A Causal Investigation Into the Relationships Between Supervisory Leadership Styles and Subordinate Satisfaction and Performance.

Kent Edward Curran
Louisiana State University and Agricultural & Mechanical College

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The Louisiana State University and
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A CAUSAL INVESTIGATION INTO THE RELATIONSHIPS BETWEEN SUPERVISORY LEADERSHIP STYLES AND SUBORDINATE SATISFACTION AND PERFORMANCE

A Dissertation

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of

Doctor of Business Administration

by

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B.S.M.E., Bradley University, 1969
M.B.A., Bradley University, 1971
December, 1975
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ABSTRACT

A manager's leadership ability is usually considered one of his most important attributes in trying to achieve organizational objectives. Much of the importance attributed to the leadership function stems from its apparent connection with the satisfaction and productivity of workers. The empirical evidence for this argument has emanated largely from numerous studies which have reported leadership style as affecting subordinate satisfaction and performance.

Many of the studies investigating leadership style, employee performance, and employee satisfaction have employed as their analytic method static correlational analysis. The weakness of such an approach rests in the difficulty of interpreting results. Though a researcher may find a significant correlation, he has no basis for inferring the direction of causality among the variables.

Using both theoretical and methodological contributions from recent years, an attempt was made in the present study to utilize a more comprehensive strategy in analyzing any possible causal relationships between supervisor leadership style and subordinate satisfaction and performance. This methodological approach included improved measures of leadership style, performance, and satisfaction, as well as the use of cross-lagged and dynamic correlational techniques.
The data were collected on first line supervisors and semi-skilled workers in garment manufacturing firms in the Midsouth. The performance data used in the study were obtained from weekly company performance reports. The subjects participated in the research on a voluntary basis. The first line supervisors completed a leadership behavior questionnaire while the workers completed an attitude survey as well as a perceived contingency questionnaire. The longitudinal data collected on the variables under investigation were then subjected to both cross-lagged panel as well as dynamic correlational analysis.

The results of the present investigation showed that subordinate performance was a far more important determinant of leadership behavior than was the opposite condition. These results were supported by the significant predictive and dynamic correlations between the leadership dimensions of task orientation and effectiveness and the objective performance index. These particular findings as well as the well-known limitations of static correlational analysis provide a strong argument against the rather common practice of interpreting significant static correlations between leadership and performance as indicating that leadership styles cause performance. The present study also indicates that the leadership behavior dimensions (task orientation and relationships orientation) have causal priority in relationships with subordinate satisfaction. Task orientation was found to affect satisfaction negatively, while relationships orientation affected
satisfaction positively. The significance of this finding is, however, somewhat lessened due to the low value of the dynamic correlations between the subject variables. Because of the low dynamic correlations, one could speculate that a third and, more likely, several additional variables contributed to the covariance between the leadership dimensions and satisfaction.
A manager's leadership ability is usually considered one of his most important attributes in trying to achieve organizational objectives. Much of the importance attributed to the leadership function stems from its apparent connection with the satisfaction and productivity of workers. The empirical evidence for this argument has emanated largely from numerous studies which have investigated the relationship between leadership styles and subordinate performance and satisfaction.

Many of the studies investigating leadership style, employee performance, and employee satisfaction have employed as their analytic method static correlational analysis. The weakness of such an approach rests in the difficulty of interpreting results. Though a researcher may find a significant correlation, he has no basis for inferring the direction of causality among the variables.

In spite of the methodological problem of using static correlational analysis, many studies have assumed a direction of causation. They have reported supervisory leadership style as affecting subordinate satisfaction and performance. Though this direction of causality is generally assumed, a few recent studies examining two of these same variables have found the direction of causation to run from subordinate performance to leadership style. Ironically,
the possibility of subordinate satisfaction affecting a supervisor's leadership style seems to have been completely overlooked by researchers even though there is sound theoretical basis for such an assumption.

In light of such conflicting and nonexistent research findings, there seems to be an opportunity for empirical testing of the relationship between leadership style, performance, and satisfaction. More specifically, the major purpose of this study is to investigate the causal basis of the relationships between supervisory leadership style, subordinate performance, and subordinate satisfaction.

The General Significance of the Study

In the late 1930's Kurt Lewin and his associates at the University of Iowa launched us into the age of scientific study in the area of leadership. Ever since this initial thrust, there has been an increasing interest in studying leadership styles and their relationship to other variables such as satisfaction and performance. More and more management theorists as well as practitioners are trying to understand or at least speculate on the possible causal relationships between supervisory leadership styles, worker satisfaction, and worker performance. This enthusiasm has not lessened

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even in the face of the different contradictory findings which have evolved.

Numerous studies and periodic reviews of the literature have been unable to ascertain a generalizable solution which conceptualizes the relationships between the variables in question. Moreover, rival explanations of the causal relationship between the variables of leadership style and worker performance have emerged resulting in conflicting theoretical propositions. Also balance theories of interpersonal attraction\(^1\) lay the groundwork for replacing the currently accepted hypothesis that leadership style affects worker satisfaction with a hypothesis in which the direction of causation between these variables is reversed.

Unfortunately, there have been few experiments which have used longitudinal data and cross-lagged models. Research of this type would allow increased legitimacy concerning the causal inferences presently being expounded by proponents of the various conceptualizations concerning the leadership style-performance relationship. It would also allow further investigation of the different theoretical positions concerning the direction of causation between leadership style and worker satisfaction.

\(^1\)See, for example, Fritz Heider, The Psychology of Interpersonal Relations (New York: John Wiley and Sons, Inc., 1958).
Historical Background

The possible relationships existing between leadership style, worker satisfaction, and worker performance have been a traditional topic of investigation for industrial psychologists and organizational behavioralists. Two areas of emphasis and conclusion derived from this research have been on the causal relationship between the variables of leadership style and worker satisfaction, and leadership style and worker performance. As a result, two rival theoretical propositions have emerged that attempt to explain the causal linkage between each of the two pairs of variables.

The first theoretical proposition concerning both pairs of variables views leadership style as affecting both worker performance and satisfaction. This conceptualization grew out of the early human relations research of Kurt Lewin. This view was then popularized by research done at the University of Michigan's Survey Research Center and leadership studies conducted by Ohio State.


University. Most of these studies did find a positive correlation between leadership style and worker performance, and leadership style...
and worker satisfaction. Unfortunately, a positive static correlation provides little basis for evaluating the direction of causality.

One of the few methods of actually evaluating the direction of causality is through the controlled field experiment. It was in 1948 when Coch and French published a pioneering field experiment into the effects of leadership style on satisfaction and performance. Following the lead of these two researchers, a number of field experiments were carried out during the 1950's and 1960's which examined the variables in question. Though there were some mixed results these studies seemed to support the contention that leadership style affected both satisfaction and performance.

In the mid-1960's the accepted causal relationship between leadership style and performance came under attack. Vroom hypothesized that it was just as reasonable to assume that performance affects leadership style as it is to assume the reverse. Korman, after a thorough review of the existing literature on the subject, reached the same conclusion.


Lowin and Craig\(^1\) offered evidence in support of this reverse contention. Thus, the second major theoretical proposition developed concerning the causal relationship between leadership style and performance.

Also in the 1960's the assumed causal relationship between leadership style and satisfaction began to be questioned. Vroom\(^2\) and Filley and House\(^3\) raised the question as to why the possibility of satisfaction causing leadership style had been disregarded. Greene in 1973 offered balance theories of interpersonal relationship as a theoretical justification for the possibility of causation running from satisfaction to leadership style.\(^4\) Therefore, though there have not been any studies investigating satisfaction's effect on leadership style, the theoretical groundwork for this second major proposition has been laid.


\(^2\)Vroom, Work and Motivation, pp. 105-119.


Justification for the Study

The basic justification for the study rests in two areas. First, there have been very few studies which have dealt specifically with the determination of the direction of causality between leadership style and subordinate performance. Also, as pointed out earlier, there have been virtually no studies exploring the causal relationship between leadership style and worker satisfaction. Second, by utilizing recent theoretical and methodological contributions, the present study offers a more comprehensive strategy in analyzing any possible causal relationships between leadership style, worker satisfaction, and worker performance. This comprehensive strategy includes improved measures of the variables of leadership style, worker satisfaction, and worker performance as well as the use of the cross-lagged panel correlation and dynamic correlation techniques.

Many studies designed to measure leadership style have done so by means of the Ohio State Leader Behavior Description Questionnaire¹ or a measuring device closely related to it. This particular instrument measures two components of the leader's behavior. These components are commonly referred to as initiating structure and consideration. The Management Style Diagnosis Test (MSDT), which

is the leadership style measuring device employed in this study, also measures behavioral components similar to initiating structure and consideration (i.e., task orientation and relationships orientation). However, the MSDT goes one step further by providing the researcher with a measure of the manager's effectiveness. The degree to which a particular manager is inclined to exhibit initiating structure (task orientation) or consideration (relationship orientation) in his particular environment does not by itself indicate if that manager is effective. Effectiveness is a function of a style's appropriateness in the situation in which it is used. Therefore, beyond ordinary readings on the task and relationships orientation of the leader, use of the MSDT offers the researcher an effectiveness measure which indicates the appropriateness of the particular manager's leadership style for his present job position.

Satisfaction has been recognized by many theorists as being a highly complex construct. Many studies using satisfaction questionnaires, however, have attempted to measure satisfaction as a "global" construct. Research utilizing such a measure has not accounted for the possible multidimensionality of the construct. If satisfaction is multidimensional, any attempt to measure the variable should provide indexes of both the cognitive properties

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as well as specific attitudes toward various components of the work environment. The semantic differential questionnaire\(^1\) used in this study utilizes a number of satisfaction indexes plus measures of perceived contingencies to account for the complexity of the satisfaction variable.

Performance is the third variable under investigation in this study. Previous research studies involving this variable have in most cases used supervisory ratings for evaluating employee performance. The inherent problem in using ratings of this type is that they tend to be highly subjective. Supervisory ratings also make it difficult to compare performance of a large group doing the same work since no individual supervisor has sufficient exposure to all workers to offer a competent rating of all their performances. To avoid these liabilities, the present study utilizes an objective "index of performance" which has been derived from company productivity records.

The statistical techniques used for data analysis in the present study are cross-lagged panel correlation and dynamic correlation. These techniques have the advantage over prior static correlation studies of allowing strong inferences concerning the direction of causality between the subject variable. They also

have the advantage over field studies of not requiring manipulation of variables which often raises both practical and ethical problems.

The General Nature of the Problem

The previous sections of this chapter have briefly examined the rival hypotheses relating to the assumed causal relationships among the variables of leadership style, worker satisfaction, and worker performance. Recent methodological and theoretical improvements have been specified in order to attempt a more thorough investigation of the subject variables.

From a historical perspective, the literature on the relationships between leadership style, job satisfaction, and job performance has resulted in numerous and often conflicting theories concerning the source and direction of causality between these variables. Recent contributions by Lowin and Craig¹ and Farris and Lim² have added some experimental evidence to the theoretical view that subordinate performance may affect leadership style and not vice versa. Likewise, balance theories of interpersonal attraction offer a new theoretical view of the relationship between the leadership style-job satisfaction variables. This new theoretical proposition holds that it would be entirely possible for the degree of

²Farris and Lim, "Effects of Performance on Leadership," pp. 490-497.
job satisfaction of the subordinate to have an effect on the leadership style used by the manager.

Other investigations have dealt with the particular variables of leadership style, satisfaction, and performance. However, these studies have always assumed a direction of causation instead of making such a determination an integral part of their methodology. Therefore the major purpose of this research effort is designed to investigate possible causal relationships between leadership style and satisfaction and leadership style and performance utilizing recent theoretical and methodological improvements.

Organization of the Research

The research study is presented in five separate chapters. This chapter has presented an introduction to the current study along with the related literature relevant to the development of the basic research idea. The second chapter is historical in nature and presents a review of the development of different leadership theories. Also reviewed in this chapter are prior research studies that examine hypothesized linkages between leadership style, worker satisfaction, and worker performance. Special attention is given to the empirical evidence and theoretical conceptualizations that have developed since the late 1930's concerning the relationship between the three variables under investigation. Chapter III presents the research design and methodology used in the present
study. Included in this chapter is a discussion of the subjects, the variables under investigation, the method of data collection, and the statistical techniques used to analyze and evaluate the data. Chapter IV presents the results of the statistical analysis of the research data. The final chapter is devoted to a summary of the research findings, a discussion of the conclusions, and implications for further research.
CHAPTER II
SURVEY OF THE LITERATURE

The survey of the literature will be presented in two major sections. The first section will consist of a review of the development of leadership theory from the scientific management era to the present time. The second section will be composed of research efforts and various reviews which have examined in one way or another the relationships between leadership style, employee satisfaction, and employee performance.

Emerging Leadership Theories

Leadership has probably been written about, formally researched, and informally discussed more than any other management topic. Throughout history, man has recognized the difference between success and failure, whether in a war, a business, or a game, can be largely attributed to leadership. Both behavioral scientists and management practitioners have tried to study and analyze the phenomenon of leadership in organizations. As a result of these many studies, a number of theories of leadership have developed over time. This section will trace the emergence of these different theories.

What is Leadership?

In management literature there are many definitions of leadership. Some of the more popular ones are:
1. Leadership is an interpersonal influence exercised in a situation and directed through the communication process, toward the attainment of a specialized goal or goals.¹

2. Leadership is the process of influencing the activities of an organized group in efforts toward goal setting and goal achievement.²

3. Leadership is the process of inducing a subordinate to behave in a desired manner.³

Other definitions of leadership have acknowledged the possible influence of situational variables. For example, McGregor states that leadership is a complex process involving at least four variables: (1) the characteristics of the leader; (2) the attitudes, needs, and other personal characteristics of the followers; (3) the characteristics of the organization such as its purpose, its structure, and the nature of the tasks to be performed; and (4) the social, economic, and political milieu.⁴ Hersey and Blanchard have simplified the above statements by defining leadership as "the _____


process of influencing the activities of an individual or a group in efforts toward goal achievement in a given situation."\(^1\)

The important point to be derived from examining these definitions is that leadership is a process which can be influenced by situational variables. Therefore, leadership may be defined as a process, affected by situational variables, in which human resources are guided toward the accomplishment of goals. Situational variables are any contributing factors which influence the leader. Examples include the leader's characteristics, his followers, his superiors, the task, and the environment in which he leads.

**Frederick W. Taylor - Scientific Management**

The first recognized American author to develop what could be construed as a theory of leadership was Frederick W. Taylor.\(^2\) Taylor, who is considered the "Father of Scientific Management," offered his first principal writing in 1903\(^3\) at a time when the United States was undergoing an industrial revolution and an attempt at standardization of production through the use of the assembly line technique. Most theories are a product of their time and Taylor's Scientific Management was no exception. The approach dealt

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with such concepts as division of labor, time and motion studies, efficiency through carefully engineered and organized jobs with clearly defined rules and regulations, motivation through pay incentives, a division between management and the workers, a heavy emphasis on production, and a scientific approach to organizing and simplifying workers' jobs.

The role of the leader in Taylor's Scientific Management approach was clearly oriented toward the attainment of production. The human side of management was recognized but taken for granted and highly oversimplified. Such complacency regarding the human element developed from the belief that workers would accept managerial commands without question as long as they were able to satisfy their economic self interests through adequate wages and incentive plans. Taylor's failing in developing the human side of management resulted from not extending scientific investigation into the human element as he did with the physical-mechanical elements of work.

Scientific Management did achieve considerable popularity and also fulfilled a need for a more scientific approach to management. However, some of the procedures employed to produce efficiency and motivation often tended to have the opposite effect. The approach tended to increase conformity at the expense of creativity, work became more impersonal, the status of the individual worker was lessened, there developed a preoccupation with rules, and worker motivation tended to be linked with increased pay and better working conditions.
Human Relations Approach

To a large degree the development of the Human Relations movement represented a reaction to the depersonalizing and dehumanizing aspects of the Scientific Management approach. The Human Relations movement began to evolve in the late 1920's and throughout the 1930's primarily through the studies and writings of Mayo¹ and Rothlisberger and Dickson.² This approach changed the manager's emphasis from a rational model focusing on production to a model that recognized workers' feelings, attitudes, beliefs, ideas, and sentiments.

Perhaps the most important contribution made during this period was the result of experiments at the Hawthorne plant of the Western Electric Company.³ The experiments, collectively known as the Hawthorne Studies, were conducted by a research team headed by Elton Mayo and composed of Harvard researchers and company representatives. Two primary conclusions can be drawn from the series of studies. First, the Hawthorne Studies were the first time that an intensive, systematic analysis was made of the human factor in management. The studies dramatically pointed out the extreme complexity of the human element. The second major conclusion is that

³For descriptions of this early research see Mayo, Human Problems, pp. 55-69; and Roethlisberger and Dickson, Management and the Worker, pp. 15-86.
climate of supervision has an important impact on the behavior of work groups. The studies did not prove that one type was better than another in attaining desired goals. Rather, the conclusion to be made is that supervisory climate has the ability to influence a work group to react in a positive or negative manner toward attaining company goals.

Other important Human Relations contributions were made by Maslow, who opened up the possibility of a multidimensional approach to motivation by proposing a theoretical hierarchy of man's needs; Zaleznik and Homans, who demonstrated the effect of groups on motivation; Lewin, who stressed the promise of democratic and group decision making as well as the importance of participation in motivating people; Rogers, who refined non-directive counseling techniques and underscored the need for understanding, empathy, open


communications, and non-directive management; and Maier\textsuperscript{1}, who developed "group-in-action" training techniques.

The leader's role in Human Relations theory is to consider the feelings of workers, let them participate in making decisions, and allow and even encourage free interaction among the employees. The objective is to keep the workers happy, strive for harmony, avoid conflict, and be warm and accepting. In turn it was believed that a successful human relations approach would create organizational harmony, higher employee satisfaction, and greater operational efficiency.

The Human Relations movement was instrumental in focusing the attention of management on the importance of recognizing the needs of human beings. However, keeping people happy does not necessarily result in higher motivation and productivity. This point is developed more fully in the second part of this chapter which deals with the relevant research related to leadership style, worker satisfaction, and worker performance.

\textbf{Ohio State Leadership Studies}

In 1945, the Bureau of Business Research at Ohio State University initiated one of the most comprehensive series of studies on leadership ever undertaken. The Ohio State studies attempted to

\textsuperscript{1}Norman Maier, Principles of Human Relations (New York: John Wiley and Sons, 1952).
determine, through factor analytic procedures, the smallest number of independent dimensions which would adequately describe leader behavior. The factor analytic technique identified two major independent dimensions - consideration and initiating structure. The two dimensions were defined in the following manner:

Initiating Structure: Reflects the extent to which an individual is likely to define and structure his role and those of his subordinates toward goal attainment. A high score on this dimension characterizes individuals who play a more active role in directing group activities through planning, communicating information, scheduling, trying out new ideas, etc.

Consideration: Reflects the extent to which an individual is likely to have job relationships characterized by mutual trust, respect for subordinates' ideas, and consideration of their feelings. A high score is indicative of a climate of good rapport and two-way communication. A low score indicates the supervisor is likely to be more impersonal in his relations with group members.

A method of measuring the two variables of initiating structure and consideration was also developed by the Ohio State group. The principle instrument was developed by Hemphill and Coons, with subsequent modification for military and educational situations by

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1 Halpin and Winer, "Factorial Study of Leader Behavior Description," pp. 39-51.


3 Hemphill and Coons, "Leader Behavior Description Questionnaire," pp. 6-38.
Halpin\(^1\) and Halpin and Winer,\(^2\) and for industrial situations by Fleishman.\(^3\) This instrument, which is called the Leader Behavior Description Questionnaire, is usually given to workers who are asked to describe the behavior of their superior. A second related instrument developed by Fleishman\(^4\) is called the Leadership Opinion Questionnaire. This instrument is completed by supervisors who are asked to describe how they think they should behave.

Both instruments mentioned above are used to identify how a leader's behavior reflects the use of initiating structure and consideration. Because of their independence, the factors may be drawn at right angles as shown in Figure 2.1. A manager's behavior can be represented by any point in the enclosed area. However, the four combinations of initiating structure and consideration illustrated are usually used in generalizing the results. It was during these Ohio State studies that leadership was first plotted on two separate axes as opposed to being on a single continuum.

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\(^1\)Halpin, "Leader Behavior and Effectiveness of Aircraft Commanders," pp. 52-64.

\(^2\)Halpin and Winer, "Factorial Study of Leader Behavior Descriptions," pp. 52-64.


Figure 2.1 The Ohio State Leadership Quadrants
University of Michigan Leadership Studies

At about the same time the Ohio State Studies were being conducted, the Office of Naval Research granted a contract to the University of Michigan Survey Research Center. The purpose of the grant was to determine the "principles which contributed both to the productivity of the group and to the satisfaction that the group members derive from their participation."\(^1\) To achieve this objective, a study was initiated in 1947 at the home office of the Prudential Insurance Company, Newark, New Jersey.\(^2\) The research plan was to conduct a systematic comparison of work groups which had been demonstrated to differ significantly in productivity as measured by company accounting procedures. The analysis plan was to determine what supervisory practices were associated with high and low levels of satisfaction, and with high and low levels of productivity. Later studies were conducted using railroad maintenance of way workers\(^3\) and employees of a large midwestern cluster of factories manufacturing agricultural equipment and tractors.\(^4\)

Some of the important findings and conclusions from the studies were:

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\(^1\) Rensis Likert, "Foreword," in Katz, Maccoby, and Morse, *Supervision in an Office Situation*, pp. v.

\(^2\) Katz, Maccoby, and Morse, *Supervision in an Office Situation*.

\(^3\) Katz, et. al., *Supervision Among Railroad Workers*.

1. Two different leadership styles were identified. Coders who read the interviews judged the supervisors of high producing units as being employee-centered in their attitudes. Supervisors of lower producing units were judged to be more production centered.¹

2. High producing supervisors (employee-centered) were found to spend more time in actual supervisory activities and less time in performing tasks similar to those done by their subordinates. These supervisors also established a supportive personal relationship with subordinates, took a personal interest in them, and were understanding when mistakes were made. Employees of these supervisors were more likely to feel that their supervisors would defend their interests rather than those of management, if such a choice became necessary.²

3. Low producing supervisors (production-centered) spent less time in actual supervisory practices, more time performing tasks similar to those of their subordinates, used close supervision, and punished mistakes. These supervisors viewed their subordinates as means through which to get the work done and were concerned primarily with achieving a high level of production. Employees of the low producing supervisors tended to feel that


²Ibid.
their interests were not being defended and that they were being treated simply as instruments of production.  

