

THE AGE FACTOR IN LEADERSHIP

by

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Dissertation submitted to the Faculty of the  
Virginia Polytechnic Institute and State University  
in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

in

Educational Administration

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May 7, 1986

Blacksburg, Virginia

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(Abstract)

This study was conducted to investigate a set of relationships which comprise a theory of leadership effectiveness based upon time in position and age-related characteristics of leaders. The interrelationships among age; time in position; interiority; conformity to organizational rules; two measures of leadership behavior, initiating structure and consideration; and effectiveness were examined. Appropriate subscales of the California Psychological Inventory; the Leader Behavior Description Questionnaire, Form XII; the Purdue Rating Scale for Administrators and Executives; and a Conformity Scale developed by A. P. MacDonald, Jr. were used to measure the variables. Path Analysis was applied to test the relationships.

Of the specific relationships hypothesized in the proposed models, only four were consistent with the theory: conformity was negatively associated with consideration ( $b = -.155, p < .05$ ), consideration was positively associated

with intellectuality ( $b = .146$ ,  $p < .01$ ) and productivity ( $b = .043$ ,  $p < .05$ ), and initiation of structure was positively associated with orderliness ( $b = .064$ ,  $p < .01$ ), intellectuality ( $b = .164$ ,  $p < .01$ ), confidence ( $b = .113$ ,  $p < .01$ ), and productivity ( $b = .052$ ,  $p < .01$ ). The remaining significant relationships--age and consideration ( $b = .116$ ,  $p < .01$ ), interiority and conformity ( $b = -.102$ ,  $p < .05$ ), conformity and initiating structure ( $b = .205$ ,  $p < .01$ ), and time in position and confidence ( $b = -.040$ ,  $p < .05$ )--were inverse to those hypothesized.

With such mixed results, there is only one fair conclusion: The theory explaining the relationship between age and leadership effectiveness proposed in this study is not adequate. The initial assumption that age is negatively associated with leadership effectiveness is cast in doubt. The two significant correlations between age and consideration and age and intellectuality indicate that the relationship, if any, between age and leadership is positive, not negative. In light of the evidence, the theory needs to be recast to consider the relationships that emerged from the analysis.

## ACKNOWLEDGEMENTS

The writer wishes to acknowledge the assistance of his dissertation committee: David J. Parks, Patrick W. Carlton, Lawrence H. Cross, Wayne H. White, William D. Smith, James F. Keller, and Loyd D. Andrew. Throughout the doctoral program, the writer has relied on the guidance of Dr. Parks, chairman of the committee.

Professors Cross, Smith, Keller, White, and Carlton gave unselfishly of their time. Their insight was valuable to the writer.

Sincere thanks is extended to the principals who participated in the study and to Paulette Gardner who typed the innumerable revisions and assisted with the technical complexities of completing a dissertation and a degree.

Finally, the writer wishes to express gratitude to his wife, , for her willingness to type the many initial revisions and for her willingness to undergo the sacrifices which made this study possible.

## TABLE OF CONTENTS

	Page
ABSTRACT.....	ii
ACKNOWLEDGEMENTS.....	iv
LIST OF TABLES.....	vii
LIST OF FIGURES.....	viii
Chapter	
1. THE BACKGROUND AND STATEMENT OF THE PROBLEM.....	1
Why Study Age-Related Characteristics of Leaders.....	1
Definition of Terms.....	6
The Thesis: Its Statement and Theoretical Basis.....	8
Age, Time in Position (Experience), and Leadership.....	10
Time in Position and Leadership.....	12
Age and Interiority.....	16
Age, Time in Position (Experience), and Conformity to Organizational Rules.....	22
Conformity to Organizational Rules and Leadership.....	25
Interiority and Leadership.....	29
Leadership and Effectiveness.....	31
The Delimitations.....	34
Summary.....	35

Chapter	Page
2. METHODOLOGY.....	36
Instruments and Their Applicability to the Study.....	36
The California Psychological Inventory.....	36
Leader Behavior Description Questionnaire--Form XII.....	38
The Purdue Rating Scale for Administrators and Executives.....	46
Self-rating Versus Staff-rating.....	55
A. P. MacDonald, Jr.'s Conformity Scale.....	55
Population and Sample.....	58
Data Collection Procedures .....	59
Method of Analysis.....	59
Summary.....	59
3. FINDINGS.....	62
4. SUMMARY, DISCUSSION AND CONCLUSIONS.....	78
Conclusions.....	79
Discussion.....	80
Implications for Future Research.....	82
BIBLIOGRAPHY.....	84
APPENDICES	
A Leadership Survey.....	89
B Communications with Participants.....	97
VITA.....	101

