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ABSTRACT

This report focuses on the problem of how to improve leadership effectiveness in order to improve overall organization effectiveness. First, three different approaches to leadership behavior are presented: Trait Approach, Behavioral Approach, and Situational Approach. Next, reviews of the leadership literature and of eight contingency models of leadership are presented. Finally, the three-component Leadership Effectiveness Model, developed on the basis of the eight models and the literature review, is described and critiqued. The Model considers leadership effectiveness to be a function of the criterion selected, the leadership style employed, and the situational environment(s), which includes the leader's subordinates, peers, and other personnel in the environment. The basis for selecting these three components was that they were found to be common across most of the leadership literature reviewed, and at the same time they provide a useful descriptive framework for depicting leadership as a decision-making process. It is concluded that leadership can best be depicted as a decision-making process which involves the leader, the followers, the situation, and the criterion of effectiveness. (TA)

AFHRL-TR-76-17

AIR FORCE HUMAN RESOURCES LABORATORY

CONTINGENCY APPROACHES TO LEADERSHIP:
A REVIEW AND SYNTHESIS

By

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June 1976

Interim Report for Period 1 September 1974 – 1 June 1975

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This technical report has been reviewed and is approved.

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Definitions of leadership are presented to establish a common frame of reference for discussing the area of leadership. Three approaches to leadership are presented, followed by a discussion of leadership related literature, and eight contingency theories or models. The literature discussion and the contingency theories serves as a basis for the development of a new model of leadership (Model 9). Its development is followed by a conclusion which attempts to integrate those aspects found to be common across the various leadership theories.

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PREFACE

The author is indebted to a number of individuals who provided constructive criticism during the initial preparation and subsequent revision of this report. In particular, the constructive comments of Dr. Daniel R. Ilgen, Purdue University, and personnel of the Occupational and Manpower Research Division, Air Force Human Resources Laboratory were helpful in pin-pointing problem areas requiring revision in order to adequately present a review and evaluation of contingency models of leadership. In addition, the author would like to express his appreciation to Mrs. M. Joyce Giorgia who provided a helpful critique of the report and Mrs. Maria M. Courtney who typed and proofed the manuscript.

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I. INTRODUCTION

Leadership effectiveness is an area of vital concern to the Air Force. Poor leadership can not only result in loss of financial resources, but also in loss of human resources. Most Air Force personnel can recall personal experiences where they have witnessed poor leadership practices which resulted in financial waste, morale problems, or perhaps even death.

The problem, of course, is how does one improve leadership effectiveness in order to improve overall organization effectiveness. This report focuses on this problem area by first, presenting three different approaches to leadership behavior. Next, a review of the leadership literature will be presented, followed by a review of eight contingency models of leadership. Finally, a model of leadership effectiveness will be developed based on a synthesis of the leadership literature. This model will be referred to as the Three-Component Leadership Effectiveness Model.

II. THREE LEADERSHIP APPROACHES

In reviewing the literature, it appears that the development of leadership theories have been based upon three general approaches (Blum & Naylor, 1968; Cribbin, 1972; Filley & House, 1969; Siegel, 1969). These approaches are: (a) the trait approach, (b) the behavioral approach, and (c) the situational approach.

Trait Approach

This approach to leadership maintains that effective leaders possess a unique combination of specific leadership traits or personal characteristics. It has been characterized as the "great man" concept of leadership. That is, there are some men who are so outstanding, by virtue of their possession of particular traits, that they are natural leaders. In addition, this approach implies that individuals are attracted to the leader by his possession of a generalized leadership quality and they will follow him under all varieties of situations. The personal characteristics usually cited with this general quality include those of aggressiveness, intelligence, and a variety of physical characteristics.

Stogdill (1948) in surveying the leadership literature concluded that, "... leadership is not a matter of passive status, or of the mere possession of some combination of traits." This view is held by most psychologists today. They view the trait approach as one which is sterile and which adds little to our understanding of the leadership process.

Behavioral Approach

The behavioral approach suggests that leaders may be best characterized by behavior patterns rather than by individual traits. Traits, such as intelligence, are not likely to be readily observed by others. On the other hand, behavioral patterns usually are rather easily observed when compared to some traits. Therefore, the major difference between the trait approach and the behavioral approach is that trait theory attempts to explain leadership on the basis of what the leader is (traits), while the behavioral approach attempts to explain leadership on the basis of what he does (behaviors).

Situational Approach

Around 1950, researchers turned their attention more toward the factors which surround the leader and his group. Their efforts were concerned with the situational approach to leadership. This approach holds that leadership can be explained only in terms of the interaction between the leader and the many variables of the work situation. More specifically, leadership behavior is considered to be multidimensional. These dimensions, however, are finite in number, and vary according to the leader's personality, the requirements of the task to be accomplished by him and his followers, the attitudes, expectations, and needs of his followers, and the organizational and physical environment in which the leader and followers exist.

This approach has also been called the "contingency approach," and is the approach with which this report is concerned. In this report, the term "contingency approach" is meant to imply that effective leadership behavior is contingent upon: (a) the leader, (b) the followers, and (c) the situation. The leadership function is considered to be a process of influence which involves inter- dependence among the three components cited above (i.e., leader, follower, and situation).

In order to better understand the contingency theories and models which exist, a review of leadership related literature will now be discussed.

III. LEADERSHIP LITERATURE

Central to the area of leadership is the problem of leadership criteria. This problem has been a difficult one in leadership studies since it involves the question of values; the question of "good" leaders versus "poor" leaders. That is, what does an individual do which classifies him as a leader?

Carter and Nixon (1949) attempted to measure leader effectiveness using four different measures. The measures used were: (a) direct observation of performance by skilled observers, (b) supervisors ratings, (c) nomination by peers, and (d) activity ratings (i.e., number of activities performed). These leadership effectiveness measures served as criteria for their leadership study. Evaluation of the different criteria when compared with task accomplishment, generally indicated low correlation between the criteria (Range: --.25 to .66). This lead the authors to conclude that leader effectiveness depends in part upon the criterion used.

More recently Wofford (1971) performed a study using two criteria: productivity, and morale. In evaluating managerial behavior (i.e., five behavioral dimensions) against the two criteria, Wofford was able to account for 40 percent of the variance in productivity and 54 percent in morale. After a detailed consideration of the five managerial behavioral dimensions and the two criteria, Wofford concluded that, "The managerial behavior dimensions most effective for productivity are not the most effective for morale (p. 16)."

The above two studies indicate that for a fixed managerial leadership style, effectiveness depends upon the criterion used. The conclusions also imply that different styles might be appropriate depending upon the criterion of effectiveness established.

What are the leadership styles that are most effective? Is there any one best style? What are the dimensions of leadership? These questions are similar to those posed in many leadership research studies. The focus is upon the leader in the leadership process. Attempts to answer these types of questions have resulted in categorization of leadership styles and dimensions.

Lewin, Lippitt, and White (1939) and White and Lippitt (1960), based on a series of studies, categorized leadership as either democratic, autocratic, or laissez-faire. The authors concluded, based on the results of their studies, that: (a) the laissez-faire leadership style resulted in less and poorer work than did the other two styles, (b) the quantity of work done under the autocratic style was greater than under the other two styles, and (c) the democratic style resulted in more group-mindedness and more friendliness among group members, and the group members continued to work when the leader was absent. In the autocratic group, however, work performance decreased when the leader left the room.

In general, the literature associated with these three styles has resulted in some authors proposing that the democratic style is the best method. Others have indicated that the autocratic style is equal to if not better than the democratic style (Roby, Nicol, & Farrell, 1963; Sales, 1966). Taken together, the studies generally indicate that no one style is best in all situations, but depends upon the circumstances involved (Siegel, 1969, p. 430).

Another classification system of leadership dimensions has resulted from the Michigan Leadership Studies and the Ohio State Leadership Studies. The Michigan Studies (Katz, Maccoby, & Morse, 1950) initially resulted in the isolation of two basic managerial dimensions. Managers in high productivity sections were compared with those in low productivity sections. Resulting analysis indicated that there were only two basic dimensions of leadership behavior. Managers in high producing sections were found to be more *employee-centered*, while those in charge of low-producing sections were found to be more *production-centered* in their orientation.

The Ohio State Leadership Studies (Fleishman, 1953: Fleishman & Harris, 1962) involved factor analysis of items on the Leader Behavior Description Questionnaire. Two prime dimensions emerged upon factor analysis. They were: (a) consideration, and (b) initiation of structure. The consideration dimension involves the degree to which a supervisor is considerate of the feelings of those under him. Initiation of structure, on the other hand, refers to the degree to which a manager facilitates or defines group interactions toward goal accomplishment.

Therefore, two different research groups derived separately two dimensions of leadership, which are basically the same. In addition to the titles given by the two research groups, these two dimensions have been referred to by other titles such as; concern for production and concern for people, and task orientation and relationships orientation.

Roach (1956) performed a factor analytic study which indicated that perhaps two dimensions (i.e., consideration and initiation of structure) were not sufficient to describe accurately managerial behavior. In Roach's study, consideration was sub-divided into open-mindedness, cheerfulness, and approachability. Also of importance was that one overall factor or general factor emerged.

Yukl (1971) suggested that there are three basic dimensions of leadership; (a) consideration, (b) initiation of structure, and (c) decision centralization. On the other hand, Bowers and Seashore (1966), based on a literature search of leadership research, proposed four basic dimensions of leadership: (a) support, (b) interaction of facilitation, (c) goal emphasis, and (d) work facilitation. While Hemphill (1959, 1960) has proposed that 10 behavioral dimensions are required to adequately describe executive behavior.

The question still remains, what are the primary dimensions of leadership behavior that exist across all situations? There is no definitive answer at this time; however, it is generally agreed the consideration and initiation of structure are two of the basic dimensions.

Another area of interest in leadership effectiveness is the situational environment. That is, what are the situational demands that influence leadership?

One situational demand that affects leadership is the time-demand. A leader is constrained by time in his decision making process. Should a manager's work area burst into flames, he could not seek opinions and suggestions from his subordinates. The situation requires an immediate decision and action. Therefore, in a crisis situation a task-oriented leadership style might be the most appropriate style. With a longer period of time for the decision-making process a manager might find a consideration oriented style more appropriate (Hersey & Blanchard, 1972a, pp. 120-121; Siegel, 1969, p. 153).

A second situational demand that affects leadership is the organizational level of a leadership position. It appears that the leadership traits required and the style employed depend upon the organizational level of the leadership position (Katz & Kahn, 1966; Nealey & Blood, 1968; Randle, 1956). For example, Randle (1956) found that certain leadership traits, such as motivation, increased in importance as one goes up in the managerial hierarchy.

Cribbin (1972) indicated that some of the important situational variables that influence the leadership process are: (a) the culture, (b) the political structure, (c) the society involved, (d) the philosophy of the organization, (e) the technology involved, and (f) the organizational structure.

Forehand and Gilmer (1964) proposed that the basic environmental (situational) components affecting the leadership process are: (a) organizational size, (b) organizational structure, (c) system complexity, (d) leadership pattern, and (e) goal direction.

Another variable of the situation that has an affect on leadership effectiveness is that of the subordinates in the organization. Vroom (1960) found that opportunities for participation in decision making are greeted differently by subordinates with differing needs on authoritarianism and independence dimensions.

Taken as a whole, these few studies indicate that leadership effectiveness is contingent, in part, upon the situation. More specifically the leadership process involves the leader and his characteristics, the subordinates and their characteristics, and the situational environment.

There have been a number of studies which have dealt with these three interdependent factors (i.e., leader, subordinates, and situation) in an integrative manner, and deserve a more detailed review than has been given in the previous studies.

Katzell, Barrett, Vann, and Hogan (1968) is one of these studies. Katzell et al. performed their study in order to determine whether differences in the ways in which executives perceive their roles are associated with differences in variables characterizing their organizational settings.

Their study involved civilian managers who worked for the Department of the Army. Nine possible management roles were identified for these employees. They were: (a) long-range planning, (b) staffing, (c) technical consultation, (d) budgeting, (e) responsibility for sharing information versus personal responsibility for taking action, (f) concern for operations versus concern for advising others on technical matters, (g) involvement in technical activity versus administrative activity, (h) controlling activities, including cost reduction, and (i) time spent with others.

These nine roles were found to be related to certain organizational characteristics such as: the organization's mission, its location, its size, and the organizational level of the position or role. More specifically, it was found that organizations with an administrative mission tended to emphasize the staffing and controlling roles, and deemphasize long-range planning. On the other hand, organizations with a research and development mission tended to deemphasize staffing and controlling roles. In regard to organizational size, larger organizations tended more than smaller organizations to emphasize the importance of time spent with others, and to deemphasize long-range planning activities.

The evidence, therefore, indicates that there are relationships that exist between an executive's role and the features of the organizational work setting.

Wofford (1967, 1970, 1971) has published a series of studies which have also dealt with this area of interest. These studies resulted in dimensions of managerial behavior and situational variables being isolated by factor analysis. The dimensions of managerial behavior were then correlated with effectiveness criteria (i.e., production, and morale) to identify significant situational influences.

The five dimensions of managerial behavior that were isolated are: (a) group achievement and order, (b) personal enhancement, (c) personal interaction, (d) dynamic achievement, and (e) security and maintenance.

Wofford (1967) reviewed the literature associated with situational variables and selected 18 for further research. Later a factor analysis (1971) using the principle axis solution with varimax rotation resulted in the extraction of five orthogonal factors. The factors extracted were: (a) centralization and work evaluation, (b) organizational complexity, (c) size and structure, (d) work group structure, and (e) organizational layering and communication.

These five situational factors are very similar to those previously cited when discussing the work of Forehand and Gilmer (1964).

Wofford, then correlated the managerial behavior dimensions with two criteria of effectiveness (i.e., productivity and morale) in each of the situational settings.

Based on the results, Wofford first concluded that the manager oriented toward security and maintenance was most effective in the large, complex organization. Second, he concluded that the personal interaction manager was most effective for simple, centralized, structured operations. Third, the manager oriented toward group achievement and order was most effective for the small group, in which group meetings were convenient. Fourth, the manager oriented toward personal enhancement was more comparable with simple work schedules that were more effectively supervised through direct authority than complex ones. Fifth, the manager oriented toward dynamic achievement was more effective in situations with low job security and involved the small group.

Wofford indicated that these conclusions are more appropriate for the criterion of productivity, and less so for morale. In fact, he says that the managerial behavior dimensions most effective for productivity are not the most effective for morale. Which once again points out the importance of the criterion of leadership effectiveness.

Olmstead (1967) has presented another view of leadership. He views leadership as a process involving the influence of individuals and organizations in order to obtain desired results. At the heart of this process is control over the environment. Olmstead indicated that when effective leaders are studied, the factor which stands out above all others is, "... that almost everyone of these men is characterized by a highly flexible approach to the constant shifting problems and situations that he faces as a leader (p. 66)."

He has also suggested that the only real criterion of leader effectiveness, or the ultimate criterion of effectiveness, is the quality of performance demonstrated by an organization's personnel, both individually and as a unit.