4. There were no significant relationships discovered between any of the indexes of satisfaction and the productivity of the work group. In other words, highly productive employees were no more likely than low producing employees to be satisfied with their jobs, the company, or their financial status.  

5. A central idea that developed from these early studies was the Michigan style continuum. The continuum suggested that as a supervisor became more employee oriented, he would necessarily become less production oriented. The relationship was also seen as existing in the opposite direction (i.e., the more production oriented one became the less employee oriented). In the later studies it was found that these two dimensions are independent and can occur simultaneously. In fact, although employee-centered leaders did not always produce the best results, a pattern that did emerge was that employee-centered supervisors, who also emphasized performance, consistently produced the highest results.  

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3Ibid., p. 282.  

The leadership theory that eventually evolved from the Michigan studies closely resembles that of the Ohio State theorists. Figure 2.2 represents this final evolution of the Michigan work. Kahn summarized the Michigan study conclusions as follows:

In the studies in the insurance company and on the railroad, we had treated employee-centered and production-centered supervision as if they were the two opposite ends of a single continuum. We had assumed, in other words, that as a supervisor became more production-oriented, he must of necessity become less employee-oriented. The research data from the tractor company suggested instead that the quality of being production-centered and the quality of being employee-centered should be regarded as theoretically independent dimensions of supervision. Thus we may, for convenience, think of a four-celled table, with each cell representing a kind of supervision which combines differently the attributes of employee orientation and production orientation. The most successful supervisors in this scheme are those who combine employee-centered and production-centered qualities, working out their own creative way of synthesizing these two concerns.¹

Douglas McGregor - Theory X and Theory Y

Douglas McGregor is probably best known for his classic Theory X/Theory Y approach to leadership.² The Theory X/Theory Y approach contrasts traditional leadership based on strong leader control and authority with leadership based on participation and self-control by subordinates. Some of McGregor's other contributions include: (a) calling attention to the fact that leadership styles are either explicitly or implicitly based on assumptions about what motivates

¹Kahn, "Productivity and Job Satisfaction," p. 282.

Figure 2.2 University of Michigan Leadership Study Conclusions
people (see Figure 2.3), and (b) recognizing the need for integration of the performance orientation of traditional theories with people orientation of the Human Relations theories.

The Theory X/Theory Y approach developed by McGregor clearly illustrates the importance of basing one's leadership style on accurate assumptions about people. Theory X assumes that the worker is just another resource of production which should be manipulated by management to assure the greatest efficiency. It is also assumed that people generally dislike work, are lazy, prefer to be directed, wish to avoid responsibility, are self-seeking and primarily motivated by money, and want security above all else. Based on Theory X assumptions the manager's job is to plan, organize, direct, and closely control the efforts of the workers as they strive toward accomplishment of organizational objectives. Without this active intervention by management, people would be passive or even resistant to organizational needs. Therefore, workers must be persuaded, rewarded, punished and controlled. The central theme of Theory X is that authority is the indispensable means of managerial control.

After describing Theory X, McGregor questioned whether this view of man is correct and if management practices based upon it are appropriate in many situations. Drawing heavily on Maslow's hierarchy of needs, McGregor concluded that Theory X assumptions about the nature of man are generally inaccurate and appeal only to the lower physiological and safety needs. Management approaches that develop from these assumptions will often fail to motivate
<table>
<thead>
<tr>
<th>THEOREY X</th>
<th>THEOREY Y</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASSUMPTIONS ABOUT PEOPLE</strong></td>
<td><strong>ASSUMPTIONS ABOUT PEOPLE</strong></td>
</tr>
<tr>
<td>Most people . . .</td>
<td>Most people . . .</td>
</tr>
<tr>
<td>-Dislike work and try to avoid it</td>
<td>-Enjoy meaningful work and want to be busy</td>
</tr>
<tr>
<td>-Are lazy</td>
<td>-Will work hard to accomplish worthwhile goals</td>
</tr>
<tr>
<td>-Dislike responsibility</td>
<td>-Like responsibility</td>
</tr>
<tr>
<td>-Resist change</td>
<td>-Will adapt to change</td>
</tr>
<tr>
<td>-Are indifferent to organizational goals</td>
<td>-Will become committed to meaningful organizational goals</td>
</tr>
<tr>
<td>-Are self-seeking</td>
<td>-Are able to seek team goals</td>
</tr>
<tr>
<td>-Are primarily motivated by money</td>
<td>-Are primarily motivated by challenging work</td>
</tr>
<tr>
<td>-Prefer to be directed</td>
<td>-Prefer self-direction</td>
</tr>
<tr>
<td><strong>LEADERSHIP PRACTICES</strong></td>
<td><strong>LEADERSHIP PRACTICES</strong></td>
</tr>
<tr>
<td>A Leader should . . .</td>
<td>A Leader should . . .</td>
</tr>
<tr>
<td>-Plan, organize, direct, and closely control the efforts of his people</td>
<td>-Let employees become involved in planning, organizing, and controlling their own efforts</td>
</tr>
<tr>
<td>-Make most of the important decisions</td>
<td>-Delegate the authority to make decisions</td>
</tr>
<tr>
<td>-Punish mistakes</td>
<td>-Focus on resolving, not punishing, mistakes</td>
</tr>
<tr>
<td>-Not get too close to his employees</td>
<td>-Know each employee personally</td>
</tr>
<tr>
<td>-Assure that his authority is unquestionable</td>
<td>-Rely on earned, not formal authority</td>
</tr>
<tr>
<td>-Push people to keep them motivated</td>
<td>-Motivate people by giving challenging assignments</td>
</tr>
</tbody>
</table>

Figure 2.3 Theory X / Theory Y Assumptions About People and Resulting Leadership Practices
people and may tend to create a self fulfilling prophecy that perpetuates its continued use - force and heavy control breed counterforces such as antagonism, resistance, and low productivity, which in turn result in more force and control.

McGregor felt that management needed practices based on a more accurate understanding of the nature of man and human motivation. As a result of his feeling, McGregor developed an alternate theory of human behavior called Theory Y. Theory Y is an integrative theory which rejects both the "hard" Theory X approach of motivating employees by coercion, subtle threats, close supervision, and tight controls, and the "soft" approach which seeks motivation by being permissive, selling harmony, and concentrating on people's needs at the expense of organizational needs. This theory assumes that the potential for development, the capacity for assuming responsibility, and the readiness to direct behavior toward organizational goals are present in most people. Based on these assumptions the leader's task becomes one of unleashing the worker's potential. If the manager creates the appropriate situation, the properly motivated worker can achieve his own goals best by directing his efforts toward accomplishing organizational goals. Theory Y is characterized by decentralization, job enlargement, participative management, greater responsibility on the part of subordinates for planning and appraising their work, and increased self control for subordinates. Theory Y managers seek high performance by focusing on the satisfaction of the higher order social, esteem, and self actualization needs.
Robert R. Blake and Jane S. Mouton - The Managerial Grid

In the development of leadership theory up to this point, several management scholars have concentrated on two theoretical concepts, one emphasizing task accomplishment and the other stressing the development of personal relationships. Robert R. Blake and Jane S. Mouton have popularized these concepts in their Managerial Grid and have used them extensively in organization and management development programs.¹

In the Managerial Grid, five different types of leadership based on concern for production (task) and concern for people (relationships) are located in the four quadrants identified by the Ohio State Studies. Figure 2.4 presents the Managerial Grid as devised by Blake and Mouton.

Concern for production is illustrated on the horizontal axis. Production becomes more important to the leader as his rating advances on the horizontal scale. A leader with a rating of 9 on the horizontal axis has a maximum concern for production.

Concern for people is illustrated on the vertical axis. People become more important to the leader as his rating progresses up the vertical axis. A leader with a rating of 9 on the vertical axis has maximum concern for people.

Figure 2.4 The Managerial Grid Leadership Styles
The five leadership styles are described as follows:

a) (1,1) Impoverished Management - The 1,1 manager has a low concern for both production and people. This manager believes that the exertion of minimum effort to get the required work done is appropriate to maintain organization membership. Task effectiveness is unobtainable because people are indolent, passive, and apathetic. Satisfactory human relations are difficult to achieve, but then human nature being what it is, conflict is to be expected.

b) (9,1) Task Management - The 9,1 manager has a high concern for production and a low concern for people. This manager believes that efficiency in operations results from arranging conditions of work in such a way that human elements interfere to a minimum degree. In this approach, workers are regarded as just another commodity - another instrument of production. Thoughts, attitudes, and feelings are given little or no attention, and when conflict arises, it is suppressed through disciplinary actions. The executive's job is to plan, direct, and control his subordinates' work.

c) (1,9) Country Club Management - A 1,9 manager has a low concern for production and a high concern for people. This management style is the reverse of task management. This manager believes that getting "the work out the gate" is incidental to elimination of conflict and the establishment of good fellowship. Being nice and considerate leads to the establishment of a comfortable, friendly "home away from home" atmosphere which allows and requires an easy-going work tempo.
(5,5) Middle-of-the-Road Management - In the center of the Managerial Grid is the 5,5 Middle-of-the-Road Manager who has an average concern for production and people. This manager believes that adequate organization performance is possible through balancing the necessity to get out work with maintaining morale of workers at a satisfactory level. The theme of this theory is to push enough to get acceptable production, but yield to the degree necessary to develop morale. By clever manipulation this manager believes he can prevent either of the two concerns from blocking the complete attainment of the other.

e)(9,9) Team Management - The 9,9 manager has a high concern for both production and people. This manager believes that work accomplishment is from committed subordinates and that interdependence through a common stake in organization purpose leads to relationships of trust and respect. The key to 9,9 management is involvement and participation of those responsible in planning and executing work. The goal of 9,9 management is to promote conditions which integrate creativity, high productivity, and high morale through concerted team action. In other words, production is achieved by the integration of task and human requirements into a unified system.

Blake and Mouton have developed an extensive management and organizational development program around the Managerial Grid. Inherent in their program is the assumption that the 9,9 style of management is the most effective.
Rensis Likert has been an outstanding contributor to leadership thinking. His involvement with leadership research began in 1947 when he was a member of the University of Michigan Leadership Studies Team. His own thinking on leadership was first formally developed in his book, *New Patterns of Management*. In his text Likert identified four basic leadership styles: (1) exploitive authoritative, (2) benevolent authoritative, (3) consultive, and (4) participative. Likert found these labels to be misleading and, in a later book (*The Human Organization*), developed different terminology for the four leadership styles. He depicted the styles as being on a continuum from System 1 through System 4. These systems might be described as follows:

System 1 - Management is seen as having no confidence or trust in subordinates since they are seldom involved in any aspect of the decision making process. The bulk of the decisions and the goal setting of the organization are made at the top and issued down the chain of command. Subordinates work in an atmosphere laden with fear, threats, punishment, and occasional rewards and need satisfaction at the physiological and safety levels. The little superior-subordinate interaction that does take place is usually characterized

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by fear and mistrust. While the control process is highly concentrated in top management, an informal organization generally develops which opposes the goals of the formal organization.

System 2 - Management is seen as having condescending confidence and trust in subordinates, such as master toward servant. While the bulk of the decisions and goal setting of the organization are made at the top, many decisions are made within a prescribed framework at lower levels. Rewards and some actual or potential punishment are used to motivate workers. Any superior-subordinate interaction takes place with some condescension by superiors and fear and caution by subordinates. While the control process is still concentrated in top management, some is delegated to middle and lower levels. An informal organization usually develops, but it does not always resist formal organizational goals.

System 3 - Management is seen as having substantial but not complete trust in subordinates. While broad policy and general decisions are kept at the top, subordinates are permitted to make more specific decisions at lower levels. Communication flows both up and down the hierarchy. Rewards, occasional punishment, and some involvement are used to motivate workers. There is a moderate amount of superior-subordinate interaction, often with a fair amount of confidence and trust. Significant aspects of the control process are delegated downward with a feeling of responsibility at both higher and lower levels. An informal organization may develop, but it may either support or partially resist goals of the organization.
System 4 - Management is seen as having complete confidence and trust in subordinates. Decision making is widely dispersed throughout the organization, although well integrated. Communication flows not only up and down the hierarchy but among peers. Workers are motivated by participation and involvement in developing economic rewards, setting goals, improving methods, and appraising progress toward goals. Relationships are characterized by extensive, friendly superior-subordinate interaction and there develops a high degree of confidence and trust. There is widespread responsibility for the control process, with the lower units fully involved. The formal and informal organization are often one and the same. Thus, all social forces support efforts to achieve organizational goals.\footnote{Description adopted from Likert, \textit{The Human Organization}, pp. 4-10.}

In describing the four systems, Likert uses three sets of variables as a framework:

Causal Variables - These are independent variables which determine the course of developments within an organization and the results achieved by the organization. These causal variables include only those independent variables which can be altered or changed by the organization and its management. The causal variables include the structure of the organization, management policies and decisions, business and leadership strategies, skills and behavior.

Intervening Variables - These variables reflect the internal state and health of the organization. Included in this category of
variables are such things as the loyalties, attitudes, motivations, performance goals, and perceptions of all members and their collective capacity for effective interaction, communication, and decision making.

End Result Variables - These are the dependent variables which reflect the achievements of the organization, such as its productivity, costs, scrap loss, and earnings.¹

Figure 2.5 illustrates how the three variables and the four management systems interact in terms of the manager's leadership style, the behavior that will occur in the organization, and the end result to the organization.

To expedite the analysis of a company's behavior, Likert developed an instrument which enabled members to rate their organization in terms of its management system. In analyzing results obtained through use of this instrument, Likert concluded that a System 4 approach seemed ideal for the profit oriented and human-concerned organization which wants high employee performance and satisfaction. He also concluded that differences in subordinates and situations may require a leader to vary his style from that advocated by the System 4 approach.

¹Description adopted from Likert, The Human Organization, pp. 26-29.
IF THE MANAGER MANAGES VIA:

- Systems 1 or 2 (e.g., uses)  
  - Casual Variables: Tight control, authoritative leadership, rigid and restrictive rules and policies

- Systems 3 or 4 (e.g., uses)  
  - Casual Variables: Self-control, participative leadership, flexible and supportive rules and policies

HIS ORGANIZATION WILL DISPLAY:

- Intervening Variables: Little group loyalty and teamwork, high amount of conflict, guarded communications, low motivation
  - vs.
  - Intervening Variables: High group loyalty and teamwork, conflict is confronted and resolved, open and genuine communications, high motivation

HIS ORGANIZATION WILL ATTAIN:

- End-Result Variables: Low productivity and sales volume, higher costs, lower earnings
  - vs.
  - End-Result Variables: High productivity and sales volume, lower costs, higher earnings

Figure 2.5 Interrelationships Among Leadership Style And Casual, Intervening, and End-result Variables
Tannenbaum and Schmidt - Choosing a Leadership Pattern

Tannenbaum and Schmidt were two of the first leadership authorities to verbalize the need for flexible leadership. They also developed a theoretical construct to assist leaders in knowing when to emphasize a particular leadership style. Figure 2.6 presents their continuum of leadership behavior which describes the range of possible behavior patterns available to the leader. Each of the leadership approaches represented in the figure is related to the degree of authority used by the boss and to the amount of freedom available to his subordinates in reaching decisions. The actions described on the extreme left characterize the manager who maintains a high degree of control while those on the extreme right characterize the manager who releases a high degree of control. The range of possible choices available to the manager are:

The Manager Makes the Decision and Announces It

In this case the boss reports his decision to his subordinates for implementation. He provides no opportunity for the subordinates to participate in the decision making process.

The Manager "Sells" His Decisions

Here, as before, the manager arrives at a decision. However, once the decision is made he tries to

Figure 2.6 Continuum of Leadership Behavior
sell his employees on it rather than announce the
decision to them. He feels that he can reduce
employee resistance to his decisions through this
approach.

The Manager Presents His Ideas, Invites Questions

This manager presents his ideas and invites ques-
tions so that his associates can better understand
what he is trying to accomplish. By using this
approach, subordinates become somewhat involved
in the decision and can explore more fully its
implications.

The Manager Presents a Tentative Decision Subject to
Change

The manager using this style forms a tentative
solution and presents it for the reaction of those
who will be affected by it. This manager makes
the final decision but strongly considers the com-
ments of his subordinates.

The Manager Presents the Problem, Gets Suggestions, and
Then Makes His Decision

In this case, the boss does not have a solution in
mind when he goes before the group. The boss identi-

fies the problem and the subordinates try to develop
solutions. The boss considers the alternative
solutions that were developed and selects the one he regards as most promising.

The Manager Defines the Limits and Requests the Group to Make a Decision

The manager using this style actually passes to the group the right to make decisions. The manager defines the problem and the boundaries within which the decision must be made and then allows the group to make the decision.

The Manager Permits the Group to Make Decisions Within Prescribed Limits

When using this style, a manager gives almost total freedom to a group making decisions. The manager may define the types of decisions the group may make but then gives them complete freedom to make decisions within the defined limits.¹

Tannenbaum and Schmidt also offer some guidelines as to what forces the manager should consider before deciding which leadership style to use. The three principal categories which these forces can be divided into are (1) forces in the manager; (2) forces in the subordinates; and (3) forces in the situation. Figure 2.7 shows how these forces might influence a leader's style in a decision-making situation.

¹Description adopted from Tannenbaum and Schmidt, "How to Choose a Leadership Pattern," pp. 467-468.
<table>
<thead>
<tr>
<th>FORCES IN THE MANAGER</th>
<th>FORCES IN SUBORDINATES</th>
<th>FORCES IN THE SITUATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>The internal forces affecting the manager are . . .</td>
<td>The manager can permit his subordinates greater freedom when they . . .</td>
<td>Situational factors that should be considered are . . .</td>
</tr>
<tr>
<td>--His value system</td>
<td>--Have relatively high needs for independence</td>
<td>--Organizational values, traditions, size, and geographical location</td>
</tr>
<tr>
<td>--His confidence in his subordinates</td>
<td>--Have a readiness to assume responsibility for decision-making</td>
<td>--Group effectiveness, teamwork, and productivity</td>
</tr>
<tr>
<td>--His own leadership inclinations</td>
<td>--Have a relatively high tolerance for ambiguity</td>
<td>--The nature of the problem</td>
</tr>
<tr>
<td>--His feelings of security in an uncertain situation</td>
<td>--Are interested in the problem and feel that it is important</td>
<td>--Time pressure</td>
</tr>
<tr>
<td></td>
<td>--Understand and identify with the goals of the organization</td>
<td></td>
</tr>
<tr>
<td></td>
<td>--If they have the knowledge and experience to deal with the problem</td>
<td></td>
</tr>
<tr>
<td></td>
<td>--If they expect to share in decision making</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2.7 Forces a Manager Should Consider in Deciding How to Manage
The leadership theory developed by Tannenbaum and Schmidt seems to focus on two main points. First, the leader must have an understanding of himself, the people working for him, and the company and broader social environment in which he operates. The second point is that the leader must behave appropriately in light of these perceptions.

Paul Hersey and Kenneth Blanchard - Life Cycle Theory of Leadership

Paul Hersey and Kenneth Blanchard have developed a leadership theory which recognizes the need for a manager to change his leadership style depending upon the situational conditions. The authors state that:

... an effective leader must be able to diagnose the demands of the environment and then either adapt his leader style to fit these demands, or develop the means to change some or all of the other variables.

The theory developed by Hersey and Blanchard has been termed "The Life Cycle Theory of Leadership". This theory is based on a curvilinear relationship between task and relationship and "maturity". The theory attempts to provide a leader with some understanding of the relationship between an effective style of leadership and the level of maturity of one's followers. The emphasis in the theory is placed on the followers, since there is some justification for regarding them as the most crucial factor in any leadership event.


2 Ibid., p. 28.
Followers are vital, not only because individually they accept or reject the leader, but also because as a group they actually determine whatever personal power he may have.

According to the Life Cycle Theory, as the level of maturity of one's followers continues to increase, appropriate leader behavior not only requires less and less structure (task) but also less and less socio-emotional support (relationships). A model depicting this hypothesis is shown in Figure 2.8.

Maturity, as defined by the authors, is the relative independence, ability to accept responsibility, and achievement-motivation of an individual or group. Maturity is concerned with psychological age not chronological age. It can be affected by such things as level of education and amount of experience. Beginning with structured task behavior which is appropriate for working with immature people, Life Cycle Theory suggests that leader behavior should move from: (1) high task-low relationships behavior to (2) high task-high relationships behavior to (3) high relationships-low task behavior to (4) low task-low relationships behavior as subordinates progress from immaturity to maturity. Thus, the leader may use a high degree of structure for an immature employee who must be given detailed directions. However, as the employee matures, the leader begins to increase his relationships behavior by showing more trust and respect for the subordinate until the subordinate is mature enough to operate independently with little structure or relationship activity.
Figure 2.8 Life Cycle Theory of Leadership
The authors also make the point that the change through the cycle from quadrant 1 to quadrants 2, 3, and 4 must be gradual. The process by its very nature cannot be revolutionary but must be evolutionary. Gradual developmental changes are a result of planned growth and the creation of mutual trust and respect.

Fred Fiedler - Leadership Contingency Model

Fred Fiedler was one of the contributors to leadership theory who also recognized the need for different leadership styles for different situations. In his Leadership Contingency Model, Fiedler identified two styles of leadership: (1) task-oriented (autocratic) and (2) relationship-oriented (permissive, democratic). Fiedler's model also suggests under what conditions each style is most successful.

To determine whether a leader is Task Oriented or Relationship Oriented, Fiedler developed a unique operational technique. The leader's style is determined from sources which indicate the leader's perception of the Assumed Similarity between Opposites (ASO) and Least Preferred Coworker (LPC). ASO calculates the degree of similarity between the leader's perception of his most and least preferred coworkers. LPC calculates the degree to which the leader favorably perceives his worst coworker. The two measurements, which

can be used interchangeably, relate to leadership style in the following manner:

1. The relationships oriented style is associated with the leader who does not discern a great deal of difference between the most and least preferred coworkers (ASO) or who gives a relatively favorable description of the least preferred coworker (LPC).

2. The task oriented style is associated with the leader who perceives a great difference between his most and least preferred coworkers (ASO) and gives a very unfavorable description of the least preferred coworker (LPC).

To determine which leadership style to use in a particular situation, Fiedler hypothesized that three major situational variables must be evaluated. These variables seem to determine whether a given situation is favorable or unfavorable to a leader. (Fiedler defined the favorableness of a situation "... as the degree to which the situation enables the leader to exert his influence over his group."\textsuperscript{1}) The three situational variables are:

1. Leader-Member Relations - The degree to which a leader's group members trust and like him, and are willing to follow his guidance.

