminant validity. Second, the item-scale correlations of all the items comprising the six personal control scales were examined to assess the empirical distinctiveness between the new and existing scales. Third, the external consistency of the personal control scales was assessed by examining the pattern of correlation each personal control scale had with a set of relevant organizational behavior variables. Finally, the extent to which the new scales explained additional variance in the dependent variables (i.e. antecedent and outcome variables), beyond that accounted for by the existing scales, was determined using a series of hierarchical multiple regression analyses in which the existing scale was entered first and the new personal control scale was entered second.

The zero-order correlations between the personal control variables and each antecedent and outcome variable were examined to test the hypothesized relationships among these variables. The mediational model of personal control was then tested using a series of hierarchical multiple regression analyses. In these analyses, two possibly confounding demographic variables--sex and educational level--were entered into the regression equations first. The personal control variables were entered in the second step, and the antecedent variables were entered last. This analysis was performed for each of the outcome variables.

To test the mediating hypothesis, this hierarchical regression was compared with one in which the demographic variables were entered first, the antecedent variables were entered second and the personal control variables were entered last.

Finally, the relationships between the personal control variables and each of the outcome variables were examined while statistically controlling for the effects of the demographic and antecedent variables. These analyses assessed the degree to which the personal control variables explained additional variance in the outcome variables beyond that accounted for by the demographic and antecedent variables.

CHAPTER IV

RESULTS AND DISCUSSION

Response Rate

Of the 3,392 questionnaires mailed to the combined faculty and clerical worker samples, 1,078 usable questionnaires were returned, yielding a response rate of 32 percent. A considerable difference, however, exists between the response rates of the two sub-samples--faculty and clerical staff members. Of the 1,768 questionnaires sent to faculty members, 423 questionnaires were returned in usable condition, producing a response rate of 24 percent. In contrast, the response rate among the clerical sample was 40 percent, with 655 usable questionnaires returned from the 1,624 that were mailed. A possible explanation for this discrepancy in response rates is that clerical workers may have found time to complete the questionnaire while at work. Because clerical workers are required to put in eight hours a day at work, those workers who filled out the survey during working hours may have felt they were doing it on company time. Faculty members, on the other hand, have far greater discretion over the amount of time they spend at work and may have felt that the survey infringed on their personal time.

Representativeness of the Sample

An important consideration in the interpretation of survey results involves determining whether or not the re-

spondents differ in a significant way from those individuals who did not return the questionnaire. Tables 4 and 5 show comparisons of sample and population demographic characteristics for faculty and clerical staff members respectively. Percent comparisons of the samples and populations on the demographic characteristics of sex, education, length of time employed, and job level generally indicated that the samples reflected their respective populations. One exception to this pattern involves the educational level of clerical workers. Twenty percent of the clerical sample reported their educational status as high school diploma or less, and 47 percent indicated that they had some college but no degree. In contrast, the population data indicates that 43 percent of the clerical workers were at high-school-diploma-or-less level and only 28 percent have some college education. It is quite likely that this discrepancy is due to an error in the population records rather than a sampling bias. Educational data for the population of clerical workers were obtained from university files. These data are collected at the time an employee is hired and is not updated unless the employee earns a degree. Thus, an employee who has a high school diploma at the time of his or her hiring and subsequently takes a few college courses would not have this change in educational status listed on his or her personnel file.

Chi Square tests were performed to determine whether the faculty and clerical worker samples differed signifi-

Table 4. Comparison of Sample and Population Demographic Characteristics for Faculty

	Population	Percentage	Sample	Percentage
N	1,792	100	423	23.6
Sex				
Male	1,522	85	341	81
Female	270	15	82	19.4
Education				
High School	0	0	1	.2
College - no degree	4	.2	0	0
Associate's degree	0	0	0	0
Bachelor's degree	6	.3	2	.5
Graduate degree	1,782	99.4	416	99.3
Length of Time Employed				
0-6 months	9	.5	2	5
7 months-1 year	51	2.8	15	3.5
1-5 yearss	363	20.2	63	15
6-10 years	295	16.5	59	14.1
11-20 years	749	41.8	179	42.7
over 20 years	325	18.1	101	24.1
Job Level				
Instructor	4	.2	3	.7
Assistant Professor	315	17.6	81	19.6
Associate Professor	494	27.6	94	22.2
Full Professor	979	54.6	245	57.9
Tenure				
Yes	1,500	83.4	339	81
No	292	16.3	80	19

Table 5. Comparison of Sample and Population Demographic Characteristics for Clerical Workers

	Population	Percentage	Sample	Percentage
N	1,586	100	655	41.3
Sex				
Male	38	24	22	3.4
Female	1,548	98	630	96.6
Education				
High School	461	43	133	20.4
College - no degree	303	28.2	306	46.9
Associate's degree	56	5.2	49	7.5
Bachelor's degree	223	20.7	131	20.1
Graduate degree	32	3	33	5
Missing cases	512	--	--	--
Length of Time Employed				
0-6 months	110	6.9	34	5.2
7 months-1 year	44	2.8	24	3.7
1-5 years	652	41.1	255	38.9
6-10 years	409	25.8	180	27.5
11-20 years	316	19.9	132	20.1
over 20 years	55	3.5	30	4.6
Job Level				
Level 4	49	3.1	14	2.2
Level 5	331	20.9	130	20.1
Level 6	337	21.2	124	19.2
Level 7	484	30.5	211	32.7
Level 8	205	12.9	94	14.6
Level 9	152	9.6	60	9.3
Level 10	28	1.8	13	2

cantly from the populations from which they were drawn in terms of sex, education, length of time employed, and job level. Table 6 shows the Chi Square results for the faculty sample. The results indicate that the faculty sample differed significantly from its population in several characteristics: sex ($p < .05$), length of time employed ($p < .01$) and job level ($p < .05$). Specifically, females, faculty members with over 20 years of tenure, and full professors were somewhat overrepresented in the sample. While these differences are statistically significant, it does not appear that the differences are large enough to represent any practical significance.

The Chi Square results for the clerical sample are summarized in Table 7. The clerical worker sample differed significantly from its population values only in regards to educational level. As discussed earlier, this difference may be artifactual in nature (i.e. inaccurate population data records). In sum, both the faculty and clerical worker samples appear to adequately reflect the demographic characteristics of the population from which they were drawn.

Psychometric Properties of the New Personal Control Scales

Before testing the model of personal control described earlier, the psychometric properties of the new or revised personal control scales were examined. Specifically, the internal consistency reliability of each personal control scale was assessed and the comparability/distinctiveness of the new personal control scales was examined in relation to

Table 6. Chi Square Test of the Differences in Demographic Characteristics Between the Faculty Sample and Its Population

Variable	Category	Expected Value	Observed Value	df	Chi Square
Sex				1	5.96*
	Male	359	341		
	Female	64	82		
Education				1	1.00
	No graduate degree	2	3		
	Graduate degree	417	416		
Time Employed				4	16.12**
	Under 1 year	14	17		
	1-5 years	85	63		
	6-10 years	69	59		
	11-20 years	175	179		
	Over 20 years	76	101		
Job Level				2	6.45*
	Instructor and Assistant Professor	75	84		
	Associate Professor	117	94		
	Full Professor	231	245		
Tenure				1	.21
	No	68	80		
	Yes	351	339		

* $p < .05$
** $p < .01$

Table 7. Chi Square Test of the Differences in Demographic Characteristics Between the Clerical Worker Sample and Its Population

Variable	Category	Expected Value	Observed Value	df	Chi Square
Sex				1	2.31
	Male	16	22		
	Female	636	630		
Education[a]				4	175.13**
	High school degree or less	280	133		
	College degree	184	306		
	Associate's degree	34	49		
	Bachelor's degree	135	131		
	Graduate degree	19	33		
Time Employed				5	7.66
	6 months-1 year	45	34		
	7 months-1 year	18	24		
	1-5 years	269	255		
	6-10 years	169	180		
	11-20 years	130	132		
	Over 20 years	24	30		
Job Level				6	5.82
	Level 4	20	14		
	Level 5	135	130		
	Level 6	137	124		
	Level 7	197	211		
	Level 8	84	94		
	Level 9	62	60		
	Level 10	11	13		

a. population data has 512 missing cases

** $p < .01$

the existing scales.

Internal Consistency

Internal consistency involves an estimate of the reliability of a measure based on the average correlation/covariance among the items in a scale (Nunnally, 1967). Stone (1978) proposed that an internal consistency estimate should be used whenever "the researcher wishes to assess the degree to which the items in a measure are homogenous (i.e. indices of a common construct)." (p. 49.) Nunnally (1967) described internal consistency as a necessary, although not sufficient, condition of the construct validity of scale.

Table 8 contains the coefficient alphas, as well as the number of items for each personal control scale: the JDS Autonomy Scale (JDS), the JCI Autonomy Scale (JCI), the Activity Control Scale (AC), the Perceived Influence Scale (PI), Vroom's Psychological Influence Scale (Vroom), and the Outcome Control Scale (OC). The coefficient alphas range from .74 to .90, indicating that the internal consistency reliability is adequate for all the personal control measures. Further, the alphas for the three personal control scales (i.e. outcome control, activity control, and perceived influence) developed or revised for this study were among the highest, ranging from .87 to .90.

Comparability/Distinctiveness of the New Personal Control Scales

Two new scales were developed for this study--the ac-

Table 8

Coefficient Alphas for the Personal Control Scales.

Scale	No. of Items	Coefficient Alpha
JDS Autonomy	3	.74
JCI Autonomy	6	.87
Activity Control	10	.87
Vroom's Participation	3[a]	.83
Perceived Influence	14	.90
Outcome Control	11	.88

a. Vroom's Participation Scale ordinarily contains four items, however, one item was inadvertently omitted on the questionnaire.

tivity control scale and the perceived influence scale--because it was believed that the existing scales were too general to adequately capture the underlying constructs. The following analyses compared the new scales with the existing scales in order to determine their comparability and distinctiveness. Ideally, the new scales will be highly related (i.e. comparable) to the existing scales since they were intended to measure the same constructs. The new scales, however, should be better or different from the existing scales in some way (i.e. distinctive) if the new scales are to be of any practical value.