In regards to the changing nature of leadership problems, Olmstead concluded that: (a) there is no single pattern of behavior which can be practiced in order to yield optimum performance under all conditions, and (b) it is more useful to view leadership as a process of adaption to changing conditions which requires the skill of being able to assess situations and to provide appropriate actions based on the prediction of outcomes.

In turn, he proposes that the skills required of an effective leader fall into two classes. The first class consists of *diagnostic skills*. These skills are those of observation, listening, analysis, and assessment of situations, as well as the ability to predict the directions situations are likely to take. The second class consists of *action skills*. These skills are those of acting or intervening in situations as they have been diagnosed and includes planning strategies, manipulation of organizational conditions, and interpersonal competency.

Therefore, for Olmstead, leadership is a decision making process which for effective behavior, involves an accurate diagnosis of the situation followed by action appropriate to the situation.

Along the same line, Hollander and Julian (1969) have suggested that leadership is best characterized as an influence system involving the leader, the followers, and the situation. Critical aspects of the system include: (a) the leader's power and authority, (b) the follower's expectations, (c) the follower's perception of the leader, and (d) the perceived legitimacy of the leader's role.

The influence system is characterized as a process which involves the leader in a given role who fulfills expectations, achieves group goals, and provides rewards for others which are reciprocated in the form of status, esteem, and heightened influence. The leader's style, therefore, is seen to be a function of the followers with their expectations and perceptions, and the situation with its unique demands.

The requirements for different leadership styles for different situational environments, once again stresses the importance of leadership flexibility.

This area of leadership flexibility has been considered by Scott (1962). His study provided some evidence that in order to be able to adopt a flexible adaptive leadership style an individual must possess a certain degree of cognitive ability. More specifically, Scott examined the relationship between cognitive flexibility (e.g., managerial style change) and cognitive complexity. He concluded that there is a relationship; the more cognitively complex individuals are usually more capable of higher cognitive flexibility.

Somewhat related to this area of cognitive complexity is a study of Mitchell (1970). He found that Fiedler's (1967) Least Preferred Co-Worker (LPC) Scale was related to cognitive complexity. His results indicated that individuals classified as high LPC's were more cognitively complex than those classified as low LPC's.

Taken as a whole, the literature cited presents leadership as a dynamic influence process system which is composed of a leader, followers, and a situation. The three components are interdependent, and a change in the characteristics or variables associated with the followers or the situation requires a change in the leader's behavior. In turn, leadership style flexibility appears to be related to cognitive complexity. An effective leader, therefore, appears to be one who is a cognitively complex adaptive decision maker within a dynamic, ever changing social system.

With this view of leadership in mind attention will now be directed to some of the more important contingency approaches to leadership. Presented next are eight contingency models or theories. They along with the literature cited will serve as a basis for the development of a new model of leadership (Model 9).

For those who desire a more detailed review of the literature, Valenzi (1972) and his associates have published an excellent literature review.

IV. MODEL 1: THE KATZ AND KAHN ORGANIZATIONAL LEVEL MODEL

Katz and Kahn (1966) proposed that the leadership style employed by a leader is contingent upon the hierarchical level of the position he holds. They indicated that there are three basic patterns or styles of leadership which can be used by a leader. Each style is appropriate for one of three hierarchical levels but not for the other two levels.

The three leadership styles proposed were: (a) origination, (b) interpolation, and (c) administration of structure. Hereafter referred to as the: (a) origination leadership style, (b) interpolation leadership style, and (c) administration leadership style.

The leadership style entitled *origination* was characterized as involving the introduction of standard change, or policy formulation. The *interpolation* leadership style, on the other hand, involved the piecing out of incompleteness in the existing formal structure, or improvisation. The third leadership style, *administration*, involved the use of existing formal structure in order to keep the organization operating in an effective manner.

This model depicts the *origination* leadership style as most appropriate for top echelon positions, while the *interpolation* style is more appropriate for intermediate positions, and the *administrative* style is best for lower managerial levels.

In addition, the required cognitive and affective abilities and skills differ for each of the three leadership styles. The three leadership styles and their respective cognitive and affective requirements will now be discussed.

Origination Leadership Style

For the origination leadership style the major cognitive requirement is a *systemic perspective*, and the major affective requirement is *charisma*.

The systemic perspective, in turn, can be broken down into two subcategories: (a) the external perspective, and (b) the internal perspective.

The external perspective involves a sensitivity by the leader to the environmental demands. That is, to the requirements which must be met by the organization in order to maintain a state of equilibrium within the environment. It also involves a sensitivity to environmental opportunities: to the possibility of achieving a more advantageous relationship with the environment. It requires a sensitivity to the trends and environmental changes which place demands upon the organization and affords the organization with opportunities. The external perspective, therefore, involves obtaining information about the organizational environment and using the information in order to forecast the probable effects of different courses of action. For example, the external perspective would be of utmost importance for the leader who is faced with the decision to merge or resist a merger, or to make a major change in location or remain in the present location.

The internal perspective, on the other hand, involves the internal subsystems within the organization. The leader needs to be aware of the differing needs of the subsystems, and the views of the people within them. The leaders function here is to integrate and harmonize these subsystems in order to optimize organizational effectiveness.

Charisma is the major affective requirement of the origination leadership style. It is that magical aura that has been endowed leaders by their subordinates. It is derived from people's emotional needs and from dramatic events associated with the exercise of leadership. The charismatic leader must provide a shared emotion between himself and his followers, but he must, in addition, rise above them in some quality of greatness so that identification will permit the followers to participate in his greatness.

Interpolation Leadership Style

This style is most appropriate for the intermediate levels of management, and it involves the development of ways and means for implementing policies and plans established by the higher echelons. In

order to adequately perform as an intermediate level manager, one must be able to relate to both those above him and below him. In Likert's (1961) approach, the intermediate level manager would be considered a linking pin between the two levels of the organizational structure. This two-way communication process is the cognitive requirement for the intermediate level manager.

The basic effective requirement is the ability to integrate primary and secondary relationships. The primary relationships are those personal relationships of individuals, such as the relationships among friends or those in the family. The secondary relationships are those role-prescribed relationships established by the organization for the employee. These are usually specified in the employee's job description.

If the intermediate level manager adequately performs this human relations activity of integrating effectively the primary and secondary relationships, then the norms of the work group are congruent with the norms of the organization. This implies that when effective integration has occurred then the paths for organizational success are the paths for individual achievement. In this case, the organizational requirements are in themselves productive of member satisfaction rather than indirect means to such satisfaction.

Administrative Leadership Style

Administration of structure is performed by the lower managerial levels. The capacity to administer effectively the established structure depends upon the manager's technical knowledge of the tasks, his understanding of the rules, and his concern with fairness, consistency, and equity in their application. Of these requirements, technical knowledge and understanding of the legal system constitute the primary cognitive requirement, while concern with equity is the prime affective requirement.

Knowledge of the technical facets of the job permit the lower level manager to make judicious use of the resources and personnel under his supervision. A portion of this responsibility is to see that his workers have an adequate flow of materials, proper tools, and appropriate directives for applying their energies.

The lower level manager in addition to technical know-how must understand the system of rules and be concerned with the effects of their application. The strength of the legal system depends upon; (a) equity or the use of rewards and punishment in a fair, consistent, and clear fashion, and (b) a reasonable consideration of the law in spirit as well as in letter. Equity in the application of rules means that the rules that are administered are administered fairly, not that the rules themselves are equitable.

In summary, the model proposed by Katz and Kahn (1966) establishes three categories or levels of leadership acts, which are differentiated in terms of their affects on the organizational structure. They are: (a) the origination of structure, or policy formulation; (b) the interpolation of structure, or the piecing out of policies to meet immediate problems; and (c) the use of structure, or the routine administration of applying prescribed remedies for predicted problems. Each of these three leadership styles is characteristically found at different organizational levels, and each requires a different cognitive style, a different affective orientation, and different knowledge.

What are the implications of this model? The main implication is that since different management skills are requirements at different organizational levels, then a given manager's capacity to adapt his style to the appropriate level needs to be ascertained. Should a lower level manager not possess the capacity to adapt the interpolation style then he should not be assigned to an intermediate managerial level. Perhaps transferring another middle level manager from a different department or organization would be more appropriate.

V. MODEL 2: THE DUBIN AND WOODWARD TECHNOLOGY MODEL

A factor that has tended to be ignored until recently is the technology that characterizes a department or firm. Dubin (1965) and Woodward (1958, 1965, 1970) have suggested that technology is one of the most important variables associated with an organization's managerial structure and therefore the managerial style employed. Woodward's studies (1958, 1965) have been particularly important in this regard, and deserve discussion.

Woodward and her associates have employed a variety of research methods, including case studies, surveys, and longitudinal and historical analyses; in order to determine the ramifications of various types of organization in 100 British firms. The firms ranged in size from 100 to 8,000 employees, and were involved in both the manufacturing and selling of products.

The studies involved the investigation of the formal organizational structure and the operating procedures employed. Researchers collected data on: (a) the history, background, and objectives of the firm, (b) the manufacturing processes and methods used, (c) the organizational structure and operating routines employed, (d) the cost structure, (e) the labor structure, and (f) the success of the firm as indicated by economic facts and figures.

The organizations were divided into three groups, according to their degree of success; below average, average, and above average.

After attempting to correlate success with form and size of organizations, Woodward hit upon the idea of classifying the organizations into three groups according to the complexity of the technology involved. The three categories established were: (a) unit and small-batch production, (b) large-batch and mass production, and (c) long-run process production of the same product, such as oil and chemicals. Therefore, the technological complexity involved, ranged from production of unit articles for individual customers to continuous-flow process plants.

Once the organizations were classified according to technological complexity, a strong relationship between organizational structure and success appeared. That is, the successful unit-production firms had organizational characteristics in common with each other, as did the above-average, large-batch productions firms and the above-average continuous process production firms.

The successful organizations at the extremes of the technological complexity scale tended to: (a) place less emphasis on clear-cut written definitions of duties, (b) provide greater delegation of authority, (c) provide more permissive management, (d) possess less tightly organized work forces, and (e) show less organizational consciousness.

The successful organizations in the middle ranges of technological complexity (mass production) possessed the most highly developed line-staff organization. On the one end of the continuum where technology was rather simple (unit), the line supervisors were technically competent and there were few specialists. On the other end of the continuum (continuous process), the technology involved a highly technical production process, and it was difficult to distinguish between the executive and advisory responsibilities.

The successful large-batch and mass production firms used more production administration and greater supervision of production operators. The control procedures employed were more elaborate, sanctions more rigorously applied, and written communications tended to occur more frequently than in the unit or continuous process type of firms.

Based on this evidence Woodward concluded that the classical management principles appeared to have been developed based upon the large-batch production industry and therefore could only be applied successfully to that type of industry. That is, the classical management principles were not appropriate for unit and continuous-flow process type of organizations.

Dubin (1965) after reviewing Woodward's studies and related literature made a number of conclusions related to the managerial or leadership styles required for the different technological organizations.

First, Dubin made a general conclusion conceming worker autonomy. Worker autonomy being a condition wherein a worker requires a minimum of close supervision. He concluded that the evidence suggests that worker autonomy may be relevant to the unit-production technologies, but probably not to mass-production technologies and almost certainly not to the continuous-flow process type of technologies.

Secondly, Dubin concluded that for production workers in unit and small batch technologies, the factors of high consideration and low structure have an affect on rated departmental efficiency and foreman proficiency. That is, higher consideration and lower structure produces an increase in proficiency. On the other hand, in mass production, efficiency and effectiveness are positively related to low consideration and high structuring of the work situation by the foreman. In the case of middle managers in

a continuous-production operation, he concluded that neither consideration nor structuring was related to rated efficiency of performance.

Based on the above discussion, it appears that there is some disagreement between Woodward and Dubin. The disagreement is not with the large batch or mass production category, nor with the unit-production category. The disagreement involves the continuous-flow process category. Perhaps this conflict is in part due to the difference in perspective between the two individuals. Woodward's emphasis is on changes in the managerial control structure and its relation to the production process; that is, the different technologies. Dubin's emphasis, is more on the surveillance of technological machinery. He argues that with advancing technology the necessary control over machines and their output becomes so critical that surveillance is shifted from the workers to management.

Zwerman (1970) has performed a follow-up study where he tried to replicate as close as possible the research of Woodward. He concluded that his findings generally confirmed those of Woodward. Nevertheless, more research is needed in order to resolve the conflict between Woodward's and Dubin's conclusions. At present, however, their areas of agreement offer the following in relating industrial technology to managerial style: (a) successful large-batch or mass production organizations require close supervision, high structure, low consideration; and (b) successful small-batch or unit production organizations require higher consideration, lower structure, and less supervision.

VI. MODEL 3: THE STOGDILL EMERGENT LEADERSHIP MODEL

Stogdill (1959, 1971) has proposed an organizational model which suggests that emergent leadership is contingent upon the individual, the group, and the interactions among members of the group. Stogdill's model is depicted as an input-output system. Member's inputs into the organization are performances, interactions, and expectations. The effects of these three input variables are exhibited in the form of role differentiation, and therefore group structure; and role performance or operations. That is, the structure of roles and the operations within the group are considered properties of groups and result from the interrelated performances, interactions, and expectations of the members. The end products or effects of these personal and interpersonal behaviors, mediated through group structure and operations are exhibited in the form of group achievement. Group achievement is composed of aspects entitled: (a) productivity, (b) morale; and (c) integration. As a part of his model, Stogdill includes two variables which he calls formal structure and role structure. These two variables represent the structuring and patterning of the input performances, interactions, and expectations which bring about group achievement.

In regard to leadership behavior, Stogdill stresses the importance of role differentiation. He suggests three factors for shaping the expectations that define an individuals (and therefore the leader's) role in an organization. The first involves the function and the status of the position occupied by the leader. Stogdill indicated that individuals of different positions vary in freedom for initiative (status) and in the extent to which they are expected to exert determining effects upon group structure and goal direction (function). The second factor consists of the demands placed upon the leader by his group due to variations in the operational and structural requirements of the group. The third and final factor consists of the group members' perceptions of the leader.

Therefore, the leadership function in Stogdill's model is one which is contingent upon the leader's role. His role is determined by his expectations which in turn are created by: (a) his status and position, (b) the groups perception of him, and (c) the groups demands upon him. The group's demands are, in turn, a result of the operational requirements and the structural requirements established for the group organization.