## LIST OF TABLES

Table	Page
1 Reliability Coefficients for Initiating Structure and Consideration (Modified Kuder-Richardson).....	44
2 Factor Loadings for Effectiveness Items.....	48
3 Eigenvalues and Percentages of Variance for Effectiveness Factors.....	49
4 Reliability Coefficients for Each Item of the Purdue Rating Scale for Administrators and Executives.....	50
5 Alpha Reliabilities for the Effectiveness Factors.....	54
6 Biographical Information on Responding Secondary School Principals (N=241).....	63
7 Summary of Unstandardized Direct and Indirect Effect Coefficients in Paths Leading to Leader Intellectuality, Leader Productivity, Leader Confidence, and Leader Orderliness: Secondary Principals in the United States in October 1981.....	69
8 Chi Square Goodness of Fit Tests for the Proposed Path Models of Leader Orderliness, Intellectuality, Productivity, and Confidence: Secondary Principals in the United States in October 1981.....	72
9 Means, Standard Deviations, and Original and Reproduced Pearson Correlation Coefficients for Variables in Four Path Models of Leadership Effectiveness: Secondary School Principals in the United States in 1981.....	73

## LIST OF FIGURES

Figure		Page
1	Theory of Leadership Effectiveness Based upon Time in Position and Age-Related Characteristics.....	2
2	Influence of Role and Personality on the Organizational Behavior of More and Less Experienced Secondary Principals.....	27
3	Horst r.....	53
4	Paths to leader intellectuality. Unstandardized regression coefficients.....	65
5	Paths to leader productivity. Unstandardized regression coefficients.....	66
6	Paths to leader confidence. Unstandardized regression coefficients.....	67
7	Paths to leader orderliness. Unstandardized regression coefficients.....	68