Several different analyses were performed to compare the new with the existing personal control scales. First, the intercorrelations among the six personal control scales were examined for evidence of convergent and discriminant validity. Second, the similarities and differences of the personal control scales were further assessed by examining the pattern of correlations each personal control scale had with a set of relevent organizational behavior variables (i.e. external consistency). Third, the item-scale correlations of all the items comprising the six personal control scales were examined to assess the empirical distinctiveness between the personal control scales.

Finally, the extent to which the new scales explained additional variance in the dependent variables (i.e. antecedent and outcome variables), beyond that accounted for by the existing scales, was determined using a series of hier-

archical multiple regression analyses in which the existing scale was entered first and the new personal control scale was entered second. The preceding analyses also provided evidence of the similarities and differences between the three personal control dimensions--outcome control, activity control, and perceived influence.

Personal Control Scales/Dimensions Intercorrelations

The intercorrelations of the personal control scales were examined for evidence of convergent and discriminant validity. Table 9 contains the intercorrelations of the six personal control scales. The highest intercorrelations were among the three scales used to measure the autonomy/activity control dimension: JDS Autonomy, JCI Autonomy, and Activity Control Scales. These intercorrelations ranged from .64 to .73. In contrast, the correlation between the two scales used to assess the participation/influence scales was a more moderate .44.

The results suggest that the autonomy/activity control scales have a high degree of convergent validity, while the participation/influence scales show much less convergence. This indicates that the activity control scale is tapping the same construct as the JDS and JCI autonomy scales, while the perceived influence scale and the Vroom psychological participation scale represent related but different constructs.

The intercorrelations between scales measuring dif-

Table 9

Intercorrelation Matrix of Demographic, Antecedent, Personal Control and Outcome Variables.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.	JDS Autonomy	(74)																			
2.	JCI Autonomy	73	(87)																		
3.	Activity Control	64	69	(87)																	
4.	Vroom Participation	47	48	40	(83)																
5.	Perceived Influence	51	43	49	44	(90)															
6.	Outcome Control	42	39	38	39	42	(88)														
7.	Sex[a]	-31	-27	-40	-09	-46	-16	(--)[c]													
8.	Educational Level	33	30	38	12	44	13	-65	(--)[c]												
9.	Job Status[b]	-40	-32	-47	-08	-54	-20	79	-80	(--)[c]											
10.	Mood	-23	-24	-23	-10	-20	-26	09	-06	08	(92)										
11.	Locus of Control	-16	-17	-20	-14	-19	-27	06	-07	07	18	(67)									
12.	Intrinsic Satisfaction	63	58	56	44	44	55	-32	22	-37	-38	25	(88)								
13.	Extrinsic Satisfaction	45	43	44	41	59	52	-20	13	-18	-39	19	64	(84)							
14.	Job Involvement	41	33	40	44	18	36	-45	39	-56	-05	05	44	27	(89)						
15.	Organizational Commitment	41	36	36	40	49	50	-12	06	-13	-30	18	56	66	42	(92)					
16.	Physical Strain	-25	-25	-31	-23	-14	-19	26	-25	28	38	-17	-34	-34	-19	-19	(69)				
17.	Psychological Strain	-21	-26	-26	-13	-21	-31	07	-04	06	62	-25	-39	-41	-07	-36	42	(85)			
18.	Effort	41	29	38	44	13	30	-52	53	-67	-06	11	45	14	64	25	-17	-07	(72)		
19.	Turnover Intention	-28	-26	-24	-26	-29	-16	08	00	-10	-27	-12	-43	-45	-31	-57	+21	+29	-21	(--)[c]	
20.	Union Attitudes	-19	-14	-23	-18	-08	-21	26	-25	31	13	-16	-20	-15	-20	-18	15	14	-26	+11	(91)

Note: Values on the diagonal represent coefficient alphas. Decimal points have been omitted from the table. Correlations greater than .06 are significant at the .05 level. Correlations greater than .08 are significant at the .01 level.

a. Sex was coded 1 for females and 2 for males.

b. Job status was coded 1 for faculty members and 2 for clerical workers.

c. no internal consistency estimate could be computed for these single item measures.

ferent personal control dimensions were moderate, ranging from .38 to .51. The activity control scale, for the most part, had lower correlations with the outcome control and perceived influence scales than did the other two autonomy/activity control scales, thus providing some evidence of the discriminant validity of the activity control scale. The perceived influence scale, however, shows little evidence of discriminant validity since it correlated higher with the JDS autonomy and the activity control scales than it did with the Vroom scale. Further, the perceived influence scale had somewhat higher correlations with the outcome control and autonomy/activity control scales than did the Vroom scale.

The intercorrelations among the personal control scales also provides evidence of the interrelationships among the personal control dimensions--outcome control, activity control, and perceived influence. The correlations among these three scales are much higher than one would expect, given the different theoretical orientations and practical applications associated with each. The high intercorrelations among these scales provides some support for this study's hypothesis that these scales tap a highly related construct (i.e. personal control).

External Consistency

Additional evidence of the similarity and differences of a variable or construct can be acquired through examination of the pattern of correlations each variable has with

several different (i.e. external) variables. Similar scales should have a similar pattern of relationships with other variables, while dissimilar scales should show unrelated patterns of correlations with the external variables.

The external variables employed in this study included current mood state, locus of control, job status, intrinsic satisfaction, extrinsic satisfaction, job involvement, organizational commitment, physical strain, psychological strain, effort/motivation, turnover intention, and attitudes toward unions. Table 9 shows the internal consistency reliabilities (i.e. coefficient alphas) of the external variables, as well as the intercorrelations between the personal control and external variables. The coefficient alphas for the external variables were quite high, ranging from .67 to .92, indicating an acceptable level of internal consistency for all of these scales.

The pattern of correlations between each personal control scale and the set of external variables are very similar. As expected, the pattern of correlation for the JDS Autonomy, JCI Autonomy and Activity Control are most similar. For example, their correlations with mood range from -.23 to -.24, with locus of control they range from .16 to .20, and with turnover intention they range from .24 to .28. The similarity of these patterns provides further evidence that the activity control scale is tapping the same construct as the autonomy scales.

The two scales used to assess the participation/influence construct have the most dissimilar pattern of correlations, once again suggesting that these two scales are tapping separate constructs. The Vroom Participation scale also has the most dissimilar pattern of correlations with the external variables of all the personal control scales. This suggests that the Vroom scale rather than the perceived influence scale is the less appropriate measure of perceived influence.

The patterns of correlations of five of the personal control scales are very similar. This provides additional support for the hypothesis that these scales are measuring similar constructs. In sum, based on both their intercorrelations and pattern of correlations with external variables, it appears that the six personal control scales yield three highly related factors: JDS/JCI/AC scales, perceived influence and outcome control and 1 factor (i.e. Vroom Participation Scale) that is less highly related.

Item-Scale Correlations

Further evidence of the comparability and distinctiveness of the personal control scales was obtained by examining the item-scale correlations. Table 10 shows the item-scale correlations for all of the items comprising the six personal control scales. To ensure an unbiased correlation between an item and its own scale, the item was removed before the correlation was computed.

For the most part, items correlated higher with their

Table 10

Item-Scale Correlations for Personal Control Measures

Item	Personal Control Measures					
	JDS	JCI	AC	VROOM	PI	OC
JDS1	60	71	67	40	48	34
JSD2	54	51	44	36	38	37
JDS3	57	55	47	35	38	31
JCI1	51	69	42	32	26	27
JCI2	56	71	46	40	34	27
JCI3	39	53	36	25	14	17
JCI4	67	78	63	42	43	35
JCI5	74	80	65	47	49	43
JCI6	50	60	61	34	29	29
AC1	37	47	54	24	20	23
AC2	46	48	62	29	32	29
AC3	51	53	64	31	42	31
AC4	34	40	55	23	27	19
AC5	58	60	73	36	39	30
AC6	35	35	53	26	31	19
AC7	48	54	61	40	30	31
AC8	39	39	59	25	37	28
AC9	51	59	67	31	28	25
AC10	41	36	44	14	42	24
Vroom 1	43	47	36	73	42	37
Vroom 2	45	47	40	72	43	37
Vroom 3	33	32	32	59	32	28
PI1	47	38	43	33	67	32
PI2	21	19	20	17	41	25
PI3	21	16	18	23	38	22
PI4	35	30	31	38	53	29
PI5	23	21	21	24	47	27
PI6	30	28	30	34	62	25
PI7	42	34	40	35	72	31

Table 10 (continued)

Item-Scale Correlations for Personal Control Measures

Item	Personal Control Measures					
	JDS	JCI	AC	VROOM	PI	OC
PI8	31	27	31	29	60	27
PI9	37	29	34	37	66	27
PI10	34	30	34	25	65	27
PI11	45	37	46	35	70	36
PI12	26	24	27	25	60	28
PI13	44	36	43	28	67	33
PI14	39	34	39	28	69	32
OC1	35	29	37	22	45	44
OC2	23	20	20	12	18	57
OC3	39	39	33	20	32	68
OC4	13	12	12	18	15	56
OC5	34	31	31	27	33	65
OC6	20	16	20	24	26	55
OC7	35	30	33	19	31	66
OC8	25	28	20	30	22	56
OC9	31	31	28	30	30	63
OC10	28	28	24	54	32	51
OC11	20	22	16	25	23	53

Note: Correlations between an item and its own scale are corrected item-total correlations.

own scale than with any of the other scales, indicating a high degree of homogeneity of items in each of the scales. All items comprising the autonomy/activity control scales had high correlations with each of the autonomy/activity control scales (i.e. JDS, JCI and AC). This provides additional evidence concerning the similarity of content of these three scales. Once again, however, the participation/influence scales showed marked differences. Items from the Vroom scale had very low correlations with the perceived influence scale, and perceived influence scale items had low correlations with the Vroom scale.