In this regard, Stogdill has indicated that:

> The members of a newly formed . . . group, as a result of their individual performances, interactions with each other, and mutual reinforcement of each other's expectations, quickly develop a role structure. One member, who succeeds in emerging as a leader, thereby strengths the expectation that he can help the group toward the accomplishment of its aims. Other members, in permitting him to lead, reinforce the expectation that he is to continue in his leadership role and that they are to play other roles in the group. It has been found that a group cannot engage in successful task performance until a role structure has evolved. The members continue to strive for position and to define and redefine their roles rather than working on the task

until a structure has become differentiated and stabilized. . . . The leader performs a valued function, not only because he is able to initiate structure, but also because he stabilizes the role structure that has evolved for the purpose of task performance. It has been found that leaders who emerge in group interaction tend to be more strongly goal committed than other members of the group. Since the nature of the goal and task is a determining factor in the development of role structure, it is not surprising to find that the leader is expected to maintain goal direction and role structure for the group. If he wanders too far afield, the group members may remind him of the primary task or of his responsibility. Thus, the leader is not alone in commitment to the group goal and role structure. Both theory and research evidence suggests a reciprocal and mutually supportive relationship between leader and followers with respect to the group goal (1971, pp. 13-14).

Therefore, Stogdill's model is primarily concerned with emergent leadership. His approach is one of a systems approach where leadership is defined as, " . . . the initiation and maintenance of structure in expectation and interaction." (1971, p. 13).

VII. MODEL 4: THE FIEDLER CONTINGENCY MODEL

Fiedler (1965, 1967) has proposed a model of leadership effectiveness which has been developed over a period of more than fifteen years and is based on empirical research, both experimental and correlational. Fiedler has proposed that environmental situations can be ordered in their degree of favorability for a leader and that the leadership characteristics required vary according to the degree of favorability. First, the leadership styles and their measurement as proposed by Fiedler will be considered, followed by a discussion of the favorability of environmental situations.

Fiedler's measure of leadership style involves an instrument which assesses the leader's esteem for his "least preferred co-worker" (LPC). In completing Fiedler's LPC instrument a leader is asked to think of all persons with whom he has worked. Then he is asked to describe the one person with whom he has found it most difficult to cooperate; that is, the person who has been his least preferred co-worker. The LPC need not be someone with whom the subject is working at the time, but any person with whom he has worked at any point in time.

The leader then describes his LPC by completing the 21 eight point semantic differential type scales on the LPC instrument. The LPC score obtained is the sum of the 21 item scores. The most favorable scale position is scored the value of 8, and the least favorable is scored as 1.

Fiedler (1966, 1971) has indicated that individuals receiving high LPC scores differ from those receiving low LPC scores in that they tend to seek different needs in the group situation. Individuals who perceive their LPCs in a relatively favorable manner (i.e., high LPCs) gain satisfaction and self-esteem from successful interpersonal relations. On the other hand, individuals who perceive their LPCs in a relatively unfavorable manner (i.e., low LPCs) gain satisfaction and self-esteem from successful task performance.

Fiedler (1967) has indicated that LPC scores have a high degree of internal consistency, with split half coefficients falling in the neighborhood of .90 to .95. The stability of the LPC score over several months has been estimated by Fiedler to be around .60.

Therefore, leadership style for Fiedler is obtained from LPC scores. Which style is the most effective? This depends upon the situation, and the situation in Fiedler's model is defined in terms of the favorability of the situation for the leader. For Fiedler, favorability of environmental situations depends upon three characteristics. They are: (a) leader-member relations, (b) task structure, and (c) position power.

Leader-member relations has been proposed by Fiedler as the most important of the three characteristics in determining one's leadership influence. The leader-member relation characteristic is characterized as the degree to which a leader's group members trust and like him and are willing to follow his guidance. This characteristic has been usually measured by either: (a) a sociometric technique which asks group members to name the most influential person in their group or the man they would most like to have as a leader, or (b) a group-atmosphere scale indicating the degree to which a leader feels accepted by a group.

The second most important characteristic according to Fiedler, is task structure. Task structure is the degree to which a task is spelled out in detail for a group, and can be accomplished according to a detailed set of standard operating instructions. The rationale behind this characteristic is that vague and ambiguous

or unstructured tasks make it difficult for the leader to exert leadership influence, because neither he nor his subordinates know exactly what has to be accomplished or how it is to be done. This characteristic has been measured on the basis of four scales developed by Shaw (1963). They are: (a) goal clarity or the degree to which the task's desired outcome is specified; (b) decision verifiability or the objectivity with which the outcome can be measured, (c) solution specificity or whether there are one or many possible solutions, and (d) goal-path multiplicity or whether there are one or many possible methods for reaching the goal.

The third characteristic is position-power. That is, the power a leader possesses because of his position within the organizational hierarchy. It is separate from his personal attraction and ability to command respect and loyalty. The rationale asociated with this characteristic is that the leader who possesses the power to hire and fire, promote and demote, can obtain worker compliance under conditions which might be impossible for a leader without this power (e.g., a chairman of a volunteer work group). An 18-item checklist filled out by an independent judge has been used to measure this dimension. This dimension has been considered to be the least important of the three dimensions.

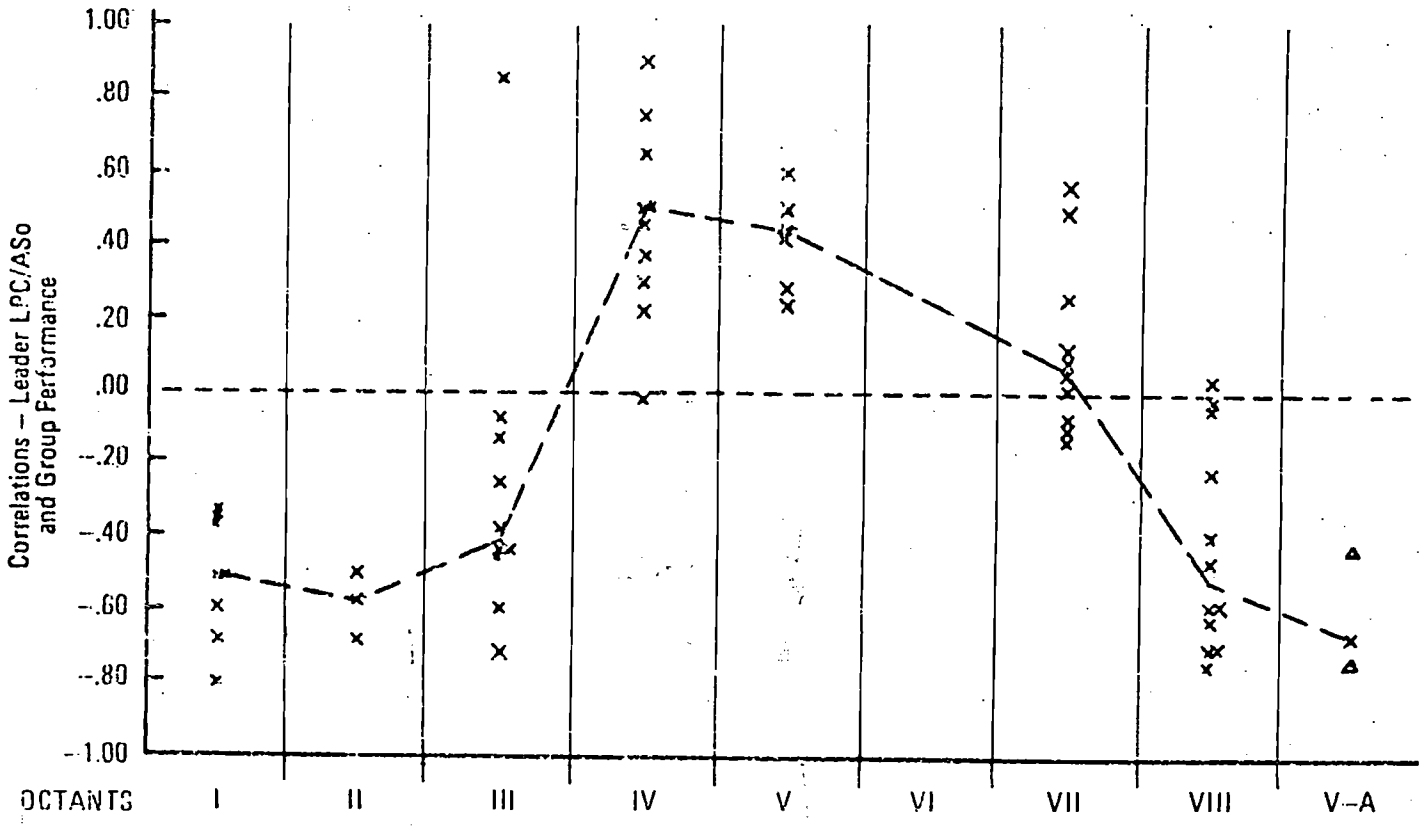
Measurements of these three characteristics or dimensions have been dichotomized, which permits a particular group leadership situation to be classified into one of eight possible categories. This relationship is depicted in Figure 1.

According to this scheme it is easiest to be a leader in a group which falls into cell or octant 1 since you are liked, have position power, and have a structured task. It is quite difficult to be a leader in a group which falls into octant 8 where the leader is not liked, has a vague unstructured task, and little position power.

On an *a priori* basis, the eight categories have been arranged on a "favorableness" continuum or the degree to which the leader's job of influencing his group will be easy or difficult, as is depicted in Figure 1. This figure shows the results obtained from 63 sets of groups. The horizontal axis indicates the situational difficulty or favorability dimension. That is, where the leader's group fell in terms of the eight fold classification scheme. The vertical axis shows the correlation coefficients between group performance and the leader's LPC score.

Fiedler concluded from the results depicted in Figure 1, that task-oriented leaders tend to perform better than relationship-oriented leaders in situations which are either very favorable, or in those which are very unfavorable. On the other hand, relationship-oriented leaders perform better than task-oriented leaders in situations which are intermediate in favorableness. Based on this conclusion, he postulated that the performance of the leader depends as much on the job and the organization as it does on the individual in the leadership position. Therefore, the organization can change leadership performance by redefining the leader's job. Fiedler believes that it is almost always easier to change a man's work environment than it is to change his personality or his leadership style. In order to change the leader's work situation so as to be more favorable to his leadership style Fiedler (1967, pp. 255-256) offers the following suggestions for organizational engineering:

> 1. In some organizations we can change the individual's task assignment. We may assign to one leader very structured tasks which have implicit or explicit instructions telling him what to do and how to do it, and we may assign to another the tasks which are nebulous and vague. The former are the typical production tasks, the latter are exemplified by committee work, by the development of policy, and by tasks which require creativity.
>
> 2. We can change the leader's position power. We not only can give him a higher rank and corresponding recognition, we can also modify his position power by giving him subordinates who are equal to him in rank and prestige or subordinates who are two or three ranks below him. We can give him subordinates who are expert in their specialties or subordinates who depend upon the leader for guidance and instruction. We can give the leader the final say in all decisions affecting his group, or we can require that he make decisions in consultation with his subordinates, or even that he obtain their concurrence. We can channel all directives, communications, and information about organizational plans through the leader alone, giving him expert power, or we can provide these communications to all his subordinates.
>
> 3. We can change the leader-member relations in the group. We can have the leader work with groups whose members are very similar to him in attitude, opinion, technical background, race, and cultural background. Or we can assign him subordinates with whom he differs in any one or several of these important aspects. Finally, we can assign the leader to a group in which the members have a tradition of getting along well with their supervisors or to a group which has a history and tradition of conflict.



OCTANTS	I	II	III	IV	V	VI	VII	VIII	V–A
Ldr. Memb. Relations	Good	Good	Good	Good	Mod. Poor	Mod. Poor	Mod. Poor	Mod. Poor	Very Poor
Task Structure	Str.	Str.	Unstr.	Unstr.	Str.	Str.	Unstr.	Unstr.	Str.
Ldr. Position Power	Strong	Weak	Strong	Weak	Strong	Weak	Strong	Weak	Strong

Figure 1. Correlations of leader LPC and group performance plotted against octants, i.e., favorableness of group task situation for leader. (Adapted from Fiedler, August 1971, p. 124.)

Fiedler (1967) has also addressed the topic of training and experience (Csoka & Fiedler, 1971). He has suggested that training and experience may be viewed as altering the favorableness of the situation. Therefore, according to Fiedler, training and experience results in improved performance of some leaders, while decreasing that of others. More specifically, training and experience (e.g., management training) that results in leaders becoming more task-motivated (low LPC) would have a positive correlation between performance and training when leading in very favorable and unfavorable situations, and a negative correlation when performing in intermediate situations. Leaders whose training and experience resulted in their becoming more relationship-motivated (high LPC) would perform better in intermediate favorability situations, however, their performance would decrease if placed in very unfavorable or favorable situations. Training (such as technical training) which generally *increases* the favorability of the situation for both task-oriented leaders and relationship-oriented leaders could either cause an increase or decrease in performance. For example, a *task-oriented* leader, working in an *unfavorable situation* who undergoes training which increases the favorableness of the situation has a resulting *decrease* in performance since he now falls within the intermediate favorability range of Fiedler's curve which requires a *relationship-oriented* leader for optimum effectiveness. On the other hand, had the leader been a *relationship-oriented* leader his performance would have not decreased, but instead would have increased.

Attempts to validate this hypothesis have been performed with some reported success by Csoka (1972), and Csoka and Fiedler (1971).

Extensive research by Fiedler, his associates, as well as other social scientists has been conducted in an attempt to examine the validity of his model. Mitchell, Biglan, Oncken, and Fiedler (1970) indicated that since 1964 approximately 25 studies have been conducted which attempted to test various aspects of the model. They concluded that the field studies testing the model generally indicate a very close relationship between the proposed curve and the obtained curve. Laboratory experiments, however, did not support the model in octant II, and the support for other octants (in many cases) was weak.

More recently Michaelsen (1971), at Michigan University's Institute for Social Research, tested Fiedler's model and he concluded that his results generally supported the "contingency model."

Even though there appears to be general support for Fiedler's model, there are problems associated with his method of assessing leadership style. One of the problems associated with assessing leadership style is the low reliability of the LPC scale. In one study (Fiedler, 1967, p. 48) the test-retest correlation dropped to .31. Therefore, there is some reason to question whether the LPC scale is a sufficiently reliable measure of leadership.

Another problem with the model is associated with the correlational data from which the model's curve was derived. Examination of the correlations reveals that at least in some octants, the correlations vary over a very wide range. In octant III, for example, the correlations range from −.72 to one isolated case of +.84 (Fiedler, 1967, p. 146). Little confidence can be given to the curve point values (i.e., median values) that are obtained from such a wide dispersion of coefficients.

A third problem is associated with the meaning of the LPC score. What the LPC score is measuring is still open to question. However, Mitchell (1970) in a series of studies concluded that the LPC score was positively related to cognitive complexity. He found that high-LPC people differentiated more than low-LPC people between task and interpersonal characteristics of both people and situations. In addition, he found that high-LPC individuals were more complex in their utilization of information about various task situations. An unexpected result was that high-LPC individuals used interpersonal relationship cues less than did low-LPC individuals in making judgements about hypothetical-task situations. Mitchell suggested that this might be due to the LPC score reflecting not a single dimension of personality but two.

