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EFFECTIVENESS OF VARIOUS MANAGEMENT AND ORGANIZATION CHARACTERISTICS ON EMPLOYEE SATISFACTION AND PERFORMANCE AS A FUNCTION OF THE EMPLOYEE'S NEED FOR INDEPENDENCE

by

Lawrence A. Wigdor

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May 20, 1969 — Conrad Berenson
date — Chairman of Examining Committee

May 20, 1969 — Conrad Berenson
date — Executive Officer

Dr. Robert House

Dr. Sidney Lirtzman

Dr. David Valinsky

Supervisory Committee

The City University of New York

TABLE OF CONTENTS

Page

CHAPTER VII

APPENDIX I

LIST OF TABLES

CHAPTER I

INTRODUCTION

Background

The need for managers to have a consciously developed philosophy of management has long been a basic tenet of organization theory. This philosophy serves as a criterion in the choice of ends or means and reflects one's judgement about what is desirable or undesirable. Clearly in choosing ends (decision making) it would help the manager to know (1) the likely consequences which would result from his choice and (2) the alternative ends from which he might choose. A major function of scientific findings and theory building is the description of consequences of certain actions and the means of attaining prescribed ends. Accurate description and explanation of phenomena make it possible to predict the consequence of action.

The scientific exploration of management with its intent to enable greater explanation and prediction of actions has reached its "third generation". Initially, management theory was based on the recall by managers of their experience or on the basis of uncontrolled observations. From this "first generation" exploration of management came the classicist's (Taylor, 1947; Graicunas, 1937; Fayol, 1949; Davis, 1951) universal principles - job specialization, unity and chain of command, limited span of control - which were put forward to guide management action. The

"second generation" management theorists were critical of classical theory and viewed its propositions as either invalid (Simon, 1947) or, at best, as hypotheses, yet to be tested by empirical research. Their efforts (Argyris, 1957; Likert,1961) beginning in the 1950's were mainly concerned with general prescriptions which would integrate the objectives of the organization and the individuals within it. This "second generation" called for, and to some extent relied upon, empirical testing based on public demonstration, and thus demanded a sounder basis for prescriptive theory. For theory the second generation gave rise to the "human relations" school of management. However, to a large extent this generation oversimplified the relations and interactions which exist within the business environment. Intervening or moderating personality variables and environmental variables were omitted in nearly all cases in an effort to develop universal principles. A number of researchers recognized these omissions; nevertheless, the vast majority stressed the universality of the importance of such variables as participation, consideration, and initiating structure.

In the recent past and present, "third generation" management theorists have begun to delineate the circumstances under which various management philosophies and prescriptions are applicable. These theorists are studying the effect of moderating variables on the predictive and explanatory validity of the input-output models of the "second generation" theorists.

The contingency model of leadership effectiveness developed by Fiedler (1967) takes into account situational factors present in the work place as well as the leader's personality. The situational components affecting leader influence are (a) leader-subordinate personal relations (b) the degree of structure in the task assigned to the group,

and (c) the power and authority which the leader's position provides.

Earlier research by Likert (1961) and his associates had indicated that human relations-oriented supervisory attitudes increased productivity. The research results for the contingency model, Fiedler stated, made it evident that:

> The prediction of group performance on the basis of these leader attributes is contingent upon the specific situation context in which the leader operates (p. 154).
>
> The type of leader attitudes required for effective group performance depends upon the degree to which the group situation is favorable or unfavorable to the leader (p. 164).

Woodward (1965), in the South Essex Studies of one hundred and eleven British manufacturing firms, concluded that the classical management principles were not universally applicable, but rather were dependent upon the level of technology within the firm. For those firms where the technology was highly complex, it dictated the anatomy and physiology of the workers' environment and worker-management relations.

For those where the technology level was very low, (i.e. craft technology), the prescriptions of classical management were inapplicable due to the workers' independence. Only for a "middle" technological level were the classical management prescriptions appropriate.

Turner and Lawrence (1965) attempted a comprehensive study of the attitudinal and behavioral responses of workers to different aspects of their jobs. The original hypohteses were that workers respond favorably (high satisfaction and low absence rates) to jobs which are more complex and have more responsibility, authority, and variety. The hypothesis concerning attendance was confirmed, but the hypothesized relationship between job scope and satisfaction was not supported. By splitting their sample they were able to determine that workers from factories located in small towns responded differently from workers who came from more urban

settings. Workers from small town settings tended to respond to task attributes in the manner predicted by Turner and Lawrence. Workers from cities indicated no relationship between task and attendance. City workers responded with low job satisfaction to such "undesirable" attributes as repetition. Turner and Lawrence contended that this resulted because urban workers would fail to develop strong group or subcultural norms or values due to the extreme size and heterogeneity of the city population. Thus, they would fail to respond positively to the white-collar-oriented values attached to larger, more autonomous, more skilled jobs. Turner and Lawrence, therefore, concluded that the unexpected results could not be attributed to chance, but could be attributed to differences in cultural background.

The contributions to the "third generation" in management theory by Fiedler, Woodward, Turner, and Lawrence are typical in that they focused on environmental or situational variables. Psychologists, such as Lewin (1951) have long realized the importance of both environmental and personality variables in the explanation of behavior.

As indicated, the major effort of the "third generation" management theorists has been to determine the influence of environmental variables on the individual's satisfaction and performance. Very little attention has been given to determining the interaction between personality factors of the participant and his satisfaction and performance.

Where personality has been looked upon as the focus of the basic causes of behavior, it has rarely been considered in studies investigating environmental and personality determinants of behavior simultaneously. As a result, while industrial and social psychologists know quite a bit about the separate effects of the two types of variables, little is known about the nature of their interaction. The need for research focusing on this type of problem and for a theoretical structure capable of

dealing with both environment and personality variables is, however, widely recognized. Katz (1955) succinctly stated the significance of this probelm for social psychology:

> In other words we have perpetuated the old dichotomy of approaches. Either all individuals are affected similarly by group conditions or all group effects are explained as the expression of personality mechanism. If social psychology has any unique subject area, it may well be in this neglected area of the interaction effects of personality and social settings (p. 352).

The implication of this point of view for management is that the appropriateness of management action and practices must be evaluated in terms of a number of other variables including the attitudes, needs, and expectations of the followers. The most effective behavior in dealing with individuals with certain personalities may be completely ineffective in dealing with persons with different personalities.

A similar point is made by proponents of the adaptive nature of leadership. After Likert (1958) reviewed research on the effectiveness of different methods of supervision in industry, he concluded:

> Supervison is, therefore, always an adaptive process. A leader, to be effective, must always adapt his behavior to fit the expectations, values, and interpersonal skills of those with whom he is interacting (p. 327).

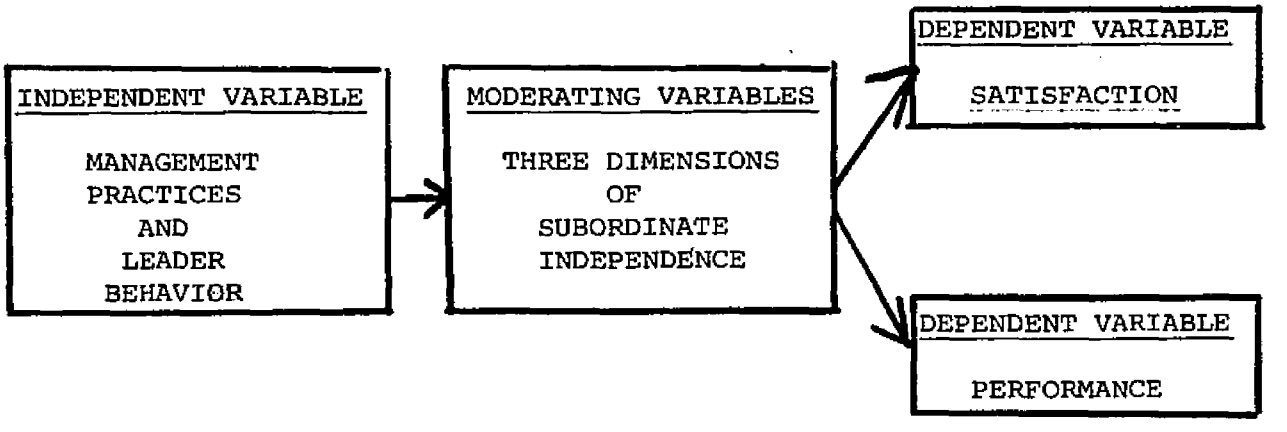
In summary, despite frequent speculation that understanding of the interaction between environmental and personality variables would enable more appropriate management action, empirical research involving both classes of variables has been sparse. Research effrots are becoming more prevalent and with them, particularly those in the area of individual personality difference, should come better understanding of the employee and, hencep more appropriate management prescriptions.

The major purpose of the present study is to determine whether or not the effects of select neo-classical management practices vary with the personality of the employee.

General Intent and Hypothesis of the Study

The general intent of this study is to ascertain whether or not selected leader behavior and management practices (independent variables), which are currently considered predictors of performance and satisfaction, will be related to the dependent variables of performance and satisfaction under conditions of high and low worker independence.

The general hypothesis is that the relationship between (a) management practices and leadership behavior, and (b) employee satisfaction and performance will be moderated by three dimensions of subordinate independence.



Rationale in Choosing Variables

The rationale behind the choice of the variables - moderating, independent, dependent - included in this study is presented in the following paragraphs.

Moderating Variables: The Importance of Independence

As previously indicated, the development of theoretical formulations capable of dealing with both environmental and personality variables is quite limited. However, there is some theoretical basis for assuming that the effects of independent (environmental) variables on employee satisfaction and performance would depend on personality.

Tannenbaum (1954), for example, hypothesized that an attitude toward an object is a multiplicative function of the strength of personality trends and the relevance of the object to the expression of these trends. The multiplicative nature of this formulation implies that the effects of variations in the relevance of an environmental object on a person's attitude toward the object vary with the strength of the personality trend.

Other theorists (Peak, 1955; Atkinson, 1957; Tolman, 1955; Vroom, 1960) using multiplicative models to describe the interation between personality and situational or environmental variables also predicted that the determination of employee satisfaction and performance would depend upon this interaction. However, they do not provide much help in choosing specific personality variables which might interact with selected management practices and leader behavior. To aid in this task, other aspects of behavioral science theory were studied and the empirical research reviewed.

Need for independence and related concepts have appeared in the writing of many theorists. Freud (1922) and other psychoanalytic theorists have emphasized the conflicting needs for independence and dependence involved in relationships with authority. The strong dependency needs developed in early relationships with authority conflict with needs for self-expression and provide the basis for ambivalent attitudes toward persons in positions of authority. According to Freud, this ambivalence explains why feelings of admiration for leaders often change quickly to rejection and hostility.

Argyris (1957, 1959) has discussed the significance of need for independence in relation to management practices and leader behavior. In his theoretical model of organizational behavior, Argyris proposed

that the personality of an individual in our culture develops from a state of "immaturity" and dependence upon others as an infant to a state of relative "maturity" and independence as an adult. Thus, requirements of job dependence resulting from formal organization structure, leader behavior or management practices would tend to be frustrating and, hence, adversely affect performance. This reaction would be expected according to Argyris' model and would be determined by the degree of independence or dependence desired by the individual.

> One can predict therefore, that absenteeism, turnover, apathy, etc., will be as high when "maturity directed" (independent) people are frustrated by being required (by formal management practices or by supervisor's) to be immature (dependent) as when "immature" people are frustrated by being required to be mature. (Argyris, p. 121, in Haire, 1959).

Levinson's (1963) conclusion that formal organization structure and directive leadership would result in improved mental health of dependent employees supports Argyris' contention and adds further theoretical support to the importance of need for independence as a moderating variable.

> Through participation he (the employee) becomes more and more aware of his supervisors' problems and he obtains a genuine satisfaction in knowing that his opinions and ideas are given consideration in the search for solutions (p. 152).

Although McGregor regards need for independence as a general characteristic, he does acknowledge individual differences in the strength of this need.

> Some subordinates seem to be content to achieve a high degree of security without independence. Others thrive on the risks and the dangers of being on their own (p. 152).

More specific empirical research on the moderating role of need for independence on the relationship between management practices and leader behavior with employee satisfaction and performance has been developed by Vroom (1960) and Wager (1965). Vroom (1960) obtained significantly

different correlations between psychological participation and attitudes toward the job for persons with high and low needs for independence. Participation has a more positive effect on the attitude of those with strong independence needs. Differences approaching significance were found between the correlations of psychological participation with ratings of job performance of persons with high, moderate, and low needs for independence.

Wager (1965) found that organizational status is an important moderating variable on which the effects of influence are contingent. The relevance of organization status, it is suggested, lies in the dependency relationship between superior and subordinate. The lower the organization status, the greater the dependency relationship. Under condtions of low superior-subordinate dependency the effect of leader influence is negligible.

The theory and empiric research reviewed above resulted in the decision to utilize independence as the moderating personality variable which, according to our general hypothesis, would determine the effects of management practices and leader behavior on employee satisfaction and performance.

Three kinds of workers' independence will be analyzed as moderating variables. This is because independence may result from three major sources: (a) the workers' task requirements; (b) the workers' ability to leave their present organization without significant loss; (c) the workers' predisposition to strive for self-reliance. The implications for management will differ depending on whether any or all three kinds of independence have a moderating effect on the relationships between dependent and independent variables. Through knowledge of the source of the independence as well as its moderating effect, management action aimed at enhancing worker performance and satisfaction can be implemented.

Independent Variables: Key Elements of Neoclassical Theory

The management practices and leader behavior variables utilized in this study comprise the key elements of neoclassical theory. Neoclassical theory developed during the 1950's as a compromise between classical and human relations theory. "It uses classical functions and principles as hypotheses and attempts to integrate them with the empirical research flowing from the behavioral sciences." (Massie, p. 414, in March, 1965). Implicitly it assumes that there is no inevitable conflict between formalization and individual needs for satisfaction. Neoclassical theory thus prescribes considerate employee-oriented leadership and politics, combined with a clearly defined rather mechanistic form of organization structure with respect to degree of formalization. Moreover, it implicitly asserts that these prescriptions effectively encourage people to achieve their own goals best by directing their efforts toward organizational objectives.

Specifically, neoclassical theory asserts that a unit will be effective and satisfying to its members if there is adherence to the chain of command; formalized plans, procedures and policies; control systems to provide feedback for corrective action and work flow; clear two-way communication networks; separation of line and staff; clear formal definition of organization responsibility, authority and interrelationships; decentralization; opportunity for broader job scopes; subordinate participation in areas affecting his job; a reasonable limit to spans of control; technically competent leadership; hierarchically influential leadership; and, employee-centered leadership and policies.

Neoclassical theory assumes that the motivation, the capacity for assuming responsibility, and the readiness to direct behavior toward organizational goals are all present in workers and not imposed by manage-

ment. It assumes that it is a responsibility of management to make it possible for people to recognize and develop these human characteristics for themselves while organizing the elements of productive enterprise in the interest of economic ends.

According to neoclassical theory the effective and satisfying unit will be theory Y with respect to the social climate and theory X with respect to organizational form.

The specific key elements from neoclassical theory which have implications for the individual and, hence, could be moderated by the personality of the individual are those concerned with:

Unity of Command and Adherence to Chain of Command

Leader Initiating Structure

Job Scope

Span of Control

Participation

Leader Technical Competence

Leader Hierarchical Influence

Leader Consideration

These elements represent the specific independent variables to be investigated in this study. Each of the independent variables will be defined operationally in Chapter III.

Dependent Variables: Satisfaction and Performance Variables

The dependent variables to be investigated are employee satisfaction and employee performance. In general, the extensive empirical literature on the relationship between these variables can be summarized by Likert's (1961) conclusion based on his studies between 1947 and 1961 at the Institute for Social Research at the University of Michigan:

> ...where productivity of individuals was related to attitudes toward the company and job a very low positive relationship has usually been observed but the relationships are so slight as to be negligible (p. 14).

Brayfield & Crockett's (1955) conclusion based on an exhaustive review of the empirical research through 1955 still appears to be applicable and further indicates the desirability of considering satisfaction and performance as separate dependent variables.

> Satisfaction with one's position in a network of relationships need not imply strong motivation for outstanding performance within that system...productivity may only be peripherally related to many of the goals toward which the industrial worker is striving (p. 396).

Both employee satisfaction and performance are multidimensional in nature; hence, it was decided to use several attributes of each.

There are many traits that could be used in measuring performance but, unfortunately, there is no rule that allows one to state that a certain list of traits can always be rated reliably and validly. The evidence from factor analytic studies (Ewart, Seashore and Tiffin, 1941; Grant, 1955; Rush, 1953) indicates that from three to six factors are a reasonable number.

"one rating that probaly should be included is one on quality of job performance. This statement is based partially upon Whitlock's (1956) series of studies on the psychological basis of performance judgement." (Lawler, 1966a, p. 371). Since there is considerable evidence (Vroom, 1960; Lawler, 1966c) that performance is a function of ability x motivation, it would appear to be worthwhile to get ratings on effort, initiative, and ability. The decision on what other factors to include depends on the particular types of behavior that characterize the important determinants of effective performance. Due to the diverse jobs of the employees studied, relatively general traits were chosen. The specific

performance traits to be investigated are:

Quality of Job Performance

Quantity of Job Performance

Effort in Performing Job

Initiative in Performing Job

Ability to do Job

Ability to do Job Without Guidance

A wide variety of individual job-related satisfactions were studied because these satisfactions are not equivalent in importance from group-to-group. Thus, in an effort to insure that the scope of the satisfaction variable had applicable dimensions to the particular group studied, the Job Description and Job Expectation questionnaires developed by the Personnel Research Board of the Ohio State University (Stodgill, 1960) were used. These scales measure employee attitude toward the company and satisfaction with respect to the following classes of role expectations - work, extrinsic factors (advancement, pay, prestige), freedom, family attitude and job security.

Scope and Limits of Study

The previous discussion pertaining to the choice of the variables to be utilized within the study indicates the extent to which the general hypotheses - that there is an interaction between (a) management practices and leader behavior, and (b) employee independence which affects employee satisfaction and performance - will be studied. Table 1 summarizes the variables to be utilized.

TABLE 1: Variables To Be Investigated In This Study

Independent Variables	Moderating Variables	Dependent Variables
Leader Consideration	Ego Independence	Satisfaction with Company
Leader Hierarchical Influence	Task Independence	Satisfaction with expectation for work
Leader Technical Competence	Organization Independence	Satisfaction with expectation for extrinsic work factors (pay, prestige, advancement)
Leader Initiating Structure		Satisfaction with expectation for freedom
Participation		Satisfaction with expecation for family attitude
Job Scope		Performance Trait-Quality
Span of Control		Performance Trait-Ability
Chain of Command		Performance Trait-Effort
		Performance Trait-Initiative
		Performance Trait-Quantity
		Performance Trait-Ability Without Guidance

Measurement of these variables will be by questionnaire responses. The major limitation in the use of questionnaire data is that it is not possible to ascertain the respondent's motivation when answering nor, without considerable effort, the effect of the background experience of the subject on his current responses. The respondent may distort his answer, to reflect either what he believes should be the situation or what he believes the researcher wants, rather than answering the question on the basis of the actual situation. Reliability measures will at least indicate whether he consistently uses the same frame of reference. The researcher tried to motivate each respondent to answer on the basis of the actual situation by sending the respondent a letter aimed at developing

the perception of the content of the questionnaire as relevant to bringing about management action which would lead to increased employee satisfaction as well as the possibility that the researcher's recommendations could bring about this change.

The utilization of a multirater-multitrait technique for measuring performance combines some of the advantages of objective and subjective techniques and enables assessment of the criterion by determining its convergent and discriminant validity.[1] For those jobs where an objective indicator would clearly reflect the essence of the job and be within the control of the worker, this criteria would be superior to the multirater-multitrait method.

The difficulty in attaining such objective criteria is considerable. Thus, it is not surprising that several studies have concluded that salary level in management jobs is not necessarily closely related to merit (Lawler, 1966b; Meyer, Kay & French, 1965). Moreover, even if it would be possible to find appropriate objective criteria, it would take considerably more time devoted to observing the sample to identify these criteria than was possible for the researcher.

It should also be pointed out that it is possible for the multirater-multitrait technique to demonstrate convergent and discriminant validity and still not constitute what normally would be acceptable valid measures of the phenomena under study. For example, peer and superior rankings of a group of employees may agree perfectly so that convergent and discriminant validity are obtained. However, both the peer and superior may be simply making the same incorrect inference from observing the individual's behavior.

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[1] See Chapter III for a discussion of discriminant and convergent validity.