2. The Task Structure - The degree to which the task is spelled out step by step for the group or must be left nebulous or undefined.

\textsuperscript{1}Ibid., p. 13.
3. Position Power - The power of the leadership position as distinct from personal power. Can the leader hire or fire and promote or demote? Is his appointment for life, or will it terminate at the pleasure of his group?

In this model, eight possible combinations of these three situational variables can occur. As a leadership situation varies from high to low on these variables, it will fall into one of eight combinations (situations). The most favorable situation for a leader to influence his group is one in which he is well liked by members (good leader-member relations), has a powerful position (high position power), and is directing a well defined job (high task structure). On the other hand, the most unfavorable situation is one in which the leader is disliked, has little position power, and faces an unstructured task.

In considering the situation variables as they interact with the two leadership styles, Fiedler concluded that (1) Task-Oriented Leadership is most effective under favorable conditions (good relations, structured tasks, and strong power) and very unfavorable conditions (poor relations, unstructured tasks, and weak power); (2) Relationship-Oriented Leadership is most effective in situations which are intermediate in favorableness. Figure 2.9 depicts the possible combinations of the situational variables and the leadership approach appropriate for each combination.

Based on his extensive leadership research, Fiedler has formed the conclusion that it is difficult if not impossible to train
Figure 2.9 How the Style of Effective Leadership Varies with the Situation
leaders to develop a style appropriate to the situation. He, there­
fore, suggests that it would seem more promising to teach the indivi­
dual to recognize the conditions under which he can perform best
and to modify the situation to suit his leadership style. Fiedler
based this idea of "organizational engineering" on the assumption
that it is almost always easier to change a man's work environment
than his personality or his style of relating to others.¹ The suc­
cess of organizational engineering depends on training an individual
to be able to diagnose his own leader personality or style and the
other three situational variables.

William J. Reddin - The 3-D Theory

William J. Reddin has offered what can be considered the most
comprehensive and advanced theory of leadership yet proposed. In
his 3-D Management Style Theory, Reddin adds an effectiveness dimen­
sion to the task and relationships dimensions of earlier models.²
By adding the effectiveness dimension, Reddin has attempted to inte­
grate the concepts of leader style with situational demands of a
specific environment. When the style of a leader is appropriate
to a given situation, it is termed effective; when his style is in­
appropriate to a given situation, it is termed ineffective.

¹Fred E. Fiedler, "Engineer the Job to Fit the Manager," Har­

²William J. Reddin, Managerial Effectiveness (New York: McCraw­
If the effectiveness of a leader behavior style depends upon the situation in which it is used, it follows that any of the basic styles may be effective or ineffective depending on the situation. The difference between the effective and the ineffective styles is often not the actual behavior of the leader, but the appropriateness of this behavior to the situation in which it is used. Reddin illustrates this concept through an eight-style typology of management behavior which represents eight possible combinations of Task Orientation, Relationships Orientation, and Effectiveness (see Figure 2.10).

In the Reddin 3-D Theory the three leadership style dimensions are defined as follows:

1. Task Orientation - The extent to which a manager directs his own and his subordinates' efforts toward goal attainment. It is characterized by initiating, organizing, and directing.

2. Relationships Orientation - The extent to which a manager has personal job relationships with subordinates. It is characterized by listening, trusting, and encouraging.

3. Effectiveness - The extent to which the manager achieves the output requirement of his position.

Of the eight styles, four are considered effective and four are considered ineffective. The styles are:
Figure 2.10 Reddin's 3-D Leadership Model
Effective:

1. **Executive** - A manager who is using a high Task Orientation and a high Relationships Orientation in a situation where such behavior is appropriate. This manager is perceived as a good motivator who sets high standards, treats everyone somewhat differently, and prefers team management.

2. **Benevolent Autocrat** - A manager who is using a high Task Orientation and a low Relationships Orientation in a situation where such behavior is appropriate. This manager is perceived as knowing what he wants and how to get it without creating resentment.

3. **Developer** - A manager who is using a high Relationships Orientation and a low Task Orientation in a situation where such behavior is appropriate. This manager is perceived as having implicit trust in people and as being primarily concerned with developing them as individuals.

4. **Bureaucrat** - A manager who is using a low Task Orientation and a low Relationships Orientation in a situation where such behavior is appropriate. This manager is perceived as being primarily interested in rules and procedures for their own sake, as wanting to control the situation by their use, and as conscientious.

Ineffective:

1. **Compromiser** - A manager who is using a high Task Orientation and a high Relationships Orientation in a situation that
requires a high orientation to only one or neither. This manager is perceived as being a poor decision maker, as one who allows various pressures in the situation to influence him excessively, and as avoiding or minimizing immediate pressure and problems rather than maximizing long-term production.

2. Autocrat - A manager who is using a high Task Orientation and a low Relationships Orientation in a situation where such behavior is inappropriate. This manager is perceived as having no confidence in others, as unpleasant, and as interested only in the immediate task.

3. Missionary - A manager who is using a high Relationships Orientation and a low Task Orientation in a situation where such behavior is inappropriate. This manager is perceived as being primarily interested in harmony.

4. Deserter - A manager who is using a low Task Orientation and a low Relationships Orientation in a situation where such behavior is inappropriate. This manager is perceived as uninvolved and passive or negative.¹

Although effectiveness appears to be an either/or situation in this model, in reality it should be represented as a continuum. Any given style in a particular situation could fall somewhere on this

¹Description adopted from Reddin, Managerial Effectiveness, pp. 41-43.
continuum from extremely effective to extremely ineffective. Effectiveness, therefore, is a matter of degree, and there could be an infinite number of planes in the effectiveness dimension rather than only the two shown in Figure 2.10.

Through this model Reddin has made a number of important contributions. His addition of Effectiveness to the Task and Relationships Orientation usually attributed to leadership styles is a significant breakthrough. By adding an effectiveness dimension, Reddin begins to integrate the concepts of leadership style with situational demands of a specific environment. Thus any of his basic styles may be effective or ineffective depending on the situation. The model is unlike the typologies of McGregor, Blake and Mouton, Likert, and others. These theories do not incorporate an effectiveness dimension and therefore do not recognize that any leader, including a leader with high consideration for performance and people, could be effective or ineffective, depending on the situation. Having high or low concern for performance or people does not automatically make one an effective or ineffective manager.

**Summary of Leadership Theories**

There is almost total acceptance among leadership theories that there are two key elements which explain most leadership styles when considered together: Emphasis on Performance and Emphasis on People. The two dimensions have been given different labels by different authors but have essentially the same meaning.
Only two of the theorists depart significantly from the two-dimensions approach. Fiedler identifies the two clusters but considers them on a single continuum. This suggests that there are only two basic leader styles - Task Oriented and Relations Oriented. Reddin makes a major contribution by adding a third dimension - Effectiveness. Reddin has related the requirements of the situation with the Task and Relationships Orientations of the manager. Thus, the 3-D Theory illustrates that it is not the amounts of Task and Relationships possessed by the manager that makes him effective or ineffective. Rather, it is the appropriateness of the style for the particular situation that determines a manager's effectiveness.

This section has traced the evolution of leadership theories up to the present time. The following discussion will examine how the recognized dimensions of leader behavior have been researched in an attempt to relate them to satisfaction and performance of the worker.

Research Examining the Relationships Between Supervisory Leadership Style and Subordinate Performance and Satisfaction

The general hypothesis underlying many leader behavior studies has been that the employee-centered, participative leadership styles lead to more satisfied, productive workers than do the production-centered, directive leadership styles. If this hypothesis could be proven conclusively, there would be some justification for assuming that the leadership style of the superior is the causal variable
which affects subordinate performance and satisfaction. However, a failure to provide conclusive evidence supporting this hypothesis would reinforce the need for research examining the direction of causation between the subject variables.

In attempting to prove or disprove this general hypothesis, two separate categories of research will be examined. First, studies contrasting the effects of employee-centered and production-centered leadership on subordinate satisfaction and performance will be examined. In the second part of this section those studies dealing with the participative versus directive styles of leadership and their effects on satisfaction and performance will be discussed.

**Employee-Centered Versus Production-Centered Leadership**

Much of the early research done by the University of Michigan's Survey Research Center contrasted employee-centered and production-centered supervision. An employee-centered supervisor established a supportive personal relationship with his subordinates, took a personal interest in them, and was understanding when mistakes were made. The production-centered supervisor viewed his subordinates as a means through which to get the work done and was concerned primarily with achieving a high level of production. A central idea which developed from these early studies was the Michigan Leadership Style Continuum. The Leadership Style Continuum hypothesized that employee-

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centered leadership and production-centered leadership were at opposite ends of a leadership continuum. The idea of the continuum suggested that as a supervisor became more employee oriented, he would necessarily become less production oriented. The relationship was also seen as existing in the opposite direction (i.e., the more production oriented the supervisor became, the less concern he had for the employees).

The Michigan Leadership Style Continuum was found to be inconsistent with empirical findings obtained by the Ohio State Leadership Studies. The Ohio State theorists, through the use of factor analytic techniques, identified two major independent leadership dimensions - consideration (similar to employee-centered) and initiating structure (similar to production-centered). These researchers also developed two instruments for measuring the initiating structure and consideration variables. Since the development of these instruments, many studies investigating employee-centered (consideration) and/or production-centered (initiating structure)

^Later research done by the University of Michigan's Survey Research Center eventually led to the development of a leadership theory closely resembling that of the Ohio State theorists.


leadership styles have employed the instruments as part of their methodology. To facilitate examination of this research, studies relating to the initiating structure dimension will be discussed separately from those dealing with the consideration dimension.

Initiating Structure

Supervisors with high scores on the initiating structure dimension of the Ohio State questionnaire have been found to be highly rated by their superiors on several important aspects of leader and group performance. Halpin reported positive correlations of airplane commanders' initiating structure score and rated proficiency. Halpin and Winer reported correlations of -.23 between the consideration dimension of twenty-nine air crew commanders and their overall effectiveness, while initiating structure correlated .28 with the over-all effectiveness ratings. In a subsequent study by Halpin, results obtained from eighty-nine air crew commanders showed a positive correlation between over-all effectiveness and initiating structure of .25. Fleishman, Harris, and Burtt reported a correlation of .47 between proficiency ratings and initiating structure for


3Halpin, "Leader Behavior and Effectiveness of Aircraft Commanders," pp. 52-64.
production foremen. Other findings from field studies and small group laboratory experiments using similar measures were highly consistent with the findings of the Ohio State Group.

Researchers at the University of California have also developed a measuring device similar to that developed at Ohio State University. The measuring device consists of a series of fifteen questions which give three measures of leader behavior very similar to Ohio State's initiating structure factor. The three factors derived from the questionnaire are advanced planning, organizing, and formu-

lation. Leaders who score high on the advanced planning and organizing factors were described by the subordinates as men who anticipated future problems of scheduling, who organized the work for the group, and who made known lines of authority and

1Fleishman, Harris, and Burtt, Leadership and Supervision in Industry.


responsibility. Formalization related to the degree to which the organization operated according to written specification such as schedules, organization charts, job descriptions, procedures, and instructions.

The University of California measuring device was given to such diverse groups as forest rangers, aircraft supervisors, and government administrators. The results showed that leaders in these groups described by subordinates as high in advanced planning, organizing, and formalization were also given high performance ratings by their superiors; or they had high productivity as measured by units of production or scrap.

Early studies done by the University of Michigan's Survey Research Center showed that managers judged to be effective by their superiors seemed more production oriented than less effective managers. That is, they spent more time planning and organizing, and performing a kind of work different from that of their subordinates. Other studies by Bass and Dunteman also showed that leaders ranking high on measures of instrumental or structuring leadership received higher rankings from superiors on effectiveness and also had more productive workers.

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Besides these positive findings, there have also been some negative results. For example, Fleishman and Harris found that production supervisors scoring high on initiating structure also had higher rates of grievances and employee turnover than did low scoring supervisors.¹ In 1966, Korman conducted a thorough review of all journals which might be expected to carry research concerned with "initiating structure" and "consideration".² He also engaged in private correspondence with psychologists prominently associated with research on these dimensions. This thorough review revealed several studies showing no relationship between initiating structure and performance or subordinate satisfaction.

Consideration

Studies using the Ohio State questionnaire have frequently found positive relationships between consideration and measures of subordinate satisfaction. Andrew Halpin and James Winer in their study of aircraft commanders found a correlation of .64 between consideration and an index of crew satisfaction.³ In a later investigation of


¹Fleishman and Harris, "Patterns of Leadership Behavior," pp. 43-56.


aircraft commanders conducted by Halpin, a correlation of .75 was found between consideration and crew satisfaction with their commander.¹ Seeman reported a positive relationship between the consideration of school superintendents and the job satisfaction of elementary school teachers.² Fleishman, Harris, and Burtt have found a positive relationship between the consideration of foremen and the morale of subordinates.³ High consideration leaders have also been found to have work groups which display much intragroup harmony and member cooperation,⁴ as well as low turnover and grievance rates.⁵

Positive effects of supportive leadership (a construct similar to consideration) on attitudes and satisfaction of subordinates have

¹Halpin, "Leader Behavior and Effectiveness of Aircraft Commanders," pp. 52-64.


³Fleishman, Harris, and Burtt, Leadership and Supervision in Industry.

⁴Oaklander and Fleishman, "Patterns of Leadership in Hospital Settings," pp. 520-532.

⁵Fleishman and Harris, "Patterns of Leadership Behavior," pp. 43-56.
been reported in industrial plants,\(^1\) in military settings,\(^2\) among forest workers,\(^3\) in educational institutions,\(^4\) and in government organizations.\(^5\)

It has also been found that consideration by a supervisor for the needs or feelings of his subordinates positively affects performance. Likert conducted a study in a large package delivery organization where he found a correlation of .64 between supervisors' attitude toward the men and productivity of thirty-two work groups.\(^6\)


\(^3\)Comrey, Pfiffner, and High, *Factors Influencing Organizational Effectiveness*.


\(^5\)Comrey, Pfiffner, and High, *Factors Influencing Organizational Behavior*.

In a study conducted in seven British factories, Argyle, Gardner, and Cioffi examined the effect of a foreman's punitive dealings with the workers on the workers' productivity.\(^1\) They found a positive relationship between non-punitixe supervision and productivity. Besco and Lawshe found correlations of .46 and .59 between foreman consideration (judged by subordinates and supervisors, respectively) and departmental effectiveness.\(^2\) In the summary of research conducted by the Institute of Social Research at the University of Michigan, Likert reported that in the majority of studies, supervisors of departments with high productivity showed more consideration than did those with low productivity.\(^3\)

Summary and Critique

In summarizing this section, it seems that there is a positive correlation between initiating structure and worker job performance. However, there seems to be little if any correlation between initiating structure and satisfaction. Consideration, on the other hand, seems to be positively correlated with both satisfaction and


\(^3\)Likert, New Patterns of Management.
performance. Korman reached relatively these same conclusions in his review of the initiating structure, consideration literature.¹

Two important criticisms of the initiating structure and consideration research made by Korman in his literature review seem applicable to the studies presented in this section. First, there are a number of methodological and theoretical problems in these studies. The main problem relates to the use of the same subjects for both predictor and criterion ratings in many of the studies. Under such conditions, significant results may be attributed to "halo effects". That is, the rater might distort one (or both) of his perceptions in order to obtain a more balanced cognition. The second criticism relates to the interpretation of the research findings. Korman found very little evidence to support the assumption of consideration and initiating structure as causal variables since none of the experimental studies addressed themselves to this issue. Korman felt, as did Vroom,² that it would be just as reasonable to assume that a leader is high in consideration because his workers are satisfied and performing well as it is to assume the reverse.

**Participative Versus Directive Leadership**

In examining research of this type there are three main research categories which can be identified based on their


methodological orientation. These three categories are: (1) laboratory studies, (2) experimental field studies, and (3) survey correlational studies.

Laboratory Studies

One of the earliest investigations into the effects of participation in decision making was conducted by Kurt Lewin and his associates, Lippitt and White, at the University of Iowa in the late 1930's.¹ Many consider this study as the one which launched us into the age of scientific study in the area of leadership.

The study was organized to investigate the effects of the laissez-faire, democratic, and autocratic styles of leadership. The subjects of the study were ten year old boys organized into hobby clubs ostensibly for the purpose of making masks. The boys were as similar as possible in relevant physical, social, and intellectual characteristics. The leader of each group was an adult, a collaborator in the experiment, who had been trained to manipulate the three leadership styles. Each of the clubs received six weeks of exposure to each of the three styles.

The result of the experiment in terms of member satisfaction is fairly clear cut. When exposed to the democratic style, groups

were found to show less apathy, less aggression, and more group cohesiveness. However, the effect on productivity is not so clear.

The results of this experiment in terms of productivity are extremely difficult to establish. When exposed to autocratic supervision the boys spent more time at work than they did under democratic supervision (74% of the total time as opposed to 50% under democratic supervision). However, the "workmindedness" of the democratically-supervised boys appeared to be somewhat higher since under democratic supervision the groups engaged in a slightly larger amount of "work-minded conversation". (There were 63 work-minded remarks per child under the democratic conditions, whereas in the autocratic condition this figure fell to 52). However, no objective measure of productivity is reported by the authors, and therefore it is impossible to determine accurately which of the two styles evoked the higher production (a fact often overlooked by reviewers of this study).  

McCurdy and Eber compared the effects of democratic versus autocratic leadership in small problem solving groups. Each group consisted of three members. The task of each group was to determine the proper setting of three switches. In the authoritarian group the participants were instructed to merely obey orders, and one of the members was given the power to order the others at will. In the democratic group the idea of equality was emphasized. It was stressed that the group members should offer suggestions, and that no individual could order the others in any way. In evaluating


the results, the democratic style was not found to be superior to the autocratic style in determination of productivity.

In a laboratory experiment using communications networks, Shaw compared the effects of authoritarian (autocratic) and nonauthoritarian (democratic) leadership in small problem solving groups.¹ There were six experimental conditions used in the study. Each of three different communications nets was paired with both authoritarian and nonauthoritarian leadership. Leadership of the group was always assigned to the position, or one of the positions, having the highest independence score in the net. The two types of leadership were introduced by means of instructions. The authoritarian leader was instructed to give orders to the other members, never to accept suggestions uncritically, and in general make it clear he was the boss. On the other hand, the nonauthoritarian leader was to offer suggestions not orders, to accept suggestions if he thought they were good ones, and in general to behave in a cooperative manner. Results of Shaw's study indicate that the autocratically-supervised subjects (a) required less time to solve the problems, regardless of the communications net in which they were placed, and (b) made fewer errors. Thus it seems that the authoritarian leadership produced

better performance. However, the authoritarian groups had lower morale than did the nonauthoritarian groups.

Day and Hamblin conducted a laboratory experiment that is particularly interesting because it not only concerns close (directive) and general (participative) supervisory styles but also attempts to simulate an industrial setting. Twenty-four groups, each consisting of four undergraduate college women, were asked to engage in a task of assembling models of molecules with pegs, springs, and various colored balls. The participants worked from elaborate blueprints with each group member specializing in one part of the task. Both close and general supervision were used. Under the experimental condition of general supervision, only eight instructions were used by the supervisor to help define the job. Under close supervision, hourly instructions were used and the supervisor hovered over and watched the workers closely, sometimes repeating instructions as a check-up. The researchers reported the following results:

... close supervision produced a significant and large increment in aggressive feelings toward the supervisor. The data also indicate a moderate and near significant increment in aggressive feelings toward co-workers. On the other hand, close supervision was not significantly related to dissatisfaction with the task, to verbal aggression against the supervisor or co-workers, or to verbal dissatisfaction with the task. Finally, the data indicate that close supervision results in a

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significant and rather substantial decrease in productivity.\(^1\)

Two studies cited by Sales\(^2\) are similar to that of Day and Hamblin\(^3\) in that they tried to replicate industrial settings in the laboratory. The first of these studies was conducted by Sales.\(^4\) In the study an assembly line setting was replicated. Male supervisors were used to play democratic and autocratic roles over both male and female groups. Provisions were made in the study to counterbalance both the role and sex of the subordinates. The results of the experiment indicate no differential effectiveness whatever between the two styles; the productivity means for the two conditions were virtually identical. The second study, conducted by Spector and Suttell, used naval trainees as subjects.\(^5\) The supervisors in this study were trained to use "single leadership" or "shared leadership" styles (styles which seem similar to directive and participative leadership). The task consisted of problems in which team members cooperated in receiving, processing, and

\(^{1}\)Ibid., pp. 505-507.


recording information. The authors were unable to detect any difference in the productivity of the groups under the two different leadership styles.

Vannoy and Morrissette compared the effects of centralized and decentralized structures by using two communications networks.¹ (It is assumed that centralized and decentralized structures parallel the directive-participative distinction). The subjects were 280 male university students assigned in four man groups for the purpose of solving problems. Thirty groups were run in the centralized (directive) structure while forty groups were run in the decentralized (participative) structure. Comparison of the two structures revealed that in the absence of feedback of results, satisfaction with job and group were both higher in the participative structure than in the directive structure. However, the difference was significant only for job satisfaction.

In summary laboratory studies seem to indicate that participative leadership resulted in greater satisfaction on the part of subordinates than did directive leadership. However, none of these studies showed any superiority of participative leadership over directive leadership in terms of performance.

Experimental Field Studies

In 1948 Coch and French published a pioneering field experiment into the effects of participation on satisfaction and performance. The study was carried out at the Harwood Corporation, a manufacturer of pajamas employing a predominately female work force. The nature of this product required continual changes in work methods which were generally resisted by workers, many of whom preferred to quit rather than make the change. Four groups of workers about to undergo a change in work methods were used in the study. The first group was the control group and underwent the change in the usual manner (i.e., the new jobs were timed, piece rates were set, and the new methods were explained by the time study man who also answered any questions). The other three groups enjoyed varying degrees of participation in making decisions concerning some aspects of the change. The second group participated through elected representatives. In the third and fourth groups which were relatively small, all the members had a chance to participate directly in making decisions regarding the change.

The results of the experiment showed the control group dropped to 50 units of production (their before change average was about 60 units). In addition to the decreased production, seventeen per cent of the control group left their work during the first forty days of

change. The second group which participated through representatives dropped in productivity immediately after the change but after thirty-two days was almost at 70 units. The total participation groups recovered more rapidly from the change and exceeded 70 units shortly after four days. There was also strong evidence that members' satisfaction or morale was higher under participative leadership. In a second experiment two and a half months after those described above, the no-participation group from the previous study was given a chance to participate in a successive change. This group reacted similarly to the previous experimental groups.