One of the outcome control items (i.e. OC 10) had its highest correlations with the Vroom scale. This is interesting since the three Vroom scale items and OC 10 refer to one's supervisor. This suggests that the Vroom scale may assess one's relationship with his of her supervisor rather than one's perception of influence in decision-making operations, as previously believed. It was unfortunate that the fourth item in the Vroom scale (i.e. "In general how much say or influence do you have on what goes on in your station?") was inadvertently excluded on the questionnaire used in this study. Because it does not refer to one's supervisor, it would have been interesting to see on which scale it had its highest correlation--the Vroom scale or the perceived influence scale.

Variance in the Dependent Variables Accounted for by the New Scales

A final set of analyses were performed to examine the distinctiveness of the new personal control scales--activity control and perceived influence. These analyses assessed the degree to which the new personal control scales explained additional variance in the dependent variables beyond that accounted for by the existing scales: JDS autonomy, JCI autonomy, and Vroom participation. Specifically, hierarchical multiple regression analyses were performed on each of the antecedent and outcome variables with the existing scale entered into the regression equation first and the new scale entered second.

Tables 11 and 12 contain the simple correlations, standardized regression coefficients, and the multiple squared correlations for each independent variable in these analyses. F-tests for the change in multiple R^2 caused by the entry of each independent variable into the regression equation are also reported. This F-test determines whether a particular independent variable explains a significant amount of additional variance (of the dependent variable) beyond that accounted for by the other independent variables. The formula used in computing this statistic was described by Nie, Hull, Jenkins, Steinbrenner and Bent (1975, p. 336).

Table 11 shows the results of the hierarchical regression analyses of the participation/influence scales--per-

Table 11. Results of Hierarchical Multiple Regression Analyses of Participation/Influence Scales-- Vroom Psychological Participation Scale (Vroom) and the Perceived Influence Scale (PI) on the External Variables

Dependent Variable (N)	Variable Entered		r	B	R^2	F for ΔR^2
Mood (801)						
	Step 1	Vroom	-.24	-.22	.05650	47.84**
	Step 2	PI	-.13	-.03	.05704	.47
Locus of Control (817)						
	Step 1	Vroom	.19	.14	.03594	30.65**
	Step 2	PI	.17	.11	.04547	8.13**
Job Status[a] (824)						
	Step 1	Vroom	-.11	.18	.01153	13.66**
	Step 2	PI	-.53	-.61	.30730	1,134.47**
Intrinsic Satisfaction (823)						
	Step 1	Vroom	.46	.32	.20923	238.63**
	Step 2	PI	.45	.30	.28105	81.91**
Extrinsic Satisfaction (821)						
	Step 1	Vroom	.60	.51	.35802	758.66**
	Step 2	PI	.43	.19	.38602	59.30**

Table 11 (Continued)

Dependent Variable (N)	Variable Entered		r	B	R^2	F for ΔR^2
Job Involvement (805)						
	Step 1	Vroom	.23	.01	.05143	52.53**
	Step 2	PI	.46	.46	.21483	166.86**
Organizational Commitment (802)						
	Step 1	Vroom	.50	.40	.25522	289.82**
	Step 2	PI	.41	.23	.29640	46.76**
Physical Strain (798)						
	Step 1	Vroom	-.14	-.04	.01857	15.55**
	Step 2	PI	-.22	-.20	.05101	27.14**
Psychological Strain (798)						
	Step 1	Vroom	-.24	-.22	.05652	47.70**
	Step 2	PI	-.15	-.05	.05816	1.38
Effort (959)						
	Step 1	Vroom	.14	-.08	.02087	21.07**
	Step 2	PI	.45	.49	.20572	186.65**

Table 11 (Continued)

Dependent Variable (N)	Variable Entered		r	B	R^2	F for ΔR^2
Union Attitudes (956)						
	Step 1	Vroom	-.12	-.03	.01375	11.36**
	Step 2	PI	-.20	-.18	.03984	21.55**
Turnover Intention (967)						
	Step 1	Vroom	.30	.23	.08904	79.16**
	Step 2	PI	.25	.14	.10573	14.83**

Note: Because of the missing data and the use of listwise deletion, the multiple regression analysis was based on the sample size indicated in the parentheses.

a. Job status is coded 1 for faculty member and 2 for clerical worker.

** $p < .01$

* $p < .05$

ceived influence and Vroom participation with each of the dependent variables. The perceived influence scale explained a significant amount of additional variance ($p < .01$) in all but two of the dependent variables (i.e. mood and psychological strain) beyond that accounted for by the Vroom participation scale. The perceived influence scale accounted for more variance in a number of dependent variables (i.e. job status, job involvement, physical strain, effort and union attitudes) than did the Vroom participation scale. These results indicate that the perceived influence scale is not redundant with the Vroom participation scale. Rather, the perceived influence scale explains a significant amount of additional variance for many of the dependent variables and in a number of cases accounted for more variance than did the Vroom scale.

Table 12 shows the results of the hierarchical multiple regression analyses of the autonomy/activity control scales: JCI autonomy, JDS autonomy and activity control. The activity control scale explained a significant amount of additional external variable variance beyond that accounted for by the JCI and JDS autonomy scales for all of the variables examined. Again, these results indicate that the activity control scale, while highly related to the two autonomy scales, is not merely a redundant scale. The activity control scale explained a significant amount of additional variance beyond that accounted for by the two autonomy scales of a set of relevant organizational behavior vari-

Table 12. Results of Hierarchical Multiple Regression Analyses of Autonomy/Activity Control Scales--JCI Autonomy Scale (JCI), JDS Autonomy Scale (JDS) and the Activity Control Scale (AC) on the External Variables

Dependent Variable (N)	Variable Entered		r	B	R^2	F for ΔR^2
Mood (974)						
	Step 1	JCI	-.28	-.18	--	
		JDS	-.22	-.04	.07802	82.69**
	Step 2	AC	-.25	-.11	.08385	6.18*
Locus of Control (984)						
	Step 1	JCI	.20	.08	--	
		JDS	.16	.02	.03983	41.17**
	Step 2	AC	.22	.15	.05103	11.37**
Job Status[a] (1001)						
	Step 1	JCI	-.39	-.23	--	
		JDS	-.32	.13	.15984	211.84**
	Step 2	AC	-.47	-.42	.24701	115.52**
Intrinsic Satisfaction (990)						
	Step 1	JCI	.59	.30	--	
		JDS	.58	.20	.40296	669.72**
	Step 2	AC	.57	.24	.43160	49.73**

Table 12 (Continued)

Dependent Variable (N)	Variable Entered		r	B	R^2	F for ΔR^2
Extrinsic Satisfaction (988)						
	Step 1	JCI	.42	.20	--	
		JDS	.42	.12	.21203	274.60**
	Step 2	AC	.44	.24	.23944	35.50**
Job Involvement (969)						
	Step 1	JCI	.42	.28	--	
		JDS	.35	-.04	.18055	217.12**
	Step 2	AC	.42	.28	.21967	47.04**
Organizational Commitment (955)						
	Step 1	JCI	.41	.27	--	
		JDS	.36	.08	.17829	209.26**
	Step 2	AC	.36	.15	.18890	12.48**
Physical Strain (967)						
	Step 1	JCI	-.25	-.04	--	
		JDS	-.23	-.06	.07133	76.44**
	Step 2	AC	-.31	-.24	.10055	31.44**

Table 12 (Continued)

Dependent Variable (N)	Variable Entered		r	B	R^2	F for ΔR^2
Psychological Strain (967)						
	Step 1	JCI	-.26	-.15	--	
		JDS	-.18	.03	.06653	69.83**
	Step 2	AC	-.27	-.18	.08162	15.84**
Effort (959)						
	Step 1	JCI	.37	.27		
		JDS	.29	-.08	.14172	164.89**
	Step 2	AC	.37	.27	.17836	42.63**
Union (956)						
	Step 1	JCI	-.17	-.08	--	
		JDS	-.15	.06	.03265	33.05**
	Step 2	AC	-.24	-.23	.05859	26.26**
Turnover Intentions (967)						
	Step 1	JDS	.26	.15	--	
		JCI	.25	.08	.07749	81.37**
	Step 2	AC	.24	.10	.08204	4.77*

Note: Because of the missing data and the use of listwise deletion, the multiple regression analysis was based on the sample size indicated in the parentheses.

a. Job status is coded 1 for faculty member and 2 for clerical worker.

** $p < .01$

* $p < .05$

ables. In one case--job status--the activity control scale explained more variance than did the JDS and JCI autonomy scales combined.

In sum, the new personal control scales--activity control and perceived influence--appear to be psychometrically sound. The activity control scale demonstrated a high internal consistency reliability, as well as a certain degree of convergent and discriminant validity. An examination of this scale's item-scale correlations and its pattern of correlations with the other personal control scales and external variables revealed a strong relationship with the two autonomy scales--JDS autonomy and JCI autonomy. This indicates that the activity control scale is tapping the same construct as the autonomy scales. The activity control scale, however, is not redundant with the autonomy scales in terms of explaining the variance of external variables. In fact, the activity control scale was able to explain a significant amount of additional variance in a set of relevant organizational behavior variables beyond that accounted for by the two autonomy scales. Thus, the activity control scale appeared to be a sound measure and was used in the subsequent analyses as the measure of activity control.

The perceived influence scale also had a high degree of internal consistency reliability, however, it demonstrated little convergence with the other participation scale (i.e. Vroom participation). An examination of item-

scale correlations and correlations with the other personal control scales and a set of external variables revealed that the perceived influence scale and the Vroom scale were quite different measures. Considerable evidence suggests that the perceived influence scale is the better measure of the influence/participation construct than the Vroom scale.