In summary, Fiedler's model involves the leader with his personality and unique style and the situation. The situation is viewed in terms of favorableness, and different personality types (i.e., high LPC's and low LPC's) perform better under different situations. Fiedler would select leaders for particular situations, (or change the situation) since he assumes they lack the ability to widely vary their leadership style. A different approach is taken in the next model: model 5.

VIII. MODEL 5: THE TANNENBAUM LEADERSHIP PROCESS MODEL

Tannenbaum, Weschler, and Massarik (1961) have developed an interesting model of leadership behavior. Their approach is apparent in their definition of leadership. They define leadership as "interpersonal influence, exercised in situations and directed, through the communication process, toward the attainment of a specified goal or goals (p. 24)."

The authors have indicated that the leadership process always involves attempts on the part of the leader to affect or influence the behavior of a follower or followers in a given situation. Therefore, their leadership process model involves: (a) the personality of the leader, (b) the personality of the follower, and (c) the characteristics of the situation.

In order to better understand this model the basic components, starting with *leader personality* and ending with *leader effectiveness* will now be discussed. Each component will be italicized when initially presented in order to identify it as a new component.

The *leader's personality* is composed of his needs, perceptual capacities, and action capacities. His needs and his perceptual capacities (i.e., potential for responding to a variety of external stimuli) affect his response to the stimuli which confront him. His overt response involves his action capacity which is defined as his capacity or potential for responding behaviorly under a variety of conditions. Once the leader receives stimuli from his followers and from the situation (e.g., physical phenomenon, organizations, goals, etc.), then his needs, perceptual capacities, and action capacities as well as the quality and quantity of the stimuli received determine his *perceptual flexibility*. Perceptual flexibility, as defined in the model, is the range of stimuli of which the leader is cognitively aware in an actual leadership situation. It serves as a basis for influence attempts by the leader.

Given that a leader possesses a certain range of perceptions (i.e., perceptual flexibility), then he must distinguish among his perceptions; those which he believes to be relevant (i.e., relevance judged by leader) to the attainment of the specified goal and those which he evaluates as irrelevant. His evaluation of relevance can be inaccurate, and his error in this instance can be ascertained by comparing his judged relevance with some extemal, *actual criterion* of relevance.

If there is agreement between the leader's perception of reality and that of some actual criterion of relevance, then the leader is said to be *sensitive* or possess *sensitivity*. Sensitivity, therefore, is defined as accuracy of perception by the leader. There are two types of sensitivity. There is *social sensitivity* which involves the accuracy of perception of followers, other individuals, groups, organizations, and cultures. Then there is *non-social sensitivity* which involves the accuracy of perception of physical phenomena. When no such agreement exists, then the leader is said to be *insensitive*.

The leader with a certain degree of sensitivity forms a cognitive structure of the follower or followers and the situations. The end product of this structuring process is termed a *psychological map*. That is, the leader assesses the followers and the situation as a preliminary to action. In so doing he establishes a mental image of the barriers and facilitating circumstances that have a bearing on the specified goals of his leadership behavior. In turn, he visualizes the alternative action pathways available to him which he feels will lead to effective leadership. This map, therefore, provides the basis for the course of action which the leader follows in his attempts to exert influence through communications.

It is at this point in the leadership process that the leader's personality once more comes into play. His needs and his action capacity or capacity for behavior, determines his action flexibility (i.e., range of available communication behaviors).

As previously mentioned, communication serves as the instrument through which influence is exerted. The leader uses communication as a tool whereby he affects the perceptual-cognitive structure of the follower. He selects from his different alternative communication behaviors those that he feels will affect the follower in changing his attitude appropriately and in turn will lead to the desired behavioral change. Therefore, for the leader certain *communication behaviors* are *judged appropriate* and selected, and others are judged inappropriate and rejected. The degree to which a leaders selected behaviors are appropriate (i.e., succeed in moving followers toward goal attainment) is a measure of *leadership effectiveness*.

In summary, it can be said that Tannenbaum and his associates have presented a leadership model based on influence attempts by a leader over followers in a given situation. The leader's personality is a variable associated with leadership effectiveness. The attributes of the leader's personality which contributed to leadership effectiveness are: (a) his needs, (b) his perceptual capacities, and (c) his action capacities. They are important to the extent to which they affect what the leader sees in his attempt to understand the follower and the situation, and to the extent that they have an impact upon his communication behaviors.

The primary factor for leadership effectiveness is, therefore, leader flexibility. Basic to this style, flexibility is the concept of leader sensitivity which determines the leader's psychological map for leadership action.

How can a leader improve upon this basic ingredient of sensitivity? Tannenbaum and his associates feel that this can be accomplished through a training program which stresses social sensitivity and action flexibility (i.e., sensitivity training).

But how does one choose a specific leadership pattern? That is the next topic of concern and Tannenbaum and Schmidt offer some assistance in answering this question.

Choosing a Leadership Pattern

Tannenbaum and Schmidt (1958) offered managers a way of thinking about varying their leadership style. They depicted the range of leadership behavior as falling along a continuum which varied from that of a boss-centered leadership style to that of a subordinate-centered leadership style.

The alternatives available to a manager include: (a) making a decision and announcing it, (b) selling his decision, (c) presenting his ideas and inviting questions, (d) presenting a tentative decision subject to change, (e) presenting the problem, getting suggestions and then making his own decision, and (f) defining the limits and requesting the groups to make a decision within prescribed limits. Depending upon the situation the manager varies his behavior along this continuum. The factors that affect the style to be selected are the factors previously mentioned; that is, the factors related to the manager himself, those related to other members of the group, and lastly, those related to the situation at hand. The manager chooses a leadership style that is consistent with his personality, his values, his confidence in his subordinates, his leadership inclinations, and his feelings of security in the situation. In addition, the effective leader bases his choice on his subordinates individual needs for independence, their tolerance for ambiguity, their willingness to accept responsibility, their interest and expertise in the problem, their understanding of organizational goals, and their experience in decision making. In regards to the situational factors to be considered, the authors include the degree of time pressure, the type of problem, the ability of the work group to work together, and the type of organization.

Being an effective leader, therefore, requires a manager to be aware of the situation, the people involved, himself, and the dynamic interactions of these factors. Once again, for Tannenbaum and his colleagues an appropriate style is one that results in influencing behavior toward goal attainment.

Since this model was initially published there have been many social developments which were not considered in the initial model. Recognizing this Tannenbaum and Schmidt (1973) recently published a modification of the model in order to incorporate these social changes.

This model reflects a more permissive philosophy of management and a more complex view of the environment in which the manager operates. The original model was basically a closed system and was concerned only with situations residing within the organizational environment. The revised model includes forces lying outside of the organization, and indicates there is an interdependency between the external and internal environment.

In the initial model the manager was portrayed as the principal actor, who initiated and determined group functions and his managerial style. The revised model gives more of this responsibility to the workers. Now the relationship between a manager and his subordinates is depicted as one arrived at by interaction between the two parties. This implies that the workers possess more power than was initially indicated in the original model. This power can be manifested in forms such as resistance by individual workers, or by joint worker action as seen in labor union activities.

In the 1958 article, Tannenbaum and Schmidt used the terms manager and subordinate. In the revised model they prefer not to use the term subordinate, since they feel it is demeaning. They prefer instead to use in its place the term non-manager.

Taken as a whole, the works of Tannebaum and his associates reflect a complex and dynamic process which has been summarized recently by Tannenbaum (1971) as follows:

> *First* I do not think we can simply discuss "leadership" out of context. If we wish to determine leadership qualities and to differentiate between levels of those qualities, we must do two things: we must relate them to societal frame of reference. *Second*, I think we must accept the evolution of the study of leadership as a three-variable problem consisting of the leader, the situation and the followers. *Third*, I hold quite strongly that effective leadership requires mastery of social sensitivity and action flexibility. The level of skill of application of these two qualities determines both short-run and long-run effectiveness.

IX. MODEL 6: THE HOUSE PATH GOAL THEORY

House (1971) has recently presented a path goal theory of leader effectiveness. The theory is based upon a path-goal hypothesis advanced by Georgopoulos and Tannenbaum (1957), and upon motivational expectancy theory (Porter & Lawler, 1968; Vroom, 1964). The theory is expressed in the formula:

$$M = IV_b + P_1 \left[IV_a + \sum_{i=1}^{n} (P_2, EV_i) \right]_{i = 1 \ldots, n,}$$

The leadership influence has an impact upon the formula in that a leader (by his actions) affects the independent variables listed and therefore influences the individual's motivation (M) toward goal achievement. In order to clarify this relationship each of the components of the formula will be discussed, followed by an explanation of the leader's influence upon each.

According to House's model, an individual in a given work situation estimates the path instrumentality (P_1) of his behavior for the accomplishment of some goal. In order to do this he considers factors such as his ability to behave in a manner that is effective, as well as the environmental work goal barriers, and the support that others will give him in attempting to accomplish the work goal. He also makes an estimate of the path instrumentality (P_2) of the work goal accomplishment for attaining personal outcomes that have a certain valence or value for him. In addition, he makes an evaluation and subjectively places values on: (a) the intrinsic valence associated with the behavior required to achieve the work goal (IV_b), (b) the intrinsic valence associated with the achievement of the work goal (IV_a), and (c) the extrinsic valence associated with the personal outcomes or payoffs that he acquires as a result of achieving the work goal (EV_i).

Put a little less formally, the process is similar to an individual asking himself: "If I perform in a certain way (behavior), what are the odds that I will obtain my work goal? Also if I do obtain my work goal what is its pay off for me – what do I get out of it; and is the pay off or any value to me, is it what I want?"

How does the leader fit into this scheme? He fits into the scheme by affecting each of the independent variables just discussed. First, the leader, in part, determines the extrinsic rewards that will be associated with the accomplishment of the work goal (i.e., EV_i). For instance, he influences the degree to which accomplishment of a work-goal will be recognized as a contribution and whether it will be rewarded, such as; financial increases, promotion, or assignment to a more interesting job or task situation. Therefore, the leader influences the magnitude of values of the available personal outcomes. Second, the leader, by constantly rewarding achievement, can increase the subordinates' path instrumentality (P_2) for valued or valent personal outcomes. That is, the worker knows that the leader has rewarded consistently in the past for good performance and that he probably will in the future. Still another way that a leader can influence a subordinate toward goal-attainment, is by giving support to the worker's efforts, thereby increasing the worker's chances of goal accomplishment. Fourth, the leader can affect the intrinsic valences or values associated with work-goal accomplishment (IV_a), by the way he assigns and delegates tasks to his workers.

This, in turn, determines the amount of influence the subordinate has in goal setting and the amount of control he is permitted in the task-directed effort. House proposes that in general the greater the subordinates' opportunity to influence a goal and exercise control over task accomplishment, the more intrinsically valent the work-goal accomplishment. Lastly, the leader can increase the net intrinsic valence associated with goal-directed behavior (IV_b). He does this by reducing barriers which cause frustration, by being supportive in difficult and stressful times and generally being considerate of the needs of the subordinate.

Therefore, in the light of the model proposed, the leader is viewed as a motivator of individual workers toward goal attainment. Is there any support for this theory? House (1971) cited three studies and drew the conclusion that the evidence generally indicated support. However, since the 1971 article, House and Wahba (1972) have reviewed the results of 14 expectancy model studies in order to establish the relationships among the components of the model. That is, are the components additive, multiplicitive, or some combination of the two. Based on these studies they modified the original model which resulted in the following formulation:

$$M = IV_a, E_1 \quad \left[IV_b + \frac{n}{1} (E_2 \times V) \right]$$

Where E_1 is equivalent to P_1 in the original formula and E_2 is equivalent to P_2.

This revised model still requires more support in order to establish the validity of the proposed relationships. Nevertheless, the model does suggest a dynamic, complex motivational system as a basis for leadership behavior, which is contingent upon the leader, the follower, and the situation.

X. MODEL 7: THE REDDIN 3-D THEORY

Reddin (1967, 1970) has developed what he calls, a 3-D Theory of Leadership Effectiveness. His theory incorporates leadership style and relates different styles to different situational environments.

He proposed two dimensions of managerial style: (a) task orientation (TO), and (b) relationship orientation (RO). These two dimensions were selected for inclusion in his model based on the Ohio State Leadership Studies, the Michigan Leadership Studies, and the work of Bales (1953) at Harvard.

Reddin defined task orientation as, " . . . the extent to which a manager is likely to direct his own and his subordinates efforts toward goal attainment (1967, p. 11)." Relationship orientation, on the other hand, was defined by Reddin as, " . . . the extent to which a manager is likely to have highly personal job relationships characterized by mutual trust, respect for subordinates' ideas and consideration of their feelings (1967, p. 11)."

Based on these two dimensions, Reddin developed four basic leadership styles. The four styles proposed are: (a) the integrated style, (b) the dedicated style, (c) the related style, and (d) the separated style. These styles can be depicted in a matrix where the *integrated* style is one where the leader is high on both the relationship orientation dimension and the task orientation dimension. On the other hand, if a leader is high in his task orientation and low in his relationship orientation then he is said to be employing the *dedicated* leadership style. While if the reverse is true, that is, he is high on the relationship orientation dimension and low on the task orientation dimension then he is employing the *related* leadership style. Lastly, if the leader is low on both dimensions then his style employed is said to be a *separated* leadership style.

Reddin, in developing his theory, indicated that these two dimensions of leadership, in and of themselves, were of little value. He further indicated that they needed to be related to managerial effectiveness in a variety of situations. Toward that end he added a third dimension, that of leader effectiveness. Reddin called a leadership style *effective*, when it was appropriate to a given situation, and he called it *ineffective* when a style was inappropriate to a given situation.

The leadership style, however, is not only effective or ineffective. The leadership style varies along a continuum of effectiveness. At one extreme the leadership style is depicted as effective, with four related

effective leadership styles. At the other extreme the leadership style is depicted as ineffective with four ineffective leadership styles. How well a leader performs, establishes his position along this continuum. His performance is measured by the extent to which he achieves the output requirements of his position, and these output requirements are established in line with the management by objectives (MBO) approach.

What are these effective and ineffective leadership styles? On the effective end of the continuum Reddin lists four styles which he calls: (a) the bureaucrat, (b) the developer, (c) the benevolent autocrat, and (d) the executive. The *bureaucrat* is characterized as one who is not interested in either the task or a relationship orientation but who, by following the rules, does not make this obvious and therefore does not let it affect morale. He is considered effective in that he follows the rules and maintains apparent interest.

The *developer*, on the other hand, is characterized as one who places implicit trust in people. He is concerned with developing the talents of others and of providing a work atmosphere conducive to maximization of individual satisfaction and motivation. He is considered effective in that the work environment he creates is conducive to his subordinates developing commitment to both themselves and the job.

The third effective leadership style, the *benevolent autocrat*, is one who places implicit trust in himself and is concerned with both short and long run tasks. He is effective in that he possesses a skill in inducing others to perform as he desires without creating enough resentment to decrease production.

The last effective leadership style, the *executive*, is one who sees his job as effectively maximizing the effort of others in relation to the short and long run tasks. He establishes high standards for performance and production and recognizes that due to individual differences and expectations that he will have to treat everyone differently. He is effective in that he is committed to both the task and the relationship dimensions involved in his position.