In another experiment in the Harwood plant, Bavelas showed that productivity could be increased by worker participation in setting goals. Groups of women sewing-machine operators were taken to meet with a psychologist (Bavelas) three times a week to decide on a definite productivity level which they could attain within a certain time. In these groups there was an average increase in production of eighteen per cent following the goal setting. To make sure the increase in production was not caused by other factors associated with the group meetings, two other working teams held interviews with the psychologist. These groups received the same attention but no production goal was discussed. These two teams showed no marked increase in production.

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Bavelas and Strauss also explored the effects of group participation in goal setting. The experiment was conducted in a toy manufacturing plant. The subjects were eight girls working in a painting room. The girls worked in side by side booths painting wooden toys and placing them on hooks moved by a conveyor belt. The girls complained that the conveyor was going too fast and that the time-study man had set the wrong rates. After a number of meetings with management concerning this problem, the girls were given control of the speed of their conveyor belt, thus their own production rate. The girls spent many lunch hours deciding on what speed the belt should be set. After the decision was made, productivity for the group increased significantly. Similar results were obtained in a study concerned with group members' participation in setting their own goals in an industrial production unit.

Studies cited up to this point have shown positive results concerning the effects of participative leadership style on productivity and satisfaction. Other studies have shown inconsistent results. French, Israel, and As published an experiment designed to "repeat


the Coch and French experiment (published in 1948) and . . . to dis­
cover whether the general results . . . conducted in the United
States, will hold in a different culture (Norway)."¹ Nine, four man
groups that were changing the type of product they produced partici­
pated in the study. The four control groups were changed by the
usual methods, but the five experimental groups were given more
participation. The researchers reported that the experimental groups
had more positive attitudes than the control groups on ten of the
questions concerning satisfaction. However, only three of these
differences were significant. Concerning production, the authors
state "there was no difference between the experimental and control
groups in the level of production."²

French, Ross, Kirby, Nelson, and Smyth reported on a large scale
modernization program entailing much more extensive change than any­
things that had been attempted with employee participation in the
past.³ The changes took place in three plants of a garment manu­
facturer. The researchers reported that the cost of production was
reduced; a better product was turned out; production time was shor­
tened; and productive capacity was expanded without heavy overhead
charges. However, the participation had no real effect on employee
morale.

¹Ibid., p. 3.
²Ibid., p. 18.
³John R. P. French, Jr., et al., "Employee Participation in a
Program of Industrial Change," Personnel 35 (November-December 1958):
p. 16-29.
Coemlbiewski and Carrigan report the results of an effort to change the organizational style (leadership style) of a sales unit in a business organization.¹ Most of a one week learning experience program was spent in sensitivity training sessions. Changes in organizational style were measured with Likert's profile of organizational characteristics.² Because the roles of the experimental unit changed rapidly, there was no way to objectively measure if the efficiency of the unit had increased. However, participants in this participative management program reported more involvement and satisfaction at work; and they generally felt that the style changes would enhance their long run performance.

Morse and Reimer describe an experiment conducted in one department of a large national insurance company which had four parallel divisions engaged in relatively routine clerical work.³ Two programs of change were employed. In two divisions an attempt was made to place a greater amount of control in the hands of the rank and file clerks, delegating to lower levels some of the decision making authority of the higher level. These two divisions comprised what the researchers called the "autonomy program". In the other two


²Likert, The Human Organization.

divisions, called the "hierarchical program," the control by upper levels was increased. Decisions and policies were initiated at upper levels and passed down the line. The results of the experiment indicate that "the individual satisfactions of the members increased significantly in the Autonomous program and decreased significantly in the Hierarchically-controlled program."¹ Company productivity records indicate significant improvement in both groups. Furthermore, the increase was greater in the Hierarchical divisions (25%) than in the Autonomy divisions (20%). Both Likert² and Tannenbaum³ have pointed out, however, that the increased productivity in the hierarchical program might not have been maintained if the experiment had lasted longer.

Dalton, Barnes, and Zaleznik describe the impact and developing effects over a two year period of a series of changes in organizational structure and arrangements in a research and development center.⁴ The research focused on a newly promoted scientist-executive and his organization of some 150 engineers, scientists, and managers. The program introduced by the director aimed at altering

¹Ibid., p. 129.

²Likert, New Patterns of Management.


⁴Gene Dalton, Louis Barnes, and Abraham Zaleznik, The Distribution of Authority in Formal Organizations (Boston: Division of Research, Graduate School of Business Administration, Harvard University, 1968).
the authority make-up of the center by moving decision making downward (increasing participation of the lower levels). For two groups in the experimental departments (the senior scientists and the junior managers), the organizational changes brought greater autonomy in the conduct of their work and a chance to influence departmental decisions. On the other hand, the senior managers and junior scientists had a relative reduction in authority and power. On the whole, members in the experimental departments (senior and junior managers and scientists) reported greater personal productivity, involvement, and satisfaction in their work than members in control departments. However, within the experimental departments the two groups whose power had expanded reported greater personal productivity and involvement in their work than the two groups whose power had diminished. Except for the junior managers, a similar pattern emerged in response to questioning concerning satisfaction.

In general, the results of the field studies examined seem to support the contention that participative leadership leads to greater productivity and satisfaction than does directive leadership.

Survey Correlational Studies

The Survey Research Center at the University of Michigan has been most prolific in describing survey correlational studies which they have undertaken. The results of almost all of the studies reported by the Center indicate that participative supervision is
positively related to measures of performance and satisfaction.¹

The only study finding results contrary to those mentioned above was an attempted replication of a Katz, Maccoby, and Morse² study by Katz, Maccoby, Gurin, and Floor.³ These researchers were unable to find any relationships between closeness of supervision and productivity in a railroad unit.

Baumgartel conducted a study in a research organization composed of several major research institutes, each specializing in a particular disease category.⁴ Twenty professional researchers who directed laboratories within the institutes were chosen as the basic unit of analysis for the study of leadership style. The study showed that scientists under participatory leadership (1) had higher levels of motivation toward organizational goals (research values), (2) had a greater sense of progress toward achieving these goals, and (3) had more favorable attitudes toward their director.

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² Katz, Maccoby, and Morse, *Supervision in an Office Situation*.

³ Katz, et al., *Supervision Among Railroad Workers*.

Jacobson researched the attitudes of workers toward their foreman and shop stewards. The attitude measures were related to the workers' amount of involvement in decision making. The research was conducted in an automobile manufacturing plant. The results showed a positive relationship between the amount of participation in decision making and attitudes toward both foreman and shop stewards.

In an investigation conducted at the Michigan Bell Telephone Company, Wickert made a comparison between questionnaire responses of several groups of young women, some of whom were still employed by the company and others who had left the company. The major differences in response to the questions concerned the amount of influence the individual had over her job. "Specifically, those who stayed tended to say (1) they had a chance to make decisions on the job, and (2) they felt they were making an important contribution to the success of the company." In a similar study, Ross and Zander matched questionnaire responses of each resigned employee with responses of two employees still with the company. (Responses of


3Ibid., p. 186.

resigned employees had been taken before resignation thus overcoming a limitation of Wickert\(^1\)). The results showed that resigned workers were less often on their own and received less recognition for their work.

Vroom carried out a study in a large company whose basic function was the delivery of small parcels and packages from department and other retail stores to private residences.\(^2\) The subjects of the study were 108 first, second, and third line supervisors. Responses to a series of questions were obtained from each supervisor concerning the amount of his influence in decision making. The responses to these questions were combined into an index called "amount of psychological participation". Performance was measured through ratings by the immediate superior of the man being rated and one other person who was acquainted with his work. Supervisors' scores on the participative index were found to correlate significantly with a number of different measures of their job performance. Vroom also found that psychological participation correlated with job satisfaction. Tosi\(^3\) in a replication of Vroom's study,\(^4\) was unable to corroborate Vroom's findings. He found no correlation between

\(^1\) Wickert, "Turnover and Employee Feelings," pp. 185-197.


\(^4\) Vroom, Personality Determinants.
participation and performance and no significant correlation between participation and satisfaction.

Palumbo conducted a study of 14 local public health departments drawn from a list of the 140 largest local public health departments in the United States.¹ Interviews were conducted with the head of each of the departments and with all the major division and program heads. The unit of analysis for study was the individual departments as well as the sub-units within each department. Closeness of supervision (directive leadership) was measured by frequency of supervisory checks on the work of subordinates. The results indicated that closeness of supervision tended to be negatively, though not significantly, related to: productivity (r = -.10), agency performance in terms of per unit cost (r = -.37), member's self ratings of their department (r = -.10), agency innovation (r = -.91, p < .01), morale (r = -.40), and role conflict (r = -.42). Aiken and Hage conducted a study in sixteen welfare organizations staffed largely by professional workers.² The researchers found that the scores of workers in highly centralized organizations - those with little autonomy over individually assigned tasks and little participation in agency wide decisions - were positively correlated with member's dissatisfaction (alienation) from work (r = .49, p < .05) and their


alienation from expressive relationships with superiors and fellow workers \( r = .45, p < .10 \).

Vroom and Mann presented a study designed to explore the relationship between the authoritarianism of supervisors and the attitudes of their subordinates.\(^1\) It was assumed that authoritarian leaders were less inclined to involve their subordinates in decision making, less considerate of personal feelings and needs of their subordinates, and there would therefore be a negative relationship between authoritarianism and attitudes. In describing the results the authors state: "The findings obtained by this analysis are generally consistent with popular notions about effective supervision. Subordinates with most positive attitudes describe their superiors as more participative, exerting less pressure for high performance, and generally creating less tension in their work relationships.\(^2\)

Contrary to the findings presented above are the findings of Berkowitz\(^3\) and Cooper.\(^4\) Berkowitz studied 72 groups of small decision making conferences in business, industry, and government.

\(^1\)Victor H. Vroom and Floyd Mann, "Leader Authoritarianism and Employee Attitudes," Personnel Psychology 13 (Summer 1960): pp. 125-139.

\(^2\)Ibid., p. 133.


Analysis of correlational data found participative leadership to decrease group cohesiveness and satisfaction with the meeting over the entire sample of groups. Participation in decision making also failed to correlate with any objective measures of performance.

Cooper conducted a correlational study in an industrial oil and fat hardening plant. The subjects were members of twelve groups composed of three to five workers. Both leadership style of participating leaders and subordinate job performance were assessed by ratings of immediate superiors. Also considered in the study was the frequency and extent of absences along with lateness. The reported results showed general (as opposed to close) supervision had a zero correlation with subordinate's job satisfaction and failed to correlate with subordinate's absence frequency rates, total absence rates, lateness rates, and rated job performance. The results of the study did not show, therefore, any positive effects of general supervision on subordinate satisfaction and performance.

Gibb\textsuperscript{1} and Jennings\textsuperscript{2} both did reviews of early studies on democratic and autocratic leadership. It was the contention of both of these authors, based on their reviews, that democratic leadership tended to be associated with more satisfied, cooperative, and


productive work groups than did authoritarian leadership. In a more recent review, Sales\(^1\) concluded that "survey (correlational) data clearly seemed to support the hypothesis that democratic supervision leads to higher production than does authoritarian supervision."\(^2\)

The correlational studies reviewed in this section point quite clearly to participative leadership being more effective in terms of member satisfaction and performance than directive leadership.

Summary and Critique

The review of literature presented in this section lends some credence to the often accepted belief that the leadership style of a manager can affect the performance and satisfaction of his employees. However, this seemingly clear conclusion may be muddied somewhat upon close scrutiny of the type of research studies which have been conducted.

A number of the studies reported here have employed static correlational analysis for their analytic method. Studies of this type include all those using concepts of initiating structure and consideration plus a large number of the studies dealing with participative-directive leadership. The weakness of these static correlational studies is that they provide little basis for making


\(^2\)Ibid., p. 281.
any inference of causality. An example clarifying this point is presented by Greene:

... a highly significant static correlation between leader initiating structure and subordinate performance indicates only that the two variables are related. The leader's initiating structure may have caused variance in subordinate performance or, conversely, changes in subordinate performance may have caused variance in the leader's initiation of structure. Third, there may have been no causal relationship between the two variables; the correlation may have been spurious or a third or additional variables may have caused the two variables in question to covary. Static correlation analysis, unfortunately, provides too little information to evaluate any of these alternative explanations of the significant correlation.¹

A second type of study examined was the laboratory experiment. There is some question, however, as to whether the extrapolation of results from a laboratory setting to an organizational setting has any merit at all.² As stated by Lawler: "... experimental laboratory studies often do not seem to offer an adequate enough simulation of the real world for results to be used with confidence when more applied problems are being dealt with."³


The final category of research not yet discussed is the experimental field study. Experiments of this type do offer some means for evaluating the causality question. In reviewing this area, there were indications that leadership style did affect both performance and satisfaction.

However, two field studies not yet discussed seem to present strong evidence that performance can affect leadership style. The first of these studies was conducted by Farris and Lim.1 Through changes in the foreman’s roles, groups of workers were assigned to a high performance, low performance, or control condition. It was found that high past performance tended to increase leader supportiveness, interaction facilitation, goal emphasis, and work facilitating leader behaviors. The second study was conducted by Lowin and Craig.2 This study also tends to support the contention that performance can affect leader behavior. In this study leaders reacted to subordinates who were programmed to be competent or incompetent performers. In the experiment the incompetent performers received significantly closer supervision, greater supervisory efforts to initiate structure, and reduced supervisory consideration than did the competent performers. In summing up their findings, the authors state that "the extent and quality of the present

1Farris and Lim, "Effects of Performance on Leadership," pp. 490-497.

findings suggest that the causal direction often ignored may be at least as important as the opposite one usually indicated. 1 Though no studies have been found that examine the proposition of satisfaction causing leadership style, there is no reason to disregard this possibility. 2

Conclusions and Research Intent

The preceding review of leadership theories and leadership oriented research has failed to prove the current contention that leader behavior affects subordinate satisfaction and performance. As pointed out in the literature review, the relationships between leadership style and job performance and satisfaction have resulted in numerous and often conflicting theories concerning the source and direction of causality between the variables. The investigations conducted to examine the relationships in question have not provided the methodological soundness needed to properly assess the possible directions of causality. Therefore, the current research effort is designed to investigate the causal inferences concerning the relationships between leadership style and subordinate job satisfaction, and leadership style and subordinate job performance.

1Ibid., p. 456.

This chapter has reviewed related literature relevant to the development of the basic research idea. The research design and methodology utilized in conducting the present study as well as the statistical techniques used to analyze and evaluate the data will be presented in Chapter III.
CHAPTER III
RESEARCH DESIGN AND METHODOLOGY

Based on the review of prior research reported in the preceding chapter, this present chapter's major emphasis will focus on a discussion and explanation of the procedure and methodology utilized in data collection. Attention will first be focused upon a description of the subject population involved in the research design, followed by a discussion of the major variables under investigation as well as the operational definitions of such variables. The chapter is concluded by an explanation of the methods and procedures utilized in data collection, followed by a discussion of the statistical tools and techniques employed in data analysis.

Subjects

The subjects for this research report consisted of female employees of garment manufacturing firms located in the Midsouth. The sample consisted of twenty-five first-line supervisors and one hundred thirty-eight of their immediate subordinates. The subordinates chosen for inclusion in the study were all semi-skilled workers who operated sewing machines in the participating organizations.

The nature of the garment manufacturing industry and the plants utilized in the study in particular tend to lend themselves well to the research idea under investigation. For example, due to the
nature of the industry, technology is slow to change. The same industrial grade sewing machines were used in all plants for all operations with many of the machines in use being over three years old. Also, beyond this stability of industry technology, the management of all participating firms gave their assurance that during the research period there would be no in plant changes that might contaminate the research being conducted. In other words, any possible moderating variables under the organization's control were kept as constant as possible over the test period.

In addition to the stability of the environment in these plants, all participating firms used the same type of a standard piece rate incentive system. The general nature of the production process lends itself well to the use of incentive systems due to the relatively little interdependence between operations and the rate of operation being controlled within a wide range by the operator.

Thus, in summary, some of the factors which led to the selection of firms in this industry for this study include: slow technological change, little interdependency between operations, variable rate of operations controlled by the worker, as well as incentive systems contingent upon the individual worker's performance. In addition, though production scheduling may vary over time, it remained fairly constant over the testing period.

The subjects utilized in this study were limited to sewing machine operating personnel on a piece rate incentive system and their immediate supervisors. Office personnel, higher level
management, as well as other production personnel not operating sewing machines were exempt from the sample. Therefore, the final analysis was carried out on one hundred thirty-eight semi-skilled workers and their twenty-five immediate supervisors.

Variables Under Investigation

The basic methodological approach utilized in this research investigation is an observational strategy referred to as systematic assessment. Under this methodological and research design technique, none of the variables under investigation are experimentally manipulated. However, even though no variable manipulation takes place within the field setting, it still becomes necessary to operationally define the variables in question in order to acquire consistent and accurate longitudinal measurements of such variables. Thus, keeping in mind the expressed purpose of this research study (i.e., an empirical investigation of the causal basis of the relationships between leadership style, performance, and satisfaction) this section is devoted to describing the techniques and methods used in defining and measuring those variables under investigation.

Performance

The individual productivity data utilized in this study was obtained from weekly company performance reports. Productivity for each employee was calculated as an index of performance which was based on the efficiency of the individual worker in meeting the standard established for a particular operation. Two types of
information were used in obtaining the individual worker's index of performance. First, a measure of the worker's actual performance as indicated by the amount of pay received for a week's work was obtained from company records. This pay measure corresponds with the actual output of the worker over the weekly time period. The second type of information gathered was the standard hourly pay rate for each of the different operations performed by the subjects. The standard hourly pay rate reflects the actual standard output minimum required by the company for a particular operation. The weekly index of performance was then calculated as a ratio of averaged weekly actual output of the individual operator expressed in dollars per hour to the standard output which was also expressed in dollars per hour.

The performance standards utilized in this study also made allowances for delays which were beyond the control of the individual operator. Examples of non-operator caused delays would include unscheduled maintenance, machine down time, and any change in the style or type of garment being sewed. All of these simultaneous variables as well as special factors that affect individual operations were incorporated into the company's performance standards used in this study.

Due to the statistical techniques adopted for use in this study, identical measures of all variables under investigation were obtained for the same subjects at two points in time. The individual performance measures were obtained by averaging the employee's weekly
index of performance over the one-month period prior to the administration of the satisfaction and leadership questionnaire which were utilized in the study. The longitudinal measures for each supervisor and employee were collected with a three month time lag between the first (time 1) and second (time 2) administration of the satisfaction and leadership questionnaires.

**Satisfaction Survey**

Longitudinal data concerning employee attitudes as well as perceived performance-outcome probabilities were collected at two points in time. The instrument utilized was a semantic differential survey which measured the worker's attitude toward various components of work such as the opportunities for advancement, the pay, the supervision, the job, and the fellow-workers.

The semantic differential survey utilized in this study is a self report measure of satisfaction. The instrument consists of groups of bipolar adjective pairs which are set against concepts of satisfaction referring to components of the work situation. The instrument was originally developed by Scott and tested on a group of design and development engineers in a large Midwestern manufacturing organization.\(^1\) The instrument was more fully developed when Scott and Rowland administered the same bipolar scales to a large number of employees.

sample of male civil service employees in a naval ammunition depot in the Midwest.¹

In developing the instrument, both the engineers and civil service employees completed the scales made up of bipolar adjective pairs assembled under the various components of the work situation. The subjects were asked to look at the concept at the top of the page and then check the appropriate quantifier (as illustrated in Figure 3.1) for each bipolar scale.

The positions for each scale were arbitrarily assigned a number from one through seven with one indicating the least preferred condition and seven the most preferred condition. The responses to the scales were then factor analyzed and the principle components were rotated orthogonally using the Kaiser Varimax solution.²

For purposes of this study, nine of the satisfaction indexes identified and described by Scott and Rowland³ were chosen as measures of worker satisfaction. Those scales containing words with ambiguous or redundant meaning as well as those with low factor loadings were eliminated from this study. In place of these


**ME AT WORK**

<table>
<thead>
<tr>
<th></th>
<th>Extremely</th>
<th>Quite</th>
<th>Slightly</th>
<th>The Other</th>
<th>Slightly</th>
<th>Quite</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appreciated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excitable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficient</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Penalized</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interested</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncooperative</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 3.1 Semantic Differential Scale and Quantifiers for Bipolar Adjective Pairs

- Unappreciated
- Calm
- Inefficient
- Rewarded
- Bored
- Cooperative
eliminated polar adjective pairs, a section was added dealing with perceived contingencies between performance and organizational rewards. The contingency questionnaire utilized was first developed by Scott and Johnson\(^1\) and later expanded and factor analyzed by Reitz.\(^2\) The perceived contingency section consisted of twenty Likert scale items with the respondent being asked to estimate the probability that a specific behavior on his part would result in a particular organization reward or response. The six responses from which the subjects had to choose ranged from "100% Certain" to "Very Improbable". The response to each item in the contingency section was scored in the same manner as the satisfaction indexes except that six was the maximum value assigned to the most preferred response.

The nine satisfaction indexes adopted for use in this study from Scott and Rowland semantic differential questionnaire include: three factors from the **ME AT WORK** section (General Affective Tone, General Arousal, and Positive Incentive Motivational State); two factors from the **MY OPPORTUNITIES FOR ADVANCEMENT** section (General Affective Orientation and General Clarity); one factor from the **MY**


Pay in comparison with what others get for similar work within the company section (Equitableness of Pay); two factors from the My Supervisor section (Interpersonal Attractiveness of Supervisor and Personal Competence of Supervision); one factor from the My Job section (Task Satisfaction); and three factors from the perceived contingencies section (Supportive Instrumentality, Punitive Instrumentality, and Advancement Instrumentality). For all of the factors utilized in this study the numerical values assigned were based on the mean response to the bipolar adjectives or the perceived contingency probabilities making up that factor (the complete semantic differential survey and contingency questionnaire may be seen in Appendix A). The adjective pairs and perceived contingency items making up the various satisfaction indexes are shown in Tables 3.1 through 3.8. Table 3.9 provides the definitions of the different satisfaction indexes as derived from the research of Scott, Johnson, and Reitz. Also incorporated into this table is a coding scheme which will be used to facilitate the presentation of data in the following chapter.

---


2Johnson, "Interaction Effects of Ability and Motivational Variables on Task Performance."