One further limitation should be noted, and that is that the firm at which the research was performed is not necessarily representative of all organizations. The conclusions will have to be restricted to the firm under consideration. Implications of the findings should spur future research in an effort to determine the generality of the findings.

Chapter Content

In Chapter II the specific hypotheses will be developed from research relevant to the relationship between the independent and dependent variables. The field setting in which the research was carried out and the methods used to measure the variables will be described in Chapter III. In Chapter IV the reliability and validity of the measures utilized will be discussed. The findings concerning the moderating effect of employee independence on the relationship between the independent and dependent variables will be reported in Chapter V and Chapter VI. Finally the implications of the findings for theory and for future research will be discussed in Chapter VII.

CHAPTER II

HYPOTHESES

Scope and Purpose of the Chapter

The general hypothesis and the delineation of the specific variables to be utilized within its framework described in Chapter I provides the basis for the specific hypotheses to be formulated in this chapter.

Despite frequent speculations that effectiveness of the management practice and leader behavior variables under investigation are specific to certain personality types or cultures, this assumption has been given little research attention. Substantial controversy exists about the relationship between the independent variables and employee satisfaction and performance. In the following paragraphs each independent variable will be defined and the previous research relevant to its relationship to the dependent variables will be reviewed. The hypotheses suggested by the relevant research and theory will be indicated at the end of the chapter along with a schematic model. The hypotheses are specific with respect to the direction and absolute nature of the relationships between independent-dependent variables under conditions of high and low independence.

Relevant Research

Leader Consideration. This variable is defined as the degree to

which an individual's superior is pereeived as friendly, supportive, easily approachable, concerned with group welfare, respectful of member integrity, willing to explain his actions and to allow participation in planning and goal setting.

Studies in many types of organizations have indicated that the supportive, human relations-oriented leader has positive effects on attitudes and satisfaction of subordinates (Halpin, 1954; Halpin and Wiener, 1957; Moore, 1953; Seeman, 1960; Comrey, Pfiffner and High, 1954; Indik, Seashore and Georgeopoulos, 1960; Patchen, 1960; Baumgartel, 1957; Hemphill, 1957; Danielson and Maier, 1957).

Highly considerate leaders also have work groups which display more intragroup harmony and cooperation (Oaklander and Fleischman, 1964), as well as lower grievance and turnover rates (Fleischman and Harris, 1962). Likert (1962) reported that the majority of studies conducted by the Institute of Social Research showed that supervisors of departments with high productivity provided more supportive leadership than did those with departments of low productivity.

In addition to having positive effects on attitudes and satisfactions of subordinates, supportive leader behavior has frequently been found to have a positive relationship with departmental and individual productivity (Likert, 1961; Blau and Scott, 1962; Argyle, Gardner and Cioffi, 1958; Katz and Kahn, 1953; Katz, MacCoby and Morse, 1950).

Findings that certain types of individuals or groups respond more favorably to authoritarian leadership are also common. Sanford, (1950) found that authoritarian personalities prefer strong directive leadership and regard the authoritarian leader as more effective than his democratic counterpart. Studies by Blau (1955); Milton (1952); French, Israel and As (1960) further indicate that the reaction of the group to employ-

ee-oriented leadership may have either no effect or a detrimental effect on satisfaction and performance. It would appear that the positive effects of employee-oriented leadership on the satisfaction and performance of the worker are related to the worker's perception of the legitimacy of the leadership style.

Korman (1966) in his extensive review of consideration, initiating structure, and organizational criteria concluded that in addition to some lack of consistency in the findings, most researchers have made little attempt either to conceptualize situational variables which might be relevant and/or measure them. Instead, the researchers have tended, usually, to follow the two-variable design which consists simply of correlating the test variable with the criterion variable, with little appreciation of the possible situational variables which might be moderating these relationships. A good example of a more satisfactory approach is that by Vroom and Mann (1960). They showed that the acceptability of certain kinds of supervisory behavior varied according to the size of the organizational units involved. Thus, authoritarian (high F-scale) leaders were more accepted by workers in large units than were those low on this variable, whereas the reverse was true for those in small units. This type of "situational variable", it seems, is only one of the many situational variables which might moderate the relationship between consideration and performance (or satisfaction) variables (Korman, p. 355).

Leader Hierarchical Influence. This variable is defined as the extent to which the individual's superior is viewed as having the support of his superiors in matters affecting his work group-wages, benefits, discipline and policy matters.

According to Likert (1961), upward hierarchical influence developed

through the "linking pin" function is a necessary though insufficient condition affecting group satisfaction and productivity. The importance of hierarchical influence was discovered by Pelz (1951, 1952) in a study of several thousand workers performed under the auspices of the Instititute for Social Research. Pelz found that the amount of influence which a supervisor has with his own superior is a "conditioning variable" which moderates the results the supervisor will achieve from his supervisory behavior. When the supervisor had high influence and also engaged in supportive leader behavior, employee satisfaction was significantly greater than when supervisors with low influence engaged in the same kind of supportive behavior. Pelz concluded that a supervisor, to function effectively, must have sufficient influence with his own superior to affect the superior's decisions. When a supervisor cannot exert sufficient influence upward in the hierarchy to handle problems affecting his subordinates, an unfavorable reaction to the supervisor, to his superior, and to the organization is likely to occur. In addition to confirming the importance of hierarchical influence on satisfaction, other studies indicate that the ability to exert an influence upward affects productivity and performance variables (Katz, MacCoby and Morse, 1950; Likert and Willits, 1940; Ronken and Lawrence, 1952).

Wager's (1965) findings were similar to Pelz's but the magnitude of the moderating effect of influence on the leader's supportive behavior was rather low, though statistically significant. He also found that the higher the organizational status of the employee, the lower the moderating effect of influence on employee satisfaction. This led Wager to conclude that when employees are performing work that permits them to be independent of their immediate superiors, the influence of the superior is less relevant to the fulfillment of subordinate expect-

ations. Thus, the concept of upward influence may be limited to conditions in which employees are at least moderately dependent on their superior for job satisfaction and for personal welfare.

Leader Initiating Structure. This variable is defined as the degree to which the leader makes specific work assignments, emphasizes deadlines, evaluates quality of work, encourages use of uniform procedures, and establishes well-defined work patterns. This measure constitutes an overall assessment of the degree to which a superior is perceived as planning, organizing, directing, and controlling the work of his unit.

Leaders high in this factor have been found repeatedly to be highly rated by their superiors and to have high scores on such objective measures of leader performance as high productivity, low scrap and low cost (Harris, 1952; Halpin and Wiener, 1957). Many other studies using similar measures are consistent with these findings (Stouffer, 1949; Moore and Smith, 1952; Moore, 1953; Katz and Kahn, 1953; Katz, MacCoby and Morse, 1950; Comrey, Pfiffner and High, 1954; Bass and Duntemann, 1963; Bass, et.al., 1963; Duntermann and Bass, 1963). This is not to say that findings concerning the effects of high task orientation are always positive. For example, Fleischmann and Harris (1962) found that production supervisors who were high in initiating structure also had higher rates of grievances and employee turnover than did supervisors who were low in initiating structure. Korman (1966), in his extensive review of the research on initiating structure, indicated several studies which revealed no relationships between initiating structure and satisfaction or performance. Korman (1966) concluded "that very little is now known as to how these variables (consideration and initiating structure) may predict work group performance and the conditions (situational moderators)

which affect such predictions" (p. 360).

Leader Technical Competence. This variable is defined as the extent to which the superior is perceived by subordinates as capable of providing advice on technical or specialized problems, and capable of anticipating important job-related details prior to assigning tasks.

Although a major variable in Scientific Management Theory (Taylor, 1947), this dimension has received little attention compared to other dimensions of leader behavior. The studies by Comrey, Pfiffner and High (1954) have indicated that supervisors of industrial production workers, government employees, and forest workers show significant positive relationships between technical competence and measures of group productivity and leader effectiveness. Taylor, (1947) felt that high technical competence of superiors was a requisite condition for high employee performance and satisfaction. Taylor believed the training by "functional foremen" would enable a worker to produce at a higher rate. Production at the higher rate would be rewarded by a pay incentive which would enahance the employee's satisfaction with the job.

In a factor analysis of the reasons for worker satisfaction, Kahn (1951) isolated four independent factors, One of these was satisfaction with the competence of supervisors and leaders.

Krech, Crutchfield and Ballachey (1962), in discussing this dimension of leader behavior, concluded:

> Whenever group members are dependent upon the person with technical knowhow he may exploit this power to consolidate his role as a leader.

The indication of dependency as a moderator of the effects of technical competence has not been researched, but appears worthy of investigation.

Participation. This variable is defined as the process of joint decision making by two or more parties. The amount of participation of any individual will be the amount of influence he has on the decisions and plans agreed upon. In the present study psychological participation or the amount of influence an individual perceives he has on decision making will be measured.

Human relations theorists for years have put forth participative management as a means of increasing worker satisfaction and performance. Studies within many different environments tended to support this conclusion (Lewin, Lippitt and White, 1939; Coch and French, 1948; Jacobson, 1951; Maier, 1950; Lawrence and Smith, 1955; Baumgartel, 1956; Morse and Reimer, (1956). Coch and French, (1948), for example, found that new group goals are more readily accepted when the members of the group participate in setting them than when they are imposed upon the group. Morse and Reimer (1956) found that satisfaction and productivity of employees increased when the employees were allowed to participate in the design of a new program.

Productivity was also raised in a program designed to restrict employee participation and increase the role of upper management in the decision making process; however, worker satisfaction decreased. Tannenbaum (1954) investigated the role of personality factors in determing the adjustment to the two programs in Morse and Reimer's study. He found that persons "suited" to the program in which they were placed wanted their respective programs to last longer and were more satisfied than persons who were less suited to the program structure in which they were placed. He concluded that "social systems cannot be fully evaluated without understanding of the psychological makeup of the individuals participating in that system" (p. 222). Interestingly, the study by Lewin,

Lippitt and White (1939) also implied that personality differences affected the effectiveness of leadership style. While their general results favored participative management, they discovered two different types of reaction to authoritarianism. One reaction was clearly passive and dependent in nature, while the other was characterized by considerable aggression toward the leader. The authors attributed these differences to the personalities of the subjects and to the order in which they experiencedthe different management styles.

Other studies (Bailey, 1953; Blau, 1955; French, Israel and As, 1960) have also implied that there is a moderating role of personality factors on the interaction between participation, employee satisfaction, and performance.

French, Israel and As (1960) found that the participation in production decisions by Norwegian factory workers did not result in greater productivity although the participation caused greater job satisfaction. They concluded that the positive effects of participation on the job attitudes of the workers were directly related to the perceived legitimacy of participation. Legitimacy was defined as the extent to which participation is considered right and proper by the parties involved.

The study which is most revealing in indicating that the beneficial effects of participation in group decision making may be limited by the personality of the worker is that by Vroom (1960). Vroom showed that the stronger an individual's need for independence, the greater the extent to which participation in decision making in his job will result in his developing a more positive attitude toward the job and will increase his motivation for more effective performance on the job.

Job Scope. This variable is described as the extent to which the

individual performs routine tasks on his job, sees projects through to completion, sets objectives, goals and procedures for the job and performs tasks not specifically assigned to him.

Classical theorists advocated job specialization and work simplification as a means of improving productivity. To Taylor (1947) the training of employees to be specialists would, with his productivity-based incentives system, result in increased pay and, hence, increased satisfaction.

Most modern writers (Argyris, 1957; Likert, 1961; MacGregor, 1957; Kornhauser, 1965) regard nearly all division of labor with the resulting job simplification and specialization as leading almost inevitably to monotony, boredom, job dissatisfaction and maladaptive employee behavior patterns. Moreover, the case has been made by these same writers and numerous others (Worthy, 1950; Davis, 1957; Reif and Schroderback, 1966) that increased job scope will result in more motivated and satisfied employees.

Though the human relations approach has gained widespread popular support, the data is unconvincing. MacKinney, Wernimont and Galitz (1962) reviewed the studies relating job satisfaction and job specialization and concluded that the issue was not settled by the data at that time.

Their statement clearly points out the importance of considering individual differences:

> The most compelling argument against specialization as a major cause of job dissatisfaction lies in the fact of individual differences. This is the central fact of life in the behavioral sciences, and yet the would-be reformers apparently believe that all people must react in exactly the same way to the same job (p. 17).

Hulin and Blood (1968) in their rather extensive review of job enlargement literature concur with the statement of McKinney, et.al. They indicate by citing numerous recent studies (Turner and Lawrence, 1965;

Konant and Kilbridge, 1965; Kornhauser, 1965; Kendall; 1963) that the general conclusion regarding the effects of job scope on job satisfaction and/or motivation is overstated and may be applicable only to certain segments of the working population. The hypothesis that job size is positively correlated in general with job satisfaction must be modified to take into account the location of the plant and the cultural backgrounds of the workers (Hulin and Blood, p. 53).

Span of Control. This variable is the number of subordinates reporting directly to a superior.

Classical theorists usually specified that the number of subordinates reporting to a superior should be limited to five or six. In some widely quoted statements, classical writers have seen a need for greater limiation (about three) at the top and a larger span (about six) at the lower levels (Massie in March, 1965). Critics of normatively defined spans have argued that the ideal span suggested by the classicists was based on insufficient evidence (Simon, 1957) or was much too narrow (Worthy, 1950) and, hence, inconsistent with the idea that the number of levels of a hierarchy should be kept to a minimum.

Considering the interest in span of control, surprisingly little empirical research has been conducted on the subject. Available information is largely the result of descriptive polls of company practices (Dale, 1952). More recently, Woodward (1965), in a study of one hundred and eleven British manufacturing firms, found the median span of control to be six. However, when the firms were classified according to the nature of their production processes (level of technology), the spans varied. The spans increased with higher level of technology. These differences in spans were also found to be appropriate for different job

levels.

Empirical research on the interaction of span of control with employee satisfaction and performance has essentially been non-existent. Studies of hierarchical levels, which of necessity vary with the span of control, have reported situations where reductions in the number of levels were correlated with heightened morale (Richardson and Walker, 1948; Worthy, 1950).

Inferences have been drawn concerning the interaction of span of control with satisfaction and performance due to the likelihood of certain practices (i.e. close supervision) being more prevalent when the span of control is narrow. Inferences concerning the effects of subordinate personality on span of control have not been made, but could eliminate some of the controversy. Massie (in March, 1965) alludes to this in the following statement:

> The concept of span of control has been refined to some extent over the years, but remains one of the chief sources of controversy within classical thinking and between it and other developing theories. The neoclassical theorist continues to consider the concept as a basic guide even though he may state it in less arbitrary terms (p. 399).

Chain of Command and Unity of Command. At the heart of the classical theorist's organization structure is the scalar principle of chain of command principle. The principle states that authority and responsibility should flow without deviation from the highest executive to the lowest operative. Closely related to this principle is the principle of unity of command - no member of an organization should receive orders from more than one superior.

From an operational standpoint it became obvious that the classicist's insistence on strict adherence to these principles would hamper

proper communications and functioning within an organization. Fayol (1949), an early classicist, perceived the possibility of difficulties and indicated that a horizontal bridge or "gangplank" between two executives on the same level was important for good communications. Barnard (1938), in his book The Functions of the Executive, was the first to view the organization as a "system of cooperation" in which the "informal organization" played an important role in attitude formation, proposal screening (before management becomes aware), and decision making.

Simon (1947, 1960) expanded on Barnard's concepts and suggested that the organization be considered from two standpoints if satisfactory decisions are to be made. These are the points at which various decisions are made and the persons from whom information will be required. This led him to regard as less than exact the principles of unity and chain command.

Many neoclassicists feel that the princple of unity of command is more defensible if narrowed to the following:

> No member of an organization should report to more than a single superior on a given function (Massie, in March, 1965, p. 397).

Other qualifications have been added by neoclassicists who, in general, have considered unity and chain of command as tools which must be moderated by factors existent in actual situations (Massie, in March, 1965, p. 397). The moderating factor of independence (ego, task, organization) has been neglected until now. Its consideration here will hopefully contribute to management's proper utilization of the principles of unity and chain of command.

Hypotheses

The previous research and theory indicate the substantial controversy that exists as to the relationship between the independent variables and dependent variables. Although little research has been conducted on personality variables which influence these relationships, the research reviewed above suggest the following hypotheses to which the present study is addressed. The hypotheses designated by an "a" pertain to satisfaction, while those designation by a "b" pertain to performance.

Hypothesis 1a - Leader consideration will have a statistically significant positive relationship to satisfaction of dependent and independent subordinates. The relationship will be greater for the dependent subordinates.

Hypothesis 1b - Leader consideration will not have a statistically significant positive relationship to performance of dependent and independent subordinates. The relationship will be greater for the dependent subordinates.

Hypothesis 2a - Leader hierarchical influence will have a statistically significant positive relationship to satisfaction of dependent subordinates, for independent subordinates it will have no significant positive relationship.

Hypothesis 2b - Leader hierarchical influence will have a statistically significant positive relationship to performance of dependent subordinates, for independent subordinates it will have no significant positive relationship.

Hypothesis 3a - Leader initiating structure will have a statistically significant positive relationship to satisfaction of dependent subordinates, for independent subordinates it will have no significant positive relationship.

Hypothesis 3b - Leader initiating structure will have a statistically

significant positive relationship to performance of dependent subordinates and independent subordinates. The relationship will be greater for the dependent subordinates.

Hypothesis 4a - Leader technical competence will have a statistically significant positive relationship to satisfaction of dependent subordinates, for independent subordinates it will have no significant positive relationship.

Hypothesis 4b - Leader technical competence will have a statistically significant positive relationship to performance of dependent subordinates and independent subordinates. The relationship will be greater for the dependent subordinates.

Hypothesis 5a - Participative leadership will have a statistically significant positive relationship to performance of independent subordinates, for dependent subordinates it will have no significant positive relationship.

Hypothesis 5b - Participative leadership will have a statistically significant positive relationship to performance of independent subordinates, for dependent subordinates it will have no significant positive relationship.

Hypothesis 6a - Job scope will have a statistically significant positive relationship to satisfaction of independent subordinates, for dependent subordinates it will have no significant positive relationship.

Hypothesis 6b - Job scope will have a statistically significant positive relationship to performance of independent subordinates, for dependent subordinates it will have no significant

positive relationship.

Hypothesis 7a - The span of control of the respondent's superior will have a statistically significant negative relationship to satisfaction of dependent subordinates, for independent subordinates it will have no significant relationship.

Hypothesis 7b - The span of control of the respondent's superior will have a statistically significant negative relationship to performance of dependent subordinates, for independent subordinates it will have no significant relationship.

Hypothesis 8a - Adherence to the chain of command will have a statistically significant positive relationship to satisfaction of dependent subordinates, for independent subordinates it will have no significant positive relationship.

Hypothesis 8b - Adherence to the chain of command will have a statistically significant positive relationship to performance of dependent subordinates, for independent subordinates it will have no significant positive relationship.

The hypotheses are summarized in Tables 1 and 2.

Table 1: Summary of Hypothesized Relationships Between Satisfaction Variables and Environmental Variables When Moderated by Subordinate Independence

CORRELATE SATISFACTION WITH	SUBORDINATES HIGH ON THE INDEPENDENCE VARIABLE (INDEPENDENT)	SUBORDINATES LOW ON THE INDEPENDENCE VARIABLE (DEPENDENT)
Leader Consideration	+	+
Leader Hierarchical Influence	0	+
Leader Initiating Structure	0	+
Leader Technical Competence	0	+
Psychological Participation	+	0
Job Scope	+	0
Narrow Span of Control	0	+
Adherence to Chain of Command	0	+

+ = Statistically significant relationship as stated in the hypothesis

0 = No statistically significant relationship as stated in the hypothesis

Table 2: Summary of Hypothesized Relationships Between Performance Variables and Environmental Variables When Moderated by Subordinate Independence

CORRELATE PERFORMANCE WITH	SUBORDINATES HIGH ON THE INDEPENDENCE VARIABLE (INDEPENDENT)	SURORDINATES LOW ON THE INDEPENDENCE VARIABLE (DEPENDENT)
Leader Consideration	0	0
Leader Hierarchical Influence	0	+
Leader Initiating Structure	+	+
Leader Technical Competence	+	+
Psychological Participation	+	0
Job Scope	+	0
Narrow Span of Control	0	+
Adherence to Chain of Command	0	+

+ = Statistically significant relationship as stated in the hypothesis

0 = No statistically significant relationship as stated in the hypothesis

CHAPTER III

METHODOLOGY

Purpose and Scope of the Chapter

In this chapter the field setting in which the research was carried out will be described. The various measures used to provide date to enable testing of the hypotheses developed in Chapted II will then be presented. Finally, the statistical procedures used to test the hypotheses will be summarized.