At the other end of the effectiveness continuum, the ineffective end, Reddin lists four ineffective or less effective styles: (a) the deserter, (b) the missionary, (c) the autocrat, and (d) the compromiser.

The first of these, the *deserter*, is characterized as one who is using a low task orientation and low relationship orientation in a situation where such behavior is inappropriate and who is, therefore, less effective. He is perceived as uninvolved and passive or negative.

The second ineffective style, the *missionary*, is a style where the manager uses a high relationship orientation and a low task orientation in a situation where such behavior is inappropriate and therefore he is also ineffective. He is perceived as being primarily interested in harmony.

The third ineffective style, the *autocrat*, involves a style that is high in task orientation and low in relationship orientation. He is perceived as having no confidence in other individuals, as unpleasant, and as interested only in the immediate task.

The fourth and last of the ineffective leadership styles is the *compromiser*. He is one who is high in task orientation and high in relationship orientation, in a situation that requires a high orientation in only one of the dimensions or neither. He is perceived as being a poor decision maker, as one who allows various pressures of the situation to overly influence him, and as one who is concerned with immediate problems rather than maximizing long-term production.

Given that there are different styles of managerial or leadership behavior available; then what are the requirements for effectively selecting and utilizing them? Reddin (1970) has indicated that there are three basic skills required in order to become an effective manager. First, the leader or manager must know how to read a situation (i.e., situational sensitivity). Second, he must have the skill to change the situation if it needs to be changed (i.e., situational management skill). Third, an effective manager must possess the capacity to vary his leadership style in accordance with the situational requirements (i.e., style flexibility skill).

In regards to situational sensitivity, an effective manager has to be aware of the basic components of a situational environment. Reddin, in his 3-D Theory, subdivided the situation into five basic elements. They are: (a) the organization philosophy, (b) the technology, (c) the superior, (d) the co-workers, and (e) the subordinates. Each of these will now be discussed.

The *organization philosophy*, which Reddin simply calls the "organization" most of the time, refers to those factors which influence behavior within a social system that are common to essentially unrelated positions.

For example, the organization philosophy has been referred to as "extrinsic job factors," "culture," "climate," and "values."

The second situational element, *technology*, refers to the way that work may be accomplished in order to achieve managerial effectiveness. Decision making and the making of inspections are forms of work that could be accomplished in different ways; that is, their technology is different, and the requirements are different. The major question is: What are the demands that technology makes on managerial behavior? A short-run as opposed to long-run production technology might require a different managerial style. Also the affect of different time pressures can influence managerial style. For example, an open-hearth steel mill foreman in an emergency situation has a different technology than during routine processing, and his style needs to be varied accordingly.

The situational elements termed superior, co-workers, and subordinates, are used within the 3-D Theory, in the generally accepted sense. Each of these are, in turn, composed of styles and expectations.

In order to accurately assess the situation, Reddin proposes the use of a "flex map." A situational flex map is composed of a diagram with the two basic leadership dimensions (i.e., task and relationship orientation), the situational element or elements involved (e.g., technology), and the range of flexibility of the leader depicted. The leaders range of flexibility is established by use of "People and Organization indicators" provided by Reddin (1970, chap. 8). Reddin suggests that the flex map enables a leader to get a realistic picture of the situation and therefore be better able to establish what action (style) is appropriate.

In summary, it can be said that Reddin's 3-D Theory provides: (a) effective and ineffective managerial styles which are contingent upon the situation, (b) a basis for establishing leader flexibility, (c) a break-out of situational elements important to leadership effectiveness, and (d) a means of assessing the situation and the managerial style required (i.e., the situational flex map). In addition, Reddin proposes that managerial effectiveness can be increased by increasing a manager's range of styles or his flexibility, and by developing his skills in changing situations to match his most dominant style. Reddin (1970, chap. 24) has suggested that this can be accomplished by a nine-stage training program especially designed to develop managerial skills in situational sensitivity, style flexibility, and situational management.

XI. MODEL 8: THE HERSEY AND BLANCHARD LIFE – CYCLE THEORY

Hersey and Blanchard were greatly influenced by Reddin's 3-D Theory. Like Reddin, they added a third dimension, that of *effectiveness*, to the task and relationship dimensions of leadership behavior. They labeled their model the "Tri-Dimensional Leader Effectiveness Model."

This model is the same as Reddin's except that the terminology is changed in part. Hersey and Blanchard (1972a, 1972b) extend the model with their distinction between *successful* and *effective* managerial leadership. The four terms of successful, unsuccessful, effective, and ineffective used by Hersey and Blanchard will now be defined.

A manager in attempting leadership can be either *successful* or *unsuccessful* in accomplishing his goal. Should he be successful, then the leadership attempt can be further categorized as *effective* or *ineffective*. For example, a manager might get his subordinates to perform up to the established requirements of the organization through the use of threats, coercion, or other forms of pressure. Since he has obtained the planned ends he is considered successful. However, if his subordinates are resentful and hostile then, according to the authors, he is not considered effective. On the other hand, should he motivate his subordinates so that they are willing to do what they are required because they experience achievement or satisfaction in excelling or feel that their needs are being met, then the leader is said to be both successful and effective. Hersey and Blanchard propose that the implication of this is that if a short-run influence is all that is needed over subordinates then a *successful* style is adequate; however, if a long-run influence is required, such as many years, then a manager whould strive to be both successful and effective. They maintain that in the long-run this will increase and organization's productivity and overall efficiency.

After developing their Tri-Dimensional Model, Hersey and Blanchard (1972a) proposed a "Life-Cycle Theory of Leadership." The theory was an outgrowth of the Tri-Dimensional Model, and was based on a curvilinear relationship between task behavior, relationship behavior, and maturity.

According to their Life-Cycle Theory, as the level of maturity of a leader's subordinates continues to increase, appropriate leader behavior requires less and less task structure while increasing consideration, and should eventually entail decreases in socio-emotional support or relationship behavior.

The Life-Cycle Theory defines maturity as being similar to the McClelland, Clark, and Lonell (1953) achievement-motivation construct, and as the willingness and ability to take responsibility, and therefore is also related to task relevant education and experience of the individual. Maturity is basically the same as Argyris's (1957) Immaturity-Maturity continuum where a person is conceived as one who matures over time and moves from a passive dependent state to a state of increasing activity and independence. Age is a factor in maturity; however, the primary concern for the Life-Cycle Theory is psychological age not chronological age.

In order to insure clarity of the Life-Cycle Theory the following example should prove helpful. For an immature person (or group) the Life-Cycle Theory suggests that the leader behavior should move through: (a) a high task-low relationship type of behavior to, (b) a high task-high relationship behavior, and then to (c) a high relationship – low task behavior, followed finally by (d) a low task-low relationship behavior. This sequence is a progression from immaturity to maturity and assumes that the subordinates will progress toward maturity.

In order to determine an appropriate leadership style, the authors have proposed that dividing the Life Cycle into three levels would be useful. Based on this division, the Life-Cycle Theory of leadership postulates that when working with subordinates of below average maturity, a high task structure – low relationship style has the best probability of success. However, when dealing with subordinates of average maturity the styles of high task – high relationships and low task – high relationships should be more appropriate. The most appropriate style for very mature employees is the low task – low relationships style.

As previously indicated individuals progress over time in their level of maturity and the managerial style required should vary with the maturity level. In addition, a manager who is new on the job or has a new task and who has above average employees in regards to maturity, should progress rapidly through the Life-Cycle process. That is, he starts at the beginning of the cycle not at some other point, but because of the maturity of the group he progresses rapidly toward a low task – low relationship style. For example, during the early stages of a research project a project manager (PM) is required to establish a certain amount of structure as to the requirements and limitations of the project. After these boundaries are understood by the project workers, the project manager may move rapidly through the project life cycle, back to a low task – low relationship style which is usually the most appropriate for such a mature group.

Hersey and Blanchard have noted that since the turn of the century, society has made great scientific and technical advances. This has resulted in many employees enjoying a higher standard of living than has been possible in the past. In turn, our society tends to be better educated and more sophisticated than ever before. Therefore, today's workers have increased potential for self-direction and self-control, when compared with those of earlier periods. That is, they are more mature. Also the higher standard of living has fulfilled or satisfied the basic needs of most workers, such as the physiological and safety needs. As a result, today's workers are more concerned with higher order needs, such as achieving status, achieving satisfaction from work, etc.

According to Hersey and Blanchard, this shift in the need disposition and level of maturity of our general population affects the traditional principles of management, such as the span of control and the role of the manager.

For the principle of span of control, the traditional approach has been that the number of employees supervised decreases as one moves higher in the organization. This has resulted in the traditional pyramidal organizational structure.

Based on their theory Hersey and Blanchard suggest that this may not be as applicable today due to the overall educational and cultural progress of our society. Instead, they suggest, it might be better to

establish an organization's span of control based on the level of maturity of the individuals being supervised. Therefore, it would appear that a manager could effectively supervise more subordinates if they were very mature (since they should not require constant close supervision) than he could if they were rather immature. Based on this logic, span of control should be broad at the top of an organization, and narrow at the bottom. That is, the inexperienced lower level workers often have less education and need more personal interaction with their supervisors. If he is to provide close supervision then his span of control should be small.

A second item that has been affected by our cultural progress, according to Hersey and Blanchard, is the role of the manager. Traditionally, the manager's role was one characterized by planning, organizing, motivating, and controlling. That is, managers told their subordinates what to do, and how to do it, and used financial incentives and the manipulation of rewards and punishments in order to motivate them.

Hersey and Blanchard feel that since today's employee is more mature, then the role of the manager should shift from formal supervision and control of his subordinates to a more general type of supervisory style with less control. In addition, the manager today can serve better as a "linking pin" (Likert, 1961) to the next higher organizational level. That is, since he has mature subordinates today, then he can direct more of his efforts and influence upward. Instead of emphasizing the functions of organizing, directing, and controlling, he can now stress long-range planning, interdepartmental coordination, and acquisition of resources at the next higher level, for the betterment of his work group and the organization.

In summary, Hersey and Blanchard have developed a Life-Cycle Theory of Leadership which had its roots in the work of Reddin. They have extended Reddin's model and distinguished between the successful and the effective manager or leader. In addition, they have stressed the importance of the maturity of the individuals and the work group in the organizational setting. Based on their maturity concept they have suggested that mature, responsible workers need a loosely controlled, flexible organization with general supervision if they are to be truly effective. On the other hand, immature, untrained workers need a structural organization with more individual attention and personal interaction with their supervisor in order to develop their talents.

Here we have a theory composed of the leader, the situation, and the subordinates. The emphasis is on assessing accurately the situation and the appropriate leadership style required for it. A part of this decision process is establishing the maturity level of the employees who are a part of the situation, a function not often considered by most behavioral theorists.

XII. EVALUATION OF LEADERSHIP MODELS

The eight contingency approaches to leadership are evaluated based on three primary criteria. They are: (a) Does the model provide a useful descriptive framework for depicting the phenomenon called leadership? (b) Does the model introduce new components or new concepts which assist in better understanding leadership? and (c) Is the model testable?

Following the evaluation of the eight models, the ninth model: The Three-Component Leadership Model is presented. The presentation relates the model to the earlier models and points out areas which are unique to Model 9. In addition, Model 9 is critiqued based on the three criteria cited above in order to assist in establishing its utility as a leadership model.

Model 1: The Katz and Kahn Organizational Level Model

Katz and Kahn (1966) take an open-systems approach in describing organizations. Leadership within this open-systems view is depicted as a dynamic process which varies as different aspects of the organization and its environment vary. For Katz and Kahn, leadership involves influence which goes beyond the routine and taps bases of power beyond those decreed by the organization. They feel that *referent power* and *expert power* are the two major power sources for effective leadership.

Within these dynamic organizations the leadership styles required differ for top echelons, intermediate levels, and lower levels. Each of these three organizational levels require different cognitive styles and different affective characteristics of leaders.

Their model therefore is a descriptive one, and its strong points include the propositions that: (a) managerial requirements are different at different organizational levels, and (b) that leadership behavior is a dynamic process because organizations are in and of themselves dynamic.

On the other hand, their model as presented appears to be limited to large-scale hierarchical organizations, and does not consider in any depth, (a) leadership style as a function of the size of an organization, or (b) leadership style as a function of the technology involved. It would appear that the leadership requirements for top echelons in large organizations would differ from those in small organizations. Also, the requirements for effective leadership in one technology would possibly differ from the requirements in a different technology (e.g., automotive versus petroleum technology). These aspects might be reflected in a very flat organizational structure with little or no middle management personnel. This organizational structure aspect is not discussed within Katz and Kahn's model. Lastly, their model does not adequately address the effect of different situations on management style. For example an authoritarian leadership style (as opposed to a style employing referant power) maybe the most effective style (in the short run and long run) when a crisis situation develops.

Nevertheless, Katz and Kahn do offer a useful descriptive model of leadership behavior for large-scale hierarchical organizations. The leader is depicted as one who needs different talents for different organizational levels, and one who is required to function within a dynamic open-system: the organization.

Model 2: The Dubin and Woodward Technology Model

It has been noted that Katz and Kahn did not consider in any depth the effects of technology on leadership or management style. Dubin and Woodward, on the other hand, have stressed this aspect. Perhaps this highlighting of technology, as an important variable associated with managerial style, is Dubin and Woodward's greatest contribution to understanding leadership. In considering technology and its effects on leadership, they also considered the size of organizations (i.e., they looked at organizations with 100 to 8000 employees) and the formal structure. Technology, as previously noted, was the only variable of these three (i.e., technology, size, structure) that was related to success.

On the other hand, Dubin and Woodward's findings appear to be limited to firms involved in the manufacturing and selling of products, and therefore is of little value in understanding other organizations. In addition, the authors do not consider the effect of organizational level on managerial style, as did Katz and Kahn. Perhaps of more importance, however, is that they do not use an open-systems approach, and therefore do not consider the effects of the environment on the organization. There is some evidence (Rossel, 1971) which indicates that leadership style is influenced more by an organization's difficulty in adapting to it's environment than to its technology. Lastly, their approach does not account for interdependence among internal components of the organization, when one component which is changed, in turn affects the other components.

Their contribution, therefore, is limited to highlighting an often neglected aspect of leadership; namely, the technology of the organization.

Model 3: The Stogdill Emergent Leadership Model

Stogdill's model attempts to account for the dynamic nature of organizations. His model is a systems model which, like Katz and Kahn's model, takes into account that leadership is contingent upon the environment within which the leader operates. That environment consists of the environment external to the organization which influences the organization, as well as the organizations internal environment. Stogdill stressed role differentiation as an important aspect of leadership. He has pointed out that a given leadership position has a certain degree of status associated with it and certain functions that are expected to be performed. In addition, the leaders role is partially determined by the group's perception of him, and the group's demands upon him. This realization, that different leadership positions require different roles, is in consonance with Katz and Kahn's approach where managerial style is considered to be a function of the organizational level of the position.