Of the personal control scales, the Vroom participation scale had the least similar pattern of relationships with the external variables. This indicates that the Vroom scale is less related to the other personal control scales than perceived influence and may be measuring some different construct. An examination of the item-scale correlations of the personal control scales revealed that one of the outcome control scale items (i.e. OC 10) had its highest correlation with the Vroom scale. This provides additional evidence that the Vroom scale may actually be assessing one's relationship with his or her supervisor rather than one's perception of influence in decison-making operations.

A further indication of the usefulness of the perceived influence scale was revealed in a series of hierarchical multiple regression analyses. The perceived influence scale explained a significant amount of additional variance ($p < .01$) in all but two of the dependent variables beyond that accounted for by the Vroom scale. Further, the perceived influence scale accounted for more variance in a

number of dependent variables (i.e. job status, job involvement, physical strain, effort, and union attitudes) than did the Vroom scale. This is especially significant since the Vroom scale entered the regression equation first and picked up the common variance shared between the dependent variable and both the Vroom scale and the perceived influence scale. For these reasons, the perceived influence scale was used as the measure of perceived influence in the subsequent analyses.

The preceding analyses also provided evidence of the relationships between the underlying constructs of the personal control scales. A major hypothesis of this study is that the three variables--autonomy, expectancy of control, and perceived influence--are much more similar than one would expect, given the different theoretical orientations and practical applications associated with each. It has been proposed in this study that what unifies these three variables is that each is related to one's perception of personal control in an organization. An examination of the personal control scale intercorrelations and their pattern of correlations with a set of relevant organizational behavior variables provides support for this hypothesis. The moderate to high intercorrelations among the scales representing different personal control dimensions suggest highly similar yet distinct underlying constructs. Further, the similarity among the pattern of correlations between the personal control scales and a set of relevant organizational behavior vari-

ables provides additional evidence of the similarity among these constructs.

Test of Hypothesized Relationships Between Personal Control Dimensions and Antecedent and Outcome Variables

In an attempt to increase our understanding of personal control, a literature review was performed to identify the important antecedents and outcomes of each dimension of control--outcome control, activity control and perceived influence. The hypothesized relationships between the control dimensions and the antecedent and outcome variables were summarized in Table 13. Correlations were computed to test these hypothesized relationships. Because of missing data on various items, these correlations were based on a sample of 983 respondents.

Table 13 includes the correlations obtained between the personal control scales and each external variable, as well as the hypothesized relationships between those external variables and each personal control dimension. A "+" indicates that a positive relationship between that personal control dimension and the external variable has been hypothesized. A "-" indicates a negative relationship, and an "NR" signifies that no relationship was believed to exist.

Mood was hypothesized to have a negative relationship with each of the personal control dimensions. The results indicated that mood did indeed have a significant negative relationship with each of the personal control variables ($p < .01$), with outcome control having the strongest rela-

Table 13

Hypothesized Relationships and Empirical Correlations Between Personal Control Dimensions and Antecedent and Outcome Variables

	Personal Control Dimensions					
	Outcome Control		Activity Control		Perceived Influence	
Mood	(-)[a]	-.26	(-)	-.23	(-)	-.10
Locus of Control	(-)	-.27	(-)	-.20	(-)	-.14
Job Status	(-)	-.20	(-)	-.47	(-)	-.54
Intrinsic Satisfaction	(NR)	.55	(+)	.56	(NR)	.44
Extrinsic Satisfaction	(+)	.52	(NR)	.44	(+)	.41
Job Involvement	(+)	.36	(+)	.40	(NR)	.44
Organizational Commitment	(+)	.50	(+)	.36	(+)	.40
Effort	(+)	.30	(+)	.38	(NR)	.44
Physical Strain	(-)	-.19	(-)	-.31	(-)	-.23
Psychological Strain	(-)	-.31	(-)	-.26	(-)	-.13
Union Attitudes	(-)	-.21	(NR)	-.23	(-)	-.18
Turnover Intention	(NR)	-.36	(NR)	-.24	(-)	-.26

Note: Hypothesized relationships between each personal control dimension and the external variables are in parentheses. A "+" indicates a positive relationship, a "-" indicates a negative relationship, and "NR" specifies that no relationship is believed to exist. Correlations greater than .06 are significant at the .05 level. Correlations greater than .08 are significant at the .01 level.

tionship. A negative relationship was also hypothesized between locus of control and each of the personal control scales. The correlations between locus of control and the personal scales were negative and significant ($p < .01$). Thus, depressed mood and an external locus of control were negatively associated with individuals' perception of control at work.

The final antecedent variable--job status--was also proposed to be negatively related to the personal control scales. Job status had been coded 1 for faculty member and 2 for clerical worker, so a high score on job status is indicative of a lower control position. The results indicated that each of the personal control scales was negatively related to job status. Activity control and perceived influence had especially high correlations with job status.

The high correlations between the personal control scales and job status also provide some evidence of the construct validity of these scales. According to Nunnally (1967), an important source of proof of the construct validity of a measure is the extent to which the measure "behaves as expected." Nunnally, (1967) has described an example of how a measure should behave as expected: "If, for example, a particular measure is thought to relate to the construct of anxiety, common sense would suggest many findings that should be obtained with the measure. Higher scores (higher anxiety) should be found for: (1) patients classified as anxiety neurotics than for unselected nonpa-

tients, (2) subjects in an experiment who are kept threatened with a painful electric shock than for subjects not so threatened, and (3) graduate students waiting to undergo a final oral examination for the Ph.D. than for the same students after passing the examination" (p. 92).

A measure of personal control in organization should be capable of distinguishing between incumbents in low control versus high control jobs. The populations chosen for this study were faculty and clerical staff members at a large midwestern university. In general, faculty members have a great deal of freedom and control over many aspects of their job. Clerical positions, in contrast, are characterized by strict work rules, close supervision, and little personal discretion in how the job is performed. The high correlations between the personal control scales and job status demonstrate the ability of the personal scales to distinguish between members of a high control versus a low control position in an organization, thus providing some evidence of the construct validity of these scales.

Intrinsic satisfaction was hypothesized to be positively related to activity control and to be unrelated to both outcome control and perceived influence. Activity control had the highest correlation with intrinsic satisfaction (r. = 56), however, its correlations with outcome control and perceived influence were also high (r.s = .55 and .44). Extrinsic satisfaction was proposed to be related to outcome control and perceived influence and unrelated to acti-

vity control. The results indicated that extrinsic satisfaction had a high positive relationship with all three scales. Thus, all three personal control scales had high positive relationships with both intrinsic and extrinsic satisfaction, supporting several hypothesized relationships.

Significant correlations were found between satisfaction variables and personal control scales that were hypothesized to be unrelated (e.g. intrinsic satisfaction and outcome control). This can be partly explained by the high correlation (.64) between intrinsic satisfaction and extrinsic satisfaction. Also, it is likely that the effects of common method variance acted to inflate the correlations between these variables.

A positive relationship was hypothesized between job involvement and both outcome control and activity control, while no relationship was believed to exist between job involvement and perceived influence. The results indicated, however, that perceived influence had the highest correlation with job involvement ($r. = .44$). Once again, variables proposed to be unrelated turned out to be highly related. Activity control and outcome control also had high positive correlations with job involvement, supporting their hypothesized relationships.

Organizational commitment was hypothesized to be positively related to all three personal control scales. The results supported these hypothesized relationships. Effort, however, had its highest correlation with perceived influ-

ence, to which it was hypothesized to be unrelated. Effort was positively correlated to both outcome control and perceived influence, as hypothesized.

Physical and psychological strain were hypothesized to be negatively related to all three personal control dimensions. The results supported these hypotheses, although the magnitude of the correlations were lower (although still significant--$p < .01$) than the correlation with the other outcome variables.

Union attitudes was hypothesized to be negatively related to both outcome control and perceived influence and unrelated to activity control. Turnover intention was proposed to be negatively related to perceived influence and unrelated to both outcome control and activity control. Significant negative correlations were found between the three personal control scales and both union attitudes and turnover intention, once again supporting the hypothesized relationships and also finding relationships where none were believed to exist.

In sum, every hypothesized relationship between the personal control scales and the antecedent and outcome variables was confirmed. However, significant correlations were found between personal control and those variables that were believed to be unrelated on a priori conceptual bases. In fact, every correlation between a personal control scale and an antecedent or outcome variable was significantly greater than zero ($p < .01$). While these significant correlations provide some evidence of the im-

portance of the personal control scales, it also signals the presence of common method bias. Common method variance was also indicated by the high correlations among the outcome variables.

Each of the three personal control scales had their highest correlations with intrinsic satisfaction, extrinsic satisfaction, job involvement and organizational commitment. Thus, the dimensions of personal control appear to be most highly related to one's satisfaction and identity with and commitment to his or her job and organization.

Test of the Personal Control Model

This paper presented a model of personal control of the form x → m → y, whereby the "x" represents the antecedent variables (i.e. job status, mood, and locus of control), the "m" symbolizes the personal control dimensions (i.e. outcome control, activity control, and perceived influence), and the "y" represents the outcome variables (i.e. intrinsic satisfaction, extrinsic satisfaction, job involvement, organizational commitment, physical strain, psychological strain, effort, union attitudes, and turnover intention). This mediational model proposes that the antecedent variables transmit their effects on the outcome variables through the personal control variables.

If the mediational model of personal control is correct as hypothesized, then the relationship between the antecedent variables and the outcome variables should vanish if the personal control variables are held constant

(James and Brett, 1984). This model was tested using a series of hierarchical multiple regressions, whereby each outcome variable was regressed on the set of personal control variables and the set of antecedent variables. In these analyses the personal control variables were entered into the regression equation, first and the antecedent variables were entered second. To test the mediating hypothesis, this hierarchical regression was compared with one in which the antecedent variables were entered first and the personal control variables were entered second. If the mediational hypotheses are supported, we would not expect the antecedent variables to add significantly to the regression analyses in which they are entered after the personal control variables. However, when antecedent variables are entered first, we would expect significant additional variance accounted for when the personal control variables are added.