Description of the Firm Studied

This study was carried out in a medium sized company whose basic function is the marketing of chemicals and plastics to industrial consumers. The company supplies its products directly to about 500 firms across the nation. Of the 200 products offered by the company, 60, comprising 50 per cent of their 40 million dollar annual sales, are manufactured. The other 140 are purchased from other corporations for resale. Approximately 95 per cent of all products are produced for inventory, as products are rarely offered on a custom order basis. The products are produced either in continuous or large scale batch plants.

Since 1962 the firm has been growing at the rate of 20 per cent per year. Corporate plans indicate a continuation of this rate through 1975. Primary growth has come from manufactured products.

Of the approximately 400 employees, 300 are salaried workers and

100 are hourly production workers.

The corporation has three major locations. These are in the states of New York, New Jersey and North Carolina. The New York office is the corporate headquarters. In New Jersey there are two sites, although one is very small (7 employees) and was not included in the study. The marketing division and production division personnel are primarily in the New Jersey location. The North Carolina facility is mainly a marketing department headquarters although a small manufacturing plant exists there.

Description of the Sample

The data for the study were collected from the salaried full-time exempt personnel at the New York, North Carolina and major New Jersey locations. The finance division (40 salaried employees) did not agree to participate and was, therefore, excluded from the study.

The 214 respondents to the questionnaire represent an 89 per cent response rate. The 26 individuals who did not respond include those who only completed a small portion of the questionnaire as well as those who did not return their questionnaire. The breakdown of the sample by occupational levels and divisions is shown in Table 1.

Table 1: Job Classification of the Sample

Job Classification	Number	Per Cent
Managerial	41	19
Marketing Division	24	11
Production Division	6	3
Other	11	5
Professional	88	41
Marketing Division	53	25
Production	15	7
Other	20	9
Clerical, Secretarial and Technicians	85	40

Description of the Measures

The measures (Appendix A) used to test the hypotheses are described below. For those measures specifically developed for the present study, construct validation tests were made. The results described in Chapter IV indicate that all these scales meet the criteria for construct validity. Tests of scale validities and scale reliabilities are presented in Chapter IV.

1. Independence

Three questionnaires, each designed to provide an indication of a different form of independence, were utilized. The three forms of independence obtained were ego, task, and organization independence.

The measure used for ego independence consists of sixteen questions, most of which were developed by Tannenbaum and Allport (1956). The questions which reflect the individual's predisposition to strive for self-reliance and to do things alone without help are identical to those used by Vroom (1960). Some of the items refer to the frequency with which the subject regularly engages in independent behavior. Others deal with the satisfaction that he gets from this behavior. The following are sample items and response choices:

-How often do you find that you can carry out other people's suggestions without changing them any?

1. almost always 2. very often 3. often 4. sometimes 5. rarely

-How much do you usually want the person who is in charge of a group you are in to tell you what to do?

1. very much 2. quite a bit 3. somewhat 4. a little 5. not at all

-When you have a problem, how much do you like to think it through yourself without help from others?

1. not at all 2. somewhat 3. quite a bit 4. very much 5. always

The task independence scale of sixteen items was developed specifically for this study. The items reflect the degree to which the respondent is able to perform his job without depending upon his superior or others for financial resources, non-financial resourses, and directions. Moreover, the extent to which the subject independently schedules and plans his activities, as well as innovates, is ascertained. Sample questions and scale choices are as follows:

-To what extent are you able to act independently of your superior in performing your job function?

1. hardly ever 2. seldom 3. occasionally 4. frequently 5. almost always

-When someone else in the company requests you to perform a task for them, how frequently do you seek advice from your superiors?

1. almost always 2. very often 3. often 4. occasionally 5. rarely

-To what extent are you able to schedule and plan your task requirements independent of others in the organization?

1. hardly ever 2. seldom 3. occasionally 4. frequently 5. almost always

The organization independence scale consisting of four questions was developed specifically for this study. The scale reflects the applicability of the worker's knowledge and experience gained on his present job in obtaining an equivalent one elsewhere. Sample questions and scale choices are as follows:

-How applicable is your knowledge and ability on your present job to other firms?

1. not at all 2. slightly 3. somewhat 4. very 5. completely

-To what extent is it likely you can leave your present job and obtain an equivalent one elsewhere?

1. not at all 2. slight 3. some 4. large 5. very large

2. Satisfaction of Employee Role Expectations

Job Description and Job Expectation questionnaires, developed by the Personnel Research Board of the Ohio State University (Stogdill, 1960) were utilized. The Job Description questionnaire essentially measures employees' attitude toward the company and its management. Factor analysis by Stogdill (1960) of a previous satisfaction scale yielded large loadings for the twelve items comprising the Job Description questionnaire. These items concern satisfaction with company, management, and recognition. Following are two of the twelve items and response choices:

-This company as a place to work.

1. very good 2. good 3. fair 4. poor 5. very poor

-Fair treatment of employees by management

1. very good 2. good 3. fair 4. poor 5. very poor

The Job Expectation questionnaire measures employee satisfaction with role expectation with respect to (a) work, (b) advancement, (c) the prest ige of the respondent's job as compared with jobs of others, (d) pay, (e) freedom, (f) family attitudes toward the respondent's job, and (g) job security.

Respondents are asked to indicate the degree to which each characteristic of the job meets his expectations. Each class of expectation is measured by averaging the scores of four questions. In the present study, the items pertaining to advancement, pay and prestige expectations are combined to provide a single measure - extrinsic job satisfaction. These were combined because the reliability of the individual scales was found to be moderately low (.616, .574, .656) and the combined reliabil-

ity was found to be much greater (.803) than the reliability of its components.

Exhibit 1 contains items representative of each class of expectations together with response choices.

EXHIBIT 1

Expectation Class	Sample Questions	Answers (Circle One)
Work (Intrinsic)	-Liking for the work I am doing here.	1. Much better than expected.
Extrinsic Work	-My chances of getting ahead in the company.	2. Better than expected
	-My job compared with my friends' jobs.	3. Same as expected
	-The amount of money I am paid.	4. Much poorer than expected.
Freedom	-Freedom to make decisions about my work.	
Family Attitude	-My family's pride in my job.	
Security.	-Chances of keeping the job as long as I want it.	

3. Performance

The job performance scale used for this study is a multirater-multitrait scale. Lawler (1967), in a review of methods for measuring performance, indicated that the multirater-multitrait method provides many of the advantages of both the more objective and more subjective measures. "Moreover, with this approach it is possible to assess the criterion by determining its convergent and discriminant validity, and it is not necessary to depend on an objective indicator such as sales or profits that may miss the essence of the job" (Lawler, 1966a, p. 370).

The raters used were the subjects' superiors and peers. The obvious constraint in the choice of the raters is that they must be familiar

with the aspects of the individual's performance that they are to rate. Otherwise, the ratings tend to be more likely to be affected by the halo tendency (Bescoe & Lawshe, 1959). To insure the choice of knowledgeable raters, the subject was asked to indicate, prior to receiving the performance questionnaire, the name of his superior(s) and the name of two peers who knew his performance best. The choice of which superior (if more than one existed) and peer rated the subject was done randomly.

The rationale behind the choice of the six traits used in this study is provided in Chapter I. The traits which the subject, the subject's superior, and the subject's peer rated for each subject are quality, quantity, ability, ability without guidance, initiative, and effort. For each trait they chose one of seven responses - excellent, very good, good, average, fair, poor, or inadequate.

The convergent and discriminant validity of the performance measures was assessed and it was found to meet the criteria for both kinds of validity. Chapter IV describes the validity tests and presents the validation data in detail.

4. Leader Consideration

Consideration sco res were obtained from twelve questions in the Leader Behavior Description Questionnaire (Stogdill and Shartle, 1955; Stogdill and Coons, 1957). Subjects were asked to describe the behavior of their superior by such items as:

-He looks out for the personal welfare of group members.

1. always 2. often 3. occasionally 4. seldom 5. never

-He gives advance notice of changes.

1. always 2. often 3. occasionally 4. seldom 5. never

-He assumes responsibility for subordinate actions.

1. always 2. often 3. occasionally 4. seldom 5. never

-He is friendly and approachable.

1. always 2. often 3. occasionally 4. seldom 5. never

5. Leader Initiating Structure

The initiating structure scale was also developed by the Personnel Research Board of Ohio State University. It consists of ten questions contained in the Leader Behavior Description Questionnaire. This scale measures the degree to which the leader is perceived by subordinates to structure the work environment by assigning particular tasks, specifying procedures to be followed, and clarifying expectations. Two sample questions and scale choices are as follows:

-He assigns group members to particular tasks.

1. always 2. often 3. occasionally 4. seldom 5. never

-He schedules the work to be done.

1. always 2. often 3. occasionally 4. seldom 5. never

6. Leader Hierarchical Influence

This scale consists of seven questions, most of which were developed by Comrey, Pfiffner and High (1954) at Southern California University. It measures upward influence of the leader only with respect to matters concerning the personnel management of the subordinates and participation in policy decisions. It does not measure influence with respect to such decisions as resource allocations, objective setting, or organization changes. The seven items are summarized to yield a single scale score. Typical items on this scale are:

-He has requested certain benefits for his workers which have not been approved.

1. frequently 2. occasionally 3. rarely 4. almost never 5. never

-Does he have influence with his superiors in getting certain benefits for his subordinates?

1. none 2. a little 3. some 4. quite a bit 5. a great deal

-Does his influence with his superiors enable his subordinates to develop faster than normal?

1. never 2. almost never 3. rarely 4. usually 5. frequently

7. Leader Technical Competence

This score was also obtained primarily from questions developed by Comrey, Pfiffner and High (1954). This scale, consisting of six items, essentially measures the degree to which the superior is perceived as capable of providing advice on technical or specialized problems. Following are two of the six items:

-You have found that he does not know something about the job that he should know.

1. very often 2. often 3. sometimes 4. occasionally 5. rarely

-When a subordinate does not know how to do a job he can show him how it is done.

1. rarely 2. occasionally 3. usually 4. almost always 5. always

8. Psychological Participation

This scale consists of six items, most of which were developed by Vroom (1960) for his study "Some Personality Determinants of the Effects of Participation". Each of the questions, designed to measure the extent to which the individual feels that he influences joint decisions made with his superior, was answered by checking the most applicable alternative on a five-point scale. The index is derived in the same way as for all the other scales by averaging the responses to all the questions. Sample questions and response choices are as follows:

-In general, how much say or influence do you feel you have on what goes on in your job?

1. little or none 2. some 3. quite a bit 4. a great deal 5. a very great deal

-Does your immediate superior ask your opinion when a problem comes up which involves your work?

1. never 2. seldom 3. sometimes 4. often 5. always

9. Job Scope

This scale of five items was developed specifically for this study. The index derived by averaging the responses to the five questions is designed to measure the extent to which the subject performs tasks outside of his normal job responsibility, sees projects through to completion and sets goals, objectives and job methods employed. Two of the items on this scale are:

-How often are you required to perform tasks which previously had not been part of your job responsibility?

1. rarely 2. occasionally 3. sometimes 4. very often 5. often

-To what extent do you set objectives, goals, and procedures for your job rather than following directions or established procedures?

1. almost never 2. little 3. somewhat 4. large 5. very large

10. Span of Control

The following single question was asked to determine the number of individuals reporting to the subject's superior:

-How many people report directly to your immediate superior?

1. one to four 2. five to seven 3. eight to ten 4. eleven to fifteen 5. more than fifteen

11. Chain of Command and Unity of Command

The four-item questionnaire developed specifically for this study measures the extent to which communications and tasks follow the chain of command, and the number of superiors to whom the subject is accountable. As with all but the performance scale, the scale questions are scored on a five-point basis, The average of the individual question scores provides a scale index. Two of the questions in this scale and their response choices are:

-How frequently do you receive orders from other than your superior?

1. very often 2. often 3. sometimes 4. rarely 5. never

-To how many superiors are you accountable?

1. six or more 2. four or five 3. three 4. two 5. one

Administration of the Questionnaire

The respondents, individually or in small groups, were given two letters immediately prior to the questionnaire. A letter from the researcher indicated that the aim of the study was to delineate better those factors necessary to provide for increased worker satisfaction and performance. It was stressed that the study was being performed at several companies and the management for these firms recognized that the responses to the questionnaire would remain strictly confidential. The management at the respondent's company was to receive a general report describing the organization climate and some alternative which could possible lead to improved employee satisfaction and performance. A letter from the Executive Committee of the firm indicated that studies like these were necessary to enable better understanding of workers' needs and, hence, better management.

When the questionnaires were distributed, the researcher requested that each individual answer the questions without consulting any other individual.

Although the directions to the questionnaires are self explanatory and designed to be self-administered, the researcher reviewed the directions with the respondents. The researcher was present throughout to provide any further interpretation of the directions. Respondents were assured that all responses would be kept strictly confidential.

The questionnaires were administered in group settings of five to eight employees per group. Questionnaires were completed during working hours in the firm's conference room. Because of the job demands, approximately 80 employees returned to their job station immediately after receiving the questionnaire and instructions concerning how to complete it. These employees returned the questionnaire to the investigator the same day as they received it.

To insure that the responses remained confidential, the questionnaires were coded rather than signed by the respondent. The coding was needed to make it possible to correlate responses to the questionnaire with performance ratings completed independently by others.

After completing the questionnaire, the respondents were requested to rate the performance of their subordinates as well as those peers who had indicated that the respondent knew their job performance (this indication had been made prior to the questionnaire administration). In order to preserve his anonymity, the respondent was instructed not to identify himself on the performance rating sheet.

Description of the Statistical Procedures

The statistical procedures used can be divided into two areas,

those pertinent to scale reliability and validity and those pertinent to the hypotheses.

1. Statistics Pertaining to Scale Reliability and Validity

Scale reliability for all scales employed was computed using a Spearman-Brown Formula Correction of the Kuder Richardson Formula 20. When this split test reliability was greater than .50 the scale was felt to have met the minimum reliability criterion to enable its use within the study.[1]

Scale validation for four scales developed for this study - task independence, organization independence, job scope, chain of command - was obtained through the use of the Mann-Whitney U test. For each scale two samples (N's range from 18 to 33) were selected which were known to be significantly different from each other with respect to the variable which the scale was developed to measure. The distribution of the samples was tested for significant differences using the Mann-Whitney U test. The criteria of a difference significant at the .05 level was specified as the validation requirement. All four scales met this requirement. Hence, the scales have construct validity.

Non-parametric statistics were used throughout the study as (1) they make no assumptions concerning the distribution of the data, and (2) the criterion of scale continuity exists.

Validation of the span of control scale was done by comparing the subject's responses to the organization chart. In 28 of 30 cases agree-

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[1] No hard and fast rules can be stated as to how high reliability coefficients should be. For research purposes, one can tolerate much lower reliabilities than one can for practical purposes of diagnosis and prediction. As Guilford (1954) has indicated, utilizing tests with reliabilities on the order of only .5 is often better than going without the use of the test at all.

ment was found.

For the multirater-multitrait performance scales, convergent and discriminant validity was computed using a Spearman rank correlation coefficient. Convergent validity is established by agreement among raters when the same traits are rated. This criteria is met when correlations between the same traits when rated by different raters is significantly different from zero. Discriminant validity is demonstrated by three criteria. First, the interrater agreement on a given trait should be greater than the halo effect across different traits rated by the same rater. Second, whenever the same trait is rated by different raters the interrater agreement should be greater than the correlations among different traits rated by those raters. Third, the magnitude and direction of correlations, when based on single or different raters, should be approximately the same.

2. Statistics Pertaining to Hypotheses

All hypotheses were tested by relating measurements on one variable with simultaneous measurements on another. Spearman rank correlation coefficients were computed to determine the degree of relationships between independent and dependent variables. Inasmuch as the direction of results has been specified in the hypotheses, one-tailed tests of significance were performed. The .05 level of confidence was established as the basis for rrejecting the null hypothesis; results at the 005 level to .10 level of confidence will be indicated to suggest trends.

To test the hypothesis that independence moderates the relationship between independent and dependent variables, the sample was trichotomized into groups according to whether they scored high, medium or low on the independence scales. Each of the three independence scales was trichoto-

mized and separate correlations were computed for relationships within each of the three groups.

Trichotomization of the independence scale was done by computing the mean scale score and assigning to the medium independence group the one-third of the sample who scored closest to the mean. For some scales, it was necessary to assign slightly more than one-third of the sample to the middle group as there were ties. All subjects scoring higher than the range of scores comprising the middle group were assigned to the high independence group. All subjects scoring lower than the range of scores comprising the middle independence group were assigned to the low independence group.

To further test the hypothesis that independence moderated the relationship between independent and dependent variables, a Z test of the significance of the difference of the Spearman rank correlation coefficients for the high and low independence groups for each relationship was computed. This provides a test of each specific hypothesis stated in Chapter II.

CHAPTER IV

FINDINGS PERTINENT TO SCALES

Purpose and Scope of the Chapter

The purpose of the chapter is to indicate the statistical findings pertinent to the measures utilized in the study. Reliabilities for each of the scales used in the study were computed. Validations of those scales developed specifically for this study which indicate their ability to discriminate between samples high and low on the variable measured will be described. Spearman Rank Correlations among all the variables were determined to ascertain the homogeneity of each of the measures. Means and standard deviations for each measure were also computed.

Scale Reliability[1]

Reliabilities for each of the scales used in the study were computed using a Spearman-Brown Prophecy Formula Correction of the Kuder-Richardson Formula 20. The Kuder Richardson is a split test reliability technique which requires that the scale scores, which ranged from 1 to 5, be dichotomized into a high and low group. The dichotomies for each of the scales were performed on the basis of assigning the larger scale range (1 to 3 or 3 to 5) to the scores less likely to occur due to

[1] The reliability of a test is the degree to which a test measures consistently whatever it does measure. Split test reliability techniques measure internal consistency.

respondent bias. For example, with the job description scale it was assumed that respondents would be more likely to respond positively than negatively to the variable. Therefore, the favorable or high response group was comprised of only two (1 to 2) of the five scores possible on a question, while the negative or low response group was comprised of three (3,4 or 5) of the five scores.

The Spearman-Brown formula is applied to estimate the reliability of the test of full length from the obtained reliability coefficient of a test of less than full length.

The reliability coefficients of the sixteen scales (Table 1) ranged from .498 to .911 with all but two of the scales having reliability coefficients greater than .6.

Table 1: Scale Reliability Coefficients

Scale	Number of Items	Reliability Coefficient
Ego Independence	16	.807
Task Independence	16	.911
Organization Independence	4	.876
Company Satisfaction	12	.938
Satisfaction with Respect to Extrinsic Work Factors	12	.803
Satisfaction with Respect to Security	3[2]	.593
Satisfaction with Respect to Freedom	4	.767
Satisfaction with Respect to Family Attitudes	4	.701
Intrinsic Work Satisfaction	3[2]	.675
Leader Hierarchical Influence	7	.740
Leader Initiating Structure	10	.902
Leader Consideration	12	.857
Leader Technical Competence	6	.828
Adherence to Chain of Command	4	.498
Job Scope	5	.659
Psychological Participation	6	.839

[2] One item was deleted from each scale because without this item the reliability coefficient was significantly larger.

The minimum reliability coefficient to enable the scales inclusion within this study is .5. Guilford (1954) indicated a coefficient of approximately this level was acceptable for research purposes. All the scales far exceed this criteria except the Adherence to Chain of Command scale. This is included because it is approximately equal to the minimum reliability criterioneven though it has a much lower internal consistency than the other scales.

Validity of Moderating and Independent Variable Scales Developed For This Study[3]

Construct validity of the four scales developed expressly for this study - task independence, organization independence, job scope, and chain of command - was ascertained through the use of the Mann-Whitney U test. The Span of Control scale was validated by comparing respondent answers to the firm's organization chart.

1. Task Independence. This scale was administered to a sample (N=33) of corporate vice presidents of two major companies (sales in excess of 500 million dollars) as it was believed that this group should be relatively task independent. For the dependent group (N=25), white collar trainees and secretaries working less than three months were questioned. The statistical analyses of the distribution of the scores of the two groups indicated they were not associated and the distribution of the vice presidents was significantly higher (more independent) than the other group at a .0001 level of significance (U=801, Z=6.10). A similar result was found when college professors with tenure (N=18)

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[3] In a broad sense, the "validity" of a test refers to the degree to which the test is capable of achieving the purposes it was intended to serve.

were used in place of the vice presidents (p=.0001; U=421; z-4.97).

2. Organization Independence. To test the validity of this scale, forty employees were selected from company records who could be classified as "Cosmppàlitans" or "Locals" (Gouldner, 1957). Cosmopolitans are defined by Gouldner as "those low on loyalty to the employing organization, high on commitment to specialized role skills and likely to use an outer reference group orientation" (p. 361). Therefore, they should score high on organization independence. Locals are characterized as "those high on loyalty to the employing organization, low on commitment to specialized role skills and likely to use an inner reference group orientation" (p. 361) and, thus, should score low on organization independence.