3Reitz, "Attitudes and Contingencies Between Performance and Organizational Response."
<table>
<thead>
<tr>
<th>Factor</th>
<th>Adjective Pairs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Affective</strong></td>
<td>Appreciated-Unappreciated</td>
</tr>
<tr>
<td><strong>Tone</strong></td>
<td>Satisfied-Dissatisfied</td>
</tr>
<tr>
<td><strong>General Arousal</strong></td>
<td>Attentive-Inattentive</td>
</tr>
<tr>
<td></td>
<td>Useful-Useless</td>
</tr>
<tr>
<td><strong>Positive</strong></td>
<td>Efficient-Inefficient</td>
</tr>
<tr>
<td><strong>Incentive</strong></td>
<td>Cooperative-Uncooperative</td>
</tr>
<tr>
<td><strong>Motivational</strong></td>
<td>Attentive-Inattentive</td>
</tr>
<tr>
<td><strong>State</strong></td>
<td>Spirited-Lifeless</td>
</tr>
<tr>
<td></td>
<td>Alert-Listless</td>
</tr>
<tr>
<td></td>
<td>Important-Unimportant</td>
</tr>
<tr>
<td><strong>Positive</strong></td>
<td>Interested-Bored</td>
</tr>
<tr>
<td><strong>State</strong></td>
<td>Productive-Unproductive</td>
</tr>
<tr>
<td></td>
<td>Valuable-Worthless</td>
</tr>
<tr>
<td></td>
<td>Useful-Useless</td>
</tr>
<tr>
<td></td>
<td>Effective-Ineffective</td>
</tr>
</tbody>
</table>
### TABLE 3.2

**ADJECTIVE PAIRS MAKING UP THE FACTORS IN THE MY OPPORTUNITIES FOR ADVANCEMENT SECTION**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Adjective Pairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Affective</td>
<td>Positive-Negative</td>
</tr>
<tr>
<td>Orientation</td>
<td>Reasonable-Unreasonable</td>
</tr>
<tr>
<td></td>
<td>Sufficient-Insufficient</td>
</tr>
<tr>
<td>General Clarity</td>
<td>Explained-Unexplained</td>
</tr>
<tr>
<td></td>
<td>Known-Unknown</td>
</tr>
</tbody>
</table>

### TABLE 3.3

**ADJECTIVE PAIRS MAKING UP THE FACTORS IN THE MY PAY IN COMPARISON WITH WHAT OTHERS GET FOR SIMILAR WORK WITHIN THE COMPANY SECTION**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Adjective Pairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equitableness Of Pay</td>
<td>Fair-Unfair, Reasonable-Unreasonable</td>
</tr>
</tbody>
</table>
### Table 3.4

**ADJECTIVE PAIRS MAKING UP THE FACTORS IN THE MY SUPERVISOR SECTION**

<table>
<thead>
<tr>
<th>Factors</th>
<th>Adjective Pairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal</td>
<td>Fair-Unfair</td>
</tr>
<tr>
<td>Attractiveness</td>
<td>Courteous-Discourteous</td>
</tr>
<tr>
<td></td>
<td>Agreeable-Disagreeable</td>
</tr>
<tr>
<td></td>
<td>Reasonable-Unreasonable</td>
</tr>
<tr>
<td></td>
<td>Thoughtful-Unthoughtful</td>
</tr>
<tr>
<td></td>
<td>Pleasant-Unpleasant</td>
</tr>
<tr>
<td>Personal</td>
<td>Strong-Weak</td>
</tr>
<tr>
<td>Competence</td>
<td>Effective-Ineffective</td>
</tr>
<tr>
<td></td>
<td>Skillful-Bungling</td>
</tr>
<tr>
<td></td>
<td>Active-Passive</td>
</tr>
<tr>
<td></td>
<td>Positive-Negative</td>
</tr>
<tr>
<td></td>
<td>Decisive-Indecisive</td>
</tr>
</tbody>
</table>

### Table 3.5

**ADJECTIVE PAIRS MAKING UP THE FACTORS IN THE MY JOB SECTION**

<table>
<thead>
<tr>
<th>Factors</th>
<th>Adjective Pairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task</td>
<td>Attractive-Repulsive</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>Good-Bad</td>
</tr>
<tr>
<td></td>
<td>Superior-Inferior</td>
</tr>
<tr>
<td></td>
<td>Exciting-Dull</td>
</tr>
<tr>
<td></td>
<td>Interesting-Boring</td>
</tr>
<tr>
<td></td>
<td>Wholesome-Unwholesome</td>
</tr>
</tbody>
</table>
TABLE 3.6
PERCEIVED CONTINGENCY ITEMS MAKING UP "SUPPORTIVE INSTRUMENTALITY"

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Your supervisor would personally pay you a compliment if you did outstanding work.</td>
</tr>
<tr>
<td>3.</td>
<td>Your supervisor would lend a sympathetic ear if you had a complaint.</td>
</tr>
<tr>
<td>4.</td>
<td>Your supervisor would be very much aware of it if there was a temporary change in the quality of your work.</td>
</tr>
<tr>
<td>6.</td>
<td>Your supervisor would blame you rather than some factor over which you have no control if the quality of your work took a turn for the worse.</td>
</tr>
<tr>
<td>11.</td>
<td>Your supervisor's boss or others in higher management would know about it if your work was outstanding.</td>
</tr>
<tr>
<td>13.</td>
<td>Your supervisor's recommendation for a pay increase for you would be consistent with his evaluation of your performance.</td>
</tr>
<tr>
<td>14.</td>
<td>Your supervisor would show a great deal of interest if you suggested a new and better way of doing things.</td>
</tr>
<tr>
<td>15.</td>
<td>You would receive special recognition if your work performance was especially good.</td>
</tr>
<tr>
<td>16.</td>
<td>Your supervisor would do all he could to help you if you were having problems in your work.</td>
</tr>
<tr>
<td>17.</td>
<td>Your supervisor's evaluation of your performance would be in agreement with your own evaluation of your performance.</td>
</tr>
<tr>
<td>19.</td>
<td>Your supervisor would encourage you to do better if your performance was acceptable but well below what you were capable of.</td>
</tr>
</tbody>
</table>
### TABLE 3.7

**PERCEIVED CONTINGENCY ITEMS MAKING UP "PUNITIVE INSTRUMENTALITY"**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>You would get no increase in pay if your work was below acceptable standards.</td>
</tr>
<tr>
<td>5.</td>
<td>You would be dismissed if you were absent for several days without notifying the company or without a reasonable excuse.</td>
</tr>
<tr>
<td>8.</td>
<td>Your supervisor would get on you if your work was not as good as the work of others in your department.</td>
</tr>
<tr>
<td>12.</td>
<td>You would be reprimanded if your work was consistently below acceptable standards.</td>
</tr>
</tbody>
</table>

### TABLE 3.8

**PERCEIVED CONTINGENCY ITEMS MAKING UP "ADVANCEMENT INSTRUMENTALITY"**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>You will eventually go as far as you would like to go in this company, if your work is consistently above average.</td>
</tr>
<tr>
<td>9.</td>
<td>You would be promoted if your work was better than others who were otherwise equally qualified.</td>
</tr>
<tr>
<td>20.</td>
<td>You would be promoted within the next two years if your work was consistently better than the work of others in your department.</td>
</tr>
</tbody>
</table>
TABLE 3.9
DEFINITIONS OF SATISFACTION INDEXES
AND PERCEIVED CONTINGENCIES

<table>
<thead>
<tr>
<th>Index</th>
<th>Coding Scheme</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Affective Tone</td>
<td>G.A.T.</td>
<td>An affective dimension dealing with intrinsic reward or satisfaction and not related to external referents.</td>
</tr>
<tr>
<td>General Arousal</td>
<td>G.A.</td>
<td>An individual's perception of the extent to which he is generally activated or invigorated.</td>
</tr>
<tr>
<td>Positive Incentive Motivational State</td>
<td>P.I.M.S.</td>
<td>The &quot;central motivational state&quot; of the individual due to the amount of positive and negative reinforcers occurring in the work environment.</td>
</tr>
<tr>
<td>General Affective Orientation</td>
<td>G.A.O.</td>
<td>An affective dimension describing the individual's perception of his possibilities for advancement within the company.</td>
</tr>
<tr>
<td>General Clarity</td>
<td>G.C.</td>
<td>The individual's perception of the availability and clarity of information regarding advancement opportunities.</td>
</tr>
<tr>
<td>Equitableness of Pay</td>
<td>E.P.</td>
<td>The individual's perception of fairness of his pay in relation to what others in the same company doing the same job are paid.</td>
</tr>
<tr>
<td>Index</td>
<td>Coding Scheme</td>
<td>Definition</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Interpersonal Attractiveness of Supervisor</td>
<td>I.A.S.</td>
<td>The subordinate's perception of the fairness and manner of the supervisor's interaction with him.</td>
</tr>
<tr>
<td>Personal Competence of Supervisor</td>
<td>P.C.S.</td>
<td>The individual's perception of his supervisor's ability and effectiveness.</td>
</tr>
<tr>
<td>Task Satisfaction</td>
<td>T.S.</td>
<td>The individual's affective reaction to the job and his perception of intrinsic job worth.</td>
</tr>
<tr>
<td>Supportive Instrumentality</td>
<td>S.I.</td>
<td>A measure of the worker's perception of company established contingencies between behavior and a supportive or rewarding type of organizational response.</td>
</tr>
<tr>
<td>Punitive Instrumentality</td>
<td>P.I.</td>
<td>The worker's perception of the contingency relationship between behavior and a punitive or reward-withholding organizational response.</td>
</tr>
<tr>
<td>Advancement Instrumentality</td>
<td>A.I.</td>
<td>The worker's perception of the contingency relationship between behavior and advancement within the organization.</td>
</tr>
</tbody>
</table>
Leadership Styles

Recent theoretical contributions to leadership theory have stressed the importance of a situational approach. That is, it has been recognized that having high or low concerns for performance or people does not automatically make one an effective manager. It is the extent to which the manager achieves the output requirements of his position that identifies him as being effective or ineffective.

Keeping the previous points in mind, this study has utilized the Management Style Diagnosis Test (MSDT) developed by Reddin\(^1\) for measuring leadership dimensions. Through the use of this instrument, three diagnostic measures of leadership style can be determined. These measures include:

1. Task Orientation (TO): The task orientation score indicates the extent to which the manager directs his subordinates' efforts toward goal attainment in the job he now has. It is characterized by initiating, organizing and directing.

2. Relationships Orientation (RO): The relationships orientation score indicates the extent to which a manager has personal job relationships with subordinates in the job he now has. It is characterized by listening, trusting and encouraging.

3. Effectiveness (E): The effectiveness score indicates the extent to which the manager achieves the output requirements of his position.

The MSDT is a self-report, forced choice questionnaire in which the participating supervisor reports his perceptions of his leadership style. The questionnaire is composed of sixty-four pairs of statements. (The specific statements which make up the questionnaire may be seen in Appendix B). After reading each pair of statements the manager must choose the one which best describes how he behaves in his present job position. Since the instrument requires an answer to each pair of statements, the respondent must decide between the two choices even though he may feel that neither of the statements or both of the statements apply to the particular situation represented. Upon completion, the questionnaires were collected and scored according to the instructions provided by Reddin. The scoring procedure, when completed, provided a numerical value between one and forty for each of the three leadership dimensions. These three values representing the individual's perception of his task orientation, relationships orientation, and effectiveness were then utilized in the statistical computations.

1These instructions are provided as an integral part of the Management Style Diagnostic Test. Though each participating supervisor could have scored his own questionnaire, this task was done by the researcher himself.
Method of Data Collection

As mentioned previously, the variables under consideration in this study were measured at two different points in time. The performance data were gathered by the author from company records. The satisfaction and leadership style data were collected on company time and premises from the subjects immediately following their afternoon break.

In administering the satisfaction questionnaire to the sewing machine operators, the subjects were told that they were being asked to take part in the evaluation and development of the questionnaire or survey. They were informed that the project was being funded through a private research grant and that their participation was strictly voluntary. Very few of the subjects to whom the presentation was made opted not to participate. Those subjects that decided to participate were then given a copy of the satisfaction questionnaire with the following information:

"YOU AT WORK"

"Everyone experiences a variety of complicated feelings while at work. Each has his own opinions. However, these feelings and opinions are not always expressed. You may be very dissatisfied with something having to do with your work and not say anything about it. Or, you might be very satisfied with something but somehow it never gets said. There are many reasons for this. You may be too busy. Sometimes you may feel too embarrassed. And there are also times when you may not feel that you can be perfectly frank about your opinions.

Your feelings and opinions are very important whether they are expressed or not. Furthermore, your Management wants to do whatever they can to make this Company a better place to work. This is a difficult
task especially when management is not certain about what is satisfying and what is dissatisfying.

This survey provides some time for you to sit down and seriously think about your opinions. It also provides an opportunity to express your feelings, good or bad, without fear of embarrassment. **Your opinions will be held in strict confidence.**

After you have completed the booklet, please return it and drop it in the sealed box that will be provided. When the survey has been completed, I will take all of the booklets back to the University for analysis. Then the booklets will be destroyed. Your booklet will never be shown to anyone connected with the Company."

In addition to this information, the subjects were also instructed in how to complete the questionnaire. The instructions, as derived from Osgood, et al., were read to the subjects who then responded to each bipolar adjective scale by checking one of the seven quantifiers. In brief the subjects were asked to:

"Please look at the concept at the top of each part of the questionnaire. If you feel that the concept is very closely related to one end of the scale you should place your check-mark under 'extremely'. If you feel that the concept is quite closely related to one or the other end of the scale (but not extremely), you should place your check-mark under 'quite'. If the concept seems only slightly related to one side or the other, then you should check 'slightly'. If you consider the concept to be neither one nor the other or unrelated to the scale, you should place your check-mark in the middle 'neither one nor the other' space. It is important that you: (1) place your check-marks in the middle of spaces, not on the boundaries; (2) be sure you place a check on every scale, do not leave any empty; and (3) do not put more than one check-mark on a single scale."

---

Total time spent with subjects in completing the attitude survey was approximately two hours.

At the same time the sewing machine operators were completing the satisfaction questionnaire, the participating first-line supervisors were answering the leadership questionnaire. The supervisors were told that they were being asked to participate in a privately funded research project aimed at developing and evaluating a leadership questionnaire. Participation was voluntary and the anonymity of the respondent was guaranteed. All of the supervisors participated, though there was some reluctance on the part of one group member. The subjects were then given a copy of the questionnaire to which was attached an answer form and the following instructions:

"The 'Individual Score Sheet' handed to you has sixty-four boxes numbered from one to sixty-four. These boxes are used to record your choice of each pair of questions, also numbered from one to sixty-four.

Look at the sixty-four pairs of statements. If you think the first statement of a pair is the one that best applies to you, put an 'A' in the appropriate box. If you think the second statement is the one that best applies to you, put a 'B' in the appropriate box. When you have finished, all the boxes will have either an 'A' or a 'B' in them.

EXAMPLE

The first pair of statements is:

A He overlooks violations of rules if he is sure that no one else knows of the violations.

B When he announces an unpopular decision he may explain to his subordinates that his own boss has made the decision.
If you think that statement 'A' is a better description of your behavior than 'B', write in 'A' in the first box. If you think that statement 'B' applies, put a 'B' in the first box. To decide which statement best applies ask yourself: 'OF THE TWO STATEMENTS GIVEN, WHICH BEST DESCRIBES WHAT I ACTUALLY DO ON THE JOB I NOW HAVE?' It may be helpful, in difficult cases, to answer as someone would who really knew and understood your present approach to your job. Some statements you may find a little ambiguous, sometimes both will apply, often neither will seem to apply. However, in every case pick the one statement that best describes you at present if you were faced with the circumstances described.\textsuperscript{1}

Total time spent by supervisors in completing the leadership instrument was approximately one and one-half hours.

Following data collection, the data was analyzed and scored for all the variables under consideration in the manner described in the section under the operational definition of those variables. The various measurements and scores were then transferred to computer cards to conduct the statistical analysis.

Statistical Analysis

There are two statistical techniques utilized in this study for data analysis. The first of these is the cross-lagged panel correlation technique. The second statistical tool is the dynamic correlation coefficient technique.

\textsuperscript{1}These instructions were adopted from the instructions accompanying the Management Style Diagnostic Test which was developed by William J. Reddin.
Cross-Lagged Panel Correlation Technique

The cross-lagged panel correlation technique was initially discussed by Simon,1 elaborated on by Campbell,2 and Pelz and Andrews,3 and applied most recently by Lawler and Suttle,4 and Greene.5 As previously pointed out, the technique requires the measurement of the variables in question at two different points in time (Time 1 and Time 2). By obtaining these identical measures both concurrent and predictive relationships between the variables can be represented by correlations. In analyzing the pattern of concurrent and predictive correlations from a cross-lagged panel, causal inferences and priorities concerning the relationships between the variables can be assessed.

After the data has been gathered, the cross-lagged analysis can be conducted as shown in Figure 3.2. The Figure illustrates that


Figure 3.2 Cross-Lagged and Dynamic Correlation Coefficients
six possible correlation coefficients exist for two hypothetical variables (A and B) measured at two points in time (Time 1 and Time 2). Two of the correlation coefficients, $r_3(r_{A_1A_2})$ and $r_4(r_{B_1B_2})$ provide information about the stability of variables A and B over time and thus are not directly concerned with the inference of causality. The remaining correlation coefficients $r_1(r_{A_1B_1})$, $r_2(r_{A_2B_2})$, $r_5(r_{A_1B_2})$, and $r_6(r_{B_1A_2})$, however, can provide indication of the causal direction of the relationships between the two variables. Greene points out that:

In order to support an hypothesis that A causes B, then the present (time 1) state of variable A should be more highly related to the future (time 2) state of variable B than to B's past and present state. Thus, if variable A does cause variable B, the magnitudes of the correlations should be such that $5 > (1=2) > 6$; that is, $r_{A_1B_2} > (r_{A_1B_1} = r_{A_2B_2}) > r_{B_1A_2}$. Conversely, if variable B is the causal variable then one would predict that $6 > (1=2) > 5$.

Pelz and Andrews\(^2\) make the further statement that if there is no observation of $r_5 > (r_1 = r_2)$, but $r_5 > r_6$, it is still plausible to infer A causes B although the interval between measurements may not be the causal interval.

Lawler\(^3\) has commented on the need to measure variables at two different points in time in order to allow predictive correlations

\(^1\)Ibid., p. 436.


and thus permit causal inferences about the relationships between two or more variables. Lawler has also explained the logic underlying the cross-lagged correlational technique as follows:

The logic underlying this kind of analysis rests upon the time lag that typically exists when one variable causes another. The argument is that if A causes B then the present state of A should be more strongly related to B's future state than to B's past or present state. Thus, where A→B (i.e., "A causally prior to B"), then $r_{AB}$ where B is measured after A should be greater than $r_{AB}$ where B is measured either before or at the same time as A. Thus, by comparing the relative sizes $r_{AB1}$, $r_{AB2}$, and $r_{AB3}$ where B is measured before, after, and at the same time as A, it is possible to determine whether the hypothesis A→B or B→A is more tenable.¹

Some important comments concerning the use of the cross-lagged panel correlation technique should be made. Though the technique does provide a better basis for making causal inferences than static correlation and other previously used techniques, it does have some weaknesses that should be mentioned. First, the technique only allows the researcher to make inferences concerning the causality question. It does not determine the direction of causation. Second, to show a strong inference of causality, the time lag necessary for causal effects to take place must be approached. Since few theories of organizational behavior try to specify the time lags needed for causal effects, the three month lag used in this study may not be the appropriate length of time needed to detect possible causal effects. Finally, this technique may show significant

¹Ibid., p. 463.
results when some third or additional variable has influenced the observed relationship.

Dynamic Correlation Coefficients

Vroom has proposed the use of a technique known as dynamic correlation coefficients that helps overcome one of the major weaknesses of the cross-lagged method of analysis. The dynamic correlation technique, like the cross-lagged approach, requires identical measurements of the subject variables at two points in time. However, the dynamic correlation method is strong where the cross-lagged technique is weak. That is, although the dynamic correlation approach cannot provide information concerning the direction of causality between the two variables, it does provide information on the possibility of a third variable causing the two variables of interest to covary.

The dynamic correlation method can best be explained by again referring to Figure 3.2 and the example of hypothetical variables A and B. A dynamic correlation coefficient $r_D$ is computed by correlating the change in A over time (difference in A from time 1 to time 2) with the change in B over time (difference in B from time 1 to time 2).

1The use of the term "dynamic correlation" seems to be peculiar to the management and psychological literature. This identical technique is often referred to in the statistical literature as the cross-sectional correlation of first differences.

to time 2). In order for a spurious dynamic correlation to occur between the changes in the two variables, a third or additional variable must be highly correlated to changes in both variables and must change in different amounts or directions in the members of the sample. Thus, when a high dynamic correlation is found between two variables, it can be inferred that one variable caused the other with considerably more confidence than that provided by the results of a high static correlation. Conversely, the lower the dynamic correlation is between two variables the greater the probability that a third or additional variable causes the two variables to covary in the static condition.

Commenting on this technique, Lawler has said that:

... when a significant dynamic correlation is found between two variables, one can put more faith in the fact that one caused the other than one can when a significant static correlation appears between two variables. This is particularly true in situations where the researcher can determine that many other variables are not changing at all or are not changing in a way that would lead to their accounting for the significant dynamic correlations.¹

Thus, even though the possibility of a third variable cannot be totally ruled out, the assurance of the management of participating firms that no inplant changes would occur over the research period, the stability of the garment industry technology, and the use of the dynamic and cross-lagged analysis make a strong case for ruling out most additional causal variables. The following chapter

presents the findings from the cross-lagged and dynamic techniques utilized in the data analysis.
CHAPTER IV
DATA ANALYSIS RESULTS AND DISCUSSION

This chapter is devoted to the presentation of the data analysis and a discussion of the findings. The results are presented according to the relationship of the variables under investigation (i.e. task orientation and satisfaction and performance, relationships orientation and satisfaction and performance, and effectiveness and satisfaction and performance). The first section of the chapter is devoted to discussing the tables used to present the data. This section is then followed by a discussion of the findings.

Discussion of Tables

The purpose of this section is to clarify and facilitate understanding of the data analysis. The main point of explanation will be the tables which are used in presenting results of the data analysis. It was mentioned in Chapter III that both the cross-lagged panel correlation and dynamic correlation techniques would be used to investigate both the concurrent and predictive relationships between the variables under investigation. A decision on how to analyze and present these data resulted in separate cross-lag and dynamic correlation coefficients for all pairs of the three leadership dimension measures, the nine satisfaction indexes, the three perceived contingency measures, and the individual index of
performance measures. A multivariate approach could have been chosen. However, such an approach was disregarded since the intent of the present research is to focus on specific patterns that may emerge among the variables rather than an overall relationship.