It was anticipated that one of the antecedent variables (i.e. job status) might have been confounded by two demographic variables--sex and educational level. Clerical workers in this sample were predominantly female (97%), while the faculty members were mostly male (81%). In regards to educational level, 97% of the faculty members had a graduate degree, while over 70% of the clerical workers did not even have a bachelor's degree. Although these findings are not surprising and are actually quite typical of these occupational groups, it was felt that the effects

of these variables should be controlled in the regression analyses. Therefore, the demographic variables--sex and educational level--were entered into the regression equation first, the personal control variables were then entered second, and the antecedent variables were entered last.

Table 14 summarizes the results of the hierarchical multiple regression analyses. Because of missing data and the use of listwise deletion, the analyses were based on samples ranging from 758 to 777. The results indicate that the antecedent variables explained a significant amount of additional variance ($p < .01$) beyond that explained by the personal control scales. These results provide only partial support for the mediational model of personal control for satisfaction, job involvement, organizational commitment and turnover intention, which proposed that the antecedent variables were related to the outcome variables only through their effects on the personal control variables. This clearly is not the case since, with the personal control variables controlled, the antecedent variables were significantly related to the outcome variables.

With very large sample sizes, however, small increments in R^2 are significant. Given the sample size in the present study, an increase in R^2 of only .003 would be significant ($p < .05$). If one compares the change in R^2 for antecedent variables when they are entered second with similar changes when they enter the regression first, one observes a pattern of relationships consistent with the mediation

Table 14

Results of the Hierarchical Multiple Regression Analyses of the Demographic, Personal Control, Antecedent and Outcome Variables

Dependent Variables	(N)	ΔR^2 for Personal Control Variables		F for ΔR^2	ΔR^2 for Antecedent Variables		F for ΔR^2
Intrinsic Satisfaction	(774)	.364	(.213)	188.86	.045	(.198)	24.15
Extrinsic Satisfaction	(771)	.309	(.210)	137.20	.068	(.168)	30.55
Job Involvement	(761)	.189	(.084)	80.93	.072	(.107)	30.78
Organizational Commitment	(761)	.338	(.245)	140.06	.040	(.134)	16.86
Physical Strain	(776)	.108	(.009)	36.56	.126	(.163)	42.74
Psychological Strain	(763)	.126	(.025)	57.25	.314	(.415)	142.55
Effort	(758)	.051	(.017)	23.56	.097	(.131)	44.71
Union Attitudes	(757)	.044	(.017)	13.35	.027	(.055)	8.15
Turnover Intention	(777)	.169	(.112)	56.07	.035	(.085)	11.58

Note: All of the F values in this table are significant ($p < .01$). Because of the missing data and the use of listwise deletion, the multiple regression analysis was based on the sample size indicated in the parentheses. The demographic variables--sex and educational level--were statistically controlled in these analyses. Values in parentheses are changes in R^2 which occurred when antecedent variables entered the regression first followed by personal control variables. These values are extracted from Tables 15 to 23, which present these regressions in more detail.

hypothesis. That is, while all antecedent variables are significantly related independently of other variables, personal control variables may be mediating part of the relationship. For example, results for intrinsic satisfaction indicate that change in R^2 due to antecedent variables was only .046 when personal control variables were controlled. Reversing the order of entry, we see that antecedent variables account for much greater portions of variance.

On the other hand, personal control explained substantial amounts of additional variance in several of the dependent variables (i.e. satisfaction, job involvement, organizational commitment and turnover intention), with the antecedent variables controlled. The personal control variables accounted for an additional 21% of variance in satisfaction, 24% in organizational commitment, 11% in turnover intention and 8% in job involvement beyond that explained by the antecedent variables. This provides additional support for the mediational model of personal control, at least for this reduced set of dependent variables.

A possible explanation for the somewhat negative results is common method variance. As was discussed earlier, the correlations among the variables used in this study may have been inflated because they were measured with similar instruments on the same questionnaire. The correlations between the antecedent and outcome variables, therefore, may be due in part to common method variance.

In Tables 15 to 23, the results of the hierarchical re-

gressions testing the unique relationship of personal control to various dependent measures are presented. In these regressions, the demographic variables were entered into the regression equations first, the antecedent variables second, and the personal control variables were entered last. These analyses assessed the degree to which the personal control variables explained additional variance in the outcome variables beyond that accounted for by the demographic and antecedent variables.

Tables 15 to 23 contain the simple correlations, standardized regression coefficients, and the multiple squared correlations for each independent variable in the regression analyses. F-tests for the change in multiple R^2 caused by the regression equation are also reported.

Table 15 shows the results of the hierarchical regression analyses of the demographic, antecedent and personal control variables on intrinsic satisfaction. The analysis was based on a sample of 774 respondents because of missing data and the use of listwise deletion. The multiple squared correlation of the demographic, antecedent and personal control variables on intrinsic satisfaction was .514. Of the demographic variables, only sex was significantly related to intrinsic satisfaction. All of the antecedent variables accounted for significant amounts of additional variance in intrinsic satisfaction beyond that accounted for by the demographic variables. More importantly, each of the personal control scales explained a significant amount of addi-

Table 15

Results of Hierarchical Regression Analysis of Demographic, Antecedent and Personal Control Variables on Intrinsic Satisfaction[a]

	Variable Entered	r	B	R^2	F for ΔR^2
Step 1.	Demographic				
	Sex[b]	-.32	-.02	.103	162.05**
	Education Level	.19	-.17	.103	.55
Step 2.	Antecedent				
	Job Status[c]	-.36	-.20	.159	87.19**
	Mood	-.38	-.18	.267	170.11**
	Locus of Control	-.30	-.07	.301	53.72**
Step 3.	Personal Control				
	Outcome Control	.56	.30	.440	218.37**
	Activity Control	.57	.30	.510	111.46**
	Perceived Influence	.44	.08	.514	5.94*

a. Because of missing data and the use of listwise deletion, the multiple regression analysis was based on a sample of 774.

b. Sex is coded 1 for male and 2 for female.

c. Job status is coded 1 for faculty member and 2 for clerical worker.

** $p < .01$
* $p < .05$

Table 16

Results of Hierarchical Regression Analysis of Demographic, Antecedent and Personal Control Variables on Extrinsic Satisfaction[a]

	Variable Entered	r	B	R^2	F for ΔR^2
Step 1.	Demographic				
	Sex	-.22	-.09	.046	61.72**
	Education Level	.11	-.06	.048	2.31
Step 2.	Antecedent				
	Job Status	-.20	.12	.054	8.05**
	Mood	-.41	-.27	.205	200.29**
	Locus of Control	-.20	.01	.216	15.32**
Step 3.	Personal Control				
	Outcome Control	.51	.28	.355	184.04**
	Activity Control	.45	.22	.403	63.41**
	Perceived Influence	.42	.20	.426	31.86**

a. Because of the missing data and the use of listwise deletion, the multiple regression analysis was based on a sample of 771.

** $p < .01$
* $p < .05$

Table 17

Results of Hierarchical Regression Analysis of Demographic, Antecedent and Personal Control Variables on Job Involvement[a]

	Variable Entered	r	B	R^2	F for ΔR^2
Step 1.	Demographic				
	Sex	-.45	.04	.203	260.73**
	Education Level	.40	-.09	.222	24.40**
Step 2.	Antecedent				
	Job Status	-.57	-.53	.326	132.77**
	Mood	-.12	.01	.329	3.79
	Locus of Control	-.08	.06	.329	.38
Step 3.	Personal Control				
	Outcome Control	.40	.24	.401	91.50**
	Activity Control	.41	.10	.410	12.00**
	Perceived Influence	.45	.08	.413	4.34*

a. Because of the missing data and the use of listwise deletion, the multiple regression analysis was based on a sample of 761.

** $p < .01$
* $p < .05$

Table 18

Results of Hierarchical Regression Analysis of Demographic, Antecedent and Personal Control Variables on Organizational Commitment[a]

	Variable Entered	r	B	R^2	F for ΔR^2
Step 1.	Demographic				
	Sex	-.12	.00	.015	18.75**
	Education Level	.05	-.06	.016	1.38
Step 2.	Antecedent				
	Job Status	-.12	.14	.022	7.83**
	Mood	-.34	-.20	.128	131.69**
	Locus of Control	-.22	-.02	.150	26.96**
Step 3.	Personal Control				
	Outcome Control	.52	.33	.324	215.76**
	Perceived Influence	.41	.26	.379	68.44**
	Activity Control	.39	.16	.395	20.28**

a. Because of the missing data and the use of listwise deletion, the multiple regression analysis was based on a sample of 761.

** $p < .01$
* $p < .05$

Table 19

Results of Hierarchical Regression Analysis of Demographic, Antecedent and Personal Control Variables on Physical Strain[a]

	Variable Entered	r	B	R^2	F for ΔR^2
Step 1.	Demographic				
	Sex	.26	.08	.066	67.07**
	Education Level	-.22	-.08	.071	5.20*
Step 2.	Antecedent				
	Job Status	.26	.05	.076	4.95*
	Mood	.41	.35	.224	149.59**
	Locus of Control	.19	.09	.234	10.29**
Step 3.	Personal Control				
	Activity Control	-.29	-.10	.242	8.38**
	Outcome Control	-.19	.02	.242	.10
	Perceived Influence	-.21	-.02	.243	.13

a. Because of the missing data and the use of listwise deletion, the multiple regression analysis was based on a sample of 776.

** $p < .01$
* $p < .05$

Table 20

Results of Hierarchical Regression Analysis of Demographic, Antecedent and Personal Control Variables on Psychological Strain[a]

	Variable Entered	r	B	R^2	F for ΔR^2
Step 1.	Demographic				
	Sex	.07	-.02	.005	6.86**
	Education Level	-.03	-.02	.006	.91
Step 2.	Antecedent				
	Job Status	.06	-.07	.006	.94
	Mood	.63	.57	.400	536.38**
	Locus of Control	.26	.11	.421	28.37**
Step 3.	Personal Control				
	Outcome Control	-.31	-.12	.438	23.33**
	Activity Control	-.27	-.11	.446	9.73**
	Perceived Influence	-.13	.02	.446	.33

a. Because of the missing data and the use of listwise deletion, the multiple regression analysis was based on a sample of 763.