The criteria used to classify employees as cosmopolitans were extensive education (MBA or equivalent) and employment at a minimum of three firms over the past twelve years. Employees were classified as locals when they held white collar jobs (excluding clerks and secretaries) with salaries in excess of $10,400, had little formal education (no college degree) and had been transferred within the corporation to at least three different jobs in the past ten years at two or more locations, with a minimum of one of these moves being lateral in the organizational hierarchy.

Mann-Whitney U test analyses of the distribution of the scores of the two groups demonstrated that the cosmopolitans (N=20) scored higher (more independent) than the locals (N=20) at a .0001 level of significance (U=381; Z=5.00).

3. Job Scope. Sixty employees were selected from company records who could be classified on the basis of organizational position and

job descriptions into a narrow job scope group (N=30) and a wide job scope group (N=30). Employees were classified according to three criteria: (a) the variety and level of decisions which they make, (b) the number of subordinates with different functions reporting to them and the level of their subordinates responsibility, and (c) their organization position. A ten point score was computed by assigning a four point value to criteria (s) and (b) and a two point value to criterion (c). Employees determined as having jobs of wide scope scored six or higher, with the mean score for employees with wide job scopes being 8.2. Employees determined as having jobs of narrow scope scored five or lower, with the meansscore for these employees being 3.8. Titles of jobs which were determined as being of wide job scope included Manager of Marketing Research, Director of Corporate Planning, Manager of Corporate Planning and Marketing Manager. Typical jobs determined as being of narrow scope included library assistant, laboratory technician, patentsearch assistant, economic analyst, and file clerk.

The Mann-Whtiney U tests of the difference of the distributionsof the scale scores of the two samples resulted in the wide job scope group scoring higher than the narrow job scope group at a .0001 level of significance (U=861; Z=6.08).

4. Adherence to the Chain of Command. To test the validity of this scale, forty employees were interviewed and classified as having jobs for which the adherence to the chain of command was either high or low. The interview consisted of having the respondent answer the following questions:

1 - Please indicate the number of persons other than your immediate boss who can initiate action on your part.

2 - Of the people other than your immediate boss, who can initiate action on your part, how many can you tell to take it through channels?

When the number of people indicated in answer to Question 1, less the number of people indicated in response to Question 2, was three or more that person was placed in the group (N=18) with jobs for which there was low adherence to the chain of command. When the difference in the responses to Questions 1 and 2 was two or less, the person was placed in the group (N=22) with jobs for which there was high adherence to the chain of command.

Mann-Whitney U test analyses of the distribution of the scores of the two groups on the Adherence to the Chain of Command scale resulted in the high adherence to the chain of command group scoring higher (greater adherence) than the low adherence to the chain of command group at a .025 level of significance (U=268; Z-1.96). A similar confirmation of the scale's validity was found when subjects were classified into groups according to their response to Question 1. The differences in the distributions of the scale scores of the two groups resulted in the high adherence group (N=16) scoring higher (greater adherence) than the low adherence group (N=24) at a .001 level of significance (U=301; Z-3.01).

5. Span of Control. To test the validity of this scale, a random sample of 30 respondents to the questionnaire was chosen. Their response as to the number of individuals reporting to their superior was compared to the firm's organization chart. In 93 per cent of the cases (28 out of 30) there was agreement, and in the remaining cases disagreement was by one and two subordinates.

Validity of Performance Scale Developed For This Study

Convergent and discriminant validity of the multitrait-multirater performance measure was found to exist when peers and superiors were used as raters and quality, quantity, initiative, effort, ability, and ability without guidance were used as the traits. Discriminant validity was not found when self ratings were used. Self-peer and self-superior ratings of the traits quality, initiative, effort and quantity indicated convergent validity. The lack of discriminant validity with self ratings caused them to be eliminated from consideration when testing the hypotheses. These findings are similar to the findings of Lawler (1966a) who reported that self-rating data in his study of middle and top level managers in a manufacturing organization offered little evidence of either convergent or discriminant validity. Lawler hypothesized that either the ratings were totally invalid as they were generally inflated, or perhaps they were just reflecting different views of the same traits (p. 375). Table 2 shows that the distribution of the performance ratings in this study also indicated greater leniency of self ratings.

Table 2: Distribution of Multitrait-Multirater Responses

		Per Cent of Respondent Rating Subject As						
Trait	Rater	Excellent	Very Good	Good	Average	Fair	Poor	Inadequate
Quality	Self	17	62	18	2	0	1	0
	Superior	13	33	36	12	4	2	0
	Peer	10	42	32	11	5	0	0
Ability	Self	36	48	11	3	1	0	0
	Superior	18	34	33	10	4	1	0
	Peer	18	37	27	13	4	1	0
Initiative	Self	45	37	14	2	1	0	1
	Superior	19	30	29	11	7	3	0
	Peer	18	39	21	13	8	1	0

Trait	Rater	Excellent	Very Good	Good	Average	Fair	Poor	Inadequate
Effort	Self	36	44	16	3	1	0	0
	Superior	13	30	29	14	9	4	1
	Peer	18	34	23	14	9	2	0
Ability Without Guidance	Self	23	52	18	4	2	1	0
	Superior	6	30	34	19	7	3	1
	Peer	8	32	31	17	9	3	0
Quantity	Self	30	44	18	4	2	1	1
	Superior	12	28	34	14	8	4	0
	Peer	13	32	25	19	9	2	0

Percentage figures were used rather than actual numbers as the number of raters were different in each category. For self raters N=214; for superiors N=193; for peers N=180.

Convergent validity is established by agreement among raters when the same traits are rated. This criterion is met when correlations between the same traits as rated by different raters are significantly different from zero. A .05 level of significance was chosen as the criteria for acceptable convergent validity. With an N of 176 (only those subjects for which self, superior and peer ratings were obtained were included), a Spearman rank correlation coefficient of .124 or greater indicates convergent validity at .05 level of significance. The data in Table 3 indicates ratings of superior and peers on all the six traits had intercorrelations which indicate convergent validity at a .0005 level of significance. Intercorrelations between self and peer ratings of two traits (ability and ability without guidance) indicated lack of convergent validity at .05 level of significance. Intercorrelations between self and superior ratings were higher than those between self and peer. The self-superior intercorrelations on all traits, except ability without guidance, indicated convergent validity at least at a .05 level of significance. The intercorrelation on the ability without guidance trait

Table 3: Intercorrelations Among Ratings

TRAITS		Peer						Superior				
	A_1	B_1	C_1	D_1	E_1	F_1	A_2	B_2	C_2	D_2	E_2	F_2
Peer												
A_1	.789	.630	.640	.697	.600							
B_1		.614	.629	.711	.568							
C_1			.819	.613	.747							
D_1				.630	.694							
E_1					.643							
F_1												
Super.												
A_2	.631	.574	.549	.507	.616	.488	.778	.672	.718	.683	.688	
B_2	.608	.589	.472	.461	.614	.451		.537	.622	.707	.547	
C_2	.456	.408	.617	.568	.409	.512			.848	.540	.708	
D_2	.453	.413	.543	.595	.462	.448				.646	.659	
E_2	.547	.517	.432	.415	.569	.491					.595	
F_2	.453	.400	.558	.535	.522	.590						
Self												
A_3	.170	.093	.167	.106	.124	.169	.217	.166	.212	.204	.140	.219
B_3	-.105	.068	.029	-.032	-.105	-.006	.090	.148	.084	.111	.130	.043
C_3	.152	.104	.174	.182	.164	.165	.165	.173	.214	.232	.111	.194
D_3	.077	.009	.172	.139	.064	.145	.077	.103	.205	.170	.042	.154
E_3	.042	-.004	.018	.041	.003	.044	.160	.194	.118	.171	.119	.133
F_3	.129	.085	.184	.150	.094	.131	.096	.165	.229	.164	.117	.169

Legend

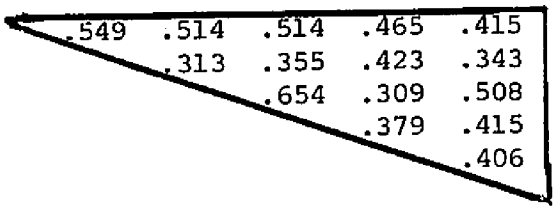
Traits

A = Quality
B = Ability
C = Initiative
D = Effort
E = Ability Without Guidance
F = Quantity

$r > .124$; $p > .05$

$r > .175$; $p > .01$

		Self			
A_3	B_3	C_3	D_3	E_3	F_3



indicated convergent validity at a .06 level of significance.

Table 3 also indicates that the correlations of the ratings of the same traits by superiors and peers (circled coefficients) were generally slightly lower than the correlations among different traits rated by the same raters (triangles enclosed in heavy lines). Thus, the first criteria for discriminant validity, that interrater agreement on same traits exceed correlations by same raters on different traits, was not met. This is a rather stringent requirement which, as Gunderson and Nelson (1966) indicate and as Lawler (1966a) states, is seldom met by behavior-trait data. However, it can also be seen that interrater agreement on the same traits exceeded intra-rater correlations for different traits (diagonal coefficients exceeded other coefficients in same matrix), thus, meeting the second test of discriminant validity for peer and superior ratings. Finally, it can be seen that the third test of discriminant validity is met for superior and peer ratings as the magnitude and direction of correlations, when based on peers or superiors singly (the monorater triangles), was similar to the pattern when based on combined ratings (heterorater triangles).

The self ratings data presented in Table 3 offer little evidence of discriminant validity except for the quality performance trait. For this reason, it was decided to use the averages of the peer plus superior ratings as the measures of subject performance.

SPEARMAN RANK CORRELATIONS AMONG THE VARIABLES

Spearman Rank Correlations among the variables - independent, dependent, moderator - were computed and are shown in Table 4. The correlations between the moderator variables and the independent or dependent variables were, for the vast majority of relationships, not signif-

icant at the .05 level. Task independence and ego independence variables were significantly correlated, but neither variable was significantly correlated to the organization independence variables.

Correlations among the independent variables alone and the dependent variables alone, and between the independent-dependent variables were significant for about half of the relationships. Correlations with the independent variables, span of control, and job scope were essentially not significant while the correlations with leader consideration were significant. For the other independent variables there was no consistency.

Insofar as the correlations among certain variables are significant, the conventionally used Z test of the difference between two correlations would not be applicable in all cases. This is because under conditions of multiple testing of non-independent relationships it is not possible to determine the number of differences one would expect at the .05 level by chance alone. To the knowledge of the author, no adequate test exists for comparison of multiple pairs of non-independent correlations. The conventional tests of the difference between two correlations are the Z test for independent correlations and Hotellings t test for non-independent correlations. Since the correlations apply to different sub samples of respondents, the correlations within any given pair are independent of each other. However, the independent variables are not always independent of each other, nor are the dependent variables. Therefore, even though the correlations within a single pair are independent, the correlations between any given independent and dependent variable may not be. Because of this limitation, Z tests, although they will be applied in this study, should not be interpreted too strictly. The difference between correlations for the high and low groups

Table 4: Spearman Rank Correlations Among the Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
1		.262	.108	.081	-.185	.068	-.053	.127	.014	-.055	-.035	.211	-.191
2			.124	-.086	-.062	.046	.037	-.154	-.105	-.139	-.081	-.018	.038
3				.162	.053	.069	.110	-.144	-.101	-.062	.127	-.041	.043
4					.407	.432	.433	.396	.564	.450	.302	.381	.348
5						.354	.561	.160	.272	.097	.162	.197	.594
6							.401	.187	.358	.183	.123	.264	.330
7								.289	.282	.118	.220	.378	.644
8									.556	.600	.585	.657	.153
9										.667	.471	.498	.183
10											.435	.416	.017
11												.509	.029
12													.117
13													
14													
15													
16													

Legend

Variables Number	Variables Name
1	Task Independence
2	Ego Independence
3	Organization Independence
4	Job Description
5	Leader Initiating Structure
6	Leader Influence
7	Leader Consideration
8	Intrinsic Work Satisfaction
9	Extrinsic Work Satisfaction
10	Family Attitude
11	Security
12	Freedom
13	Technical Competence
14	Psychological Participation
15	Job Scope
16	Adherence to Chain of Command
17	Span of Control
18	Quality of Job Performance
19	Ability in Performing Job
20	Effort in Performing Job
21	Initiative in Performing Job
22	Ability Without Guidance in Performing Job
23	Quantity in Performing Job

14	15	16	17	18	19	20	21	22	23
.424	.482	.057	-.138	.133	.118	.165	.148	.098	.121
.183	.155	.152	.016	.052	.080	-.005	-.029	.005	-.125
.118	.148	.092	.065	.128	.154	.078	-.019	.104	.101
.268	.111	.340	-.058	.130	.114	.205	.159	.098	.187
.121	-.109	.327	-.027	.168	.137	.276	.241	.217	.295
.207	.036	.376	-.051	.080	.001	.133	.110	.113	.171
.435	.053	.232	.016	.122	.113	.232	.171	.204	.190
.320	.208	.000	-.096	.063	.058	.221	.215	.133	.193
.259	.111	.190	-.052	.077	.056	.240	.200	.117	.188
.133	.074	.057	-.040	-.012	.010	.121	.111	.050	.062
.203	.099	.039	-.062	.023	.007	.149	.127	.094	.145
.459	.261	.048	-.083	.101	.061	.252	.211	.195	.247
.181	.117	.304	.021	.219	.211	.204	.184	.281	.243
	.542	.080	-.117	.107	.126	.188	.148	.159	.074
		-.093	-.073	.051	.042	.183	.111	.027	.092
			-.014	.246	.224	.262	.313	.284	.202
				.084	.095	.084	.063	.093	.069
					.854	.712	.733	.801	.684
						.640	.682	.806	.611
							.876	.635	.779
								.703	.731
									.694

will also be discussed in terms of their direction and monotonicity.

Means and Standard Deviations for the Variables

Means and Standard Deviations for all the variables used in this study are shown in Table 5.

Table 5: Means and Standard Deviations for the Variables

Variable	Mean	Standard Deviation
Task Independence	3.37	.724
Ego Independence	3.15	.472
Organization Independence	4.21	.609
Leader Consideration	2.42	.745
Leader Hierarchical Influence	3.37	.723
Leader Initiating Structure	2.07	.842
Leader Technical Competence	3.79	1.039
Psychological Participation	3.52	.841
Job Scope	3.31	.720
Span of Control	2.41	1.363
Adherence to Chain of Command	3.70	.765
Company Satisfaction	2.20	.708
Intrinsic Work	2.46	.857
Extrinsic Work Factors	3.03	.711
Family Attitude	2.68	.592
Freedom	2.58	.622
Security	2.71	.736
Quality	2.62	.935
Ability	2.51	.999
Effort	2.58	1.105

Initiative	2.77	1.145
Ability Without Guidance	3.00	1.045
Quantity	2.85	1.120

Chapter Summary

1. Reliabilities of scales proposed for inclusion in the study were computed using the Spearman-Brown Prophecy Formula Correction of the Kuder Richardson Formula 20 and found to be sufficiently large, ranging from .498 to .938, to enable their use in the study. For most scales, the reliability coefficients were higher than .800, with all but two of the scales having coefficients greater than .600.

2. Construct validity of four scales developed for this study - task independence, organization independence, job scope, and adherence to chain of command - was affirmed through the use of the Mann-Whitney U Test. The span of control scale was shown to be valid by comparing questionnaire responses to the firm's organization chart.

3. Convergent and discriminant validity of the multitrait-multirater performance measure was found to exist when peers and supervisors were used as raters and quality, quantity, initiative, effort, ability, and ability without guidance were used as the traits. Of the three criteria required for discriminant validity, two were met. The requirement for discriminant validity, that interrater agreement on same traits exceed correlations by same raters on different traits, was not met. This is a rather stringent requirement which, as Gunderson and Nelson (1966) and Lawler (1966a) state, is seldom met by behavior trait data.

4. Self ratings were, in general, more lenient than superior or peer ratings. Convergent validity was found for most traits between the

self-ratings and the peer and superior ratings; discriminant validity was not found. Due to the lack of discriminant validity, self-ratings were excluded from the study.

5. Ascertainment of sufficient scale reliability and validity of scales enabled all the scales indicated in Table 1, Chapter I, to be included.

6. Spearman rank correlations among the variables indicated (a) correlations between the moderator variables and the independent or dependent variables were, for the vast majority of relationships, not significant, and (b) correlations among the independent variables alone and for the dependent variables alone and between the independent and dependent variables were significant for about half of the relationships. As some of the correlations among the variables are significant, all variables are not independent from the other variables. The Z test of the difference between two correlations, although not strictly applicable, will be used. The difference between two correlations will also be discussed in terms of their direction and monotonicity.

CHAPTER V

RESULTS PERTINENT TO EMPLOYEE SATISFACTION

Purpose and Scope of the Chapter

In this chapter, the relationships between (a) management practices and leadership behavior, and (b) employee satisfaction when moderated by three measures of subordinate independence are examined. Statistical significance of the findings and comparison of the findings to the hypotheses are presented. The differences between independent-dependent variable correlations for low and high independent subordinates will be discussed in terms of the monotonicity, direction, and significance.[1] The differences in correlations indicate the extent of the moderating effect of independence. Major findings and trends are summarized; discussion of possible theoretical and prescriptive implications of these results is contained in Chapter VII.

Leadership Behavior-Employee Satisfaction Relationships

Consideration - Hypothesis 1a - leader consideration will have a statistically significant positive relationship to satisfaction of dependent[2] and independent[2] subordinates - is supported by the data as

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1 As previously discussed (Chapter IV), the Z test of the differences between two correlations is not strictly applicable in all cases as some of the variables are not independent from other variables.

2 Dependent subordinates are those scoring low on the independence scale in question while independent subordinates are those scoring high on the scale.

shown in Table 1.

With ego independence as the moderating variable, consideration-satisfaction relationships are slightly higher[3] (as hypothesized) under conditions of low ego independence than under conditions of high ego independence. Further, it is shown that respondent satisfaction with three classes of role expectation increase monotonically with decreasing ego independence.

When organization independence is the moderator, correlations are slightly higher under conditions of high independence. However, task independence moderated relationships are not consistent.

Hierarchical Influence - The data as shown in Table 2, in general, does not support the hypothesis (2a) that leader hierarchical influence will have a statistically significant positive relationship to satisfaction of dependent subordinates, and for independent subordinates it will have no significant positive relationship. The hypothesis is supported only when security is the satisfaction variable.

The relationships between leader hierarchical influence and subordinate satisfaction as indicated in Table 2, are generally significant for both dependent and independent subordinates.

With organization independence as the moderating variable, the influence-satisfaction correlations are higher under conditions of high organization independence except when security is the satisfaction variable. Only one of the relationships for the low organization independent

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[3] The adjectives higher and lower will be used to describe the differences between correlations for the high and low independence groups if a consistency or pervasiveness of effect exists for multiple relations. When the differences between the correlations are significant, the adjectives higher and lower will be preceded by the word significantly.

Table 1: Satisfaction - Leader Consideration Relationships When Moderated by Subordinate Independence

Satisfaction Variables	Low on Independence	Medium on Independence	High on Independence	Comparison High to Low Independence Group
	TASK INDEPENDENCE			
	N = 60	N = 75	N = 76	
Company Satisfaction	.522*	.364*	.436*	+
Intrinsic Job	.304*	.247*	.312*	-
Extrinsic Work	.342*	.173**	.390*	-
Family Attitude	.182**	.065	.196*	-
Security	.288*	.108	.286*	+
Freedom	.488*	.348*	.389*	+
	EGO INDEPENDENCE			
	N = 63	N = 81	N = 67	
Company Satisfaction	.430*	.444*	.429*	+
Intrinsic Job	.318*	.360*	.207*	+
Extrinsic Work	.469*	.274*	.203*	+s
Family Attitude	.167**	.176**	.116	+
Security	.401*	.068	.294*	+
Freedom	.494*	.336*	.301*	+
	ORGANIZATION INDEPENDENCE			
	N = 54	N = 70	N = 87	
Company Satisfaction	.255*	.396*	.549*	-s
Intrinsic Job	.373*	.232*	.307*	+
Extrinsic Work	.264*	.363*	.321*	-
Family Attitude	.126	.105	.246*	-
Security	.129	.268**	.273*	-
Freedom	.304*	.358*	.440*	-

N = Number of subordinates
* = Spearman Rank Correlation Coefficient significant at .05 level
**= " " " " " " .10 "
+ = Difference between correlation for high and low groups in direction hypothesized
- = Difference between correlation for high and low groups in opposite direction hypothesized
s = Significant difference between correlation for high and low groups at .05 level

subordinates are significant at the .05 level. The differences in the correlations for high and low organization independent employees, as in the case when the other moderating variables are used, are not significant.