Stogdill's major contribution in understanding leadership is in describing leadership as a dynamic process, which involves role differentiation. Role differentiation, in part, is a result of the leader's position and the group's expectations of him.

One of the major problems associated with Stogdill's approach is its very broad descriptive nature. Since it is cast in such a general nature, it is very difficult to test. His model since it is difficult to test cannot be readily proved or disproved. Therefore, the utility of his model in understanding the nature of leadership is quite limited, but does attempt to view leadership as a dynamic process involving the leader, the group, and the interactions among members of the group.

Model 4: The Fiedler Contingency Model

From the time when Fiedler first introduced his model there has been an enormous amount of research performed to test different aspects of the model. In addition to those studies cited earlier, studies by Graen, Alvares, Orris, and Martella (1970); Graen, Orris, and Alvares (1971); and Ashour (1973) have attempted to test Fiedler's model and their results provide additional information on which Fiedler's model can be evaluated.

The main area of criticism presented by the above authors involves the predictive validity of Fiedler's model. Graen et al. (1970) analyzed several studies which had been cited as supportive research for Fiedler's model (Fiedler, 1967). The authors concluded that the model is, in the main, without any predictive validity. They indicated that they felt that the "contingency model" curve obtained by Fiedler was simply an artifact of inappropriate research methods and inappropriate data analysis. Graen et al. (1970) maintained that the specification of situational favorableness has been quite vague and variable across different studies, and that any resulting pattern could be produced by the careful *post-hoc* ordering of data. In addition, they noted that Fiedler has used non-significant data as support. Fiedler used it by indicating that it was in the anticipated (i.e., hypothesized) direction even though non-significant. Graen et al. (1970) indicate that this is another example of Fiedler's inadequate research methodology. Also Graen et al. (1971) in two laboratory experiments designed to test Fiedler's model, found no support. In these experiments, which involved three-man groups, an attempt to test the full eight cell favorableness dimension was made. In neither of the studies did any of 16 correlations, between group productivity and leader LPC score, reach significance. In addition, the correlations did not follow the pattern predicted by Fiedler's model.

Ashour (1973) has also criticized Fiedler's methodology. In particular, the criticism has been directed at Fiedler's procedure for combining results of different octants together which confounds any predictive differences that might exist between octants. Ashour, in order to test Fiedler's model, used what he felt was the most rigorous and direct method of combining correlations obtained from small samples. The method was suggested initially by Fisher (1946, p. 204) and it provides an overall estimate of the correlation based on correlations obtained from different samples. The estimated value can then be subjected to significant testing, which Ashour indicated would be equivalent to testing the significance of cumulative results on the samples included.

After applying Fisher's technique of combining correlations and then analyzing the data, Ashour found that Fielder's model failed the validity tests (i.e., non-significant correlations) in six of the eight situational octants. Ashour concluded that the model had serious theoretical and methodological flaws.

Fiedler (1971) has responded to the criticism aimed at his model. He has argued that the data used to substantiate the charges made by Graen et al. were collected in methodologically faulty experiments. Chemers and Skrzypek (1972) have rallied to Fiedler's defense, and have provided some evidence which tends to support the predictive powers of Fiedler's model. Their study was conducted at the United States Military Academy at West Point, and involved 128 cadets. Leader LPC scores and group effectiveness scores were correlated for each octant of the favorableness dimension. The resulting curve was very close to that predicted by Fiedler's model (i.e., rank-order correlation between predicted and obtain curve points = .86). Even here, however, the individual correlations were found to be nonsignificant.

The present mood associated with Fiedler's model, therefore, is one of heated controversy between Fiedler and his opponents (e.g., Graen et al.). This mood will probably prevail for a long time since both sides are firm in their convictions. Hopefully, methodologically clean research evidence will resolve the controversy in the near future, but it is doubtful.

Based on the above, Fiedler's model might be best characterized as a model of controversy, and perhaps the birth of this controversy is Fiedler's greatest contribution to the understanding of leadership. The introduction of his model has resulted in many researchers attempting to test the model, and each test

has perhaps added a little more to the knowledge of leadership. The predictive validity of Fiedler's model is still in question, as are his methods and techniques for performing research. The meaning of the LPC score is another aspect of the model which is still unresolved. Still another aspect which requires further research is Fiedler's hypothesis that training and experience modify the favorableness dimensions. In addition, Chemers and Rice (1974) have noted that Fiedler's model does not adequately deal with the problems of: (a) follower loyalty, (b) employee satisfaction, and (c) global effects on the organization by leadership. Mitchell et al. (1970) have noted that the model: (a) does not provide a way of quantifying the favorability of a particular group's situation, and (b) may well neglect other important aspects of the situation which affect leader influence.

On the other hand, Fiedler has pointed out that individual personalities are hard to change and that it's easier to engineer the job to fit the individual. This generally appears reasonable, as does his basic idea that different types of leaders are needed for different positions and situations. This of course is in agreement, in part with Katz and Kahn's model (i.e., different positions require different leaders) and Dubin and Woodward's (i.e., different technologies require different managerial styles). Fiedler does not present his model of leadership within a dynamic open-systems framework as has Stogdill, but has restricted his model to the dimensions of effectiveness and situational favorability and, therefore is basically a testable model and this testability is one of its strong points.

One thing that Fiedler has accomplished is to focus attention on contingency approaches to leadership; so much so that many individuals refer to Fielder's model as "the contingency model" of leadership.

Model 5: The Tannenbaum Leadership Model

Tannenbaum's model, as initially conceived, is best characterized as a closed systems model. He and his associates have depicted leadership as a dynamic process which involves the leader, the group or groups that he interacts with, and the situation at hand. His contribution to leadership, beyond that of indicating that leadership is dynamic, is his focus on individual differences. He notes that selecting an appropriate leadership behavior is in part a function of the characteristics of the individual leader, as well as being in part, a function of the characteristic of the leader's followers. This idea is similar to Fiedler's (i.e., effective leadership style depends upon the situation) and Katz and Kahn's (i.e., different types of leaders required for different organizational levels).

Tannebaum and Schmidt (1973) noted that the environment surrounding the organization affects the organization, and this realization resulted in their modifying their initial model to include this environment. Their resulting model is more of an open systems model (as was Katz and Kahn's) and has the advantages and disadvantages associated with open systems. On the one hand, all contingencies can be included in an open-systems model, however, due to its complexity it is difficult to test, and since it is difficult to test it is not readily proved or disapproved unless it is well defined. The modified model is more in line with Katz and Kahn's proposition that *referent power* and *expert power* were the major power sources for effective leadership. The original model placed more emphasis on the leader as a coercive power source where the modified model depicts power as being shared by the leader and his subordinates.

The model's contribution to leadership is in providing a way of looking at the leadership process. That is, leadership is characterized as involving the selection of a leadership style appropriate to the situation. This selection is a function of the leader and his characteristics, the followers and their characteristics, and the situation proper (including the extemal environment). On the other hand, the model adds little to the understanding of leadership due to its abstract nature which is difficult to test.

Model 6: The House Path Goal Theory

House's model focuses on the leader as a motivator of his employees or followers toward work goal accomplishment. He motivates them by varying his leadership style or leadership dimensions (i.e., *consideration* and *initiation of structure*), to meet the requirements of the situation. House emphasizes (a) worker motivation as a function of worker valence for reinforcement (intrinsic and extrinsic), and (b) the worker estimated subjective probability that certain outcomes will occur. These for House are very important aspects of the motivational process. One major strength of his model is that it is testable. House has provided a formula (as well as a modified formula) which can be tested and therefore proven or disproved, in part or in total. In turn, the model lends itself to modification as new research evidence is obtained.

One of the areas of weakness is in the perceptual difference between the leader and his followers. The leader may perceive that if he manipulates rewards in a certain fashion, his workers will be favorably motivated. The workers perception of his manipulation may be quite different than anticipated by the leader, for reasons such as differences in values between the leader and the workers, or because the workers feel they are being manipulated for management's benefit. The model, therefore, does not really deal with the leaders' perception or misperception per se. In addition, it does not provide a means for explaining adequately how a leader learns from his organizational environment and adjusts his style in order to be more effective across different situations with different types of employees.

In comparing House's model to the models presented earlier, it can be said that House's model is similar to Katz and Kahn's in that House (1971) feels that leadership style should change depending on the situation (Katz and Kahn feel that different styles should be used for different organizational levels). In addition, it is similar to Katz and Kahn's model in that both indicate that the worker's motivation is important for organizational success, and that for optimum goal accomplishment the paths for organizational success should be the paths for worker success (see pp. 15-19). That is, the organizational requirements are in and of themselves productive of member satisfaction.

The House model differs from Stogdill's markedly in that Stogdill emphasized that the leadership role is influenced by the group's perception of the leader and the group's demands placed upon the leader. As noted earlier, the House model does not adequately deal with this aspect of leadership.

It also differs from Tannenbaum's since Tannenbaum stresses that the characteristics of the leader are quite important in the leadership situation (i.e., leader, group, and situation). The leader and his characteristics are not really identified in House's model, and therefore appears to be an area of possible weakness.

In summary, House provides a model which focuses on motivating workers toward goal attainment. It is a testable model which can be modified as research evidence points out areas requiring modification. Presently it is in need of further testing before its utility can be fully realized.

Model 7: The Reddin 3-D Theory

Reddin's model provides a valuable descriptive framework of leadership. His two dimensions of managerial style (i.e., task orientation and relationship orientation) are soundly based on research evidence obtained from the Ohio State and Michigan Leadership Studies. His addition of an effectiveness dimension appears to be a logical addition. It provides a means of showing that the managerial style required in order to be effective depends upon the situation at hand. Reddin has indicated that an effective leader has to be able to vary or select different managerial styles. In order to do this an effective leader must be able to accurately read or evaluate the situation, possess the skills to manipulate the situation, and finally, possess the capacity to vary this style in accordance with the situational requirements.

Reddin's breakout of the situational variables identifies some components not found in most of the previous theories. The situational variables of Reddin's that were cited earlier were: (a) the organizational philosophy, (b) the technology, (c) the superior, (d) the co-workers, and (e) the subordinates. Of particular importance is the variable of organizational philosophy which has not been explicitly identified by most of the previous theories. Obviously the philosophy of the organization is a major situational influence which must be taken into account if a leader is to be effective. Technology and its importance has been stressed earlier in the Dubin and Woodward model discussion and the same concepts associated with technology and managerial style developed earlier apply in this model. On the other hand, the superior with his abilities and characteristics, has not been addressed as an important situational variable in the previous discussions; nor have the co-workers (i.e., peers) of a given leader. These as well as the subordinates, are important aspects of the situation that should be considered by the leader.

A manager's style in a given situation as portrayed within this model is similar to Stogdill's portrayal in his model. It is similar in that it basically agrees with the concept of role differentiation in Stogdill's model which depended upon the leader, the group's perception of him, and their demands placed upon him. Reddin's model, of course, includes additional factors.

The three dimensional portrayal of leadership, along with the leadership requirements for effective management are positive aspects of this model, as well as the detailed breakout of the situational aspect of leadership.

On the negative side, Reddin does not really address the external environment and its affect on the organization. In addition, he fails to address individual worker's differences such as; educational attainment, technical experience, values, and expectations. These are aspects of the situation that certainly need to be considered. Furthermore, since the model is primarily descriptive it is basically untestable at this time. More definitive descriptions for categorizing quantitatively the components of the model are required before it can be effectively tested (e.g., superior style or philosophy needs to be better defined and categorically quantified).

Model 8: The Hersey and Blanchard Life-Cycle Theory

Basically Hersey and Blanchard's Tri-Dimensional Leader Effectiveness Model is the same as Reddin's 3-D Model. The prime difference being that Hersey and Blanchard have broken down *successful* leadership into *effective* and *ineffective* leadership behavior. The advantage of this break-down is that it provides a descriptive category for those leadership acts that for the short run get the job done (i.e., successful-ineffective acts) but that may cause problems in the long run; such as, morale problems, absenteeism, etc.

Out of the Tri-Dimensional Model grew their Life-Cycle Theory of Leadership. The major contribution of this theory to leadership, is that it points out that the worker's level of maturity is a prime factor in determining an effective leadership style. The curvilinear relationship between task behavior, relationship behavior, and maturity is a feature that is readily testable, and therefore a strong point associated with their model. This relationship was not proposed in Reddin's model and is a major difference between the two models. Hersey and Blanchard's recognition that employees today may be more mature than in the past, due to factors such as increase in educational level, are in effect including in their model the environment external to the organization. This inclusion of the external environment is another difference between Reddin's model and Hersey and Blanchard's; with Reddin's model approximating a closed-system, and Hersey and Blanchard's approximating an open-system.

The disadvantages of the 3-D Theory cited earlier hold, in the main, for the Life-Cycle Theory since the Life-Cycle Theory is an outgrowth of Reddin's theory. The exceptions being that *successful* leadership has been somewhat better defined, and that maturity level of workers is a new concept which is testable.

These two models incorporate many of the features of earlier models plus some additional aspects; some are readily testable, some are not so readily testable. It does, however, provide a descriptive framework for investigating this phenomenon called leadership and presently requires further testing to better define, quantify, and if needed modify the components of the model.

XIII. MODEL 9: A SYNTHESIS: THE THREE-COMPONENT LEADERSHIP EFFECTIVENESS MODEL

The eight contingency models and theories presented previously, as well as the literature discussed earlier, provide the basis for the following contingency model of leadership: The Three Component Leadership Effectiveness Model.

This proposed model considers leadership effectiveness (E) to be a function of; the criterion selected (c); the leadership style employed (l); and the situational environment (s), which includes the leader's subordinates, peers, and other personnel in the environment. That is: E=f(c,l,s).

The basis used for selecting these three components was that they were three components found to be common across most of the leadership literature reviewed (e.g., Cribbin, 1972; Fiedler, 1967; Hersey & Blanchard, 1972a, 1972b; Katz & Kahn, 1966; Olmstead, 1967; Reddin, 1967, 1970; Stogdill, 1958, 1959, 1971; Tannenbaum et al., 1961) and at the same time they provide a useful descriptive framework for depicting leadership as a decision making process.

Criterion

First, leadership effectiveness has been demonstrated to be dependent upon the criterion selected for evaluation (Carter & Nixon, 1949; Wofford, 1971). Therefore, within the Three Component Leadership Effectiveness Model, the leader is required to vary his style in a given situation as different criteria of effectiveness are established.

Leadership Style

Second, leadership effectiveness is dependent upon the leader and the dimensions of his leadership style. The following dimensions (modified from Wofford, 1970, 1971) are suggested as being relevant for leadership behavior across a variety of situational environments; they are the dimensions of: (a) group processing, (b) self-enhancing, (c) dynamic interacting, (d) structural achieving, and (e) compromising.