** $p < .01$
* $p < .05$

Table 21

Results of Hierarchical Regression Analysis of Demographic, Antecedent and Personal Control Variables on Effort[a]

	Variable Entered	r	B	R^2	F for ΔR^2
Step 1.	Demographic				
	Sex	-.51	.05	.264	364.50**
	Education Level	.49	-.04	.308	59.86**
Step 2.	Antecedent				
	Job Status	-.66	-.66	.432	170.44**
	Mood	-.07	.04	.432	0.00
	Locus of Control	-.14	-.06	.439	9.94**
Step 3.	Personal Control				
	Outcome Control	.29	.10	.452	19.01**
	Perceived Influence	.44	.08	.456	11.30**
	Activity Control	.35	.00	.456	0.00

a. Because of the missing data and the use of listwise deletion, the multiple regression analysis was based on a sample of 758.

** $p < .01$
* $p < .05$

Table 22

Results of Hierarchical Regression Analysis of Demographic, Antecedent and Personal Control Variables on Union Attitudes[a]

	Variable Entered	r	B	R^2	F for ΔR^2
Step 1.	Demographic				
	Sex	-.25	-.02	.062	53.91**
	Education Level	-.24	-.03	.072	9.52**
Step 2.	Antecedent				
	Job Status	.31	.25	.095	20.42**
	Mood	.16	.07	.112	14.56**
	Locus of Control	.17	.09	.127	12.90**
Step 3.	Personal Control				
	Outcome Control	-.24	-.12	.141	12.02**
	Activity Control	-.25	-.07	.143	2.02
	Perceived Influence	-.21	.04	.144	.94

a. Because of the missing data and the use of listwise deletion, the multiple regression analysis was based on a sample of 757.

** $p < .01$
* $p < .05$

Table 23

Results of Hierarchical Regression Analysis of Demographic, Antecedent and Personal Control Variables on Turnover Intention[a]

	Variable Entered	r	B	R^2	F for ΔR^2
Step 1.	Demographic				
	Sex	-.10	-.02	.010	10.41**
	Education Level	-.03	-.24	.027	16.25**
Step 2.	Antecedent				
	Job Status	-.11	-.10	.047	19.80**
	Mood	-.27	-.16	.108	60.63**
	Locus of Control	-.17	-.03	.112	11.74**
Step 3.	Personal Control				
	Outcome Control	.39	.25	.206	84.84**
	Perceived Influence	.26	.13	.220	14.65**
	Activity Control	.26	.08	.224	4.05*

a. Because of the missing data and the use of listwise deletion, the multiple regression analysis was based on a sample of 777.

** $p < .01$
* $p < .05$

tional variance in intrinsic satisfaction beyond that accounted for by the demographic and antecedent variables.

Table 16 shows the results of the multiple regression analysis of the demographic, antecedent and personal control scales on extrinsic satisfaction. The results are very similar to those involving intrinsic satisfaction, although the R^2 was somewhat lower (i.e. .412). Each of the personal control scales accounted for significant amounts of additional variance in the dependent variable (i.e. extrinsic satisfaction) beyond that explained by the demographic and antecedent variables. These results provide evidence of the importance of the personal control scales in terms of their explanatory power of the satisfaction variables.

The multiple R^2 of the antecedent, demographic and personal control variables on job involvement was .413. Both demographc variables were significant predictors, while job status was the only significant predictor among the antecedent variables. Once again, all three personal control scales explained a significant amount of additional variance of the dependent variable beyond that explained by the demographic and antecedent variables.

The regression analyses with the other dependent variables provided additional evidence of the explanatory power of the personal control scales (see Tables 17 through 23). Each of the personal control scales explained significant increments of explained variance in organizational commit-

ment. Only activity control, however, was a significant predictor of physical strain. Both activity control and outcome control accounted for a significant amount of additional variance in psychological strain beyond that explained by the demographic and antecedent variables. Outcome control and perceived influence explained a significant amount of additional variance in effort and turnover intentions, while only outcome control was a significant predictor of union attitudes.

In sum, the regression analyses provided evidence of the importance of outcome control, activity control and perceived influence as predictors of important organizational behavior variables (i.e. the outcome variables). Further, including more than one personal control scale in the regression equations increased the amount of variance explained in many of the dependent variables: intrinsic satisfaction, extrinsic satisfaction, job involvement, organizational commitment, psychological strain, effort and turnover intentions. Thus, the three-dimensional conceptualization of personal control provides greater explanatory power of important organizational behavior variables than any of the personal control scales alone.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary and Conclusions

Theorists and researchers have long proposed that personal control is an important human need. Laboratory researchers have demonstrated the negative effects of lack of control and the positive effects of perceived control over aversive environmental events. The purpose of this study was to increase our understanding of the construct of personal control in organizations.

Personal control was defined as one's perception of freedom in and control over work activities, events and outcomes. Bazerman's (1982) multidimensional conceptualization of personal control was used to provide a framework for the operationalization of personal control in this study. It was necessary, however, to include the construct of perceived influence along with Bazerman's two dimensions of control to conform to this study's definition of personal control derived from the work of psychological theorists (i.e. Tannenbaum, 1962; White, 1959) and laboratory researchers (e.g. Glass and Singer, 1972). Thus, personal control was defined as consisting of the following dimensions: outcome control, activity control and perceived influence.

Although each of these constructs of personal control has been operationalized and studied by organizational behavior researchers, no researcher has studied more than one

dimension of control at the same time. Thus, our understanding of the interrelationships among the different dimensions of control is limited. Further, researchers studying these constructs have not explicitly related them to personal control. Expectancy of control has been studied in the context of motivation theory, autonomy as a job characteristic, and perceived influence in regards to participative management. The present study proposed that these three constructs are much more similar than one would expect, given the different theoretical orientations and practical applications associated with each. It was further proposed that what unifies these three constructs is their relationship to one's perception of control.

A review of the research literature involving the three constructs of control revealed how each has been operationalized and the important antecedents and outcome variables associated with each. A mediational model of personal control was developed based on the antecedent and outcome variables identified in the literature review. Further, the relationship between the personal control dimensions and each antecedent and outcome variable was hypothesized on the basis of the research literature.

The three dimensions of control were operationalized in the present study using existing scales and newly developed scales to test the multidimensional conceptualization of personal control and the mediational model of control in a field setting.

Questionnaires were mailed to 1,768 faculty and 1,624 clerical staff members of a large midwestern university. Usable questionnaires were returned by 423 faculty members and 655 clerical workers, yielding response rates of 24 and 40 percent respectively. A comparison of the sample and population demographic characteristics indicated that the sample was representative of the population from which it was drawn.

The results indicated that the new personal control scales had a high degree of internal consistency, as indicated by their coefficient alphas and item-scale correlations. Each of the new personal control scales had high correlations with their respective existing scales, indicating a certain degree of convergent validity. Further, the new and existing personal control scales had similar patterns of correlations with the antecedent and outcome variables. Thus, it was concluded that the new personal scales were comparable to the existing scales.

The new scales were also sufficiently distinctive from the existing scales to demonstrate their practical value. In a series of hierarchical regression analyses in which the existing scale was entered into the regression equation first and the new scale entered second, the new scale explained a significant amount of additional variance in each of the antecedent and outcome variables beyond that explained by the existing scale.

The results supported the multidimensional conceptual-

ization of personal control. An examination of the personal control scale intercorrelations and their pattern of correlations with the antecedent and outcome variables indicated that the personal control dimensions are indeed highly related but distinct variables.

Further, all of the hypothesized relationships between the personal control scales and the antecedent and outcome variables were confirmed. However, variables that were theorized to be unrelated were also significantly correlated. In fact, each personal control scale was significantly correlated with all of the antecedent and outcome variables. It is likely that method variance was somewhat responsible for these higher-than-expected correlations.

The results, however, did not fully support the mediational model of personal contorl. Although the antecedent variables were significantly related to the mediating variables (i.e. personal control) and the mediating variables were significantly related to the outcome variables, the antecedent variables were significantly related to the outcome variables with the mediating variables controlled. In other words, the antecedent variables were significantly related to the outcome variables independent of the mediating variables. This does not support a complete mediational model which proposes that the antecedent variables affect the outcome variables completely through its effects on the mediating variables.

While the results did not support a complete media-

tional model of personal control, there was support for a partial mediational model. Given the large sample size on which these analyses were computed, even small changes in R^2 are significant. A comparison of the change in R^2 for the antecedent variables when they are entered second with similar changes when they enter the regression equations first, reveals a pattern of relationships consistent with a partial mediational model. For example, with the personal control variables controlled, the antecedent variables only accounted for 4.6% of the additional variance in intrinsic satisfaction, 6.8% in extrinsic satisfaction, 4% in organizational commitment, 7.2% in job involvement and 3.5% in turnover intentions. These are substantially lower changes in R^2 as compared to similar changes in R^2 when the antecedent variables enter the regression equation first.

Further, the personal control variables explained substantial amounts of additional variance in several of the dependent variables with the antecedent variables controlled--24% of the variance in organizational commitment, 21% in satisfaction, 11% in turnover intention and 8% in job involvement. This provides some support for the mediational model of personal control, at least for this reduced set of dependent variables.

The results also provided evidence of the importance of outcome control, activity control and perceived influence as predictors of important organizational behavior variables (i.e. the outcome variables). Further, including

more than one personal control scale as predictors of the outcome variables significantly increased the amount of variance explained in most of the outcome variables: intrinsic satisfaction, extrinsic satisfaction, job involvement, organizational commitment, psychological strain, effort and turnover intentions. Thus, the three-dimensional conceptualization of personal control provides greater explanatory power of the antecedent and outcome variables than any of the personal control scales alone.