Initiating Structure - The results shown in Table 3, in general, do not support the hypothesis (3a) that leader initiating structure will have a statistically significant positive relationship to satisfaction of dependent subordinates, and for independent subordinates it will have no significant positive relationship. The hypothesis is only supported when ego independence is the moderating variable and security, freedom, and intrinsic work are used as the satisfaction variable.

As shown in the table, the moderating effect of the three independence variables are different. Initiating structure-satisfaction relationships are, for the most part, significant for high task and organization independent subordinates and low ego independent subordinates. Correlations with the satisfaction variables - company satisfaction and extrinsic work factors - are significant for highly independent subordinates regardless of the nature of the independence moderator.

Technical Competence - Hypothesis 4a - leader technical competence will have a statistically significant positive relationship to dependent subordinate satisfaction and for independent subordinates it will have no significant positive relationship - is not supported by the data as shown in Table 4.

For independent subordinates correlations of technical competence and the satisfaction variables - company satisfaction and extrinsic work factors - are significant.

Table 2: Satisfaction - Leader Hierarchical Influence Relationships When Moderated by Subordinate Independence

Satisfaction Variables	Low on Independence	Medium on Independence	High on Independence	Comparison High to Low Independence Group
	TASK INDEPENDENCE			
	N = 60	N = 75	N = 76	
Company Satisfaction	.467*	.359*	.497*	-
Intrinsic Job	.353*	.102	.150**	+
Extrinsic Work	.310*	.241*	.473*	-
Family Attitude	.244*	.090	.308*	-
Security	.317*	-.024	.163**	+
Freedom	.383*	.173**	.344*	+
	EGO INDEPENDENCE			
	N = 63	N = 81	N = 67	
Company Satisfaction	.442*	.439*	.434*	+
Intrinsic Job	.138	.286*	.152	-
Extrinsic Work	.238*	.395*	.388*	-
Family Attitude	-.023	.373*	.230*	-ss
Security	.254*	.209*	-.021	+ss
Freedom	.298*	.367*	.188**	+
	ORGANIZATION INDEPENDENCE			
	N = 54	N = 70	N = 87	
Company Satisfaction	.234*	.477*	.533*	-s
Intrinsic Job	.173	.139	.273*	-
Extrinsic Work	.218**	.421*	.403*	-
Family Attitude	.140	.170**	.341*	-
Security	.177**	.128	.103	+
Freedom	.204**	.390*	.272*	-

N = Number of Subordinates
* = Spearman Rank Correlation Coefficient significant at .05 level
**= " " " " " " .10 "
+ = Difference between correlation for high and low groups in direction hypothesized
- = Difference between correlation for high and low groups in opposite direction hypothesized
s = Significant difference between correlation for high and low groups at .05 level
ss= Significant difference between correlation for high and low groups at .10 level

Table 3: Satisfaction - Leader Initiating Structure Relationships When Moderated by Subordinate Independence

Satisfaction Variables	Low on Independence	Medium on Independence	High on Independence	Comparison High to Low Independence Group
	TASK INDEPENDENCE			
	N = 60	N = 75	N = 76	
Company Satisfaction	.363*	.406*	.455*	-
Intrinsic Job	.205**	.023	.194*	+
Extrinsic Work	.090	.152**	.472*	-s
Family Attitude	-.025	.024	.245*	-s
Security	.141	.003	.217*	-
Freedom	.368*	.075	.265*	+
	EGO INDEPENDENCE			
	N = 63	N = 81	N = 67	
Company Satisfaction	.334*	.356*	.459*	-
Intrinsic Job	.298*	.047	.054	+ss
Extrinsic Work	.436*	.071	.270*	+
Family Attitude	.108	.043	.136	-
Security	.363*	.003	.103	+ss
Freedom	.351*	.105	.148	+
	ORGANIZATION INDEPENDENCE			
	N = 54	N = 70	N = 87	
Company Satisfaction	.165	.407*	.464*	-s
Intrinsic Job	.082	.163**	.170**	-
Extrinsic Work	.113	.338*	.268*	-
Family Attitude	.193**	.133	.028	+
Security	.154	.295*	.044	+
Freedom	.071	.111	.293*	-ss

N = Number of subordinates
* = Spearman Rank Correlation Coefficient significant at .05 level
**= " " " " " " .10 "
+ = Difference between correlation for high and low groups in direction hypothesized
- = Difference between correlation for high and low groups in opposite direction hypothesized
s = Significant difference between correlation for high and low groups at .05 level
ss= Significant difference between correlation for high and low groups at .10 level

Table 4: Satisfaction Leader Technical Competence Relationships When Moderated by Subordinate Independence

Satisfaction Variables	Low on Independence	Medium on Independence	High on Independence	Comparison High to Low Independence Group
	TASK INDEPENDENCE			
	N = 60	N = 75	N = 76	
Company Satisfaction	.216*	.300*	.471*	-s
Intrinsic Job	.190**	.026	.365*	-
Extrinsic Work	-.014	.048	.460*	-s
Family Attitude	-.070	.146	.294*	-
Security	.065	.067	.168**	-
Freedom	.296**	.022	.289*	+
	EGO INDEPENDENCE			
	N = 63	N = 81	N = 67	
Company Satisfaction	.298*	.350*	.369*	-
Intrinsic Job	.200**	.216*	.121	+
Extrinsic Work	.205**	.155**	.219*	-
Family Attitude	-.005	.062	.105	-
Security	.125	.022	.067	+
Freedom	.300*	.122	.039	+ss
	ORGANIZATION INDEPENDENCE			
	N = 54	N = 70	N = 87	
Company Satisfaction	.087	.356*	.428*	-s
Intrinsic Job	.153	.292*	.144**	+
Extrinsic Work	-.082	.328*	.210*	-s
Family Attitude	-.110	.100	.113	-ss
Security	-.032	.157**	.071	-
Freedom	-.053	.330*	.154**	-

N = Number of subordinates
* = Spearman Rank Correlation Coefficient significant at .05 level
**= " " " " " " .10 "
+ = Difference between correlation for high and low groups in direction hypothesized
- = Difference between correlation for high and low groups in opposite direction hypothesized
s = Significant difference between correlation for high and low groups at .05 level
ss= Significant difference between correlation for high and low groups at .10 level

When organization or task independence is used as the moderating variable, technical competence - satisfaction correlations are, in general, higher under conditions of high independence than under conditions of low independence. The differences in the correlations for the high and low organization or task independence groups are, in several cases, significant at the .05 level. For the task and organization dependent groups most of the technical competence-satisfaction correlations are negative.

Management Practices - Employee Satisfaction Relationships

Psychological Participation - The data as shown in Table 5 only support the hypothesis (5a) that participation will have a statistically significant positive relationship to the satisfaction of independent subordinates, and for dependent subordinates it will have no significant positive relationship, when family attitude is the satisfaction variable. All participation-satisfaction correlations are significant for independent subordinates. However, for dependent subordinates most participation-satisfaction correlations are also significant. When company satisfaction, security, and intrinsic work are used as the satisfaction variables, correlations are significant for employees regardless of the nature or extent of their independence.

Job Scope - Hypothesis 6a - job scope will have a statistically significant positive relationship to satisfaction of independent subordinates, and for dependent subordinates it will have no significant positive relationship - is, in general, supported by the data as shown in Table 6. Regardless of the extent or nature of the subordinate's independence company satisfaction - job scope correlations were not significant.

Table 5: Satisfaction - Psychological Participation Relationships When Moderated by Subordinate Independence

Satisfaction Variables	Low on Independence	Medium on Independence	High on Independence	Comparison High to Low Independence Group
	TASK INDEPENDENCE			
	N = 60	N = 75	N = 76	
Company Satisfaction	.328*	.113	.284*	-
Intrinsic Job	.328*	.398*	.334*	+
Extrinsic Work	.244*	.266*	.304*	+
Familty Attitude	.155	.192*	.179*	+
Security	.161	.254*	.286*	+
Freedom	.525*	.551*	.281*	-ss
	EGO INDEPENDENCE			
	N = 63	N = 81	N = 67	
Company Satisfaction	.180**	.343*	.291*	+
Intrinsic Job	.310*	.345*	.421*	+
Extrinsic Work	.240*	.363*	.240*	
Family Attitude	.041	.220*	.226*	+
Security	.262*	.039	.331*	+
Freedom	.579*	.318*	.521*	-
	ORGANIZATION INDEPENDENCE			
	N = 54	N = 70	N = 87	
Company Satisfaction	.211**	.303*	.261*	+
Intrinsic Job	.400*	.218*	.374*	-
Extrinsic Work	.160	.355*	.278*	+
Family Attitude	.079	.106	.230*	+
Security	.109	.070	.345*	+ss
Freedom	.523*	.431*	.445*	-

N = Number of subordinates
* = Spearman Rank Correlation Coefficient significant at .05 level
**= " " " " " " .10 "
+ = Difference between correlation for high and low groups in direction hypothesized
- = Difference between correlation for high and low groups in opposite direction hypothesized
s = Significant difference between correlation for high and low groups at .05 level
ss= Significant difference between correlation for high and low groups at .10 level

From Table 6 it can be seen that respondent satisfaction with at least three classes of role expectations increase monotonically with increasing independence when each of the moderating variables are used.

Span of Control - The results shown in Table 7 do not support the hypothesis 7a that the span of control of the respondent's superior will have a statistically significant negative relationship to satisfaction of dependent subordinates, and for independent subordinates it will have no significant relationship.

Span of control-satisfaction correlations are not significant for dependent subordinates and for task and ego independent subordinates. For organization independent subordinates, the span of control-satisfaction correlations are significant at, at least, a .10 level. Moreover, all the correlations moderated by organization independence decrease monotonically with decreasing independence. The span of control-satisfaction correlations are also lower under conditions of high task and ego independence.

Adherence to Chain of Command - Hypothesis 8a - adherence to the chain of command will have a statistically significant positive relationship to satisfaction of dependent subordinates, and for independent subordinates it will have no significant positive relationship - is not supported by the data as shown in Table 8.

As seen in Table 8, the relationship between adherence to the chain of command and satisfaction with the company is significant for dependent and independent subordinates. For independent subordinates, the relationship between adherence to the chain of command and satisfaction with extrinsic work factors is also significant.

Summary of Major Findings

Table 6: Satisfaction - Job Scope Relationships When Moderated By Subordinate Independence

Satisfaction Variable	Low on Independence	Medium on Independence	High on Independence	Comparison High to Low Independence Group
	TASK INDEPENDENCE			
	N = 60	N = 75	N = 76	
Company Satisfaction	.105	.013	.114	+
Intrinsic Job	.128	.220*	.242*	+
Extrinsic Work	-.014	.143	.169**	+
Family Attitude	.032	.181**	.193*	+
Security	.180**	.120	.229*	+
Freedom	.106	.294*	.189*	+
	EGO INDEPENDENCE			
	N = 63	N - 81	N = 67	
Company Satisfaction	.027	.112	.119	+
Intrinsic Job	.138	.149**	.431*	+
Extrinsic Work	-.044	.202*	.140	+
Family Attitude	.052	.105	.169**	+
Security	.127	-.014	.312*	+
Freedom	.232**	.125	.413*	+
	ORGANIZATION INDEPENDENCE			
	N = 54	N = 70	N = 87	
Company Satisfaction	.025	.104	.095	+
Intrinsic Job	.024	.263*	.335*	$+^{s}$
Extrinsic Work	-.091	.158**	.170**	$+^{ss}$
Family Attitude	-.044	.154	.165**	+
Security	-.093	-.041	.434*	$+^{s}$
Freedom	.171	.201*	.353*	+

N - Number of subordinates
* = Spearman Rank Correlation Coefficient significant at .05 level
**= " " " " " " .10 "
+ = Difference between correlation for high and low groups in direction hypothesized
- = Difference between correlation for high and low groups in opposite direction hypothesized
s = Significant difference between correlation for high and low groups at .05 level
ss= Significant difference between correlation for high and low groups at .10 level

Table 7: Satisfaction - Span of Control Relationships When Moderated by Subordinate Independence

Satisfaction Variable	Low on Independence	Medium on Independence	High on Independence	Comparison High to Low Independence Group
	TASK INDEPENDENCE			
	N = 60	N = 75	N = 76	
Company Satisfaction	.040	.037	.114	+
Intrinsic Job	.073	.109	.132	+
Extrinsic Work	.135	.219*	-.058	-
Family Attitude	.080	.150**	.023	-
Security	-.049	.127	.201*	+ss
Freedom	.003	.158**	.004	+
	EGO INDEPENDENCE			
	N = 63	N = 81	N = 67	
Company Satisfaction	-.032	.122	.133	+
Intrinsic Job	.068	.119	.093	+
Extrinsic Work	.046	.111	.107	+
Family Attitude	.069	.059	.069	+
Security	-.016	.086	.122	+
Freedom	.078	.042	.128	+
	ORGANIZATION INDEPENDENCE			
	N = 54	N = 70	N = 87	
Company Satisfaction	-.101	.061	.173**	+
Intrinsic Job	.071	.045	.141**	+
Extrinsic Work	-.126	.147	.223*	+s
Family Attitude	-.055	.065	.146**	+
Security	-.077	.067	.155**	+ss
Freedom	.119	.115	.198*	+

N = Number of subordinates
* = Spearman Rank Correlation Coefficient significant at .05 level
**= " " " " " " .10 "
+ = Difference between correlation for high and low groups in direction hypothesized
- = Difference between correlation for high and low groups in opposite direction hypothesized
s = Significant difference between correlation for high and low groups at .05 level
ss= Significant difference between correlation for high and low groups at .10 level

Table 8: Satisfaction – Adherence to Chain of Command Relationships When Moderated by Subordinate Independence

Satisfaction Variable	Low on Independence	Medium on Independence	High on Independence	Comparison High to Low Independence Group
	TASK INDEPENDENCE			
	N = 60	N = 75	N = 76	
Company Satisfaction	.219**	.152**	.508*	-s
Intrinsic Job	-.057	.087	-.051	-
Extrinsic Work	.054	.134	.310*	-ss
Family Attitude	-.159	1034	.197*	-s
Security	-.073	.119	-.003	-
Freedom	.031	.087	.044	+
	EGO INDEPENDENCE			
	N = 63	N = 81	N = 67	
Company Satisfaction	.368*	.317*	.284*	+
Intrinsic Job	.114	-.036	.036	+
Extrinsic Work	.215*	.108	.290*	-
Family Attitude	-.054	.057	.140	-
Security	.194**	-.136	.034	+
Freedom	.113	.079	-.056	+
	ORGANIZATION INDEPENDENCE			
	N = 54	N = 70	N = 87	
Company Satisfaction	.178**	.244*	.424*	-
Intrinsic Job	.085	-.156**	.062	+
Extrinsic Work	.135	.110	.314*	-
Family Attitude	.116	-.122	.168**	-
Security	.135	-.029	.014	+
Freedom	.009	.017	.103	-

N = Number of subordinates
* = Spearman Rank Correlation Coefficient significant at .05 level
**= " " " " " " .10 "
+ = Difference between correlation for high and low groups in direction hypothesized
- = Difference between correlation for high and low groups in opposite direction hypothesized
s = Significant difference between correlation for high and low groups at .05 level
ss= Significant difference between correlation for high and low groups at .10 level

The findings reported in this chapter may be summarized as follows:

1. The moderating effect of independence on the relationship between the dependent and independent variable is a function of the nature of the independence. For example, the effect of ego independence as a moderator is different in most cases than the effect of task and organization independence (Table 9).

2. Table 9 indicates that with ego independence as the moderating variable, the relationships between the independent variables and satisfaction variables were directionally as specified in the hypotheses. With task and organization independence as the moderating variables, relationships between leader behavior variables and employee satisfaction were normally opposite in direction to the hypotheses.

3. The hypothesized satisfaction-independent variable relationships were, in general, confirmed only for the consideration and job scope variables. For the other independent variables, few relationships supported the hypotheses.

4. The relationship of leader behavior and management practices to employee satisfaction is a function of the satisfaction variable in question.

5. The differences in the correlations for high and low independence groups are generally not statistically significant regardless of the moderating variable employed.

6. Leader consideration has a statistically significant positive relationship to employee satisfaction. The relationship is higher (more positive) for low ego independent and high organization independent employees.

7. Leader hierarchical influence has, in general, a statistical-

Table 9: Comparison of SatisfactionIndppendent Variable Relationships Determined in the Study to the Hypothesized Dependent-Independent Variable Relationships

	TASK INDEPENDENCE		
	Direction Same as Hypothesized[1]		Direction Opposite to Hypothesized[2]
Leader Behavior Variables			
Consideration	3	-	3
Hierarchial Influence	3	-	3
Initiating Structure	2	-	4
Technical Competence	1	-	5
Sub-total	9	-	15
Management Practices Variables			
Psychological Participation	4	-	2
Job Scope	6	-	0
Span of Control	4	-	2
Adherence to Chain of Command	1	-	5
Sub-total	15	-	9
Total	24	-	24

[1] Direction Same as Hypothesized - indicates that the satisfaction-independent variable relationship determined in the study was higher (more positive) for the same independence group (high or low) as was hypothesized as having the higher relationship.

[2] Direction Opposite to Hypothesized - indicates that the satisfaction-independent variable relationship determined in the study was higher (more positive) for the independence group which was hypothesized as having the lower (less positive) relationship.

EGO INDEPENDENCE			ORGANIZATION INDEPENDENCE		
Direction Same as Hypothesized		Direction Opposite to Hypothesized	Direction Same as Hypothesized		Direction Opposite to Hypothesized
6	-	0	1	-	5
3	-	3	1	-	5
4	-	2	2	-	4
3	-	3	1	-	5
16	-	8	5	-	19
5	-	1	4	-	2
6	-	0	6	-	0
6	-	0	6	-	0
4	-	2	2	-	4
21	-	3	18	-	6
37	-	11	23	-	25

ly significant positive relationship to employee satisfaction except for low organization independent employees. The relationships between influence and the security satisfaction variable are significant only for dependent subordinates.

8. Leader initiating structure has a statistically significant positive relationship to satisfaction (most aspects) of ego dependent, task independent and organization independent subordinates.

9. Leader technical competence-satisfaction relationships are significant for independent subordinates when the satisfaction variables are company satisfaction and extrinsic work factors. In general, the technical competence-satisfaction relationships are higher for the high independence groups than for the low independence groups.

10. Psychological participation has a statistically significant positive relationship to satisfaction of independent subordinates and dependent subordinates (4 of the 6 satisfaction variables). The differences between the correlations of participation and satisfaction for the high and low independence groups are not significant; they are higher for independent subordinates for all satisfaction variables except freedom.

11. Job scope has a statistically significant positive relationship to satisfaction of independent subordinates except for their satisfaction with the company. For dependent subordinates, the job scope-satisfaction relationships are not significant.

12. Span of control of the subordinate's superior does not have a statistically significant negative relationship to satisfaction of dependent subordinates and task and ego independent subordinates. For organization independent subordinates, correlations between span of control and satisfaction are significant at least at a .10 level.

13. Adherence to the chain of command, in general, is not significantly related to employee satisfaction. It is significantly related to the company satisfaction variable for all employees and to the extrinsic work factors variable for high independence employees.

CHAPTER VI

RESULTS PERTINENT TO EMPLOYEE PERFORMANCE

Purpose and Scope of the Chapter

In this chapter, the relationships between (a) management practices and leadership behavior, and (b) employee performance when moderated by three measures of subordinate independence are examined. Statistical significance of the findings and comparison of the findings to the hypotheses are presented. The differences between independent- dependent variable correlations for low and high independent subordinates will be discussed in terms of their monotonicity, direction, and significance.[1] The differences in correlations indicate the extent of the moderating effect of independence. Major findings and trends are summarized; discussion of possible theoretical and prescriptive implications of these results is contained in Chapter VII.

Leadership Behavior - Employee Performance Relationships

Consideration - Hypothesis 1b - leader consideration will not have a statistically significant relationship to performance of dependent and independent[2] subordinates - as shown in Table 1, is only supported when

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[1] As previously discussed (Chapter IV), the Z test of the differences between two correlations is not strictly applicable in all cases as some of the variables are not independent from other variables.

[2] Dependent subordinates are those scoring low on the independent scale in question while independent subordinates are those scoring high on the scale.