As pointed out in Chapter III, the use of the cross-lagged and dynamic correlation coefficients require identical measurements on the subject variables at two points in time. In the present study, data were gathered at successive three month intervals on measures of leadership style, worker satisfaction, and worker performance. Since the purpose of the present research is to examine both predictive and concurrent relationships between the variables under investigation, an attempt is made here to point out the possible meaningful empirical relationships that can be analyzed with the statistical techniques employed.

The correlations presented in the cross-lagged panel in Figure 4.1 represent the six coefficients that can be computed when longitudinal data are available. The horizontal or lagged correlations $r_3(r_1A_2)$ and $r_4(r_1B_2)$ reflect the test-retest reliability of variables A and B respectively. That is, coefficients $r_3$ and $r_4$ reflect the consistency of the variables under investigation over time. Therefore, though these two coefficients ($r_3$ and $r_4$) are not directly involved in tests for causality, they do provide evidence concerning the stability of the measures of variable A and variable B from time 1 to time 2.
Figure 4.1. Format for Presentation of Cross-Lagged and Dynamic Correlation Coefficients
Coefficients $r_1(r_{A_1B_1})$ and $r_2(r_{A_2B_2})$ represent the concurrent relationships between the two variables (A and B) at time 1 and time 2 respectively. Although these correlations are static in nature and therefore cannot actually determine causal priority, they can readily determine whether two variables are related. As mentioned in Chapter 3, however, the magnitudes of $r_1$ and $r_2$ can, when used in conjunction with the cross-lagged coefficients $r_5$ and $r_6$ provide an indication of the causal direction of the relationship between the two variables.

The predictive relationship between variable A and variable B can be empirically determined by examining coefficients $r_5(r_{A_1B_2})$ and $r_6(r_{B_1A_2})$. As is illustrated in Figure 4.1, analysis of the pattern of predictive or cross-lag correlations from a cross-lagged panel permits causal inferences about the relationship between the two variables under consideration. If variable A determines variable B rather than the reverse, the cross-lagged correlation $r_{A_1B_2}(r_5)$ should exceed $r_{B_1A_2}(r_6)$. By analyzing coefficients $r_5$ and $r_6$ from the panel data, a good indication of which of two variables (A or B) is more likely to have causal priority over the other can be assessed.

As pointed out in Chapter III, one of the weaknesses of the cross-lagged panel correlation technique is that it cannot rule out the possibility of a third variable causing the other two variables to covary. To help overcome this limitation, the dynamic correlation technique was employed in this study. The dynamic correlation coefficient $r_D$ shown in Figure 4.1 correlates changes in variable A from time 1 to time 2 with changes in variable B from
time 1 to time 2. When a high dynamic correlation (r_D) is found between two variables, the probability that a third or additional variable caused the two variables to covary is reduced though not entirely eliminated. Thus, the combination of the cross-lagged and dynamic correlation techniques can allow fairly strong inferences about causal priority when the results of both analysis agree.

In order to present the results of the data analysis in a comprehensible manner, separate cross-lagged panels and dynamic coefficients for all possible relationships between the variables under investigation will be presented. The results of the statistical analysis will be presented and discussed in the following order: (1) relationships between the leadership style dimension of task orientation and the nine satisfaction indexes, the three perceived contingency measures, and the performance index (Table 4.2), (2) relationships between the leadership style dimension of relationships orientation and the satisfaction indexes, perceived contingency measures, and the performance index (Table 4.3), and (3) relationships between the leadership style dimension of effectiveness and the nine satisfaction indexes, the three perceived contingency measures, and the performance index (Table 4.4). Before an attempt is made to infer the possible causality patterns between the subject variables, an analysis will first be made of the test-retest reliability of each variable since low correlations between variables can result from either or both being unreliable. This discussion will be followed by an examination of the concurrent or
static relationships between the variable pairs. Next, the cross­
lagged or predictive correlations dealing with causal priority will
be examined. Finally, dynamic correlations between the variable
pairs under investigation will be discussed.

Presentation of Findings

As was suggested in the previous section of this chapter, the
findings of the statistical analysis are presented according to the
possible relationships between the subject variables. Also, the
test-retest reliability, concurrent correlations, predictive cor­
relations, and dynamic correlations will be examined separately for
each set of variables being analyzed. In keeping with the major
purpose of this research (i.e. an investigation of the possible
causal relationships between leadership style, subordinate satis­
faction, and subordinate performance), the focus of the presentation
of the research findings will be on data which helps reveal any
causal priorities between the variables under investigation.

The mean satisfaction index scores, perceived contingency scores,
leadership dimension scores, and performance index scores for all
the subjects in the study are presented in Table 4.1. In the table,
the raw scores and standard deviations for all the variables are
reported for both time period one and time period two. The table
indicates that the mean score of the majority of the variables de­
clined in time period two relative to time period one. The only
exceptions to this were Punitive Instrumentality (P.I.), Task
Table 4.1
Comparison of Mean Scores for Variables Under Investigation

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean Scores</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Time 1</td>
</tr>
<tr>
<td>Satisfaction Indexes</td>
<td></td>
</tr>
<tr>
<td>General Affective Tone</td>
<td>4.89</td>
</tr>
<tr>
<td>General Arousal</td>
<td>6.25</td>
</tr>
<tr>
<td>Positive Incentive Motive State</td>
<td>6.08</td>
</tr>
<tr>
<td>General Affective Orientation</td>
<td>4.16</td>
</tr>
<tr>
<td>General Clarity</td>
<td>4.16</td>
</tr>
<tr>
<td>Equitableness of Pay</td>
<td>4.52</td>
</tr>
<tr>
<td>Interpersonal Attractiveness of Supervisor</td>
<td>5.33</td>
</tr>
<tr>
<td>Personal Competence of Supervisor</td>
<td>5.44</td>
</tr>
<tr>
<td>Task Satisfaction</td>
<td>4.99</td>
</tr>
<tr>
<td>Perceived Contingencies</td>
<td></td>
</tr>
<tr>
<td>Supportive Instrumentality</td>
<td>4.16</td>
</tr>
<tr>
<td>Punitive Instrumentality</td>
<td>4.52</td>
</tr>
<tr>
<td>Advancement Instrumentality</td>
<td>3.10</td>
</tr>
<tr>
<td>Leadership Dimensions</td>
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<tr>
<td>Task Orientation</td>
<td>32.83</td>
</tr>
<tr>
<td>Relationships Orientation</td>
<td>32.20</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>32.28</td>
</tr>
<tr>
<td>Performance</td>
<td>105.07</td>
</tr>
</tbody>
</table>
Orientation (T.O.), and Performance (Perf.) which tended to rise over the three month time interval. Appendix C contains additional information concerning the raw data including the sums and the minimum and maximum values for each of the variables.

**Relationships Between Task Orientation and Satisfaction and Performance**

Table 4.2 depicts the relationships between the leadership dimension of task orientation (T.O.) and subordinate satisfaction and subordinate performance. The first three pages of Table 4.2 show the relationships of task orientation with the nine satisfaction indexes. The fourth page of the table illustrates the relationships between task orientation and the three perceived contingency measures. The final page of the table presents the task orientation-performance relationships.

**Task Orientation and Satisfaction**

As previously mentioned the first three pages of Table 4.2 depict the relationships between task orientation and the nine satisfaction indexes. The consistency of the task orientation variable and all nine of the satisfaction measures is quite apparent. The horizontal or reliability correlation coefficients of all the measures are significant at the .001 level. Thus, the empirical evidence highly supports the stability of the task orientation dimension and the satisfaction indexes from time period 1 to time period 2.
Table 4.2
Correlations Between Task Orientation, Satisfaction, and Performance

Note: The first numerical value is the correlation coefficient. The value in parentheses is the level of significance.
Table 4.2 (Continued)

Note: The first numerical value is the correlation coefficient. The value in parentheses is the level of significance.
Table 4.2 (Continued)

Note: The first numerical value is the correlation coefficient.
The value in parentheses is the level of significance.
Table 4.2 (Continued)

Note: The first numerical value is the correlation coefficient. The value in parentheses is the level of significance.
Table 4.2 (Continued)

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<th>TO1</th>
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<td>(0.0001)</td>
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<td></td>
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<tr>
<td>Perf.3</td>
<td></td>
<td></td>
<td>.243</td>
<td>(0.004)</td>
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<tr>
<td>Perf.4</td>
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<tr>
<td>Perf.9</td>
<td></td>
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</tr>
</tbody>
</table>

Note: The first numerical value is the correlation coefficient. The value in parentheses is the level of significance.

Since both task orientation and the nine satisfaction indexes were measured at two points in time, eighteen concurrent or static correlations can be analyzed. Of the eighteen concurrent correlations, sixteen were negative. Of the negative correlations, one was significant at the .001 level while two were significant at the .05 level. The remaining negative correlations failed to reach significance. Two of the correlations were positive. However, neither of these positive correlations even approached a significant level. The preponderance of negative correlations gives an indication that if there is a static relationship between task orientation and satisfaction it is a negative relationship. However, due to the lack of strength of these concurrent correlations, the hypothesis of a .00 correlation between the subject variables cannot be ruled out.

Also illustrated in the table are the cross-lagged or predictive relationships between task orientation and the satisfaction indexes.
The values of these correlation coefficients vary somewhat in strength. However, the patterns of these cross-lagged coefficients support the "task orientation-causes-satisfaction" proposition in a majority of the cases. Task orientation has a strong causal relationship with Equitableness of Pay (E.P.) \((p<.01)\), a moderate causal relationship with Task Satisfaction (T.S.) \((p<.05)\), and causal relationships with General Affective Tone (G.A.T.) and Positive Incentive Motivational State (P.I.M.S.) that are approaching significance \((\text{both } p's<.1)\). Task orientation seems to have causal priority in its relationship with Interpersonal Attractiveness of Supervisor (I.A.S.) and Perceived Competence of Supervisor (P.C.S.) although the predictive correlation coefficients are not significant.

The negative signs in front of the coefficients in all of the above cases can be interpreted as supporting the proposition that the greater the task orientation of the supervisor, the lower will be the subordinates' satisfaction. This point can be illustrated by examining the task orientation - equitableness of pay relationship. As the supervisor's task orientation increases, the subordinates' perception of the equitableness of his pay tends to decrease. In contrast to the above findings, General Clarity (G.C.) seems to be the causal variable in its relationship with task orientation. The predictive correlation coefficient in this case is negative and approaching significance \((p<.1)\). The negative correlation seems to indicate that as the subordinate becomes more aware of his chances for advancement, the amount of task orientation exhibited by the
supervisor tends to decrease. The pattern of cross-lagged correlation coefficients between task orientation and General Affective Orientation (G.A.O.) seems to indicate reciprocal causality. This inference must, however, be viewed with caution since neither of the predictive correlations are significant. The mixed nature of the correlations between task orientation and General Arousal (G.A.) precludes the possibility of inferring anything about the causal relationship between the two variables.

Of the nine dynamic correlation coefficients between task orientation and the satisfaction indexes, five are negative and four are positive. None of these dynamic coefficients reached statistical significance. The dynamic correlation coefficients indicate that a third, and perhaps several additional variables, contributed to the covariance between the task orientation dimension and the nine satisfaction indexes.

Task Orientation and Perceived Contingencies

The possible relationships between task orientation and the perceived contingency measures are shown on the fourth page of Table 4.2. The stability of the task orientation variable has already been established. The test-retest reliabilities of Supportive Instrumentality (S.I.) and Advancement Instrumentality (A.I.) are significant at the .001 level. The reliability of the third perceived contingency measure (Punitive Instrumentality - P.I.) is significant at the .01 level. Thus, all four of the variables appear to have a high level of stability from time period 1 to time period 2.
Five of the six concurrent correlations between task orientation and the three contingency measures are negative. None of the five negative or one positive concurrent correlations approach statistical significance. It is not, therefore, possible to reject the hypothesis of a .00 correlation between the variables. It is, however, interesting to note the predominance of negative correlations between task orientation and the contingency measures. There is again the indication, as with the satisfaction indexes, that task orientation has a negative static relationship with the other variables under examination.

All six of the cross-lagged relationships between task orientation and Supportive Instrumentality (S.I.), Punitive Instrumentality (P.I.) and Advancement Instrumentality (A.I.) are negative and have a low median predictive coefficient of only -.0745. The pattern of predictive correlation coefficients between task orientation and Supportive Instrumentality and task orientation and Advancement Instrumentality are such that reciprocal causality is indicated. However, none of the predictive correlation coefficients are significant. There is some slight indication that Punitive Instrumentality may have causal priority in its relationship with task orientation. The negative sign indicates that, as the subordinates perception of the contingency relationship between his behavior and punitive organizational responses increases, the supervisors emphasis on task decreases. The inference of causality in this case is again weak, however, since the correlation coefficients are not significant.
The dynamic correlations between task orientation and the contingency measures are quite weak and none are significant. Based on this information, it is not possible to rule out the possibility of additional variables causing the task orientation and contingency variables to covary.

Task Orientation and Performance

The final cross-lagged and dynamic panels in Table 4.2 show the relationships between task orientation and performance. The panels indicate the strongest test-retest reliability between the two variables. Since the reliability coefficients of both variables are significant at the .001 level, the measures of task orientation and performance show a high level of consistency from time period 1 to time period 2.

The two concurrent relationships between the variables of task orientation and performance are positive. However, neither of these static correlations even approach significance. Due to lack of significant concurrent or static correlations, the hypothesis of .00 correlation between the variables cannot be rejected.

The cross-lagged coefficient supporting the "performance-causes-task orientation" proposition was the strongest of the two predictive correlation coefficients. This coefficient though not significant is quite close to being significant (p=.07). The negative sign of the coefficient can be interpreted as indicating that low performance by a subordinate leads to increased task orientation behavior by the leader while high performance by a subordinate causes reduced leader
emphasis on task orientation. The dynamic correlation is significant \((p < .005)\) and strong enough to rule out any large possibility of additional variables contributing to the covariance between performance and task orientation.

Summary

In summary, the empirical data support the proposition that task orientation has a negative causal impact on the satisfaction indexes in six out of nine cases. However, due to the low values of the dynamic correlation coefficients, third variable causal affects cannot be ruled out. The empirical data also showed negative reciprocal causality between task orientation and the perceived contingency measures. However, because of low concurrent and dynamic correlations, the data do not give strong support to a generalizable solution concerning these variables. Finally, the data show performance as being the causal variable in its negative relationship with task orientation. This finding is strengthened by the strong dynamic correlation between the two variables which rules out the possibility of most potential third causal variables.

Relationships Between Relationships Orientation and Satisfaction and Performance

The possible relationships between the leadership dimension of relationships orientation (hereafter referred to as R.O.) and subordinate satisfaction and performance are shown in Table 4.3. The first three pages of this table show the relationships of R.O. with the nine satisfaction indexes. The fourth page of the table
Table 4.3
Correlations Between Relationships
Orientation, Satisfaction, and Performance

Note: The first numerical value is the correlation coefficient. The value in parentheses is the level of significance.
Table 4.3 (Continued)

Note: The first numerical value is the correlation coefficient. The value in parentheses is the level of significance.
Table 4.3 (Continued)

Note: The first numerical value is the correlation coefficient. The value in parentheses is the level of significance.
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<td>0.103</td>
<td>0.225</td>
</tr>
</tbody>
</table>

Note: The first numerical value is the correlation coefficient. The value in parentheses is the level of significance.
Table 4.3 (Continued)

Note: The first numerical value is the correlation coefficient. The value in parentheses is the level of significance.

illustrates the relationships between R.O. and the three perceived contingency measures. The final page of the table presents the R.O. performance relationships.

Relationships Orientation and Satisfaction

The first three pages of Table 4.3 illustrate the relationships between R.O. and the nine satisfaction indexes. As noted in the previous section, the test-retest reliabilities of the nine satisfaction indexes are significant at the .001 level. The correlation between relationships orientation (R.O.) at time 1 and at time 2 is significant at the .002 level. Thus, the empirical evidence highly supports the stability of all the subject variables from time period 1 to time period 2.

The eighteen possible concurrent correlations between relationships orientation (R.O.) and the nine satisfaction indexes offer
little evidence of a static relationship between the variables. Of the eighteen coefficients, only one was significant (p < .05) while the majority did not approach statistical significance. The overall level of the concurrent relationships is quite low with the median static correlation coefficient equal to .034. Fifteen of the coefficients, however, were positive while only three were negative. This predominance of positive correlations may offer some evidence that if there is a static relationship between the variables it is a positive one. However, due to lack of strength of the eighteen concurrent correlations, the hypothesis of a .00 correlation between the variables cannot be rejected.

The predictive or cross-lagged correlation coefficients for the analysis of the relationships orientation-satisfaction data are also presented in the first three pages of Table 4.4. The patterns of the cross-lagged coefficients indicate relationships orientation as having causal priority over satisfaction in five of the nine cases. This indication is quite strong in R.O.'s relationship with General Clarity (G.C.)(p = .002), moderately strong in its relationship with General Affective Tone (G.A.T.) and Task Satisfaction (T.S.) (both p's < .05), and approaching significance in its relationship with General Arousal (G.A.) (p < .1). There is also an indication that relationships orientation (R.O.) has causal priority in its relationship with Positive Incentive Motivational State (P.I.M.S.). However, in this case the predictive coefficient is not significant. In all cases described above the causal
relationship was positive which indicates that as the leaders relationships orientation increases, satisfaction, as measured by these five indexes, also tends to increase. Two exceptions to the above statements are also evident when the cross-lagged panels are examined. Interpersonal Attractiveness of Supervisor (I.A.S.) and Perceived Competence of Supervisor (P.C.S.) seem to have causal priority in their relationships with R.O. Both predictive correlations are significant at the .05 level and have negative signs preceding the correlation coefficients. The negative signs can be interpreted as indicating that increases in the employees' perception of the supervisor's fairness (I.A.S.) and ability (P.C.S.) lead to decreased emphasis on relationships orientation (R.O.) by the supervisor. The mixed nature of the predictive correlations between relationships orientation (R.O.) and General Affective Orientation (G.A.O.) and Equitableness of Pay (E.P.) make it impossible to infer causal priority in either of the relationships.

The dynamic correlation coefficients between relationships orientation (R.O.) and the nine satisfaction indexes are too low to rule out the possibility of additional variables causing the relationships orientation (R.O.) and satisfaction variables to covary. Of the nine dynamic correlations computed between the changes in relationships orientation (R.O.) and the changes in the nine satisfaction indexes, none are significant with five of the nine being negative.
Relationships Orientation and Perceived Contingencies

The fourth page of Table 4.3 shows the relationships between the leadership style dimension of relationships orientation (R.O.) and the three perceived contingency measures. The test-retest reliability of all of these measures has been previously discussed and there appears to be a high level of stability for all four variables from time period 1 to time period 2.

Of the six possible concurrent correlations between the relationships orientation (R.O.) and perceived contingency variables, four were positive and two were negative. All six of the correlation coefficients were quite low and none approached significance. Overall, very little empirical support exists for any strong static relationship between (R.O.) and the three measures of perceived contingency.

The predictive correlations between relationships orientation (R.O.) and Supportive Instrumentality (S.I.) are mixed and therefore offer no indication of causal priority. The patterns of the cross-lagged coefficients between Punitive Instrumentality (P.I.) and relationships orientation (R.O.) and Advancement Instrumentality (A.I.) and relationships orientation (R.O.) give a slight indication that the two perceived contingency measures may have causal priority in a negative causal relationship. However, these two relationships should be viewed with much caution since the predictive correlations do not approach customary levels of significance.
The three dynamic correlations between the changes in relationships orientation (R.O.) and the changes in the three perceived contingencies were all positive. They were, however, quite low and did not approach significance. Thus, the possibility of third or even more causal variables affecting the subject relationships cannot be ruled out.

Relationships Orientation and Performance

The final page of Table 4.3 shows the relationships between the leadership dimension of relationships orientation (R.O.) and the subordinate performance index. The reliability correlations relating relationships orientation (R.O.) at time 1 and time 2 and performance at time 1 and time 2 are both highly significant (both p's < .002). Therefore, both measures seem to be quite consistent over time.

Table 4.3 also shows the concurrent and predictive relationships between R.O. and performance. Neither the concurrent nor the cross-lagged coefficients reached a level of statistical significance. The two concurrent correlations are negative and only one of them approaches customary levels of significance (p < .1). One of the predictive correlations is negative and the other is positive. Both correlations are quite weak. Due to lack of strength of both the concurrent and predictive correlations, little evidence of causal priority appears to exist and the possibility of a .00 correlation between the pair of variables cannot be rejected.
The dynamic correlation coefficient between relationships orientation and performance is .146 (p=.083). Although this coefficient begins to approach customary levels of significance, the possibility of other causal variables cannot be ruled out.

Summary

In summary, the empirical evidence seems to give some indication of there being a positive static relationship between relationships orientation and satisfaction. It also indicates that relationships orientation has a positive causal relationship with five of the satisfaction indexes. Two of the satisfaction indexes, however, appear to have causal priority in their negative relationships with the R.O. leadership dimension. The empirical data between relationships orientation (R.O.) and the three perceived contingency measures and between relationships orientation (R.O.) and performance does not give strong support to a generalizable solution concerning which of the variables tends to have causal priority over the other.

Relationships Between Effectiveness and Satisfaction and Performance

Table 4.4 shows the relationships between the leadership style dimension of effectiveness (E.) and subordinate satisfaction and subordinate performance. Analogous with the presentation of research findings in the two previous sections, the first three pages of Table 4.4 depict the effectiveness-satisfaction relationships. This information is followed by the relationships between effectiveness
Table 4.4
Correlations Between Effectiveness, Satisfaction, and Performance

Note: The first numerical value is the correlation coefficient. The value in parentheses is the level of significance.
Note: The first numerical value is the correlation coefficient. The value in parentheses is the level of significance.
Table 4.4 (Continued)

<table>
<thead>
<tr>
<th></th>
<th>( \text{Eff}_1 )</th>
<th>( \Delta \text{Eff} )</th>
<th>( \text{Eff}_2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>IAS(_1)</td>
<td>( .161 ) ( (.055) )</td>
<td>( .047 ) ( (.594) )</td>
<td>( .156 ) ( (.064) )</td>
</tr>
<tr>
<td>IAS(_2)</td>
<td>( .0001 )</td>
<td>( .0001 )</td>
<td>( .0001 )</td>
</tr>
<tr>
<td>PCS(_1)</td>
<td>( .568 ) ( (.0001) )</td>
<td>( .178 ) ( (.035) )</td>
<td>( .029 ) ( (.739) )</td>
</tr>
<tr>
<td>PCS(_2)</td>
<td>( .195 ) ( (.021) )</td>
<td>( .312 ) ( (.038) )</td>
<td>( .775 ) ( (.0001) )</td>
</tr>
</tbody>
</table>

Note: The first numerical value is the correlation coefficient. The value in parentheses is the level of significance.
Table 4.4 (Continued)

Note: The first numerical value is the correlation coefficient. The value in parentheses is the level of significance.
and the perceived contingencies as illustrated on the fourth page of the table. The final page of the table contains the cross-lagged and dynamic panels which present relationships between effectiveness and performance.