The Personal Control Model

This study empirically tested a mediational model of a multidimensional conceptualization of personal control in a field setting. While the results did not fully support a mediational model of personal control, evidence of partial mediation was found. There are several possible explanations for the somewhat negative results. First, it is possible that common method variance was somewhat responsible for the higher-than-expected correlations between the antecedent and outcome variables. Unfortunately, method variance cannot be statistically controlled in this study because of the methodology used to collect the data.

The specific antecedent variables utilized in this study may also have been somewhat responsible for the partial failure of the mediational model. The antecedent variable, job status, although not susceptible to method variance, may have been both deficient and contaminated as an indicator of the level of control in a job. Job status was

selected as an antecedent variable because it was believed that a vast difference exists between the amount of control provided incumbents in faculty versus clerical positions. It was also assumed that faculty members would have higher levels of all three dimensions of control as compared to clerical workers.

The results indicated that job status was highly correlated with activity control ($r. = -.47$) and perceived influence ($r. = -.54$) and much less related to outcome control ($r. = -.20$). Apparently, faculty and clerical workers did not differ as much in their perceptions of outcome control as they did with activity control and perceived influence. It would have been preferable for job status, as an antecedent variable, to be highly correlated with <u>all</u> three dimensions of personal control.

Of greater concern is the possible contamination of job status with extraneous factors (i.e. unrelated to personal control) that were related to the outcome variables. Job status was very highly related to certain demographic characteristics--sex ($r. = .79$) and educational level ($r. = -.80$). Although these variables were statistically controlled in the analyses, faculty and clerical workers may also differ on factors that were not measured and subsequently not controlled. For example, faculty earn higher salaries and enjoy greater prestige in their jobs than do clerical workers. These factors, while unrelated to personal control, would likely impact on some of the outcome

variables (e.g. job satisfaction). The results indicated that job status had high correlations with several outcome variables: effort ($r. = -.67$), job involvement ($r. = -.56$), and intrinsic satisfaction ($r. = -.37$). Future research needs to identify specific antecedents that directly impact on each of these dimensions of personal control.

On a more positive note, the results of this study supported a multidimensional conceptualization of the construct of personal control. Further, the construct of personal control provides an integration of aspects of three separate research literatures--expectancy theory, job design and participative decision making. These three variables--outcome control, activity control and perceived influence--are clearly highly related yet distinct constructs.

The importance of personal control in organizatins was also demonstrated in this study in terms of the high correlations found between the personal control scales and a set of important organizational behavior variables (i.e. the outcome variables). Further, the multidimensional conceptualization of personal control explained more variance in the outcome variables than any of the personal control scales alone. Researchers investigating any of these individual dimensions of control would be advised to measure all three constructs for a more complete understanding of the phenomena at hand.

Limitations of Study

The results obtained in this study, however, are limited in several important ways. The two samples employed in this study--faculty and clerical workers-- differed in ways other than their occupationsl status. The faculty members were predominantly male, while the clerical workers were mostly female. Also, the faculty members were much more highly educated than the clerical workers. Although the analyses statistically controlled for the effects of sex and educational level, the results may be somewhat limited to samples of male faculty and female clerical workers. Further, the study was conducted in a non-profit, state-run, educational organization. Thus, the generalization of these results to private-sector, non-educational organizations should be done with caution.

A more serious problem was the presence of common method variance. It was apparent that a large general factor existed, affecting both the independent and dependent variables. This common factor was likely a method bias and provided an alternative explanation of the relationships between the variables studied. Thus, it cannot be concluded with certainty that specific variables are related, since the relationship could be due, at least in part, to common method variance.

Future Research

The present model of personal control is limited by its assumption that personal contorl is a basic human need desired by all. It is likely that not everyone desires or is capable of using greater amounts of control at work. Schneider, Reichers and Mitchell (1982) have warned that attempts at job enrichment (i.e. increased autonomy) may fail because these changes can increase the requirements of the job beyond the job incumbent's ability. Similar problems are likely to result from programs designed to increase employees' participation in organizational decision-making operations. Increased personal control would likely be associated with greater levels of responsibility, and increased responsibility at work would not be welcomed by all.

Bazerman (1982) proposed that the optimal control state is one in which an individual's ability to use control is congruent with the amount of control provided him or her by the organization. In a laboratory study using college students, Bazerman found that performance was higher in the congruent condition than either the under-control or over-control conditions. Future research should examine this congruence model in a field setting.

An important issue that warrants a great deal of future research involves the change in one's level of personal control. In a series of studies, Brehm (1966, 1972) found that experimental participants reacted very nega-

tively (i.e. reactance) when their choice of rewards for participating in the study was restricted. Thus, loss of control over important work outcomes could produce serious problems to an organization. Future research should investigate the range of negative outcomes that might result from workers' loss of personal control. Of particular importance in this line of research is the relationship between loss of personal control and stress reactions in organizational members.

Finally, future research should address the issue of how to facilitate organizational change with a minimum of disruption to its organizational members. It is likely that personal control would be a central variable in this line of research. This line of research would be especially important, given the current state of rapid organizational changes in American companies brought about by increased foreign competition and continually evolving technologies.

Practical Implications

The measures of personal control developed for this study have practical value for organizations in several functions. The primary use of these instruments is as a diagnostic tool to assess individuals' perceptions of control or influence over important aspects of their worklife. The present study has demonstrated the importance of perception of personal control in terms of its relationship

with other variables (e.g. satisfaction and reduced strain).

Low scores on these scales may signal the need for improvement in some aspect of the organization. For example, low levels of activity control suggest a need for job design. The perceived influence scale can identify a need for a more participative style of management, while scores on the outcome control scale have implications for the organization's reward and control systems. Further, the individual items in each of the scales can be used separately as a single-item measure of control or influence over specific aspects of work (e.g. job security, work deadlines or promotions). The results obtained from the individual items can allow practitioners to focus their change programs on the specific deficient area.

The personal control scales might also be used as part of an evaluation effort to determine the efficacy of an organizational change intervention related to job design or participative decision making. Any manipulation that attempts to increase employees' participation in decision making or involvement in other management functions (e.g. quality circles) or enrich their jobs through job design might impact on an employee's perception of personal control. Thus, personal control may be the direct result of a wide variety of organizational development programs. In turn, increases in personal control may influence the more frequently used measures of the effective-

ness of these programs such as behavioral and affective reactions. Personal control, then, may serve as an important "barometer" of employees' reactions to organizational change programs, much like the function that job satisfaction measures have played in the past.

APPENDICES

APPENDIX A

DEMOGRAPHIC ITEMS

Demographic Items

Answer each of the following questions using the scale provided:

1. How long have you been an employee of MSU?

    1. less than 6 months
    2. 6 months to 1 year
    3. 1 to 5 years
    4. 6 to 10 years
    5. 11 to 20 years
    6. over 20 years

2. Please indicate your gender.

    1. male
    2. female

3. Please indicate your educational status.

    1. high school graduate or less
    2. some college--no degree
    3. two-year college degree
    4. four-year college degree
    5. graduate degree

4. Please indicate your job level (clerical only).

    1. level 4
    2. level 5
    3. level 6
    4. level 7
    5. level 8
    6. level 9
    7. level 10
    8. level 11 & 12
    9. other

5. Please indicate your rank (faculty only).

    1. professor
    2. associate professor
    3. assistant professor
    4. instructor
    5. other

6. Have you received tenure (faculty only)?

    1. no
    2. yes

APPENDIX B

ANTECEDENT VARIABLES

Profile of Mood States - Depression/Dejection Scale (McNair, Lorr and Droppleman, 1971)

The list of words below describes feelings people have. Please read each item and rate how you are feeling <u>today</u> using the following scale:

1	2	3	4	5
not at all	a little	moderately	quite	extremely

1. unhappy
2. sorry
3. sad
4. blue
5. hopeless
6. unworthy
7. discouraged
8. lonely
9. miserable
10. gloomy
11. desperate
12. helpless
13. worthless
14. terrified
15. guilty

Locus of Control (Rotter, 1966)

How much do you agree or disagree with each of the following statements? Mark your response on the answer sheet using the scale below:

1. strongly agree
2. agree
3. neither agree nor disagree
4. disagree
5. strongly disagree

1. Many of the unhappy things in people's lives are partly due to bad luck.

2. Who gets to be boss often depends on who was lucky enough to be in the right place first.

3. In my case, getting what I want has little or nothing to do with luck.

4. In the long run, people get the respect they deserve in this world.

5. When I make plans, I am almost certain that I can make them work.

6. Without the right breaks, one cannot be a good leader.

7. In the long run, the bad things that happen to us are balanced by the good ones.

8. What happens to me is my own doing.

9. Many times I feel that I have little influence over the things that happen to me.

10. Most people don't realize the extent to which their lives are controlled by accidental happenings.

11. Becoming a success is a matter of hard work; luck has little or nothing to do with it.

APPENDIX C

PERSONAL CONTROL MEASURES

OUTCOME CONTROL (Lawler, 1981)*

Here are some things that could happen to people if they work hard at their job. How likely is it that each of these things would happen if you worked hard at your job? Use the following scale to answer:

1. not at all likely
2. unlikely
3. somewhat likely
4. likely
5. quite likely
6. very likely
7. extremely likely

1. You will get a bonus or pay increase.
2. You will feel better about yourself as a person.
3. You will have an opportunity to develop your skills and abilities.
4. You will have better job security.
5. You will be given chances to learn new things.
6. You will be promoted or get a better job.
7. You will get a feeling that you've accomplished something worthwhile.
8. You will have more freedom on your job.
9. You will be respected by the people you work with.
10. Your supervisor will praise you.
11. The people you work with will be friendly with you.

* Instructions modified by the author.