Table 1: Performance - Leader Consideration Relationships When Moderated by Subordinate Independence

Performance Variable	Low on Independence	Medium on Independence	High on Independence	Comparison High to Low Independence Group
	TASK INDEPENDENCE			
	N = 44	N = 63	N = 65	
Quality	.474*	.097	-.145	+s
Ability	.471*	-.015	-.105	+s
Effort	.610*	.050	.112	+s
Initiative	.594*	-.003	.039	+s
Ability Without Guidance	.531*	.270*	-.136	+s
Quantity	.582*	.148	-.044	+s
	EGO INDEPENDENCE			
	N = 53	N = 64	N = 55	
Quality	.178	.188**	-.026	+
Ability	.134	.185**	-.016	+
Effort	.176	.321*	.189**	-
Initiative	.167	.219*	.109	+
Ability Without Guidance	.212**	.326*	.001	+
Quantity	.164	.316*	.047	+
	ORGANIZATION INDEPENDENCE			
	N = 43	N - 56	N = 73	
Quality	.034	-.030	.210*	-
Ability	.183	.001	.140	+
Effort	.099	.189**	.298*	-
Initiative	.055	.166	.181**	-
Ability Without Guidance	.282*	.120	.183**	+
Quantity	.145	.091	.284*	-

N = Number of subordinates
* = Spearman Rank Correlation Coefficient significant at .05 level
**= " " " " " " .10 "
+ = Difference between correlation for high and low groups in direction hypothesized
- = Difference between correlation for high and low groups in opposite direction hypothesized
s = Significant difference between correlation for high and low groups at..05 level
ss= Significant difference between correlation for high and low groups at .10 level

ego independence is the moderating variable.

Performance-consideration correlations for task dependent and organization independent groups are significant. The task independence moderated correlations, in general, monotonically increase in going from high to low task independent subordinates. Moreover, differences in correlations between the high and low task independence groups are significant at the .01 level.

With ego independence as the moderating variable, the consideration-performance relationships, although not significant, are higher[3] (as hypothesized) under conditions of low ego independence than under conditions of high ego independence.

Hierarchical Influence - The data as shown in Table 2, does not support the hypothesis (2b) that leader hierarchical influence will have a statistically significant positive relationship to performance of dependent subordinates, for independent subordinates it will have no significant positive relationship.

The relationshipsbetween leader hierarchical influence and subordinate performance, as indicated in Table 2, are generally not significant for both dependent and independent subordinates.

With organization independence as the moderating variable, five of the six influence-performance correlations for high organization independent subordinates are significant at at least a .10 level. The differences in the correlations for high and low organization independent employees, as in the case when the other moderating variables are

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[3] The adjectives higher and lower will be used to describe the differences between correlations for the high and low independence groups if a consistency or pervasiveness of effect exists for multiple relations. When the differences between the correlations are significant, the adjectives higher and lower will be preceded by the word significantly.

Table 2: Performance - Leader Hierarchical Influence Relationships When Moderated by Subordinate Independence

Performance Variable	Low on Independence	Medium on Independence	High on Independence	Comparison High to Low Independence Group
	TASK INDEPENDENCE			
	N = 44	N = 63	N = 65	
Quality	.093	.052	.099	-
Ability	.080	-.173**	.063	+
Effort	.243**	-.052	.182**	+
Initiative	.219**	-.102	.204**	+
Ability Without Guidance	.088	.147	.065	+
Quantity	.338**	.122	.070	+ss
	EGO INDEPENDENCE			
	N = 53	N = 64	N = 55	
Quality	.100	.005	.125	-
Ability	-.012	-.086	.124	-
Effort	.074	.172**	.153	-
Initiative	.103	.102	.118	-
Ability Without Guidance	.067	.076	.200**	-
Quantity	.186**	.215*	.103	+
	ORGANIZATION INDEPENDENCE			
	N = 43	N - 56	N = 73	
Quality	.127	-.112	.171**	-
Ability	-.004	-.144	.126	-
Effort	.076	.049	.203*	-
Initiative	.071	.034	.156**	-
Ability Without Guidance	.099	.067	.242*	-
Quantity	.176	.085	.215*	-

N = Number of subordinates
* = Spearman Rank Correlation Coefficient significant at .05 level
**= " " " " " " .10 "
+ = Difference between correlation for high and low groups in direction hypothesized
- = Difference between correlation for high and low groups in opposite direction hypothesized
s = Significant difference between correlation for high and low groups at .05 level
ss= Significant difference between correlation for high and low gourps at .10 level

used, are not significant.

Initiating Structure - The results shown in Table 3 do not support the hypothesis (3b) that leader initiating structure will have a statistically significant positive relationship to performance of dependent and independent subordinates. The hypothesis is only supported when organization independence is the moderating variable and quality and quantity of work performed are the performance variables.

As shown in Table 3, the moderating effect of the three independence variables are different. All initiating structure-performance relationships are significant for task dependent and organization independent employees. Several structure-performance relationships are significant for all employees except those who are highly task independent. Differences in correlations for high and low task independent employees are significant at the .05 level. Three of the six performance-initiating structure relationships increase monotonically in going from high to low task independent subordinates.

Technical Competence - Hypothesis 4b - leader technical competence will have a statistically significant positive relationship to performance of dependent and independent subordinates - is not supported by the data as shown in Table 4.

Performance-technical competence relationships are significant for high ego and organization independent subordinates and low task independent subordinates. The differences in the correlations for the high and low task or organization independent subordinates are, for the majority of relationships, significant at at least a .10 level. Performance-technical competence correlations generally increase monotonically with increasing organization and ego independence and decreasing task independence.

Table 3: Performance - Leader Initiating Structure Relationships When Moderated by Subordinate Independence

Performance Variable	Low on Independence	Medium on Independence	High on Independence	Comparison High to Low Independence Group
	TASK INDEPENDENCE			
	N = 44	N = 63	N = 65	
Quality	.416*	.167	.038	$+^{s}$
Ability	.443*	.031	.034	$+^{s}$
Effort	.602*	.209**	.153	$+^{s}$
Initiative	.604*	.094	.180**	$+^{s}$
Ability Without Guidance	.491*	.117	.153	$+^{s}$
Quantity	.730*	.203**	.097	$+^{s}$
	EGO INDEPENDENCE			
	N = 53	N = 64	N = 55	
Quality	.152	.230*	.113	+
Ability	.145	.207**	.093	+
Effort	.225**	.342*	.270*	-
Initiative	.174	.306*	.233*	-
Ability Without Guidance	.234*	.329*	.090	+
Quantity	.270*	.434*	.128	+
	ORGANIZATION INDEPENDENCE			
	N = 43	N - 56	N = 73	
Quality	.266*	-.102	.283*	-
Ability	.067	-.009	.244*	-
Effort	.108	.177**	.393*	$-^{ss}$
Initiative	.058	.117	.382*	$-^{ss}$
Ability Without Guidance	.228**	.017	.306*	-
Quantity	.303*	.082	.443*	-

N = Number of subordinates
* = Spearman Rank Correlation Coefficient significant at .05 level
**= " " " " " " .10 "
+ = Difference between correlation for high and low groups in direction hypothesized
- = Difference between correlation for high and low groups in opposite direction hypothesized
s = Significant difference between correlation for high and low groups at .05 level
ss= Significant difference between correlation for high and low groups at .10 level

Table 4: Performance - Leader Technical Competence Relationships When Moderated by Subordinate Independence

Performance Variable	Low on Independence	Medium on Independence	High on Independence	Comparison High to Low Independence Group
	TASK INDEPENDENCE			
	N = 44	N = 63	N = 65	
Quality	.333*	.364*	.060	+ss
Ability	.333*	.261*	.111	+
Effort	.396*	.155	.179	+
Initiative	.432*	.192**	.107	+s
Ability Without Guidance	.450*	.365*	.141	+s
Quantity	.465*	.313*	.087	+s
	EGO INDEPENDENCE			
	N = 53	N - 64	N = 55	
Quality	.140	.209*	.304*	-
Ability	.153	.168**	.382*	-
Effort	.058	.353*	.188**	-
Initiative	.051	.243*	.288*	-
Ability Without Guidance	.220**	.287*	.342*	-
Quantity	.140	.386*	.163	-
	ORGANIZATION INDEPENDENCE			
	N = 43	N = 56	N = 73	
Quality	.096	.003	.409*	-s
Ability	.127	.115	.341*	-
Effort	.066	.086	.340*	-ss
Initiative	.110	.069	.300*	-
Ability Without Guidance	.139	.206**	.381*	-ss
Quantity	.162	.165	.331*	-

N = Number of subordinates
* = Spearman Rank Correlation Coefficient significant at .05 level
** = " " " " " " .10 "
+ = Difference between correlation for high and low groups in direction hypothesized
- = Difference between coreelation for high and low groups in opposite direction hypothesized
s = Significant difference between correlation for high and low groups at .05 level
ss= Significant difference between correlation for high and low groups at .10 level

Management Practices - Employee Performance Relationships

Psychological Participation - In general, the data as shown in Table 5 does not support the hypothesis (5b) that participation will have a statistically significant positive relationship for independent subordinates, for dependent subordinates it will have no significant relationship. The hypothesis is only supported when ego independence is the moderating variable andinitiative in performing work is the performance variable.

The performance-participation relationships are primarily not significant for both dependent and independent subordinates. Differences in correlations for the high and low independence groups are also not significant.

Job Scope - Hypothesis 6b - job scope will have a statistically significant positive relationship to performance of independent subordinates, for dependent subordinates it will have no significant positive relationship, is, in general, not supported by the data as shown in Table 6. The hypothesis is supported only when effort is the performance variable.

Job scope-performance relationships are not significant except for (a) the job scope-effort relationship for independent subordinates, and (b) the job scope-quantity relationship for ego independent subordinates. Job scope-performance correlations are, in general, higher under conditions of high independence than under conditions of low independence. Most of the correlations for task and organization dependent subordinates are negative. The differences in the correlations for the high and low independence groups are, however, not significant.

With task independence as the moderating variable, four of the six job scope-performance relationships increase monotonically with

Table 5: Performance - Psychological Participation Relationships When Moderated by Subordinate Independence

Performance Variable	Low on Independence	Medium on Independence	High on Independence	Comparison High to Low Independence Group
	TASK INDEPENDENCE			
	N = 44	N = 63	N = 65	
Quality	.196	-.147	.091	-
Ability	.171	-.094**	.163**	+
Effort	.171	.029	.170**	+
Initiative	.098	.002	.167**	+
Ability Without Guidance	.158	.073	.066	-
Quantity	.107	.023	-.009	-
	EGO INDEPENDENCE			
	N = 53	N = 64	N = 55	
Quality	.125	.109	.075	-
Ability	.095	.088	.173	+
Effort	.213**	.148	.225*	+
Initiative	.148	.086	.239*	+
Ability Without Guidance	.151	.176**	.103	-
Quantity	.101	.022	.158	+
	ORGANIZATION INDEPENDENCE			
	N = 43	N = 56	N = 73	
Quality	.072	.031	.125	+
Ability	.276*	.000	.127	-
Effort	.270*	.132	.145	-
Initiative	.181	.118	.094	-
Ability Without Guidance	.381*	.117	.031	-s
Quantity	.089	.061	.058	-

N = Number of subordinates
* = Spearman Rank Correlation Coefficient significant at .05 level
**= " " " " " " .10 "
+ = Difference between correlation for high and low groups in direction hypothesized
- = Difference between correlation for high and low groups in opposite direction hypothesized
s = Significant difference between correlation for high and low groups at .05 level
ss= Significant difference between correlation for high and low groups at .10 level

Table 6: Performance - Job Scope Relationships When Moderated by Subordinate Independence

Performance Variable	Low on Independence	Medium on Independence	High on Independence	Comparison High to Low Independence Group
	TASK INDEPENDENCE			
	N = 44	N = 63	N = 65	
Quality	.027	-.078	.094	+
Ability	-.039	-.051	.108	+
Effort	.072	.092	.242*	+
Initiative	-.027	.002	.177**	+
Ability Without Guidance	-.061	-.009	.003	+
Quantity	-.109	.108	.136	+ss
	EGO INDEPENDENCE			
	N = 53	N = 64	N = 55	
Quality	-.017	.094	.076	+
Ability	.038	.035	.025	-
Effort	.186**	.134	.227*	+
Initiative	.158	.006	.160	+
Ability Without Guidance	.031	.055	.025	-
Quantity	.019	.026	.279*	+ss
	ORGANIZATION INDEPENDENCE			
	N = 43	N = 56	N = 73	
Quality	-.101	.130	.023	+
Ability	-.071	.100	.014	+
Effort	.134	.141	.198*	+
Initiative	.045	.137	.080	+
Ability Without Guidance	.145	.061	.080	-
Quantity	-.001	.142	.076	+

N = Number os subordinates
* = Spearman Rank Correlation Coefficient significant at .05 level
**= " " " " " " .10 "
+ = Difference between correlation for high and low groups in direction hypothesized
- = Difference between correlation for high and low groups in opposite direction hypothesized
s = Significant difference between correlation for high and low groups at .05 level
ss= Significant difference between correlation for high and low groups at .10 level

increasing subordinate task independence.

Span of Control - The results shown in Table 7 do not support the hypothesis (7b) that the span of control of the respondent's superior will have a statistically significant negative relationship to performance of dependent subordinates, for independent subordinates it will have no significant relationship. The hypothesis is only supported when effort and initiative are the performance variables and ego independence is the moderating variable.

Span of control-performance correlations are not significant for dependent and independent subordinates. Correlations are more negative for task dependent, ego dependent, and organization independent subordinates. The correlations, in general, decrease monotonically with increases in the employee's ego dependence, task dependence, or organization independence.

Adherence to the Chain of Command - Hypothesis 8b - adherence to the chain of command will have a statistically significant positive relationship to performance of dependent subordinates, for independent subordinates it will have no significant positive relationship - is supported when task independence is the moderating variable. Differences in the correlations for the high and low task independence groups are significant.

With ego or organization independence as the moderating variable, adherence to the chain of command-performance relationships are, in general, significant for both dependent and independent subordinates. The ego and organization moderated relationships are usually higher under conditions of low independence than under conditions of high independence.

Table 7: Performance - Span of Control Relationships When Moderated by Subordinate Independence

Performance Variable	Low on Independence	Medium on Independence	High on Independence	Comparison High to Low Independence Group
	TASK INDEPENDENCE			
	N = 44	N = 63	N = 65	
Quality	-.129	-.071	-.111	+
Ability	-.115	-.151	-.055	+
Effort	-.278*	-.038	-.056	+
Initiative	-.264	-.044	.014	+ss
Ability Without Guidance	-.173	-.101	-.073	+
Quantity	-.120	-.111	-.048	+
	EGO INDEPENDENCE			
	N = 53	N = 64	N = 55	
Quality	-.222**	-.014	-.049	+
Ability	-.188**	-.096	-.003	+
Effort	-.161	-.127	.064	+
Initiative	-.114	-.169**	.118	+
Ability Without Guidance	-.153	-.098	-.017	+
Quantity	-.216**	-.043	.035	+ss
	ORGANIZATION INDEPENDENCE			
	N = 43	N = 56	N = 73	
Quality	.001	-.103	-.086	-
Ability	.012	-.086	-.142	-
Effort	-.001	-.133	-.075	-
Initiative	-.041	-.055	-.068	-
Ability Without Guidance	-.021	.012	-.185**	-
Quantity	.103	-.069	-.139	-

N = Number of Subordinates
* = Spearman Rank Correlation Coefficient significant at .05 level
**= " " " " " " .10 "
+ = Difference between correlation for high and low groups in direction hypothesized
- = Difference between correlation for high and low groups in opposite direction hypothesized
s = Significant difference between correlation for high and low groups at .05 level
ss= Significant difference between correlation for high and low groups at .10 level

Table 8: Performance - Adherence to Chain of Command Relationships When Moderated by Subordinate Independence

Performance Variable	Low on Independence	Medium on Independence	High on Independence	Comparison High to Low Independence Group
	TASK INDEPENDENCE			
	N = 44	N = 63	N = 65	
Quality	.439*	.373*	-.010	+s
Ability	.435*	.300*	.001	+s
Effort	.553*	.263*	.026	+s
Initiative	.554*	.320*	+116	+s
Ability Without Guidance	.467*	.438*	.025	+s
Quantity	.602*	.304*	.184**	+s
	EGO INDEPENDENCE			
	N = 53	N = 64	N = 55	
Quality	.292*	.284*	.188**	+
Ability	.229*	.283*	.165	+
Effort	.176	.371*	.245*	-
Initiative	.240*	.479*	.254*	-
Ability Without Guidance	.341*	.306*	.221*	+
Quantity	.269*	.306*	.088	+
	ORGANIZATION INDEPENDENCE			
	N = 43	N = 56	N = 73	
Quality	.454*	.032	.273*	+
Ability	.301*	.103	.263*	+
Effort	.463*	.105	.239*	+ss
Initiative	.443*	.118	.360*	+
Ability Without Guidance	.453*	.051	.367*	+
Quantity	.399*	.048	.196*	+

N = Number of Subordinates
* = Spearman Rank Correlation Coefficient significant at .05 level
**= " " " " " " .10 "
+ = Difference between correlation for high and low groups in direction hypothesized
- = Difference between correlation for high and low groups in opposite direction hypothesized
s = Significant difference between correlation for high and low groups at .05 level
ss= Significant difference between correlation for high and low groups at .10 level

Summary of Major Findings

The findings reported in this chapter may be summarized as follows:

1. The moderating effect of independence on the relationship between the dependent and independent variable is a function of the nature of the independence. For example, the effect of ego independence as a moderator is different than the effect of task and organization independence (Table 9).

2. Table 9 indicates that with task independence as a moderator, relationshps between independent variables and performance variables were directionally as specified in the hypotheses. With ego independence as the moderator, independent-performance variable relationships were directionally as specified in the hypotheses except when either leader hierarchical influence or leader technical competence was the independent variable. With organization independence as the moderating variable, independent-performance variables relationships were normally opposite in direction to the hypotheses.

3. The hypothesized performance-independent variable relationships were, in general, not supported by the findings. The following were the major relationships which confirmed the hypotheses: (a) consideration-performance relationships moderated by ego independence; (b) initiating structure-performance relationships moderated by organization independence; and (c) the adherence to chain of command-performance relationships moderated by task independence.

4. The differences in the correlations for high and low ego organization independent groups are almost always not statistically significant. With task independence as the moderating variable, the differences in the performance-independent variable correlations for the high and low groups were significant when consideration, initiating

Table 9: Comparison of Performance-Independent Variable Relationships Determined in the Study to the Hypothesized Dependent-Independent Variable Relationships

	TASK INDEPENDENCE		
	Direction Same as Hypothesized[1]	-	Direction Opposite to Hypothesized[2]
Leader Behavior Variables			
Consideration	6	-	0
Hierarchial Influence	5	-	1
Initiating Structure	6	-	0
Technical Competence	6	-	0
Sub-total	23	-	1
Management Practices Variables			
Psychological Participation	3	-	3
Job Scope	6	-	0
Span of Control	6	-	0
Adherence to Chain of Command	6	-	0
Sub-total	21	-	3
Total	44	-	4

[1] Direction same as Hypothesized - indicates that the performance-independent variable relationship determined in the study was higher (more positive) for the same independence group (high or low) as was hypothesized as having the higher relationship

[2] Direction Opposite to Hypothesized - indicates that the performance-independent variable relationship determined in the study was higher (more positive) for the independence group which was hypothesized as having the lower (less positive) relationship.

EGO INDEPENDENCE			ORGANIZATION INDEPENDENCE		
Direction Same as Hypothesized		Direction Opposite to Hypothesized	Direction Same as Hypothesized		Direction Opposite to Hypothesized
5	-	1	2	-	4
1	-	5	0	-	6
4	-	2	0	-	6
0	-	6	0	-	6
10	-	14	2	-	22
4	-	2	1	-	5
6	-	0	5	-	1
4	-	2	0	-	6
4	-	2	6	-	0
18	-	6	12	-	12
28	-	20	14	-	34

structure, technical competence, and adherence to the chain of command were the independent variables.

5. Leader consideration has a statistically significant positive relationship to performance of task dependent and organization independent subordinates. When ego independence is the moderating variable, the relationships between consideration and performance are not significant.

6. Leader Hierarchical influence is not significantly related to employee performance except for the relationships for high organization independent employees.

7. Leader initiating structure has a statistically significant positive relationship to performance of task dependent and organization independent employees. With ego independence as the moderating variable, the correlations are primarily not significant for both dependent and independent subordinates. The relationship between initiating structure and quantity of work performed for dependent subordinates and the relationship of initiating structure to initiative in performing the job for independent subordinates are significant.

8. Leader technical competence - performance relationships are significant for task dependent, ego independent, and organization independent subordinates.