**Effectiveness and Satisfaction**

As previously indicated in the discussion of the research findings, the reliability coefficients between the nine satisfaction indexes are all significant at the .001 level. The stability of the effectiveness dimension is not significant in the commonly accepted sense of the term (p=.055). This value is, however, so close to being significant that it seems reasonable to state that all the measures under examination have fairly strong test-retest reliability from time period 1 to time period 2.
The eighteen concurrent correlations between the leadership dimensions of effectiveness and the satisfaction indexes are also shown on the first three pages of Table 4.4. These correlations are almost equally mixed. Eight of the correlations are positive and ten are negative. Two of the positive correlations are significant (one at the .01 level and one at the .05 level) and two of the negative correlations are significant (one at the .01 level and one at the .05 level). The mixed nature of the correlations precludes making any judgments as to the type of static relationship existing between the variables. Also, the low values of most of the concurrent correlations do not allow rejection of the hypothesis of a possible .00 correlation between the leadership dimension of effectiveness and the nine satisfaction indexes.

There are eighteen cross-lagged or predictive correlations between effectiveness and the nine satisfaction measures shown in Table 4.4. The patterns of the predictive correlations between Interpersonal Attractiveness of Supervisor (I.A.S.) and effectiveness indicate that I.A.S. has causal priority. The predictive correlation in this case is negative and significant at the .05 level. The negative correlation would seem to indicate that increases in the employee's perception of the supervisor's fairness, lead to decreased perceptions of effectiveness by the supervisor. The cross-lagged correlations between Perceived Competence of Supervisor (P.C.S.) and effectiveness are both significant at the .05 level. Since both of these predictive correlations are significant
there seems to be an indication of reciprocal causality between the two variables. Positive Incentive Motivational State (P.I.M.S.) seems to have causal priority in its relationship with effectiveness. This positive relationship which is approaching significance (p=.062) indicates that an increase in the general satisfaction of the workers (P.I.M.S.) leads to an increased perception of effectiveness on the part of the supervisor. Because of the mixed nature and low values of the predictive correlation coefficients between effectiveness and General Arousal (G.A.), Equitableness of Pay (E.P.), and Task Satisfaction (T.S.), no meaningful inference of causality can be presented. The cross-lagged correlations between effectiveness and General Affective Tone (G.A.T.), General Affective Orientation (G.A.O.) and General Clarity (G.C.) are all very low and negative with a median correlation of -.015. The low values of these correlations make it impossible to assess causal priority among the variables.

Of the nine dynamic correlation coefficients, five are positive and four are negative. Eight of these correlations are quite low and did not reach significance. The dynamic correlation between effectiveness and Perceived Competence of Supervisor (P.C.S.) does, however, approach significance (p<.1). Since none of the dynamic correlations reached statistically acceptable levels of significance, the possibility of third causal variables affecting the relationships in question cannot be ruled out.
Effectiveness and Perceived Contingencies

The relationships between effectiveness and the perceived contingency measures are shown on the fourth page of Table 4.4. The test-retest reliability of all of these measures has been previously shown to be of sufficient strength to indicate a fairly high level of stability for all the measures from time period 1 to time period 2.

Of the six concurrent correlations between the effectiveness and perceived contingency variables, four of the correlations are negative and two are positive. One of the four negative concurrent correlations is significant at the .05 level and two of the three remaining negative correlations are approaching significance (p < .1). Neither of the positive correlations are significant. The fact that a majority of these static correlations are negative and relatively strong seems to indicate the possibility of a negative static relationship between the variables.

The six predictive correlations between effectiveness and the perceived contingencies are also illustrated in Table 4.4. The predictive correlation between Punitive Instrumentality (P.I.) at time 1 and effectiveness at time 2 is significant at the .05 level and seems to indicate that Punitive Instrumentality has causal priority. The negative sign preceding the predictive correlation coefficient shows that increased worker perception of the relationship between behavior and punitive organizational responses leads to decreased perceived effectiveness of supervision. Advancement Instrumentality
(A.I.) seems to have causal priority in its relationship with effectiveness. The predictive correlations indicate that this relationship is negative and approaching significance ($p < .1$). The negative sign seems to indicate that an increased worker awareness of the relationship between advancement and behavior within the organization leads to decreased perceived effectiveness on the part of the supervisor. The two predictive correlations between effectiveness and Supportive Instrumentality (S.I.) are so close ($-.140$ and $-.135$) that there seems to be an indication of reciprocal causality. The inferences of causality made between Advancement Instrumentality and effectiveness and Supportive Instrumentality and effectiveness should be accepted only with the proper amount of caution since none of these predictive correlations reached accepted levels of significance.

All three of the dynamic correlations between effectiveness and the perceived contingency measures are positive and low. The median value of the dynamic coefficients is $0.066$. The weakness of these correlations indicates that third and possibly additional outside variables may have contributed to the covariance between the leadership dimension of effectiveness and the three perceived contingency measures.

**Effectiveness and Performance**

The test-retest reliabilities of the effectiveness and performance measures have previously been established. The concurrent relationships between effectiveness and performance are shown on the last
One of the concurrent relationships is positive and approaching significance \( (p = .105) \) while the other is negative and not significant. The predictive correlations are both positive with the correlation between performance at time period 1 and effectiveness at time period 2 being significant at the .01 level. Performance, therefore, seems to be the causal variables in the positive relationship between the two variables.

The dynamic correlation coefficient is positive and significant at the .05 level. The strength of this correlation tends to rule out any large possibility of additional variables contributing to the covariance between performance and effectiveness.

**Summary**

In summary, only two of the satisfaction indexes were found to have significant predictive relationships with effectiveness. In one of these relationships the satisfaction index was found to have negative causal impact on the effectiveness dimension. In the second relationship there seemed to be an indication of reciprocal causality between the satisfaction index and effectiveness. Only one of the perceived contingency measures was found to have a significant relationship with effectiveness. In this case, the perceived contingency measure seemed to have causal priority in its negative relationship with effectiveness. Finally, performance was found to be the causal variable in its positive relationship with effectiveness. The significance of this finding was enhanced by a significant dynamic correlation coefficient between the two variables.
This chapter has presented the findings of the data analysis. The purpose of the next chapter is to present a complete summary of the results of the data analysis and the conclusions resulting from this study.
CHAPTER V
SUMMARY AND CONCLUSIONS

Theory and research concerning the possible relationships between the variables of leadership style, subordinate satisfaction, and subordinate performance date back a number of years in studies of organizational behavior. As discussed in Chapter II, various theoretical conceptualizations have emerged concerning the hypothesized linkages between the major variables of leadership style, subordinate satisfaction, and subordinate performance. Numerous studies and periodic reviews of the literature have been unable to ascertain a generalizable solution which supports any of the theoretical conceptualizations between the variables. Moreover, many of the research studies examining the variables in question have not concerned themselves with the determination of the direction of causality but have simply assumed leadership style as having causal priority in its relationships with worker satisfaction and performance. In light of these findings it was felt that some improvements might be made over previous empirical studies in this area. Specifically, an attempt has been made in the present study to utilize recent theoretical and methodological contributions to allow a more comprehensive strategy in analyzing any possible causal relationships between the variables under investigation. The methodological improvements employed in the present study include
improved measures of the variables of leadership style, worker satisfaction, and worker performance as well as the use of the cross-lagged panel correlation and dynamic correlation techniques.

The results of this study (as summarized below) lend some credence to the recently discussed proposition that the performance of the subordinate affects the leadership style of the superior. In addition, the findings of this study follow somewhat the more commonly accepted theoretical views concerning the subject variables. However, before presenting a complete discussion of the conclusions resulting from this study, a summary of the results of the data analysis will be presented.

Summary of Data Analysis

The summary of the data analysis will be presented according to the possible relationships between the subject variables. Analogous to the organization used in the data analysis section of Chapter IV, the summary of the relationships detected between task orientation and satisfaction and performance will be presented first. Following this, the summary of the data analysis linking relationships orientation, satisfaction, and performance will be presented. Finally the results relating effectiveness, satisfaction, and performance will be summarized.

Relationships Between Task Orientation and Satisfaction and Performance

The test-retest reliability correlation coefficients between task orientation, the nine satisfaction indexes, the three perceived
contingency measures, and the performance index were all significant (p's < .002). Thus the empirical evidence highly supports the stability of these measures from time period 1 to time period 2.

Examination of the twenty-six concurrent correlations between task orientation and the nine satisfaction indexes, the three perceived contingency measures, and the performance index show that twenty-one of these concurrent correlations are negative. The large number of negative concurrent correlations seems to indicate that in the static condition there is a negative relationship between task orientation and the other variables under investigation. This indication must, however, be viewed with a proper amount of caution since only two of the negative static correlations were significant.

The predictive correlations between task orientation and the nine satisfaction indexes seem to indicate the leadership dimension of task orientation as having causal priority in six of the nine cases. In all six of the cases the causal relationship is negative. This would seem to show that increases in a leader's task orientation leads to decreased subordinate satisfaction as measured by these six indexes. The predictive correlations between task orientation and three of the satisfaction indexes and the three perceived contingency measures did not reach statistical significance. Therefore, little can be inferred concerning causal priority in these cases. The cross-lagged coefficients between
task orientation and performance support the "performance-causes-task orientation" proposition. The negative cross-lagged correlation coefficient in this case seems to indicate that low performance by the worker leads to an increase in task orientation on the part of the superior.

The dynamic correlations between task orientation and the satisfaction and perceived contingency measures did not reach statistical significance. The possibility of additional variables causing the subject variables to covary cannot, therefore, be ruled out. The strong dynamic correlation between task orientation and performance does, however, rule out any large possibility of additional variables contributing to the covariance between these two subject variables.

Relationships Between Relationships Orientation and Satisfaction and Performance

The test-retest reliability coefficients of the satisfaction indexes, perceived contingency variables, and the performance index have previously been summarized as being highly significant. The reliability coefficient between relationships orientation at time 1 and at time 2 is also significant (p=.002). All variables, therefore, seem to have remained stable over the three month lag period.

There are a total of twenty-six concurrent correlations between relationships orientation and the measures of satisfaction, perceived contingency, and performance. Of these twenty-six static correlations only one reached significance. The possibility of a .00
correlation between the variables cannot, therefore, be ruled out. If, however, there is a static relationship between the leadership style dimension of relationships orientation and the other variables, it appears that it would be positive since nineteen of the static correlations were positive.

The predictive correlations between relationships orientation and the satisfaction indexes indicate relationships orientation as having causal priority over five of the nine indexes. The predictive correlations in these five cases are positive and indicate that increased emphasis on relationships orientation leads to increased subordinate satisfaction as measured by these particular indexes. In two cases, however, negative predictive correlations indicated the satisfaction index as having causal priority (i.e. I.A.S.→R.O. and P.C.S.→R.O.). The predictive correlation coefficients between relationships orientation and the remaining satisfaction indexes, the perceived contingency measures, and the performance index are low and/or mixed and therefore make it impossible to infer causality.

Of the thirteen dynamic correlation coefficients between relationships orientation and the other variables under investigation, only one correlation coefficient even approaches significance (i.e. the dynamic correlation coefficient between relationships orientation and performance). The low values of these correlations make it impossible to rule out the possibility of additional variables causing the subject variable pairs to covary.
Relationships Between Effectiveness and Satisfaction and Performance

The empirical data shows the coefficient of reliability between effectiveness at time period 1 and at time period 2 to be significant at the .055 level. Since this value is quite close to popularly accepted levels of significance, it seems reasonable to state that the measure has test-retest reliability from time period 1 to time period 2. As previously mentioned, the satisfaction, perceived contingency, and performance variables also showed strong test-retest reliability over the research period.

Of the twenty-six concurrent correlations between the leadership style dimension of effectiveness and the satisfaction, perceived contingency, and performance variables, eleven of the concurrent correlations are positive while fifteen are negative. The mixed nature of these correlations precludes making any judgement concerning the static relationships between the variables. Also the low values of a majority of these static correlations do not allow rejection of the hypothesis of a possible .00 correlation between effectiveness and the other variables.

The predictive correlations between effectiveness and seven of the satisfaction indexes do not reach customary levels of significance. The lack of significant predictive correlations makes it impossible to access causal priority in the seven relationships. The predictive correlations in one of the effectiveness-satisfaction index relationships indicate a negative relationship in which the
The predictive correlations in the remaining relationship between effectiveness and the satisfaction indexes are negative. Both of the predictive or cross-lagged correlations are significant, thus giving an indication of reciprocal causality (i.e. E.→P.C.S. and P.C.S.→E.). One of the perceived contingency measures appears to have causal priority in its negative relationship with effectiveness (P.I.→E.). The predictive correlations in the two remaining effectiveness-perceived contingency relationships did not reach significance and thus causal priority cannot be inferred. The predictive correlations in the performance-effectiveness relationship appear to indicate that performance has causal priority. This predictive correlation was significant at the .008 level. The cross-lagged correlation in the above case was positive and appears to indicate that increased subordinate performance leads to increased perceptions of effectiveness on the part of the supervisor.

None of the dynamic correlations between effectiveness and the nine satisfaction indexes and the three perceived contingency measures were significant. However, the dynamic correlation between performance and effectiveness was significant at the .016 level. This tends to add some validity to the findings that performance has causal priority over effectiveness since the strong dynamic correlation coefficient rules out the possibility of most other variables causing the two variables in question to covary.
Discussion of Results

It will be recalled that the major purpose of this research endeavor has been to investigate the possible causal relationships between the variables of managerial leadership style, subordinate satisfaction, and subordinate performance. The study has utilized the most recent theoretical and methodological techniques available. This section focuses on a discussion of the results of this improved methodological approach. The results will be presented in three parts. Findings dealing with each of the leadership dimensions will be examined beginning with task orientation, followed by relationships orientation and ending with effectiveness.

Task Orientation

As was pointed out in the discussion of research findings in Chapter II, there have been very few attempts to determine the direction of the causal relationships between task orientation and satisfaction. The only researcher to date to have looked at these relationships using a longitudinal approach has been Greene. On the whole, Greene was able to find very little evidence of causality between initiating structure (task orientation) and satisfaction. In contrast to Greene's findings, the task orientation-satisfaction indexes relationships in the present study appear to indicate that

task orientation has causal priority over satisfaction. It should also be pointed out that the significant predictive correlations indicate that the relationship between task orientation and the satisfaction indexes are negative. The negative sign indicates that increases in leader task orientation lead to decreased satisfaction on the part of the worker.

The empirical results of this study concerning the task orientation-satisfaction relationship support a theoretical proposition recently introduced by Kerr, et al. Kerr and his associates at Ohio State University examined the voluminous literature relating initiating structure (task orientation) and consideration (relationships orientation) for purposes of formulating a set of theoretical propositions concerning how these variables relate to subordinate satisfaction and performance. One of the propositions formulated by these researchers was that when work was not intrinsically satisfying, increased resentment and decreased satisfaction occur as the manager increases his initiation of structure (task orientation). A caveat to this proposition was that "most of the reviewed studies failed to establish research designs adequate to permit cause-effect relationships to be ascertained. The propositions cannot therefore

be taken to signify that any consensus yet exists about the direction of causality.\(^1\)

Since the type of work examined in this study can be classified as "not intrinsically satisfying" (i.e. does not offer job autonomy, broad job scope, or the opportunity to do interesting work), the empirical results not only support the Ohio State proposition but add credibility to it. The present findings, which show task orientation as having negative causal priority over satisfaction, tend to overcome the major restriction of the Ohio State proposition and, therefore, give it empirical justification.

The general contention concerning the leader behavior-performance relationship has been that leadership style is the causal variable. This theoretical proposition was finally questioned when Vroom\(^2\) and Korman\(^3\) concluded that there was just as much likelihood that performance causes leadership style as there was for the reverse proposition. At a theoretical level, Lowin and Craig\(^4\) presented such a position based on Katz and Stotland's functional view of attitudes which postulates that a person will develop positive attitudes toward objects which are instrumental to satisfaction of his needs.

\(^1\)Ibid., p. 74.

\(^2\)Vroom, Work and Motivation, pp. 211-229.


This theoretical proposition can be extended to leader–subordinate relationships in formal organizations to the extent that the organization makes rewards bestowed on the leader contingent on the performance of his subordinates. In this situation, one would expect the leader to develop more positive attitudes toward his high performing subordinates and perhaps toward those who reinforce him by expressing satisfaction with their work.

Laboratory experimental designs conducted by Lowin and Craig and Farris and Lim support the second theoretical proposition that performance causes leadership style. A longitudinal study conducted by Greene found that there was some evidence of reciprocal causation between leader initiating structure (task orientation) and subordinate performance, but the data more strongly supported subordinate performance as the causal variables.

The results of the present study seem to support the above findings that performance has causal priority over task orientation. In both this research and the study conducted by Greene, the predictive correlations between the variables were negative. The negative sign can be interpreted as indicating that low performance

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1 Ibid.

2 Farris and Lim, "Effects of Performance on Leadership," pp. 490-497.


4 Ibid.
by a subordinate leads to increased task orientation behavior by
the leader. The findings in the present study are enhanced by the
strong dynamic correlation between the two variables (p<.005) which
rules out any large possibility of additional variables contributing
to the covariance between performance and task orientation. Thus,
the present findings strongly support the more recent theoretical
proposition that performance has causal priority in the performance-
task orientation relationship.

Relationships Orientation

There are two competing theoretical propositions concerning the
relationships between leader behavior and subordinate satisfaction.
The older and more popular theoretical proposition assumes that lea­
dership style affects employee satisfaction. The newer theory pro­
poses that it is possible for satisfaction to have causal priority
over leader behavior.¹ This latter proposition has been theoretically
supported by balance theories of interpersonal attraction.² Balance
theory suggests that similar or shared attitudes toward a common
object (e.g., the leader desires satisfied subordinates and subor­
dinates are satisfied) will result in positive attitudes expressed

¹See for example Vroom, Work and Motivation, pp. 105-119.
Filley and House, Managerial Process and Organizational Behavior,
pp. 391-416. Greene, "A Longitudinal Analysis of Relationships
Among Leader Behavior and Subordinate Performance and Satisfaction,"
pp. 433-440.

²Heider, The Psychology of Interpersonal Relations.
by one actor (the leader) toward the other (the subordinate). In the case of subordinate satisfaction these theoretical propositions lead to the following predictions. The leader of a subordinate who expresses high satisfaction with the job situation will be more inclined, with other factors (e.g., performance) held constant, to be more considerate of the subordinate. Conversely, if the subordinate expresses dissatisfaction, the leader may very well restrict the subordinates activities with respect to the job (increased emphasis on task orientation) and the activities unrelated to the job (a form of reduced relationships orientation), in addition to showing more negative effect toward his subordinates (another form of reduced relationships orientation).

The results of the present study seem to indicate that there is a positive static relationship between relationships orientation and the satisfaction indexes. Beyond this, the predictive correlations indicate that relationships orientation has causal priority over a majority of the satisfaction indexes. The positive predictive or cross-lagged correlations in these cases suggest that increases in leader relationships orientation will lead to increases in subordinate satisfaction. These findings are similar to those of Greene¹ who found some evidence of reciprocal causation between leader

consideration (relationships orientation) and subordinate satisfaction, but stronger support for the consideration (relationships orientation) causes satisfaction proposition. These findings therefore tend to support the older historical proposition that leader consideration positively affects subordinate satisfaction. These findings also add some empirical verification to the propositions of both House\textsuperscript{1} and Kerr, et al.,\textsuperscript{2} that when a task fails to provide intrinsic satisfaction there tends to be a positive relationship between consideration (relationships orientation) and satisfaction.

In support of the more recent theoretical proposition that satisfaction affects leader behavior, the present findings indicate that the satisfaction indexes of Interpersonal Attractiveness of Supervisor (I.A.S.) and Perceived Competence of Supervisor (P.C.S.) have causal priority over relationships orientation. Since the predictive correlations are negative, the findings indicate that increases in employee perception of the supervisors fairness (I.A.S.) and ability (P.C.S.) lead to decreased emphasis on relationships orientation by the supervisor. These findings seem to support both balance theories of interpersonal attraction and the situational approach to management advocated by Reddin.\textsuperscript{3} Reddin has repeatedly


\textsuperscript{3}Reddin, Managerial Effectiveness.
commented on the fact that any managerial style even a style low in relationships orientation can be effective. The fact that increases in worker perceptions of supervisor fairness and ability lead to less emphasis on relationships orientation appears to indicate that the workers feel that for a supervisor to be competent in this type of job environment, he should not exhibit high orientation toward relationships.

The results of this study seem to indicate that there may be a negative static relationship between the leadership dimension of relationships orientation and the perceived contingency measures. However, the results do not confirm any direct causal relationship between these variables. Table 4.3 points out that the overall strength of the relationship between R.O. and the contingency measures is very weak with neither the concurrent, predictive, or dynamic correlations approaching significance.

The present study found no significant predictive correlations between relationships orientation and performance. In contrast to this finding, Greene found that subordinate performance appeared to cause leader consideration (relationships orientation). In a review of four laboratory studies which attempted to determine causal relationships between consideration (relationships orientation) and performance, Kerr and Schriesheim concluded "... that under some conditions subordinate performance causes subsequent leader behavior

while upon other occasions such performance is caused by leader behavior. In view of the results of this study and those of the other studies cited, it seems that more needs to be learned concerning the cause effect relationship between R.O. and performance.

**Effectiveness**

Effectiveness has been defined as the extent to which a manager achieves the output requirements of his position. Reddin has stated that it is not the amount of task orientation and relationships orientation that the manager has that makes him effective. Effectiveness depends on using the appropriate amount of task orientation and relationships orientation to achieve the required outputs of a particular situation. Thus any combination of the dimensions of task orientation and relationships orientation can be effective depending upon situational variables.