Job Diagnostic Survey - Autonomy Scale
(Hackman & Oldham, 1975)

1. How much autonomy is there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing the work?

1 . . . 2 . . . 3	. . . .4 5	. . . .6 . . . 7
very little; the job gives me almost no personal "say" about how and when the work is done	moderate autonomy; many things are standardized and not under my control, but I can make some decisions about the work	very much; the job gives me almost complete responsibility for deciding how and when the work is done

Indicate the accuracy of each of the following statements concerning your job using the scale below:

1. very inaccurate
2. mostly inaccurate
3. slightly inaccurate
4. uncertain
5. slightly accurate
6. mostly accurate
7. very accurate

2. The job denies me any chance to use my personal initiative or judgment in carrying out the work.

3. The job gives a person considerable opportunity for independence and freedom in how he or she does the work.

Job Characteristics Inventory - Autonomy Scale (Sims, Szilagyi and Keller, 1976)

Use the following scale to answer these questions:

1. . . . . 2 . . . . . 3 . . . . . 4 5
very little a moderate amount very much

1. How much are you left on your own to do your own work?

2. To what extent are you able to act independently of your supervisor in performing your task?

3. To what extent are you able to do your job independently of others?

Use the following scale to answer these questions:

1. . . . . 2 . . . . . 3 . . . . 4 5
a minimum amount a moderate amount a maximum amount

4. The freedom to do pretty much what I want on my job.

5. The opportunity for independent thought and action.

6. The control I have over the pace of my work.

Activity Control

Rate the amount of control that you have over each of the following aspects of your job using the following scale:

1 . . . . . 2 . . . . 3 . . . . 4 . . . 5
complete control moderate control no control

1. The speed with which you do your work.
2. The setting of work deadlines.
3. The selection of work tasks that you perform.
4. When you take your rest breaks.
5. The choice of methods to do your work.
6. The layout of your workspace.
7. The setting of performance goals.
8. The choice of equipment to do your work.
9. Determining the order in which you will do your work.
10. The specific hours you work each day.

Psychological Participation (Vroom, 1960)

1. If you have a suggestion for improving the job or changing the setup in some way, how easy is it for you to get your ideas across to your immediate supervisor?

   1 . . . . . 2 . . . . 3 . . . . 4 5
   very easy average very difficult

2. Do you feel you can influence the decisions of your immediate supervisor regarding things about which you are concerned?

   1 . . . . 2 . . . . . 3 . . . . . 4 5
   very little a moderate amount very much

3. Does your immediate supervisor ask your opinion when a problem comes up which involves your work?

   1 . . . . 2 . . . . . 3 . . . . . 4 5
   very little a moderate amount very much

4. In general, how much say or influence do you have on what goes on in your station?

   1 . . . . 2 . . . . . 3 . . . . . 4 5
   very little a moderate amount very much

Perceived Influence

Rate the level of your past involvement in each of the 14 decision areas listed below using the following rating scale:

1. No advance information was provided to you concerning the decision.
2. You were informed in advance of the decision to be made.
3. You were able to voice your opinion concerning the decision.
4. Your opinion concerning the decision was taken into account in the decision-making process.
5. The decision was made jointly with equal authority between yourself and someone else.
6. The decision was entirely your own with no involvement by anyone else.

1. Hiring new employees.
2. Your promotion.
3. Your performance appraisal.
4. Training new employees.
5. Your pay raise.
6. Discipline procedures.
7. Evaluation of other personnel.
8. Allocation of department budget.
9. Assignment of personnel.
10. Department layoff policy.
11. Department policy making.
12. Department wage level.
13. Department promotion procedures.
14. Department performance appraisal procedures.

APPENDIX D

OUTCOME VARIABLES MEASURES

Minnesota Satisfaction Questionnaire
(Weiss, Dawis, England and Lofquist, 1967)

The questions in this part ask you to describe your job or how you feel about your job. Use the scale below to indicate your answer:

1. very satisfied
2. satisfied
3. neutral
4. dissatisfied
5. very dissatisfied

On my present job this is how I feel about:

1. Being able to keep busy all the time.
2. The chance to work alone on the job.
3. The chance to do different things from time to time.
4. The chance to be "somebody" in the community.
5. The way my supervisor handles his or her employees.
6. The competence of my supervisor in making decisions.
7. Being able to do things that don't go against my conscience.
8. The way my job provides for steady employment.
9. The chance to do things for other people.
10. The chance to tell people what to do.
11. The chance to do something that makes use of my abilities.
12. The way company policies are put into practice.
13. My pay and the amount of work I do.
14. The chances for advancement on this job.
15. The freedom to use my own judgment.
16. The chance to try my own methods of doing the job.
17. The working conditions.
18. The way my co-workers get along with each other.

Job Involvement (Kanungo, 1981)

How much do you agree or disagree with each of the following statements? Mark your response on the answer sheet using the scale below:

1. strongly agree
2. agree
3. neither agree nor disagree
4. disagree
5. strongly disagree

1. The most important things that happen to me involve my present job.
2. To me, my job is only a small part of who I am.
3. I am very much involved personally in my job.
4. I live, eat, and breathe my job.
5. Most of my interests are centered around my job.
6. I have very strong ties to my present job which would be very difficult to break.
7. Usually, I feel detached from my job.
8. Most of my personal life goals are job oriented.
9. I consider my job to be very central to my existence.
10. I like to be absorbed in my job most of the time.

Organizational Commitment Questionnaire
(Porter, Steers, Mowday and Boulian, 1974)

How much do you agree or disagree with each of the following statements? Mark your response on the answer sheet using the scale below:

1. strongly disagree
2. moderately disagree
3. slightly disagree
4. neither agree nor disagree
5. slightly agree
6. moderately agree
7. strongly agree

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 organization's values are very similar.

6. I am proud to tell others that I am part of this organization.

*7. I could just as well be working for a different organization as long as the type of work was similar.

8. This organization really inspires the very best in me in the way 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 I was considering at the time I joined.

*11. There's not too 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.

*Indicates reverse scoring of item.

The Physical Strain Index

Use the following scale to answer these questions:

1. not at all
2. less than once a week
3. 1-2 times a week
4. 3-4 times a week
5. every day

Listed below are some physical problems that often bother people. How often does each of them happen to you at work?

1. upset stomach

2. backache

3. headache

4. fatigue

General Health Questionnaire (Goldberg, 1972)

Use the following scale to answer these questions:

1. not at all
2. less than usual
3. no more than usual
4. a little more than usual
5. much more than usual

Compared to usual, have you recently:

*1. Been able to concentrate on whatever you're doing?

2. Lost much sleep over worry?

*3. Felt that you are playing a useful part in things?

4. Felt capable of making decisions about things?

5. Felt constantly under strain?

6. Felt you couldn't overcome your difficulties?

*7. Been able to enjoy your normal day-to-day activities?

*8. Been able to face up to your problems?

9. Been feeling unhappy and depressed?

10. Been losing confidence in yourself?

11. Been thinking of yourself as a worthless person?

*12. Been feeling reasonably happy, all things considered?

*Indicates reverse scoring of item.

Effort/Job Motivation (Patchen, 1965)

Answer the following questions using the scales provided:

1. On most days on your job, how often does time seem to drag for you?

   1. about half the day or more
   2. about one-third of the day
   3. about one-quarter of the day
   4. about one-eighth of the day
   5. time never seems to drag

2. Some people are completely involved in their job--they are absorbed in it night and day. For other people their job is simply one of several interests. How involved do you feel in your job?

   1. very little involved; my other interests are more absorbing
   2. slightly involved
   3. moderately involved; my job and my other interests are equally absorbing to me
   4. strongly involved
   5. very strongly involved; my work is the most absorbing interest in my life.

*3. How often do you do some extra work for your job which isn't really required?

   1. almost every day
   2. several times a week
   3. about once a week
   4. once every few weeks
   5. about once a month or less

*4. Would you say you work harder, less hard, or about the same as other people doing your type of work at (name of organization)?

   1. much harder than most others
   2. a little harder than most others
   3. about the same as most others
   4. a little less hard than most others
   5. much less hard than most others

*5. How often do you work through lunch or after regular working hours without getting paid to do so?

   1. almost every day
   2. several times a week
   3. about once a week
   4. once every few weeks
   5. about once a month or less

*Indicates reverse scoring.

Note: Item number 5 was added by the author.

Attitudes Towards Unions (Uphoff and Dunnette, 1956)

How much do you agree or disagree with each of the following statements? Mark your response on the answer sheet using the scale below:

1. strongly agree
2. agree
3. neither agree nor disagree
4. disagree
5. strongly disagree

1. If it were not for unions, we'd have little protection against favoritism on the job.
2. I think the best person should be kept on the job regardless of seniority.
3. Unions impose too many restrictions on employers.
4. Charges of "racketeering " in unions are greatly exaggerated.
5. Employees of a firm have better wages and working conditions when all of them belong to unions.
6. Unions should have something to say about whom the employer hires.
7. A nonunion shop usually pays lower wages than a union shop.
8. Union rules often interfere with the efficient running of the employer's business.
9. Every worker should be expected to join the union where he/she works.
10. We need more laws to limit the power of labor unions.
11. Labor unions hold back progress.
12. The high wage demands of unions reduce chances for employment.
13. The growth of unions has made our democracy stronger.
14. The selfishness of employers can be fought only by strong unions.
15. Workers should not have to join a union in order to hold a job.
16. Labor unions should be regulated to a greater extent by the federal government.
17. Every labor union should be required to take out a license from the U.S. government.
18. In a factory where there is a union, workers who are not members should be required to pay the regular union fees if they are getting union rates of pay.
19. Most unions gain their membership by forcing workers to join with threats of violence.
20. If the majority of workers in a plant vote to have a union, the others should be required to join.

Turnover Intention

Please indicate how strongly you feel at present about leaving or staying at MSU.

1. strongly inclined to leave
2. inclined to leave
3. don't know whether I want to stay or leave
4. inclined to stay
5. strongly inclined to stay

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