9. Psychological participation has a statistically significant positive relationship to the effort and initiative put forth on the job by subordinates high on task and ego independence; although the significance level for the task independent subordinates is .10. When organization independence is the moderating variable, correlations are more positive under conditions of low organization independence than under conditions of high organization independence. Performance-participation

correlations for organization dependent subordinates were significant when effort, ability, and ability without guidance were the performance variables.

10. Job scope - performance relationships are generally more positive for independent subordinates than for dependent subordinates. All relationships except that between job scope and effort for independent subordinates are not significant. With task independence as the moderating variable, most of the relationships monotonically become more positive as the employee becomes more independent.

11. Span of control - performance correlations are, in general, not significant for dependent and independent subordinates. Correlations are significant at the .05 level when employees are task dependent and effort and initiative are the performance variables. Correlations, in general, decrease monotonically with increases in the employee's ego dependence, task dependence, or organization independence.

12. Adherence to the chain of command - performance relationships are statistically significant for both ego and organization independent and dependent subordinates. With task independence as the moderating variable, there is a strong moderating effect as the chain of command-performance relationship is significant for task dependent subordinates and not significant for task independent subordinates. Differences between the correlations of the two groups are significant at a .01 level.

CHAPTER VII

DISCUSSION OF FINDINGS AND CONCLUSIONS

Purpose and Scope of the Chapter

In this chapter, the findings concerning the moderating effect of subordinate independence on the relationship between (a) management practices and leader behavior, and (b) employee satisfaction and performance will be discussed and an analysis of the significance of the findings according to previous empirical research and theory will be made. Theoretical and prescriptive implications of the findings, when applicable, will be reviewed. The study will be summarized and the implications of the findings will be indicated.

Discussion of the Findings

Findings related to the general hypothesis and those which are broader in significance than the moderating effect of subordinate independence on a single independent-dependent variable relationship will be presented first. A discussion of the findings for each of the management practice and leader behavior-dependent variable relationships will follow.

General Hypothesis

The general hypothesis that the relationship between (a) management practices and leader behavior, and (b) employee satisfaction and

performance will be moderated by three dimensions of subordinate independence is supported by the data in Chapters V and VI. The interaction between environmental and personality determinants must be understood in order to evaluate the effectiveness of management practices and behavior on employee satisfaction and performance. As indicated earlier in this study, little research attention had been given to this interaction. The hypotheses postulated in this study and shown in Table 1 were based on the limited empirical research available. This study's findings, although restricted to the firm studied, indicate that approximately half the relationships determined for dependent and independent employees were different than the hypothesized relationships.

The results suggest the inadequacy of generalizations concerning the effects of management practices and leader behavior.

Studies which ignore the interaction of environmental and personality variables yield relationships which are solely average effects of management practices and behavior for all the persons in the sample. The net effect of this has been to yield very low predictions or validity coefficients in previously reported research. The statistics used to estimate the degree of relationship underestimates the effect of the management practices and behavior on some persons and overestimates the effect on others.

The differences in the general moderating effect of the three independence variables can be seen from Table 1 and the data in Chapters V and VI. Although all the relationships between the independent and dependent variables are not moderated by the independence variables, most relationships are. Significant (.05 level) moderating effects were particularly evident with task independence as the moderating variable. The determination of the significance of the differences between independent-

Table 1: Independent-Dependent Variable Relationships Determined in the Study Compared to the Hypothesized Relationships

Management Practice and Leader Behavior Variables	General Hypothesized Relationship		Relationships Determined with Task Independence as the Moderating Variable	
	Independent Subordinates	Dependent Subordinates	Independent Subordinates	Dependent Subordinates
	SATISFACTION RELATIONSHIPS			
Consideration	+	+	+	+
Hierarchical Influence	0	+	+	+
Initiating Structure	0	+	+	0
Technical Competence	0	+	+	0
Psychological Participation	+	0	+	+
Job Scope	+	0	+	0
Span of Control	0	+	0	0
Chain of Command	0	+	+	0
	PERFORMANCE RELATIONSHIPS			
Consideration	0	0	0	+
Hierarchical Influence	0	+	0	0
Initiating Structure	+	+	0	+
Technical Competence	+	+	0	+
Psychological Participation	+	0	0	0
Job Scope	+	0	0	0
Span of Control	0	+	0	0
Chain of Command	0	+	0	+

0 - Indicates the relationships between the independent and dependent variables are generally not significant.

+ - Indicates a generally statistically significant relationship between the independent and dependent variables.

A+ -Is recorded when (a) at least three of the six independent-dependent correlations are significant at a .05 level, or (b) when four or more of the six correlations are significant at at least a .10 level.

Relationships Determined with Ego Independence as the Moderating Variable		Relationships Determined with Organization Independence as the Moderating Variable	
Independent Subordinates	Dependent Subordinates	Independent Subordinates	Dependent Subordinates
+	+	+	+
+	+	+	+
0	+	+	0
0	+	+	0
+	+	+	0
+	0	+	0
0	0	+	0
0	0	0	0
0	0	+	0
0	0	+	0
0	0	+	0
+	0	+	0
0	0	0	+
0	0	0	0
0	0	0	0
+	+	+	+

dependent variable correlations for high and low independence groups is a rather stringent requirement. This determination offers evidence of the magnitude of the moderating effect. However, it is necessary to recognize that a moderating effect could also have important implications for management and theory when there is a consistency or pervasiveness of effect in the differences in correlations for the high, medium, and low independence groups. The validity of this is seen, for example, from the findings on the moderating effect of task independence on the relationship between job scope and subordinate satisfaction and performance which is discussed in a later section of this chapter.

Satisfaction Relationships Compared to Performance Relationships

Traditional human relations theory postulates that employee satisfaction is positively related to employee performance. Many managers and consultants implicitly or explicitly accept this proposition. Yet, previous empiric research reveals highly inconsistent relationships between satisfaction and performance. The findings in this study strongly suggest that the two variables are generally not related. In the majority of cases, where there was a significant relationship between satisfaction and the independent variable, there was no significant relationship between performance and the same independent variable. When satisfaction-independent variable relationships were not significant, similar lack of conformity existed as performance-independent variable relationships were often significant.

Only for high organization independent employees or cosmopolitans (Gouldner, 1957) were relationships between the independent variables and both subordinate satisfaction and performance similar. This similar-

ity is restricted to the leader behavior independent variables, it does not exist for the management practice variables.

The conclusions of Brayfield & Crockett (1955) that satisfaction with one's position in a network of relationships need not imply strong motivation for outstanding performance, and March & Simon (1958) that "high satisfaction, per se, is not a particularly good predictor of high production nor does it facilitate production in a causal sense" (p. 51) are consistent with the general results obtained in this study.

General Findings Concerning Independent-Dependent Variable Relationships for High and Low Independent Subordinates

From the data in Chapters V and VI and Table 1, the general statistical significance of the dependent-independent variable relationships for subordinates with different levels of independence can be determined.

For low task independent subordinates there are more positve performance-leader behavior variable relationships than there are for high task independent subordinates. Performance-leader behavior correlations for the low independent subordinate are generally significant while for the high task independent subordinate they are not. For about half of the performance-leader behavior relationships respondent satisfaction increases monotonically with decreasing task independence. The satisfaction independent variable relationships for high task independent subordinates are generally significant, the significance of these relationships are a function of the particular independent variable and satisfaction variable for the task dependent subordinate. Possible explanations in terms of relevent theory are provided where pertinent in the discussion of the specific, independent-dependent variable relation-

ships moderated by task independence.

For ego dependent and independent subordinates the independent variable-satisfaction relationships are generally a function of the specific independent variable and satisfaction variable. Independent variable-performance relationships for ego dependent and independent subordinates are generally not significant with the exception of (a) adherence to chain of command-performance relationships, and (b) technical competence-performance relationships, for ego independent subordinates. The limited number of significant performance-independent varialbe relationships when ego independence is the moderator compared to the number of significant task and organization moderated relationships could be the result of greater relevance of task and organization independence to performance on the job. The origin of task and organization independence measures is a function of the work environment.

For organization independence moderated relationships, subordinate satisfaction is generally more positively related to the leader behavior and management practice variables (independent variables) for cosmoplitans than it is for locals. Performance of cosmopolitans is also more positively related to the leader behavior variables, chain of command variable, and job scope variable. The findings for cosmopolitans could possibly result from cosmopolitans (a) expecting more of supervision and, hence, only performaing when these expectations are met and/or (b) having jobs which coincidentally require the kind of work necessitating that type (considerate, formalized, participative, influential, technically competent) supervision. Directive formalized supervision would not as likely be looked upon as threatening because the cosmopolitan feels he could leave the organization for at least an equivalent job elsewhere.

With the attainment and availability of higher education for a greater segment of our population and with the increasing demand and, hence, independence of skilled workers, the proportion of cosmopolitans in our society is increasing. The implications of this trend for management is to make more important the answer to the question "Do cosmopolitans expect and respond differently to managerial practices and leader behavior than do locals?" From the findings in this study, it is evident that cosmopolitans perform best for influential and considerate managers who are technically competent to structure the environment. Locals perform best when management is directive and formalized, that is, when there is adherence to the chain of command and initiating structure. Consideration is pertinent to satisfaction of locals but not to their performance. Leader technical competence and hierarchical influence are not generally related to either satisfaction or performance of locals.

Consideration-Satisfaction and Performance Relationships

Consistent with previous findings[1], leader consideration is significantly related to subordinate satisfaction. When ego independence is the moderator, consideration has a slightly higher relationship to satisfaction of dependent subordinates than to independent subordinates. For organization independence moderated relationships, the opposite is true with three of the six correlations increasing monotonically with increases in independence. A plausible explanation for the higher correlations for more ego dependent subordinates is that the need for belonging should be more prevalent among these employees than for the ego independent employees. The findings on leader behavior-satisfaction (and

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[1] See pages 21-22 of this study for references to the previous findings.

performance) relationships for cosmopolitans has been previously discussed. Considerate leadership is perhaps necessary to get the cosmopolitan committed to the organization.

When ego or task independence is the moderating variable, the more dependent the subordinate the more positive is the relationship between consideration and performance. Differences between the consideration-performance correlations for high and low task independence groups were statistically significant. For the task independent and ego independent subordinates, there were several negative performance-consideration relationships. The probable reason for the strong moderating effect of task independence on the consideration-performance relationships is that the task (and ego) independent subordinates do not see their supervisor's consideration as contributing to their performance while the task and ego dependent subordinate possible, in an effort to maintain a favorable dependency relationship and to secure additional consideration, responds by performing better. This explanation is consistent with theories of motivation (Vroom, 1960; Atkinson, 1957; Rotter, 1954) that a person's aroused motivation to perform a series of acts is a joint multiplicative function of the strength of the motive, the value of the incentive offered in the situation, and the expectancy that the act will lead to the attainment of the incentive.

Hierarchical Influence-Satisfaction and Performance Relationships

In general, leader hierarchical influence was shown to be significantly related to employee satisfaction but not to employee performance. This partially supports Likert's (1961) conclusion that upward hierarchical influence developed through the "linking pin" function is a necessary, though not sufficient, condition affecting group satisfaction and

performance. It also supports, in part, Pelz's (1951, 1952) findings. In essence, employees derive satisfaction from reporting to an influential supervisor. However, the incentive to the subordinate of this influence and the expectation that this influence would foster their own goals is not sufficient to stimulate performance.

Wager's (1965) hypothesis - when workers are performing work that permits them to be independent of their immediate supervisor, the influence of their superior is less relevant to subordinate satisfaction and performance - is generally not supported by the findings. Relationships of satisfaction and performance to leader influence were similar for both task dependent and independent subordinates, except for the relationship between influence and quantity of work performed. This relationship supports Wager's (1965) hypothesis. For task dependent subordinates the performance-quantity of work performed relationship was significantly different than the relationship for task independent subordinates.

Initiating Structure-Satisfaction and Performance Relationships

Findings on the relationship between leader initiating structure and employee performance demonstrate clearly the different moderating effect of the three independence scales.

With task independence as the moderating variable, significant relationships were found between (a) initiating structure and performance for the task dependent group, and (b) initiating structure and satisfaction for the task independent group. Leader initiating structure appears to enable the dependent subordinates to have the needed guidelines to perform more effectively. The structuring may, however, be looked upon as non-supportive to the task dependent subordinate and non-contributory

to his security and extrinsic job satisfaction insofar as it probably exposes his dependency. The increase in task independent subordinate satisfaction as a result of structuring probably occurs due to the likelihood that the structuring (a) enhances the subordinate's ego due to his opportunity to indicate his independence, and (b) provides a non-threatening guideline.

The findings suggest that ego dependent subordinates generally respond to leader initiating structure as a positive stimulus to their satisfaction and performance. For ego independent subordinates there are mixed results depending on the performance and satisfaction variable utilized.

Structure-performance and structure-satisfaction relationships for organization independent employees (cosmopolitans) are generally statistically significant. The effect of the structuring probably either meets the expectation of the worker on his job or is required in order to perform on the type of job he has. It is probably not looked upon as threatening as the worker could leave the organization for at least an equivalent job elsewhere. The performance of organization dependent employees for certain attributes of performance (quality, quantity) is positively related to initiating structure. The structuring is probably not viewed as supportive and, hence, there is, in general, no significant relationship between initiating structure and satisfaction.

Technical Competence-Satisfaction and Performance Relationships

The moderating effect of the task and organization independence scales on the relationship between leader technical competence and subordinate satisfaction and performance is similar to their moderating effect on the relationships between leader initiating structure and sub-

ordinate satisfaction and performance. There is, however, in general, a negative correlation between leader technical competence and satisfaction of organization dependent subordinates. This could arise because technical competence of the superior is viewed as more threatening than initiating structure.

With ego independence as the moderating variable, significant relationships between technical competence and performance were found for high ego independent subordinates. In general, these relationships increase monotonically with increasing ego independence. The significance of the technical competence-satisfaction relationships for ego independent subordinates were dependent upon the satisfaction variable. The finding that some of the relationships were not significant could result from the possibility that technically competent leaders could use this competency to decrease the subordinate's independence.

Psychological Participation-Satisfaction and Performance Relationships

The present study corroborated previous findings (Vroom, 1960; Maier, 1952; Coch & French, 1948) that participation in decision making is positively related to employee satisfaction. It was demonstrated further that these effects are moderated by the nature and magnitude of the employee's independence. The satisfaction-participation relationships for all employees are statistically significant; the magnitude of these relationships is generally more positive the more independent (task, ego or organization) the employee. The differences between the correlations of participation and satisfaction for the high and low independent subordinate groups are not, however, statistically significant.

The various sources of satisfaction to be derived from participation help to explain the generally significant relationship between

participation and satisfaction. French, et.al. (1960), for example,hypothesized that participation satisfies a person's need to be valued and appreciated. Maier (1952), in pointing to several sources of satisfaction involved in the democratic approach to leadership, indicated that participants derive ego satisfaction and pleasure from solving problems and from working in cooperating groups. In addition, participation in decision making is satisfying because it gives participants the opportunity to make decisions which are consistent with their own goals. Thus, one would expect workers to enjoy participating in decisions on wages and working conditions not only for the social experience, but also because it gives them an opportunity to improve their work situation in these respects. There is a good basis for assuming that some of these sources would be more rewarding to persons who are high rather than low on their independence needs and, hence, this would explain the more positive relationships for the independent employees. A person who participates in making decisions with superiors has greater control over his own actions than one who merely carries out orders. On this basis, one would expect participation to satisfy needs for independence - the stronger the need, the larger the satisfaction. Theoretically, this would be consistent with Vroom's (1960) motivational hypothesis that the amount of affect attached to an object is a multiplicative function of the strength of the motive and the instrumentality of the object for the satisfaction of the motive. The instrumentality of participation toward satisfaction on the job would seem to be valid where the participation is carried out within the context of the job, is concerned with the work-related problems and is viewed as appropriate by the participants. The appropriateness would likely be larger for those having high independence needs.

The findings on the relationship between satisfaction and psychological participation do not indicate as strong a moderating effect by employee independence as Vroom's (1960) findings had. Directionally, however, the relationships support Vroom's (1960) findings, as they are more positive the more independent the employee. A hypothesis worthy of study is whether the moderating effect of independence on the relationship between participation and satisfaction is contingent upon the type of job or job role involved or a combination of the organizational stress and job role involved. This hypothesis is suggested, in part, by the fact that Vroom (1960) used a relatively small single organizational level sample while this study was conducted on a larger scale across organizational levels.

The findings on the relationship between participation and performance when moderated by subordinate independence, in general, indicate relatively small correlations compared to the satisfaction-participation correlations. Moreover, the performance-participation correlations are generally not statistically significant.

When ego independence is the moderating variable, the relationships between participation and performance variables are generally slightly more positive for independent than for dependent subordinates. These findings are directionally similar to Vroom's (1960), but differences between the relationships for the high and low groups are, unlike Vroom's (1960), not significant. With effort as the performance variable, there are significant performance-participation relationships for ego independent and dependent subordinates. The participation-initiative relationship is significant only for ego independent subordinates.

With task independence as the moderating variable, no significant performance-participation findings or trends were found. With organiza-

tion independence as the moderating variable, three of the six performance-participation relationships were statistically significant for organization independent subordinates. This can partially be explained because organization independent employees, although more satisfied by participation, do not see participation as a strong contributor to their success. Organization dependent subordinates, however, could see participation as a means of interaction with other corporate members which fulfills their dependency needs and motivates them to better performance.

Job Scope-Satisfaction and Performance Relationships

The relationship of job scope to employee satisfaction and performance is moderated by employee (task, ego and organization) independence. The more independent the subordinate, the more positive are the job scope-satisfaction and job scope-performance relationships. Statistically significant relationships exist only for the job scope-satisfaction relationships for independent employees. Almost all performance-job scope correlations are not significant with the exception for independent employees of the relationships with the performance variable effort.

For task, ego and, particularly, organization dependent subordinates many of the job scope-performance, and job scope-satisfaction correlations are negative suggesting that dependent subordinates prefer narrow job scopes. Broader job requirements probably make it more difficult to establish close dependency relationships with their superior. The wider the job scope, the greater the opportunity for the independent employees to exercise their need for independence, hence they are more satisfied.

The findings corroborate the conclusions of both MacKinney,

Wernimont & Galitz (1962), and Hulin and Blood (1968) which are based on their extensive review of the empirical literature on job scope and employee satisfaction and performance. Their conclusion was that the general human relations assumption that increased job scope will result in more motivated and satisfied employees is an oversimplification and determination of the relationship should take into account environmental and individual differences. From the present study, it is shown that one moderator of the job scope-employee satisfaction and performance relationships is the independence of the employee.

Span of Control-Satisfaction and Performance Relationships

Span of control-performance and span of control-satisfaction relationships, in general, are more negative under conditions of low independence than under conditions of high independence. The exceptions to the above are relationships moderated by the organization independence variable. The span of control relationships are generally monotonically more negative as employees indicate greater dependency. This results from the respondent's superior being able to give greater attention to him when his superior has fewer subordinates reporting to him. The greater attention is likely to be viewed as supporting the subordinate's dependency needs.

Adherence to the Chain of Command-Satisfaction and Performance Relationships

Adherence to the chain of command is generally significantly related to employees' performance but not to their satisfaction. The predictability and stability enabled by adherence to the chain of command is likely to enable better performance. In almost all cases, the chain of

command-performance relationships were more positive for dependent subordinates because their dependency is likely to be supported by adherence to the chain of command. For task independent subordinates, the performance-chain of command relationship was not significant and for several performance variables was only slightly positive. Insofar as the superior of the task independent subordinate is not essential for the subordinate's job performance, it is likely that the subordinate's incentive for increased performance due to adherence of the chain of command is negligible.

Summary and Implications

The findings in this study support the general hypothesis that the relationship between (a) management practices and leader behavior, and (b) employee satisfaction and performance will be moderated by employee satisfaction and performance will be moderated by employee independence. However, the specific hypotheses which included direction were, in some cases, either not corroborated or found to be opposite in direction to the relationships obtained in the study. The findings suggest that the interaction between environmental and personality determinants must be understood in order to evaluate the effects of management practices and leader behavior on employee satisfaction and performance. Generalizations concerning these effects are usually inadequate.

The moderating effect of the subordinate's independence on the independent-dependent variable relationships is a function of the nature as well as the extent of the subordinate's independence. This finding has many implications for management. The knowledge of the proportion of people in work units in the organization who are, for example, organization independent provides an indication as to the appropriateness of

the leadership behavior and practices employed by a given unit's manager. It is possible that the proportion of independent workers in a unit could be a function of such factors as the type of work performed by the unit, the age of the workers in the unit, the professions of the unit members' parents, and the education level of the workers. The understanding of the factors which would predict the extent and nature of workers' independence would be helpful but would probably not be as accurate as the development of independence indices bases on questionnaire and/or observation techniques. The development of these indices and classification of employees based on their personality characteristics should be a function of the corporation's personnel department.