These five dimensions were established based upon studies (Wofford, 1970, 1971) which indicated that they might be more appropriate for managerial behavior than the two dimensions of "consideration" and "initiation of structure." The reasoning behind this conclusion was that these five dimensions were derived from studies involving the managerial functions of planning organizing, and controlling, as well as that of leading. In addition, the sample of managers involved in the studies was taken from a variety of types and sizes of companies, and therefore, provided a wider sample range than that of the Ohio State University studies. The proposed five dimensions or factors of leadership style will now be defined.

The *group processing* factor or dimension refers to the predominant managerial style employed by a manager who uses the group process in decision making, organizing, motivating, and communicating. He is thorough, plans well, and is highly organized and orderly. This factor is characteristic of the professional administrator.

The *self-enhancing* factor refers to the leader who uses his organizational authority as the primary means of influencing subordinates. He is outspoken and demanding and seeks personal recognition rather than recognition for his subordinates.

The *dynamic interacting* factor refers to the leader who is warm, friendly, and informal in his interactions with his subordinates. He spends a great deal of time interacting with his subordinates and often works with them to complete their daily assignments.

The *structural achieving* factor refers to the leader who sets specific goals with his personnel and measures their performance in reaching these goals. He is open and direct with others, and is characterized as efficient and energetic.

The *compromising* factor refers to the leader who is cautious, somewhat aloof, and who checks with both his supervisor and his personnel before making a decision. He prefers to remain neutral when problems arise, and he readily changes his decisions when there is disagreement with them. Since he separates himself from his personnel, he promotes a great deal of freedom for their actions; such as setting their own goals, establishing their work routines, and developing their work standards.

Situational Environment

The third component of the Three-Component Leadership Effectiveness Model is the situational environment (s), which includes the personnel with which the leader interacts. Six factors are proposed based upon the studies of Forehand and Gilmer (1964) Hersey and Blanchard (1972a) and Wofford (1967, 1970, 1971). They are: (a) centralization and work evaluation, (b) organizational complexity, (c) size and structure, (d) work group structure, (e) organizational communication, and (f) group member maturity.

The *centralization and work evaluation* factor refers to the degree of centralization of the decision-making power in the organization, and to the situational aspects influencing the closeness of supervisory control.

The *organizational complexity* factor refers to the degree of organizational complexity and sophistication. The level of ability and technical knowledge required are aspects of this factor.

The *size and structure factor* refers to the size of the organization and the degree of work task structuring.

The *work group structure* factor refers to the work groups structural attributes. For example, a high rating on this factor would indicate that a work group was small and its operations supported group meetings.

The *organizational communication* factor refers to those aspects of the organization relating to communication layers and peer communications.

The *group member maturity* factor refers to the capacity of group members to take responsibility, be able to set their own goals, and work without close supervision.

These six factors, listed above, can be quantified by rating on organization's environment on a three point scale (i.e., 1 = low, 2 = average, 3 = high) on each of these factors. In turn, the derived scores can then be placed in a situational profile. This profile would depict the numerical value for each of the six factors. It is suggested that the effective leader acts as though he develops a situational profile during his decision-making leadership process.

The first five situational factors suggested previously, along with the elements associated with each factor, were based on Wofford (1971). The sixth factor above is not included in the list. Data related to it can be found in Hersey and Blanchard (1972a).

Leadership Model

Figure 2 depicts the components of the proposed model and their relationships [i.e., E=f(c,l,s)]; and Figure 3 describes the decision-making process for a leader who possesses the maximum "range of styles."

The basic model (Figure 2) indicates that leadership effectiveness is a function of the three interdependent components. Each of which influences both effectiveness and the other two components, and is in turn influenced to a degree by them [e.g., (l) is influenced by (E) (s), and (c)]. That is, the leadership model is conceived to be a dynamic interdependent system similar in nature to the system models of Katz and Kahn (1966), Hersey and Blanchard (1972a, 1972b), Reddin (1967, 1970), Stogdill (1959, 1971), and Tannenbaum (1971). Of these models it is probably most similar to Tannenbaum's model which was depicted earlier.

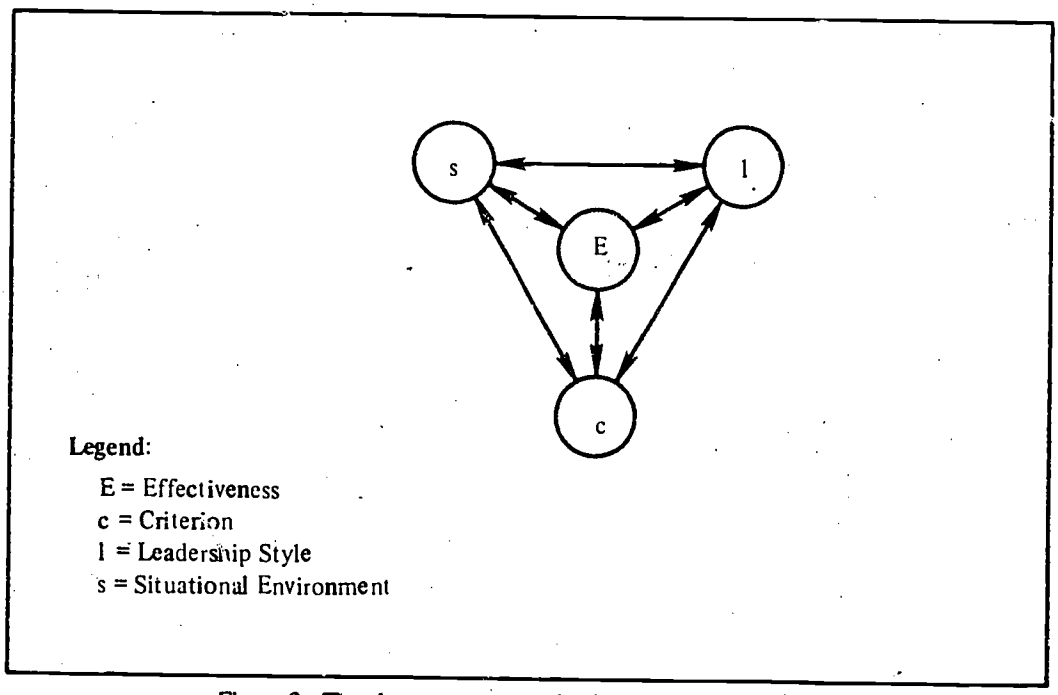


Figure 2. **The three component leadership effectiveness model.**

In this model five styles are included. Some leaders will possess a range that includes all five, some will have a range of only one style which he employs in all situations, while other leaders will possess a range of styles between the two extremes. Figure 3, depicts the leader as one who continuously searches for situational data, diagnoses the situational environment, matches the present situational dimensions with the six situational dimensions listed earlier, selects one of five leadership styles that is most appropriate for the six-factor situational pattern, implements the style, performs checks on its affects, and continues the use of the style or re-diagnosis the situational environment, which is ever changing.

This model, therefore, suggests that for any given situation (which is composed of various combinations of the six situational dimensions) a particular leadership style is most appropriate. That is, one of the five leadership dimension styles proposed earlier is appropriate. Evidence supporting this proposition can be found in Wofford (1971, pp. 16-17). For example, the *self-enhancing* leadership style (Wofford calls it personal enhancement) is usually a more effective style for a leader if his job consists of simple work schedules which permits direct supervision.

In addition, it is proposed that individuals vary in their ability to adopt or assume different leadership styles. It is suggested that this difference in ability can be ascertained by establishing the individual's cognitive complexity and his cognitive flexibility.

It is further proposed that individuals with high cognitive complexity will have a broader "range of styles," which they employ than less cognitively complex individuals.

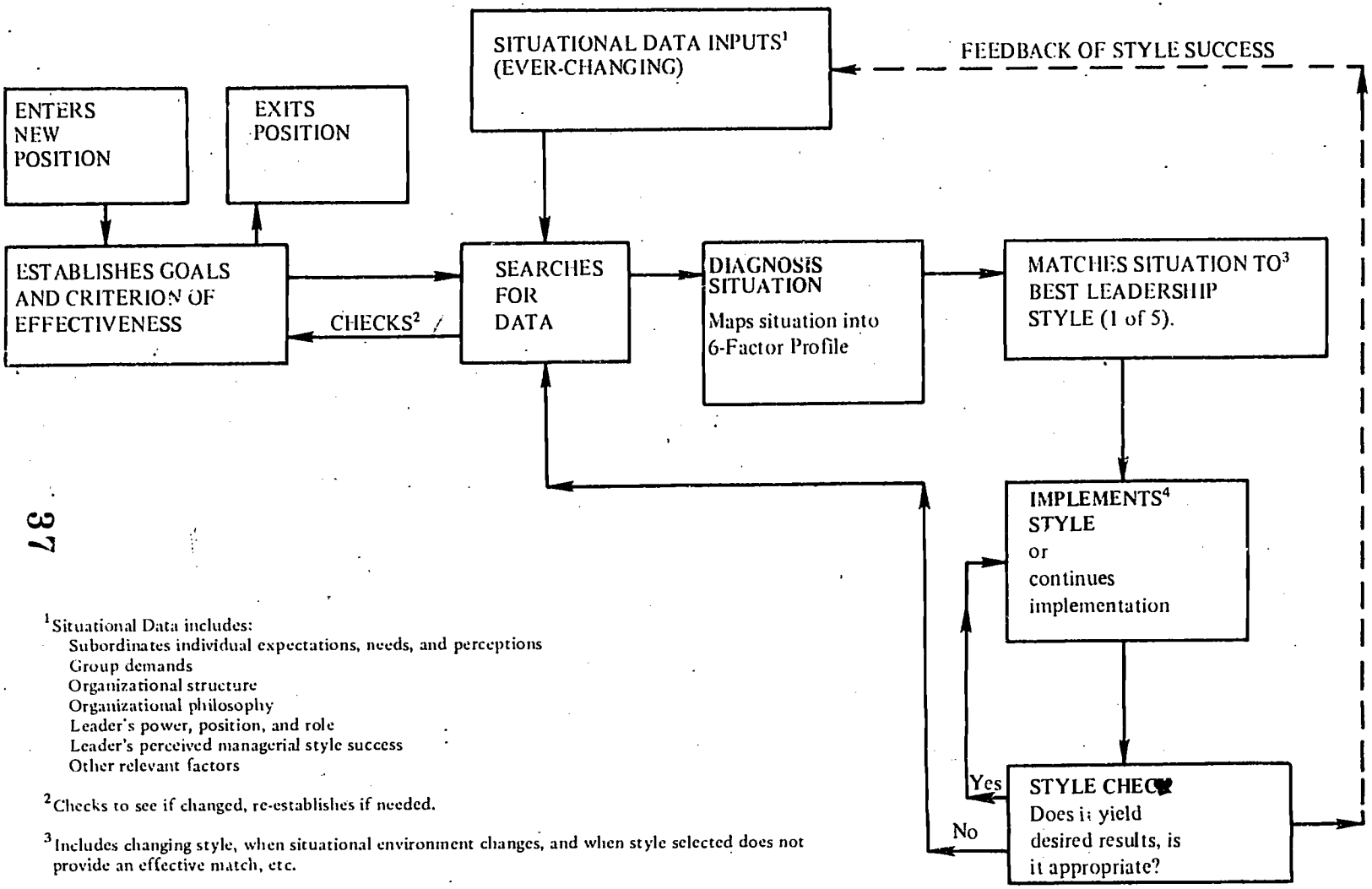
If this model and its associated propositions hold true, then there are associated implications for organizational selection and training. It appears that if a position requires a variety of management styles then a manager possessing high cognitive complexity and flexibility should be selected for this position, since he should possess a wider "range of styles" than a less cognitive complex individual. For positions that are rather stable and require one basic style most of the time, a manager with a narrow "range of styles" can be selected. He must, however, possess the dominant style appropriate to the situation. The style-situation relationships listed in Wofford (19[illegible], pp. 16-17) provide a starting point in establishing relevant style-situation categories.

There is also an implication for training. For those managers who are to eventually move into positions requiring a wider "range of styles" than they initially possess; expansion of their range is required. The techniques and methods utilized to accomplish this should emphasize the development of cognitive flexibility, in order to increase the manager's capacity to act as a flexible decision maker who varies his style to meet the requirements of the situation.

Since management training programs (e.g., T-group or sensitivity training) have not been overly successful, to date, it is suggested that the training approach cited above be implemented through what can be called a "career progression design." That is, a managerial career pattern should be established for each manager which starts him at a given organizational level, which is compatible with his "range of styles" and promotes him through a series of positions. Each position, as he rises in the organizational hierarchy, will require of him a slightly more complex decision making strategy. Over a series of years he is trained through experience to deal in a more cognitively complex manner with his situational environment. This in turn should increase his "range of styles."

Relationship to Other Models

As previously noted the basic model [i.e., E=f(c,l,s)] is related to most of the eight models cited earlier, as well as the leadership literature reviewed at the beginning of this report. The concept of synthesizing the available research evidence into the decision making model presented in Figure 3 is basically original. In Figure 3, the block that indicates that a criterion of effectiveness needs to be established in order to establish leadership success was based, in part, on the reports of Carter and Nixon (1949) and Wofford (1971). The DIAGNOSIS SITUATION block, includes a 6 factor profile. These 6 factors were adopted from a series of studies; namely, Forehand and Gilmer (1964), Hersey and Blanchard (1972a) and Wofford (1967, 1970, 1971). The leadership styles matched to situations in Figure 3, were established basically from the research efforts of Wofford (1970, 1971).



[1] Situational Data includes:
- Subordinates individual expectations, needs, and perceptions
- Group demands
- Organizational structure
- Organizational philosophy
- Leader's power, position, and role
- Leader's perceived managerial style success
- Other relevant factors

[2] Checks to see if changed, re-establishes if needed.

[3] Includes changing style, when situational environment changes, and when style selected does not provide an effective match, etc.

[4] Includes selection of communication process or processes, and leaders's characteristics, training, past success, experience, etc.

Figure 3. Leader's decision making process.

The basic components acting in a dynamic interacting fashion as depicted in Figure 3 are in part original but are also in part result of a review of Katz and Kahn's approach (1966), Stogdill's approach (1959, 1971), and the approach presented by Tannenbaum et al. (1961). More specifically the concept of *leader flexibility* and *range of styles* have been primarily adopted from Fiedler (1967), Hersey and Blanchard (1972a, 1972b), Olmstead (1967), Reddin (1967, 1970), Scott (1962), and Tannenbaum et al. (1961).

Utility of the Model

In evaluating the previously cited eight models, basically three criteria have been used: (a) Does the model provide a useful descriptive framework for depicting the phenomenon called leadership? (b) Does the model introduce new components or new concepts which assist it better understanding leadership? (c) Is the model testable? That is, can it be proved or disproved?