The findings of the present study seem to support Reddin's theory. Perhaps one of the most critical foundation stones of the 3-D Theory rests on its assumption that the leader perceives himself as being effective when he is achieving the output requirements of his position. The predictive correlations between the leadership dimension of effectiveness and subordinate performance strongly

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2Reddin, *Managerial Effectiveness*. 
indicate that performance is the causal variable (this predictive correlation is significant at the .008 level). Since the causal relationship is positive, there is the indication that an increase in subordinate performance leads to an increase in the supervisor's perception of his effectiveness. The dynamic correlation coefficient between performance and effectiveness is significant at the .016 level. The strength of this correlation allows one to rule out any large possibility of additional variables contributing to the covariance between performance and effectiveness. The results, therefore, seem to indicate that the leader relies heavily on the performance of his subordinates to give him an indication of his effectiveness.

The empirical results of this study were unable to confirm any direct causal relationship between effectiveness and seven of the satisfaction indexes. The low and/or mixed values of the concurrent, predictive, and dynamic correlations precluded determination of causal priority in these cases. Both cross-lagged correlations between Perceived Competence of Supervisor (P.C.S.) and effectiveness are negative and significant at the .05 level. Since both of these cross-lagged correlations are significant, there appears to be reciprocal causality between the two variables. The negative sign would seem to indicate that increases in the workers perception of the leader's effectiveness (P.C.S.) leads to decreases in the leader's perception of his own effectiveness, and vice versa. This finding would seem to indicate that the worker's perceptions
of what make a supervisor effective are not the same as the supervisor's perceptions of effectiveness. Workers, therefore, appear to feel that a supervisor must do more than just maintain the output requirements of his position to be effective. The final satisfaction index, Interpersonal Attractiveness of Supervisor (I.A.S.), appears to have negative causal priority over effectiveness. This relationship seems to indicate increases in the employee's perceptions of the supervisor's fairness lead to reductions in the supervisor's perception of his effectiveness. This finding would seem to indicate that subordinates like supervisors who do not push for output and therefore perceive themselves as less effective. Since none of the dynamic correlations between effectiveness and the satisfaction indexes reached significance, the possibility of additional variables causing the subject variables to covary cannot be ruled out. Therefore, it does not appear that any of the above results can be offered as generalizations until more is known about the effects of other potential causal variables.

None of the predictive or dynamic correlations between the leadership dimension of effectiveness and the perceived contingency measures of Advancement Instrumentality (A.I.) and Supportive Instrumentality (S.I.) reached significance. Therefore, no generalizable inference of causality can be offered concerning these relationships. The perceived contingency measure of Punitive Instrumentality (P.I.) seems to have causal priority in a significant
negative relationship with effectiveness. This relationship seems to show that increased worker perception of the relationship between job behavior and punitive organizational responses leads to decreased perception of effectiveness on the part of the supervisor. This result appears to suggest that the supervisor doesn't perceive himself as effective when he must rely on punitive organizational responses to elicit acceptable subordinate behavior. Since the dynamic correlation between Punitive Instrumentality and effectiveness is not significant, outside variables could have caused these two variables to covary. More studies examining the effectiveness dimension are needed before any generalizable statements can be made.

Conclusions and Implications

Perhaps the major conclusion to be drawn from the study is that performance appears to have causal priority over the leadership dimensions of task orientation and effectiveness. In both of these cases the dynamic correlations were strong enough to rule out the possibility of most other outside variables causing the subject variables to covary. These particular findings as well as the well known limitations of static correlational analyses provide a strong argument against the common practice of interpreting significant static correlations between leadership and performance as indicating that leadership styles cause performance.
The present study also indicates that in most instances task orientation and relationships orientation have causal priority over satisfaction. The findings show that task orientation affects satisfaction negatively while relationships orientation affects satisfaction positively. One caveat to these findings must be introduced and that is that the dynamic correlations between the leadership dimensions and satisfaction were not significant. Due to this lack of significant dynamic correlations, one could speculate that a third and, more likely, several additional variables contributed to the covariance between the leadership dimensions and the nine satisfaction indexes. Such a hypothesis would seem theoretically, in agreement with the reinforcement theorists view that variations in self report measures of satisfaction are the result of the present existence or withdrawal of reinforcers in the work environment.\footnote{See for example, Albert Bandura, \textit{Principles of Behavior Modification}. New York: Holt, Rinehart and Winston, 1969. David J. Cherrington, H. Joseph Reitz, and William E. Scott, Jr., "Effects of Contingent and Noncontingent Reward on the Relationship Between Satisfaction and Task Performance," \textit{Journal of Applied Psychology} 55 (December 1971): pp. 531-536. Burrhus F. Skinner, \textit{Contingencies of Reinforcement: A Theoretical Analysis}. New York: Appleton-Century-Crofts, 1969.}

In addition to leadership dimension variables utilized in the present study, many additional informal reinforcers present in the work environment could also have a direct impact on both the internal cognitive states as well as specific attitudinal referents in the
job situation as measured by the self-report measure of satisfac-
tion utilized in this study.

While the results of the data analysis seem to support the con-
clusions discussed above, they also point up the need for additional
investigation. Specifically, it seems that more work needs to be
done concerning the impact of various informal rewards (compliments,
preferences in job assignments, and informal work groups) and their
influence on the leader behavior-satisfaction relationships. Also,
very little previous research could be drawn upon to compare to the
effectiveness-satisfaction and effectiveness-perceived contingency
results. More studies are needed in this area to build up an under-
standing of how the leaders effectiveness influences or is influenced
by subordinate satisfaction and perceived contingencies. Finally
many more causal investigations are needed in different types of
organizations to either prove or disprove the different situational
propositions developed by Kerr, et al.,1 and House.2

The conclusions of this study must be viewed in light of some of
its limitations. These limitations include: (1) the fact that only
a few garment manufacturing plants which were located in the Midsouth
were included in the study; (2) the fact that all of the participating
organizations were non-unionized; and (3) the fact that all of the
subjects were women who performed a particular type of work. There-
fore, replications of the present study among different samples and


different types of organizations are needed before any attempt at
generalization concerning this study's findings can be made. In
addition, it is impossible at this time to say exactly what the time
sequence should be between the two measures of the variables under
investigation in order to test any causal relationship. The three
month separation chosen in the present study was arbitrary, hence
future research should vary the time interval between data collection
periods in order to get increased insight into the time sequence in-
volved in any causal relationship between the variables under
investigation.


Comrey, Andrew A.; Pfiffner, J.; and High, Wallace S. Factors Influencing Organizational Effectiveness. Los Angeles: University of Southern California, 1954.


Dalton, Gene W.; Barnes, Louis B.; and Zaleznick, Abraham. The Distribution of Authority in Formal Organizations. Boston: Division of Research, Graduate School of Business Administration, Harvard University, 1968.


Kerr, Steven; Schriesheim, Chester; Murphy, C.; and Stogdill, R. "Toward a Contingency Theory of Leadership Based Upon the Consideration and Initiating Structure Literature." *Organizational Behavior and Human Performance* 12 (August 1974): pp. 62-82.


APPENDIX A

SEMANTIC DIFFERENTIAL SATEISFACTION SURVEY
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|                      |           |       |          |           |          |       |           | Bored          |
|                      |           |       |          |           |          |       |           | Cooperative    |
|                      |           |       |          |           |          |       |           | Dissatisfied   |
|                      |           |       |          |           |          |       |           | Productive     |
|                      |           |       |          |           |          |       |           | Discouraged    |
|                      |           |       |          |           |          |       |           | Inattentive    |
|                      |           |       |          |           |          |       |           | Serene         |
|                      |           |       |          |           |          |       |           | Worthless      |
|                      |           |       |          |           |          |       |           | Reliable       |
|                      |           |       |          |           |          |       |           | Lifeless       |
|                      |           |       |          |           |          |       |           | Useful         |
|                      |           |       |          |           |          |       |           | Alert          |
|                      |           |       |          |           |          |       |           | Tense          |
|                      |           |       |          |           |          |       |           | Effective      |
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Positive: Positive
Explained: Unexplained
Limited: Unlimited
Reasonable: Unreasonable
Concealed: Revealed
Bad: Good
Sufficient: Insufficient
Important: Unimportant
Known: Unknown
Essential: Unessential
## COMPANY BENEFITS

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|             | Pleasing  | Unreasonable | Inferior | Rewarding |

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Unfair
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MY PAY IN COMPARISON WITH WHAT OTHERS GET
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| Helpful          |           |       |          |           |          |       |           |
| Unpleasant       |           |       |          |           |          |       |           |
| Unselfish        |           |       |          |           |          |       |           |
| Weak             |           |       |          |           |          |       |           |
| Discontented     |           |       |          |           |          |       |           |
| Vigorous         |           |       |          |           |          |       |           |
| Unhappy          |           |       |          |           |          |       |           |
| Unsuccessful     |           |       |          |           |          |       |           |
| Satisfied        |           |       |          |           |          |       |           |
| Unimportant      |           |       |          |           |          |       |           |
| Unemotional      |           |       |          |           |          |       |           |
| Tense            |           |       |          |           |          |       |           |
| Calm             |           |       |          |           |          |       |           |
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<p>| Disliked | Vigorous | Obstructive | Strong | Regressive | Unsuccessful | Goal Directed | Exciteable | Close | Deliberate | Unsociable | Tense | Visible |</p>
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**MY JOB**

Neither One Nor Extremely Slightly The Other

Attractive Repulsive
Difficult Easy
Exciting Dull
Bad Good
Complex Simple
Interesting Boring
Superior Inferior
Routine Varied
Wholesome Unwholesome
Temporary Permanent
Meaningful Meaningless
Stable Changeable
Important Unimportant
Secure Insecure
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- Soothing
- Unpleasant
- Uncomfortable
- Safe
- Clean
- Disorderly
- Spacious
- Cold
- Noisy
- Colorless
- Unimportant
Section Two

In your opinion, what is the probability that:

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<th>Fairly Improbable</th>
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<tr>
<td>1. Your supervisor would personally pay you a compliment if you did outstanding work.</td>
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<td>2. You would get no increase in pay if your work was below acceptable standards.</td>
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<td>3. Your supervisor would lend a sympathetic ear if you had a complaint.</td>
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<td>4. Your supervisor would be very much aware of it if there was a temporary change in the quality of your work.</td>
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<td>5. You would be dismissed if you were absent for several days without notifying the company or without a reasonable excuse.</td>
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<td>6. Your supervisor would blame you rather than some factor over which you have no control if the quality of your work took a turn for the worse.</td>
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<td>7. You will eventually go as far as you would like to go in this company, if your work is consistently above average.</td>
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<td>8. Your supervisor would get on you if your work was not as good as the work of others in your department.</td>
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<td>9. You would be promoted if your work was better than others who were otherwise equally qualified.</td>
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<td>10. Your supervisor would help you get a transfer if you asked for one.</td>
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<td>11. Your supervisor's boss or others in higher management would know about it if your work was outstanding.</td>
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<td>12. You would be reprimanded if your work was consistently below acceptable standards.</td>
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<td>13. Your supervisor's recommendation for a pay increase for you would be consistent with his evaluation of your performance.</td>
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<td>14. Your supervisor would show a great deal of interest if you suggested a new and better way of doing things.</td>
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<td>15. You would receive special recognition if your work performance was especially good.</td>
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In your opinion, what is the probability that:

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<td>16. Your supervisor would do all he could to help you if you were having problems in your work.</td>
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<td>17. Your supervisor's evaluation of your performance would be in agreement with your own evaluation of your performance.</td>
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<td>18. Your next pay increase will be consistent with the amount recommended by your supervisor.</td>
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<td>19. Your supervisor would encourage you to do better if your performance was acceptable but well below what you were capable of.</td>
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<td>20. You would be promoted within the next two years if your work was consistently better than the work of others in your department.</td>
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APPENDIX B

STATEMENT PAIRS MAKING UP THE MANAGEMENT

STYLE DIAGNOSIS TEST
QUESTIONNAIRE

1) A He overlooks violations of rules if he is sure that no one else knows of the violations.
   B When he announces an unpopular decision, he may explain to his subordinates that his own boss has made the decision.

2) A If an employee's work is continually unsatisfactory, he would wait for an opportunity to have him transferred rather than dismiss him.
   B If one of his subordinates is not part of the group, he will go out of his way to have the others befriend him.

3) A When the boss gives an unpopular order, he thinks it is fair that it should carry the boss's name, and not his own.
   B He usually reaches his decisions independently, and then informs his subordinates of them.

4) A If he is reprimanded by his superiors, he calls his subordinates together and passes it on to them.
   B He always gives the most difficult jobs to his most experienced workers.

5) A He allows discussions to get off the point quite frequently.
   B He encourages subordinates to make suggestions, but does not often initiate action from them.

6) A He sometimes thinks that his own feelings and attitudes are as important as the job.
   B He allows his subordinates to participate in decision making, and always abides by the decision of the majority.

7) A When the quality or quantity of departmental work is not satisfactory, he explains to his subordinates that his own boss is not satisfied.
   B He reaches his decisions independently, and then tries to "sell" them to his subordinates.

8) A When he announces an unpopular decision he may explain to his subordinates that his own boss made the decision.
   B He may allow his subordinates to participate in decision making, but he reserves the right to make the final decision.

9) A He may give difficult jobs to inexperienced subordinates, but if they get into trouble he will relieve them of the responsibility.
B When the quality or quantity of departmental work is not satisfactory, he explains to his subordinates that his own boss is not satisfied, and that they must improve their work.

10) A He feels it is as important for his subordinates to like him as it is for them to work hard.

B He lets other people handle jobs by themselves, even though they may make mistakes.

11) A He shows an interest in his subordinates' personal lives because he feels they expect it of him.

B He feels it is not always necessary for subordinates to understand why they do something, as long as they do it.

12) A He believes that disciplining subordinates will not improve the quality or quantity of their work in the long run.

B When confronted with a difficult problem, he attempts to reach a solution which will be at least partly acceptable to all concerned.

13) A He thinks that some of his subordinates are unhappy, and tries to do something about it.

B He looks after his own work, and feels it is up to higher management to develop new ideas.

14) A He is in favour of increased fringe benefits for management and labor.

B He shows concern for increasing his subordinates' knowledge of the job and the company, even though it is not necessary in their present position.

15) A He lets other people handle jobs by themselves, even though they make many mistakes.

B He makes decisions independently, but may consider reasonable suggestions from his subordinates to improve them if he asks for them.

16) A If one of his subordinates is not part of the group, he will go out of his way to have others befriend him.

B When an employee is unable to complete a task, he helps him to arrive at a solution.
QUESTIONNAIRE
(Continued)

17) A He believes that one of the uses of discipline is to set an example for other workers.
    B He sometimes thinks that his own feelings and attitudes are as important as the job.

18) A He disapproves of unnecessary talking among his subordinates while they are working.
    B He is in favour of increased fringe benefits for management and labor.

19) A He is always aware of lateness and absenteeism.
    B He believes that unions may try to undermine the authority of management.

20) A He sometimes opposes union grievances as a matter of principle.
    B He feels that grievances are inevitable and tries to smooth them over as best he can.

21) A It is important to him to get credit for his own good ideas.
    B He voices his own opinions in public only if he feels that others will agree with him.

22) A He believes that unions may try to undermine the authority of management.
    B He believes that frequent conferences with individuals are helpful in their development.

23) A He feels it is not always necessary for subordinates to understand why they do something, as long as they do it.
    B He feels that time-clocks reduce tardiness.

24) A He usually reaches his decision independently, and then informs his subordinates of them.
    B He feels that unions and management are working toward similar goals.

25) A He favors the use of individual incentive payment schemes.
    B He allows discussions to get off the point quite frequently.

26) A He takes pride in the fact that he would not usually ask someone to do a job he would not do himself.
    B He thinks that some of his subordinates are unhappy, and tries to do something about it.
QUESTIONNAIRE
(Continued)

27) A If a job is urgent, he might go ahead and tell someone to do it, even though additional safety equipment is needed.  
B It is important to him to get credit for his own good ideas.

28) A His goal is to get the work done without antagonizing anyone more than he has to.  
B He may assign jobs without much regard for experience or ability, but insists on getting results.

29) A He may assign jobs without much regard for experience or ability, but insists on getting results.  
B He listens patiently to complaints and grievances, but often does little to rectify them.

30) A He feels that grievances are inevitable and tries to smooth them over as best he can.  
B He is confident that his subordinates will do satisfactory work without any pressure from him.

31) A When confronted with a difficult problem, he attempts to reach a solution which will be at least partly acceptable to all concerned.  
B He believes that training through on the job experience is more useful than theoretical education.

32) A He always gives the most difficult jobs to his most experienced workers.  
B He believes in promotion only in accordance with ability.

33) A He feels that problems among his workers will usually solve themselves without interference from him.  
B If he is reprimanded by his superiors, he calls his subordinates together and passes it on to them.

34) A He is not concerned with what his employees do outside of working hours.  
B He believes that disciplining subordinates will not improve the quality or quantity of their work in the long run.

35) A He passes no more information to higher management than they ask for.  
B He sometimes opposes union grievances as a matter of principle.
QUESTIONNAIRE
(Continued)

36)  A He sometimes hesitates to make a decision which will be unpopular with his subordinates.
     B His goal is to get the work done without antagonizing anyone more than he has to.

37)  A He listens patiently to complaints and grievances, but often does little to rectify them.
     B He sometimes hesitates to make a decision which he feels will be unpopular with his subordinates.

38)  A He voices his own opinions in public only if he feels that others will agree with him.
     B Most of his subordinates could carry on their jobs without him if necessary.

39)  A He looks after his own work, and feels it is up to higher management to develop new ideas.
     B When he gives orders, he sets a time limit for them to be carried out.

40)  A He encourages subordinates to make suggestions, but does not often initiate action from them.
     B He tries to put his workers at ease when talking to them.

41)  A In discussion he presents the facts as he sees them, and leaves others to draw their own conclusions.
     B When the boss gives an unpopular order, he thinks it is fair that it should carry the boss's name, and not his own.

42)  A When unwanted work has to be done, he asks for volunteers before assigning it.
     B He shows an interest in his subordinates' personal lives because he feels they expect it of him.

43)  A He is as much interested in keeping his employees happy as in getting them to do their work.
     B He is always aware of lateness and absenteeism.

44)  A Most of his subordinates could carry on their jobs without him if necessary.
     B If a job is urgent, he might go ahead and tell someone to do it, even though additional safety equipment is needed.

45)  A He is confident that his subordinates will do satisfactory work, without any pressure from him.
B He passes no more information to higher management than they ask for.

46) A He believes that frequent conferences with individuals are helpful in their development.
B He is as much interested in keeping his employees happy as in getting them to do their work.

47) A He shows concern for increasing his subordinates' knowledge of the job and the company, even though it is not necessary in their present position.
B He keeps a very close watch on workers who get behind or do unsatisfactory work.

48) A He allows his subordinates to participate in decision making, and always abides by the decision of the majority.
B He makes his subordinates work hard, but tries to make sure that they usually get a fair deal from higher management.

49) A He feels that all workers on the same job should receive the same pay.
B If any employee's work is continually unsatisfactory, he would wait for an opportunity to have him transferred rather than dismiss him.

50) A He feels that the goals of union and management are in opposition but tries not to make his view obvious.
B He feels it is as important for his subordinates to like him as it is for them to work hard.

51) A He keeps a very close watch on workers who get behind or do unsatisfactory work.
B He disapproves of unnecessary talking among his subordinates while they are working.

52) A When he gives orders, he sets a time limit for them to be carried out.
B He takes pride in the fact that he would not usually ask someone to do a job he would not do himself.

53) A He believes that training through on the job experience is more useful than theoretical education.
B He is not concerned with what his employees do outside of working hours.
QUESTIONNAIRE
(Continued)

54)  A He feels that time-clocks reduce tardiness.
     B He allows his subordinates to participate in decision making,
        and always abides by the decision of the majority.

55)  A He makes decisions independently, but may consider reasonable
     suggestions from his subordinates to improve them if he asks
     for them.
     B He feels that the goals of union and management are in
        opposition but tries not to make his view obvious.

56)  A He reaches his decisions independently, and then tries to
     "sell" them to his subordinates.
     B When possible he forms work teams out of people who are
        already good friends.

57)  A He would not hesitate to hire a handicapped worker if he
     felt he could learn the job.
     B He overlooks violations of rules if he is sure that no one
        else knows of the violations.

58)  A When possible he forms work teams out of people who are al­
     ready good friends.
     B He may give difficult jobs to inexperienced subordinates,
        but if they get in trouble he will relieve them of the
        responsibility.

59)  A He makes his subordinates work hard, but tries to make sure
     that they usually get a fair deal from higher management.
     B He believes that one of the uses of discipline is to set an
        example to other workers.

60)  A He tries to put his workers at ease when talking to them.
     B He favors the use of individual incentive payment schemes.

61)  A He believes in promotion only in accordance with ability.
     B He feels that problems among his workers will usually solve
        themselves without interference from him.

62)  A He feels that unions and management are working towards
     similar goals.
     B In discussion he presents the facts as he sees them and
        leaves others to draw their own conclusions.
QUESTIONNAIRE
(Continued)

63)  A When an employee is unable to complete a task, he helps him to arrive at a solution.
     B He feels that all workers on the same job should receive the same pay.

64)  A He may allow his subordinates to participate in decision making, but he reserves the right to make the final decision.
     B He would not hesitate to hire a handicapped worker if he felt he could learn the job.
APPENDIX C

RAW DATA SCORES
FOR TIME PERIOD 1 AND
TIME PERIOD 2
### RAW DATA: TIME PERIOD 1

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VITA

Kent E. Curran was born in Chicago, Illinois, on September 10, 1947. He attended primary and secondary schools near his home town, Bensenville, Illinois and received his undergraduate Bachelor of Science in Mechanical Engineering degree from Bradley University, Peoria, Illinois in 1969. He continued his education at Bradley University and received a Master of Business Administration degree in 1971. While a graduate student at Bradley he held a graduate assistantship in the Department of Business Administration.

In 1971 he enrolled in the Doctor of Business Administration (DBA) degree program at Louisiana State University, Baton Rouge, Louisiana. He was awarded a graduate research assistantship in the Department of Marketing for the spring semester of the 1971-72 academic year. For the 1972-73 and 1973-74 academic years he held graduate teaching assistantships in the Department of Management. For the fall semester of the 1974-75 academic year he was awarded an instructorship in the Department of Management. Since January 1975, he has been working as Assistant Professor and Director of Business Administration at Spring Hill College, Mobile, Alabama. He is now a candidate for the Doctor of Business Administration degree at the Fall, 1975 commencement of Louisiana State University.
Candidate: Kent Edward Curran

Major Field: Management

Title of Thesis: A Causal Investigation into the Relationships Between Supervisory Leadership Styles and Subordinate Satisfaction and Performance

Approved:

[Signatures]

EXAMINING COMMITTEE:

[Signatures]

Date of Examination: November 21, 1975