Once the nature and extent of the worker's or unit's independence was know, the leader style and management practices most likely to enhance employee satisfaction and performance can be determined. A training program could be instituted if the manager's style had to be adapted. If necessary, the existing manager could be replaced. It is likely that a replaced manager could fill an effective role as manager of another unit where his style would be more conducive to the satisfaction and performance of the employees. Organization or reorganization of work units in terms of the individual unit members and managerial assignments would also be more effective due to the knowledge and consideration of the employees' independence. The assignment of individuals to participate in group efforts would also be more effective as knowledge of each of the employee's need for independence was known. Further research in the area of group processes is needed to determine the effect of t he group goals on the independence needs of the group members. It is likely that the group's effect on the individual will be a function of the nature of the

individual's independence.

The findings concerning high (cosmopolitans) and low (locals) organization independent subordinates illustrate the importance of ascertaining the employees' independence. Cosmopolitans expect and respond differently to managerial practices and leader behavior than do locals. Satisfaction is more positively related to the independent variables for cosmopolitans than for locals. Performance of cosmopolitans is also more positively related to the leader behavior variables and job scope. Cosmopolitans prefer managers who are considerate, influential, and provide structuring based on their competency rather than managers who manage by being kind and benevolent. Locals desire managers who are directive, that is, who adhere to the chain of command and provide initiating structure. The implication of the different expectations and responses of cosmopolitans to locals will increase in importance as the number of cosmopolitans continues to expand in our society.

Another finding indicating the importance of independence as a moderating variable is that essentially all performance-independent variable relationships for high task independent subordinates are not significant. The only exception is that there is a significant correlation between job scope and effort in performing the job by high task independent subordinates. The lack of significant performance-independent variable relationships implies that the high task independent employee's job must be changed (for example, by giving more challenging and responsible assignments) to reduce his task independence, and thereby effectively gain his commitment toward better performance.

An attempt was made to interpret the present findings in regard to previous empirical research and in terms of general theories on attitudes and motivation. Vroom's (1960) findings, for example that

psychological participation is more satisfying to persons of high ego independence and has a greater effect on their performance were only very weakly corroborated. For the sample studies, psychological participation was significantly related to satisfaction of all subordinates. Correlations were generally, but not significantly, higher for the independent subordinates. Performance-participation correlations were for most relationships not significant. For ego independent and dependent subordinates the participation-effort relationships were significant. The initiative-participation relationship was only significant for high ego independent subordinates.

Wager's hypothesis that leader hierarchical influence is less relevant to task independent subordinate satisfaction and performance was only supported by one of the six performance-influence relationships. The quantity of work-influence relationship was significant for task dependent subordinates and was significantly different than the relationship for task independent subordinates. The conclusion of Brayfield and Crockett (1955) was also supported by the findings in this study which indicate that employee satisfaction is, for the most part, not related to employee performance. A manager must, therefore, devote separate attention and effort in attempting to enhance employee satisfaction and performance.

In terms of theory, the hypothesis (Atkinson, 1957; Vroom, 1960; Rotter, 1954) that a person's aroused motivation to perform a series of acts is a multiplicative function of strength of motive, the value of the incentive offered in the situation, and the expectancy that the act will lead to the attainment if the incentive was found to be useful in explaining several findings. The theoretical implications of the pres ent study are evidenced from the previous discussion of the findings.

The study also points the direction for future research which, if confirming the results, could have significant social consequences. An immediate need is for the corroboration of the present findings in a number of firms using suitable experimental controls. The effect, for example, of independence as a moderator of independent-dependent variable relationships at one organization level or for different age groups appears worthy of investigation. The logic underlying the present design could also be used to study the moderating effects of other personality variables, such as authoritarianism on the management practices and leader behavior-employee satisfaction and performance relationships. This type of research could have the effect of broadening the field of personnel selection from almost an exclusive focus on aptitudes and ability to a consideration of the potential motivation of the applicants. This process would require the measurement of the personality characteristics of the individual as well as the measurement of relevant propeties of the work situation (type of job, supervisor's style, etc.)

Another implication of the research of the type reported here would be the modification of leadership training courses to take into consideration that (a) there is no one correct method of supervision, and (b) attention to indiviual differences is important. Management practices or techniques appropriate for individuals with one set of personality characteristics may be inappropriate for others. Similarly, different methods of taining and changing attitudes may be effective with persons with different personalities.

Finally, industry is not a machine; it is a complex form of human association. Its body may be viewed as a magnified nervous system. Industry's need is to find a means for understanding and utilizing the people which comprise it. The complexity of the relations which exist

within the organization renders it difficult to provide effective management without focusing on individual differences. Understanding of the interaction between environmental and personality variables should enable more appropriate management presctiptions. The study of the effect of moderating variables on the predictive and explanatory validity of the input-output models of "second generation" theorists will hopefully be fostered by the findings in this study.

APPENDIX A

THE MEASURES

TASK INDEPENDENCE

Circle the one response which best answers the question.

1. To what extent are you able to act independently of your supervisor in performing your job function?

   1. Hardly ever 2. Seldom 3. Occasionally 4. Frequently 5. Almost always

2. How much are you required to depend on your superiors for the non-financial resourses (information, supplies, etc.)necessary for the performance of your job?

   1. Almost always 2. Very much 3. Quite a bit 4. Seldom 5. Not at all

3. How much must you rely on directions from others in performing routine tasks?

   1. Almost always 2. Very much 3. Quite a bit 4. Some 5. Very little

4. How often are you given assignments requiring you to search for a solution without directions from your superior?

   1. Rarely 2. Sometimes 3. Often 4. Very often 5. Almost always

5. How much do your job rewards depend upon your ability to gain the cooperation of others?

   1. Almost completely 2. Very much 3. Quite a bit 4. Some 5. Very little

6. How often must you rely on directions from others in performing non-routine tasks?

1. Almost always 2. Very often 3. Often 4. Sometimes
5. Rarely

7. How much do your job rewards depend upon your superiors?
1. Almost completely 2. Very much 3. Quite a bit 4. Some
5. Very little

8. How often is it necessary for you to seek instructions from others prior to beginning new assignments?
1. Almost always 2. Very often 3. Often 4. Occasionally
5. Rarely

9. When someone else in the company requests you to perform a task for them, how frequently do you seek advice from your superiors?
1. Almost always 2. Very often 3. Often 4. Occasionally
5. Rarely

10. How much do your job rewards depend upon your performance?
1. Very little 2. Some 3. Quite a bit 4. Very much
5. Almost completely

11. How much of your satisfaction on the job is dependent upon your contact with your superiors?
1. Very much 2. Quite a bit 3. Some 4. Little 5. Very little

12. How much time do you have on your job to perform your regularly assigned functions rather than those specially assigned by your superiors?
1. Very little 2. Little 3. Some 4. Quite a bit
5. Very much

13. How much of your satisfaction on the job is determined by your superior's approval rather than on your feeling of accomplishment?
1. Very much 2. Quite a bit 3. Some 4. Little
5. Very little

14. To what extent are you able to schedule and plan your task requirements independent of others in the organization?

    1. Hardly ever 2. Seldom 3. Occasionally 4. Frequently
    5. Almost always

15. In your effort to get ahead on your job, to what extent do you act as an innovator?

    1. Hardly ever 2. Seldom 3. Occasionally 4. Frequently
    5. Almost always

16. To what extent do the resources (personnal, budget, etc.) you receive depend upon your superiors?

    1. Very large 2. Large 3. Some 4. Slight
    5. Almost none

ORGANIZATION INDEPENDENCE

Circle the one response which best answers the question.

1. How applicable is your knowledge and ability on your present job to other firms?

    1. Not at all 2. Slightly 3. Somewhat 4. Very applicable
    5. Completely applicable

2. To what extent is your social life connected to your job?

    1. Very large 2. Large 3. Somewhat 4. Slightly
    5. Not at all

3. To what extent is it likely that you can leave your present job and obtain an equivalent one elsewhere?

4. How useful is the knowledge you obtain on this job to you if you were to seek employment elsewhere?

1. Not at all 2. Little 3. Somewhat 4. Quite a bit

5. Very useful

JOB DESCRIPTION

Circle the one response which best answers the question.

VG = Very good
G = Good
F = Fair
P = Poor
VP = Very poor

1. Management's interest in welfare of employees. . VG G F P VP
2. This company as a place to work. . . . . VG G F P VP
3. Appreciation shown here for my work. . . . . VG G F P VP
4. Fair treatment of employees by management . . . . . VG G F P VP
5. This company's reputation in the community. . . . . VG G F P VP
6. Feeling that my job is regarded as important. . . . . VG G F P VP
7. Management's planning for the future . . . . . VG G F P VP
8. Communications from company to its employees. . . . . VG G F P VP
9. Credit given by my superior for doing a good job. . . . . VG G F P VP
10. Management understanding of worker's problems . . . . . VG G F P VP
11. My pride in working for this company . . . . . VG G F P VP
12. Credit given by company for good work . . . . . VG G F P VP

JOB EXPECTATION

Choose the one response which best answers the question.

MB = Much better than expected
B = Better than expected
S = Same as expected
P = Poorer than expected
MP = Much poorer than expected

WORK

1. My happiness in my work compared to most people. .MB B S P MP
2. Liking for the work I am doing here. . . . . .MB B S P MP
3. Interesting work to do . . . . . .MB B S P MP

EXTRINSIC FACTORS

1. My chances of getting ahead in this company. . . .MB B S P MP
2. My friends' opinions about the company . . . . . .MB B S P MP
3. The amount of money I am paid. . . . . .MB B S P MP
4. Satisfaction with my progress here . . . . . .MB B S P MP
5. My job compared with my friends' jobs. . . . . .MB B S P MP
6. Pay here compared to other places. . . . . .MB B S P MP
7. My chances of going as high as I want to go here .MB B S P MP
8. My advancement compared with that of my friends. .MB B S P MP
9. Pay compared to what my work is worth. . . . . .MB B S P MP
10. Advancement on the basis of ability. . . . . .MB B S P MP
11. My pay compared with the pay of my friends . . . .MB B S P MP
12. The pay for overtime work. . . . . .MB B S P MP

FREEDOM

1. Freedom to make decisions about my work. . . . . .MB B S P MP
2. Freedom to use my own judgment in my work. . . . .MB B S P MP
3. Ability to plan ahead in my work . . . . . .MB B S P MP
4. Freedom to express my opinions to my superior. . .MB B S P MP

FAMILY ATTITUDE

1. My family's pride in my job. . . . . .MB B S P MP
2. What my family thinks about the company. . . . . .MB B S P MP

3. Interest of my family in my work here. . . . . MB B S P MP

4. My family's satisfaction with my advancement here. MB B S P MP

SECURITY

1. Chances of steady work . . . . . MB B S P MP

2. Chances of staying on this job till retirement . . MB B S P MP

3. Steadiness of work here compared with most places. MB B S P MP

PERFORMANCE

Circle the one response which best answers the question.

Word in parenthesis is used in place of you or your when rating others.

A = Excellent
B = Very good
C = Good
D = Average
E = Fair
F = Poor
G = Inadequate

1. Rate the quality of your (his) job performance. A B C D E F G

2. Rate your (his) ability to perform the job. . . A B C D E F G

3. Rate your (his) effort put forth on the job . . A B C D E F G

4. Rate your (his) ability to perform the job without guidance. . . . . A B C D E F G

5. Rate your (his) initiative in performing the job . . . . . A B C D E F G

6. Rate the quantity of work you (he) performs on the job. . . . . A B C D E F G

LEADER HIERARCHICAL INFLUENCE

Circle the one response which best answers the question about your immediate boss.

1. He has requested from his superiors certain benefits for his workers which have <u>not</u> been approved

   1. Frequently 2. Occasionally 3. Rarely 4. Almost never 5. Never

2. If he were to discipline a subordinate and it was challenged by the subordinate, his superiors would back him up

   1. Probably not 2. Possibly 3. Probably 4. Definitely 5. Very definitely

3. He makes wage increases and other rewards based on what he feels his superiors feel of his subordinates rather than on what he actually feels

   1. Frequently 2. Occasionally 3. Rarely 4. Almost never 5. Never

4. Does he have influence with his superiors in getting certain benefits and resources for his subordinates?

   1. None 2. A little 3. Some 4. Quite a bit 5. A great deal

5. Does his influence with his superiors enable his subordinates to develop faster than normal?

   5. Frequently 4. Usually 3. Rarely 2. Almost never 1. Never

6. He has made recommendation for wage increases and budget approvals for his workers which did not go through

   1. Frequently 2. Sometimes 3. Rarely 4. Almost never 5. Never

7. He participates in policy decisions which affect his group

   1. Never 2. Rarely 3. Occasionally 4. Often 5. Very often

LEADER CONSIDERATION

Circle the one response which best answers the question about your immediate boss.

A = Always
B = Often
C = Occasionally
D = Seldom
E = Never

1. He is friendly and approachable. . . . . A B C D E

2. He does little things to make it pleasant to be a member of the group. . . . . A B C D E

3. He puts suggestions made by the group into operation. . . . . A B C D E

4. He treats all group members as his equal . . . . . A B C D E

5. He give advance notice of changes. . . . . A B C D E

6. He keeps to himself. . . . . A B C D E

7. He looks out for the personal welfare of group members. . . . . A B C D E

8. He is willing to make changes. . . . . A B C D E

9. He refuses to explain his actions. . . . . A B C D E

10. He acts without consulting the group . . . . . A B C D E

11. He assumes responsibility for subordinate actions . A B C D E

12. He coaches and counsels subordinates . . . . . A B C D E

LEADER INITIATING STRUCTURE

Circle the one response which best answers the question about your immediate boss.

A = Always
B = Often
C = Occasionally
D = Seldom
E = Never

1. He lets group members know what is expected of them. . . . . .A B C D E

2. He encourages the use of uniform procedures . . . .A B C D E

3. He tries out his ideas in the group . . . . . .A B C D E

4. He makes his attitudes clear to the group . . . . .A B C D E

5. He decides what shall be done and how it shall be done . . . . . .A B C D E

6. He assigns group members to particular tasks . . .A B C D E

7. He makes sure that his part in the group is understood by the group members. . . . . A B C D E

8. He schedules the work to be done . . . . . A B C D E

9. He maintains definite standards of performance . . A B C D E

10. He asks that group members follow standard rules and regulations. . . . . A B C D E

LEADER TECHNICAL COMPETENCE

Circle the one response which best answers the question about your immediate boss.

1. You have found that he does not know something about the job that he should know

   1. Very often 2. Often 3. Sometimes 4. Occasionally

   5. Rarely

2. When a tough job comes up, he has the technical "know-how" to get it done

   1. Rarely 2. Occasionally 3. Usually 4. Almost always

   5. Always

3. When a subordinate does not know how to do a job he can show him how it is done

   1. Rarely 2. Occasionally 3. Usually 4. Almost always

   5. Always

4. He has failed to do a good job because of poor technical skill or lack of knowledge

   1. Frequently 2. Occasionally 3. Seldom 4. Almost never

   5. Never

5. He has high technical competence

   5. Always 4. Usually 3. Frequently 2. Occasionally

   1. Rarely

6. He keeps abreast of technical developments related to the jobs he supervises

   5. Always 4. Most of them 3. Many of them 2. Infrequently 1. Rarely

JOB SCOPE

Circle the one response which best answers the question.

1. How often are you required to perform tasks which previously had not been part of your job responsibility?

   5. Very often 4. Often 3. Sometimes 4. Occasionally 1. Rarely

2. How often do you see projects through to completion?

   1. Rarely 2. Occasionally 3. Sometimes 4. Often 5. Very often

3. To what extent do you set objectives, goals, and procedures for your job rather than following directions or established procedures?

   5. Very large 4. Large 3. Somewhat 2. Little 1. Almost never

4. To what extent do you participate in decisions concerning the methods to be used in performing your job?

   1. Almost never 2. Occasionally 3. Frequently 4. Usually 5. Almost always

5. To what extent are you able to allocate a portion of your time to tasks related to corporate objectives but not specifically assigned to you?

   5. Very large 4. Large 3. Sometimes 2. Little 1. Almost never

SPAN OF CONTROL

Circle the one response which best answers the question.

1. How many people report directly to your immediate superior?

   1. One to four 2. Five to seven 3. Eight to ten

   4. Eleven to Fourteen 5. Fifteen or more

CHAIN OF COMMAND

Circle one response which best answers the question.

1. How frequently do you receive orders from other than your superior?

   1. Very often 2. Often 3. Sometimes 4. Rarely

   5. Never

2. To what extent is the chain of command bypassed in assigning tasks?

   1. Very large 2. Large 3. Quite a bit 4. Occasionally

   5. Rarely

3. To how many superiors are you accountable?

   1. Six or more 2. Four or five 3. Three 4. Two 5. One

4. How frequently do you receive assignments from outside the chain of command?

   1. Always 2. Often 3. Occasionally 4. Seldom 5. Never

PSYCHOLOGICAL PARTICIPATION

Circle the one response which best answers the question.

1. In general, how much say or influence do you feel you have on what goes on in your job?

   5. A very great deal of influence

   4. A great deal of influence

3. Quite a bit of influence

2. Some influence

1. Little or no influence

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

5. I can influence him to a very great extent

4. To a considerable extent

3. To some extent

2. To a very little extent

1. I cannot influence him at all

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

5. He always asks my opinion

4. Often asks

3. Sometimes asks

2. Seldom asks

1. He never asks my opinion

4. If you have a suggestion for improving the job or changing the set-up in some way, how easy is it for you to get your ideas across to your immediate superior?

1. It is difficult to get my ideas across

2. Somewhat difficult

3. Not too easy

4. Fairly easy

5. It is easy to get my ideas across

5. How much influence do you have in planning what you will do and how you will go about it?

5. Very large influence

4. Large influence

3. Some influence

2. Little influence

1. Very little influence

6. In general, how much do you participate in decisions affecting the carrying out of your work?

5. Almost always

4. Frequently

3. Occasionally

2. A little

1. Almost never

EGO INDEPENDENCE

Circle the one response which best answers the question.

1. How important is it for you to feel that you can run your life without depending upon people who are older and more experienced than you?

   1. Not at all 2. Slightly 3. Somewhat 4. Very 5. Extremely

2. How often do you find that you can carry out other people's suggestions without changing them any?

   1. Almost always 2. Very often 3. Often 4. Sometimes

   5. Rarely

3. How much humility do you think you should show to those whom you respect and admire?

   1. Very much 2. Quite a bit 3. Some 4. A little

   5. None at all

4. How much respect do you think should be shown to a judge even outside the courtroom?

1. Extremely much 2. Very much 3. Quite a bit 4. Some
5. None at all

5. How much do you usually want the person who is in charge of a group you are in to tell you what to do?
1. Very much 2. Quite a bit 3. Somewhat 4. A little
5. Not at all

6. When you have a problem, how much do you like to think it through yourself without help from others?
1. Not at all 2. Somewhat 3. Quite a bit 4. Very much
5. Extremely much

7. How much respect do you think people should show to policemen?
1. Extremely much 2. Very much 3. Quite a bit 4. Some
5. None at all

8. How hard do you find it to disagree with others even in your own thinking?
1. Very 2. Quite 3. Somewhat 4. Slightly 5. Not at all

9. How much do you think that the leaders of organization to which you belong have the right to expect certain things from you to which you should conform?
1. Very much 2. Quite a bit 3. Somewhat 4. A little
5. Not at all

10. How much do you feel that you are not as good in most things as people who are older and more experienced than you?
1. Very much 2. Quite a bit 3. Somewhat 4. A little
5. Not at all

11. In school, how much did you dislike teachers who had forceful and dominant personalities?
1. Not at all 2. A little 3. Somewhat 4. Quite a bit

5. Very much

12. If you have thought about something and come to a conclusion, how hard is it for someone else to change your mind.

    1. Not at all 2. Somewhat 3. Quite 4. Very 5. Extremely

13. How much do you feel officers of the law should tell people what to do rather than ask them?

    1. Very much 2. Quite a bit 3. Somewhat 4. A little

    5. Not at all

14. If you were going to night school, under which of these conditions would you learn best?

    1. If I were given daily instructions, daily assignments, and frequent tests

    2. If I were instructed, given assignments, and tested occasionally.

    3. If I were given some suggestions and some assignments to complete

    4. If I were given suggestions from teachers as to what might be the best to study

    5. If I were left completely alone to seek out whatever I wanted

15. How much do you dislike being told to do something by a superior that is contrary to your wishes?

    1. Not at all 2. A little 3. Somewhat 4. Quite a bit

    5. Very much

16. How often do you base your actions on your own judgments and evaluations?

    1. Rarely 2. Sometimes 3. Often 4. Very often 5. Almost always

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