The utility of the present model will be evaluated based on these same criteria. First, does the model provide a useful descriptive framework for depicting the leadership phenomenon? The previous models have emphasized different aspects of leadership; such as, the motivation of the subordinates (House, 1971), the position of the leader (Katz & Kahn, 1966), and the technology of the organization (Dubin 1965; Woodward, 1958, 1965, 1970). Common to all of the models, and yet practically ignored by some, is that leadership involves an individual whose primary function is that of a decision maker. It appears reasonable (to this author at least) that this approach offers a somewhat new; somewhat different view of leadership, when compared to the previous models, and yet gets to the heart of leadership, that of decision making. As a descriptive model, it includes the major components of the previous models (i.e., the leader, other organizational personnel, and the situation), depicts them in an open-systems framework, and portrays in a dynamic constantly evaluative fashion the decision making process of a leader. It is felt that this approach which has been built, in part, upon the previously described models has potential as a descriptive model in that: (a) it is not simply a retracing of the same basic approach (listing of components) used by most of the earlier models, and therefore has more promise for providing additional information and insight in understanding leadership, and (b) it captures basically the essence of leadership, which is a decision making process.

Second, does the model introduce new components or new concepts which assist in better understanding leadership? The new components or concepts added by this model is the depiction of leadership as a decision making process involving inputs to the leader, outputs from the leader, and feedback for evaluating and modifying his actions.

Third, is the model testable? Basically the answer is yes. This can be done by computer simulation within the Lens Model framework (see Brunswik, 1956). Situations can be created by presenting a leader with a 6-factor profile which depicts the situation. Next, he is presented with the 5 proposed leadership styles from which he selects one as being most appropriate for the situation, and implements it (e.g., inputs his selection into a computer). Feedback to the operator (by computer simulation output) then tells him how successful his performance has been. He then is allowed to continue his "style" or select a new style based on the feedback results.

After exposure to numerous situational profiles (e.g., 200) the leader's behavior can be captured using the regression model: $Y=\beta X+e$; where Y represents his style selected, and X represents the series of x values depicting the cues or factors making up the situational profile. An individual's (or group's) policy, once captured can then be applied to new situations to see if it is an effective predictor model of actual behavior (i.e., is it a valid predictor model).

In addition, different leaders can then be compared on a variety of variables; such as, the number of cues or profile factors utilized in their decision process, the weight assigned to each factor, and the "range of styles" employed. The range of style, in turn, can be compared to each leader's cognitive complexity. Cognitive complexity being established for each leader by a separate cognitive complexity test given prior to the experiment proper.

The six factors associated with the situation and the 5 leadership styles are not considered to be fixed in the model and as evidenced indicates they can be modified (i.e., added to or deleted). In addition, the model may require modification as the decision-making process is further investigated. This investigation of the decision-making process should include a detailed analysis of managerial behavior in a variety of situations. Toward this end the techniques utilized in job analysis should be fully exploited.

Should the basic propositions associated with the model be supported by research evidence, then the model can be said to accomplish the following: (a) it can provide a means for selecting managers (based on cognitive flexibility) for specific types of positions, (b) it can provide a means for management development (as previously discussed), (c) it can provide a useful descriptive leadership framework, and (d) it can be captured mathematically for highly effective leaders and then be used by less effective managers as an aid to decision-making, or the mathematical model can be used in managerial training programs.

Future Research

The above model is a first step in the development of a decision-making model of leadership effectiveness. It therefore, is incomplete at this time. Hopefully it provides a framework for future research. Research needed the most at this time is in the area of establishing relevant categories of leadership styles and situational environments.

XIV. CONCLUSION

It is concluded that leadership can best be depicted as a decision-making process which involves the leader, the followers, the situation, and the criterion of effectiveness. Some of the key elements of the above components are: the style of the leader, his expectations and those of his followers, the leaders position and power, and the situational environment in which the leader and followers operate.

The decision-making leadership process is a dynamic one where the components are interdependent, and their relationships are frequently changing. This is the nature of the proposed Three Component Leadership Effectiveness Model.

REFERENCES

Argyris, C. *Personality and organization.* New York: Harper, 1957.

Ashour, A.S. Further discussion of Fiedler's contingency model of leadership effectiveness. *Organizational Behavior and Human Performance,* 1973, **9**, 369-376.

Bales, R.F. The equilibrium problem in small groups. In T. Parsons, R.F. Bales, & E.A. Shils (Eds.), *Working papers in the theory of action.* Glencoe, IL: Free Press, 1953.

Blum, M.L., & Naylor, J.C. *Industrial psychology: Its theoretical and social foundations* (Rev. ed.). New York: Harper & Row, 1968.

Bowers, D.G., & Seashore, S.E. Predicting organizational effectiveness with a four-factor theory of leadership. *Administrative Science Quarterly*, 1966, **11**, 238-263.

Brunswik, E. *Perception and the representative design of psychological experiments.* Berkeley: University of California Press, 1956.

Carter, L.F., & Nixon, M. An investigation of the relationships between four criteria of leadership ability for three different tasks. *Journal of Psychology*, 1949, **27**, 245-261.

Chemers, M.M., & Rice, R.W. A theoretical and empirical examination of Fiedler's contingency model of leadership effectiveness. In J.G. Hunt & L.L. Larson (Eds.), *Contingency approaches to leadership.* Carbondale, IL: Southern Illinois University Press, 1974.

Chemers, M.M., & Skrzypek, G.J. An experimental test of the contingency model of leadership effectiveness. *Journal of Personality and Social Psychology*, 1972, **24**, 172-177.

Cribbin, J.J. *Effective managerial leadership.* American Management Association, Inc., 1972.

Csoka, L.S. A validation of the contingency model approach to leadership experience and training. ONR Technical Report No. 72-32, AD-754 439. February 1972.

Csoka, L.S., & Fiedler, F.E. The effect of leadership experience and training in structural military tasks: A test of the contingency model. ONR Technical Report No. 71-20, AD-729 237. July 1971.

Dubin, R. Supervision and productivity: Empirical findings and theoretical considerations. In L. Broom (Ed.), *Leadership and productivity: Some facts of industrial life.* San Francisco, CA: Chandler, 1965.

Fiedler, F.E. Engineer the job to fit the manager. *Harvard Business Review*, September 1965, 115-122.

Fiedler, F.E. *A review of research on ASO and LPC scores as measures of leadership style.* Urbana: Group Effectiveness Research Laboratory, University of Illinois, 1966.

Fiedler, F.E. *A theory of leadership effectiveness.* New York: McGraw-Hill, 1967.

Fiedler, F.E. Leader experience, leadership training, and other blind alleys. In R.E. Stockhouse, V.F. Phillips, & E. Owens (Eds.), *Frontiers of leadership: The United States Air Force Academy Program (1970).* Air Force Office of Scientific Research, Air Force Systems Command, USAF Technical Report AFOSR-TR-71-1857, August 1971.

Fiedler, F.E. Note on the methodology of the Graen, Orris, and Alvares studies testing the contingency model. *Journal of Applied Psychology*, 1971, **55**, 202-204.

Filley, A.C., & House, R.J. *Managerial process and organizational behavior.* Glenview, IL: Scott, Foresman, 1969.

Fisher, R.A. *Statistical methods for research workers* (10th ed.). London: Oliver and Boyd, 1946.

Fleishman, E.A. The description of supervisory behavior. *Journal of Applied Psychology*, 1953, **37** 1-6.

Fleishman, E.A., & Harris, E.F. Patterns of leadership behavior related to employee grievances and turnover. *Personnel Psychology*, 1962, **15**, 43-56.

Forehand, G.A., & Gilmer, B.H. Environmental variation in studies of organization behavior. *Psychological Bulletin*, 1964, **62**(6), 361-381.

Georgopoulos, B.S., & Tannenbaum, A.S. A study of organizational effectiveness. *American Sociological Review*, 1957, **22**, 534-540.

Graen, G., Alvares, K., Orris, J.B., & Martella, J.A. Contingency model of leadership effectiveness: An antecendent and evidential results. *Psychological Bulletin*, 1970, **74**, 285-296.

Graen, G., Orris, J.B., & Alvares, V.M. Contingency model of leadership effectiveness: Some experimental results. *Journal of Applied Psychology*, 1971, **55**; 196-201.

Hemphill, J.K. Job descriptions for executives. *Harvard Business Review*, 1959, **37**, 55-67.

Hemphill, J.K. *Dimensions of executive postions.* Ohio Studies in Personnel, Resc. rch Monographs. Ohio State University, Bureau of Business Research, 1960, No. 98.

Hersey, P., & Blanchard, K.H. *Management of organizational behavior: Utilizing human resources* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall, 1972. (a)

Hersey, P., & Blanchard, K.H. The management of change: Change and the use of power. *Training and Development Journal*, 1972, **26**(1), 6-10. (b)

Hollander, E.P., & Julian, J.W. Contemporary trends in the analysis of leadership processes. *Psychological Bulletin*, 1969, **71**(5), 387-397.

House, R.J. A path goal theory of leader effectiveness. *Administrative Science Quarterly*, 1971, **16**(3) 321-338.

House, R.J., & Wahba, M.A. Expectancy theory in industrial and organizational psychology: An integrative model and a review of the literature. *Proceedings of the 80th Annual Convention of the American Psychological Association*. Honolulu, 1972, **7**(1). 465-466.

Katz, D., Maccoby, N., & Morse, N.C. *Productivity, supervision and morale in an office situation.* Survey Research Center, University of Michigan, Ann Arbor, 1950.

Katz, D., & Kahn, R.L. *The social psychology of organizations.* New York: Wiley, 1966.

Katzell, R.A., Barrett, R.S., Vann, D.H., & Hogan, J.M. Organizational correlates of executive roles. *Journal of Applied Psychology*, 1968, **52**. 22-28.

Lewin, K., Lippitt, R., & White, R.K. Patterns of aggressive behavior in experimentally created social climates. *Journal of Social Psychology*. 1939. **10**, 271-301.

Likert, R. *New patterns of management.* New York: McGraw-Hill. 1961.

McClelland, D.C., Clark, R.A., & Lowell, E.L. *The achievement motive.* Appleton-Century-Crofts, 1953.

Michaelsen, L.K. *Leader orientation, leader behavior, group effectiveness, and situational favorability: An extension of the contingency model.* ONR Technical Report, AD-731 668. September 1971.

Mitchell, T.R. Leader complexity and leadership style. *Journal of Personality and Social Psychology*. 1970, **16**(1), 166-174.

Mitchell, T.R., Biglan, A., Oncken, G.R., & Fiedler, F.E. The contingency model: Criticism and suggestions. *Academy of Management Journal*. 1970, 253-267.

Nealey, S.M., & Blood, M.R. Leadership performance of nursing supervisors at two organizational levels. *Journal of Applied Psychology*. 1968, **52**. 414-422.

Olmstead, J.A. The skills of leadership. *Military Review* March 1967, **47**(3), 62-70.

Porter, L.W., & Lawler, E.E. *Managerial attitudes and performance.* Homewood, IL: Irwin-Dorsey. 1968.

Randle, C.W. How to identify promotable executives. *Harvard Business Review*, 1956. **34**(3), 122-134.

Reddin, W.J. The 3-D management style theory: A typology based on task and relationships orientations. *Training and Development Journal*, April 1967, 8-17.

Reddin, W.J. *Managerial effectiveness.* New York: McGraw-Hill, 1970.

Roach, D.E. Factor analysis of rated supervisory behavior. *Personnel Psychology*, 1956, **9**, 487-498.

Roby, T.B., Nicol, E.H., & Farrell, F.M. Group problem solving under two types of executive structure. *Journal of Abnormal and Social Psychology*, 1963, **67**, 530-556.

Rossel, R.D. Required labor commitment, organizational adaptation, and leadership orientation. *Administrative Science Quarterly*, 1971, **16**, 316-320.

Sales, S.M. Supervisory style and productivity: Review and theory. *Personnel Psychology*, 1966, **19**, 275-286.

Scott, W.A. Cognitive complexity and cognitive flexibility. *Sociometry*, 1962, **25**, 405-414.

Shaw, M.E. *Scaling group tasks: A method for dimensional and analysis.* Technical Report 1, 1963, ONR contract NR 170-266, NONR-580(11).

Siegel, L. *Industrial psychology* (Rev. ed.). Homewood, IL: Irwin, 1969.

Stogdill, R.M. Personal factors associated with leadership: A survey of the literature. *Journal of Psychology*, 1948, **25**, 35-71.

Stogdill, R.M. Personal factors associated with leadership: A survey of the literature. In C.G. Browne & T.S. Cohn (Eds.), *The study of leadership*. Danville, IL: Interstate Printers, 1958.

Stogdill, R.M. *Individual behavior and group achievement*. New York: Oxford University Press, 1959.

Stogdill, R.M. Organizational leadership. In R.E. Stockhouse, V.F. Phillips, & E. Owens (Eds.), *Frontiers of leadership: The United States Air Force Academy program (1970)*. Air Force Office of Scientific Research, Air Force Systems Command, USAF AFQSR-TR-71-1857, August 1971.

Tannenbaum, R. Leadership development. In R.E. Stockhouse, V.F. Phillips, & E. Owens (Eds.), *Frontiers of leadership: The United States Air Force Academy program (1970)*. Air Force Office of Scientific Research, Air Force Systems Command, USAF Technical Report AFOSR-TR-71-1857, August 1971.

Tannenbaum, R., & Schmidt, W.H. How to choose a leadership pattern. *Harvard Business Review*, 1958, **36**, 95-101.

Tannenbaum, R., & Schmidt, W.H. How to choose a leadership pattern. *Harvard Business Review*, 1973, **51**(3), 162-180.

Tannenbaum, R., Weschler, I.R., & Massarik, F. *Leadership and organization: A behavioral science approach*. New York: McGraw-Hill, 1961.

Valenzi, E.R., Miller, J.A., Eldridge, L.D., Irons, P.W., Solomon, R.J., & Klauss, R.E. *Individual differences, structure, task, and external environment and leader behavior: A summary*. ONR TR-49, AD-753 036, October 1972.

Vroom, V.H. *Some personality determinants of the effects of participation*. Englewood Cliffs, NJ: Prentice-Hall, 1960.

Vroom, V.H. *Work and Motivation*. New York: Wiley, 1964.

White, R., & Lippitt, R. *Autocracy and democracy*. New York: Harper, 1960.

Wofford, J.C. Behavior styles and performance effectiveness. *Personnel Psychology*, 1967, **20**, 461-495.

Wofford, J.C. Factor analysis of managerial behavior variables. *Journal of Applied Psychology*, 1970, **54**(2), 169-173.

Wofford, J.C. Managerial behavior, situational factors, and productivity and morale. *Administrative Science Quarterly*, 1971, **16**(1), 10-17.

Woodward, J. *Industrial organization: Behavior and control*. London: Oxford University Press, 1970.

Woodward, J. *Management and technology*. London: Her Majesty's Stationary Office, 1958.

Woodward, J. *Industrial organization: Theory and practice*. London: Oxford University Press, 1965.

Yukl, G. Toward a behavioral theory of leadership. *Organizational Behavior and Human Performance*, 1971, **6**, 414-440.

Zwerman, W.L. *New perspectives on organization theory*. Westport, CT: Greenwood Publishing, 1970.

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