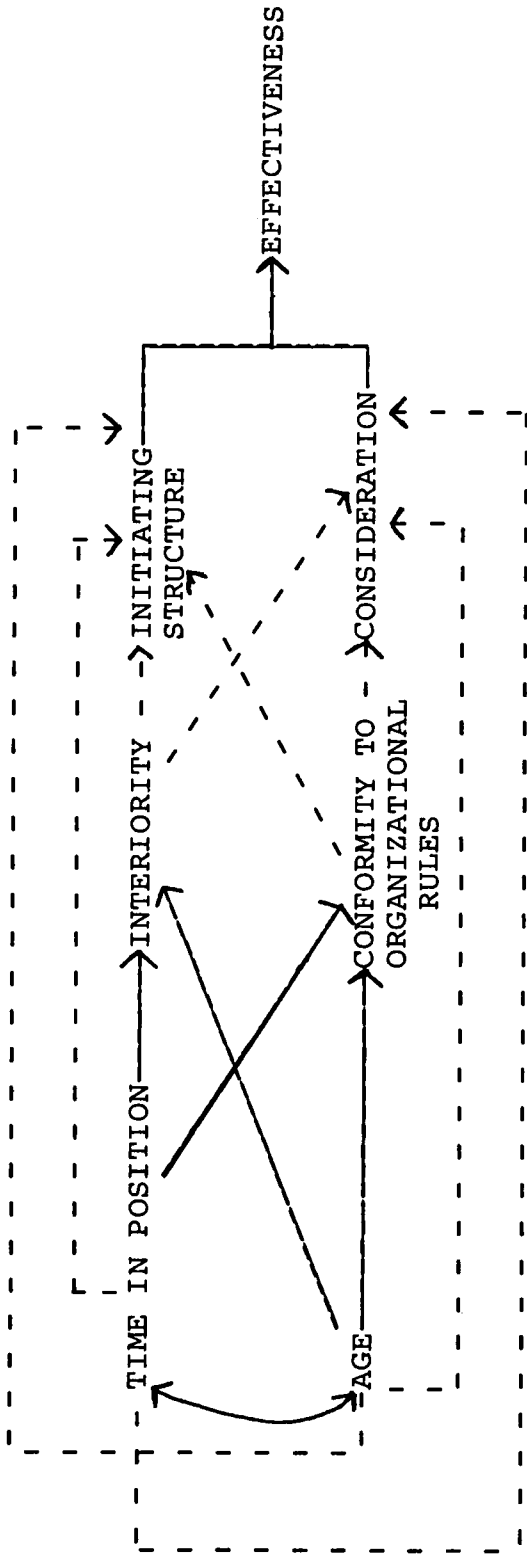
## CHAPTER 1

### THE BACKGROUND AND STATEMENT OF THE PROBLEM

This study is an investigation of a set of relationships which comprise a theory of leadership effectiveness based upon time in position and age-related characteristics of leaders. These relationships are presented in Figure 1. The interrelationships among age; time in position; interiority; conformity to organizational rules; two measures of leadership behavior, initiating structure and consideration; and effectiveness will be examined. The dominance subscale of the California Psychological Inventory; the initiating structure and consideration subscales of the Leader Behavior Description Questionnaire, Form XII; the Purdue Rating Scale for Administrators and Executives; and a conformity scale developed by A. P. McDonald, Jr. were used to measure the variables. Path analysis was applied to test the relationships.

#### Why Study Age-Related Characteristics of Leaders

People report in casual conversation that they note changes in their attitudes toward jobs and their lives in general as they approach their middle years. For many, the job takes on less significance in their lives and the



LEGEND

- - - - Negative Relationship
- Positive Relationship

The bidirectional (two headed) curved line connecting Age and Time in Position indicates that these variables are correlated and that they probably have common causes which have not been measured.

FIGURE 1. THEORY OF LEADERSHIP EFFECTIVENESS BASED UPON TIME IN POSITION AND AGE-RELATED CHARACTERISTICS

overall quality of their lives takes on greater significance. These people become more interested in themselves than in their jobs (Glass and Rosenthal, 1972).

Although these changes are reported for the population generally, there is little evidence on whether the same conditions hold for leaders in American society. There are large numbers of leaders beyond the middle years that seem to thrive on their work. Reduced concern for the job is not evident. These people can be found at the top of organizations and in government. Ronald Reagan and many long-term senators illustrate this continuing interest in their work. These people probably are anomalies. They have reached the top, they continue to be successful and respected, and their lives are their jobs. People at lower levels of leadership do not get the same social support, nor do they have the same quality of experience found at the upper levels, thus their attitudes toward their jobs may well change in the middle years.

Since little knowledge is available on the age-leadership relationship in the broader studies of leadership, the age variable has been included in this systematic study. The model of relationships proposed here is a modest attempt to identify variables that may help explain the relationships among age, leadership style, and effectiveness.

Practically, knowledge of the age-leadership relationship could be used by leaders and their organizations to adjust their behaviors or programs to make optimum use of leaders at each stage of development. For example, if it is found that younger administrators are more likely to initiate structure and be considerate of subordinates while older principals are less likely to behave this way, organizations may want to implement a plan of assigning younger administrators to positions requiring higher levels of these behaviors. The plan also would include the assignment of older principals to positions requiring less initiating structure and consideration. Such matching of leaders and positions would remove any frustration experienced by either older or younger administrators resulting from perceptions that the organization is not moving fast enough or that the organization is moving too fast. This matching could be done with the knowledge of those being reassigned. Rather than a stigma being attached to such movements, reassignments could be viewed as an organizational adjustment required by the natural development of leaders.

The matching of leaders with positions is not a new concept. Fiedler and Chemers (1984) have designed instruments for assessing leadership styles and position

requirements. They use these assessments to match leaders and positions.

Findings from research on age and leadership have implications for the recent legislation on age discrimination which protects persons who are at least forty years of age but less than seventy years of age (McCarthy, 1983, p. 50). This legislation prohibits discrimination in employment based upon age. Is this legislation reasonable public policy or is it harmful to both employees and organizations? Older persons may be placed in positions requiring the behaviors of younger persons; hence, effectiveness may suffer. Both the organization and the person may be harmed. On the other hand, if there is no relationship between age and leadership, age discrimination legislation is appropriate public policy, beneficial to both organizations and people. Age should have no place in considerations of employing and assigning leaders.

The study of time in position is closely related to that of age. The two variables are positively correlated ( $r = .48$  in this study). Should time in position be found to be negatively related to leader style and effectiveness, organizations may find it beneficial to limit the number of years one is able to serve in a single position. Rotation of administrators may become a feasible policy. If there is

no relationship between time in position and leadership effectiveness, organizations may wish to encourage longevity in positions by applying incentives for years of service in the same position.

#### Definition of Terms

Leadership Behavior. "Leadership Behavior is the process (act) of influencing the activities of an organized group in its efforts toward goal setting and goal achievement" (Stogdill, 1974, p. 9).

Initiating Structure. Initiating Structure refers to the leader's behavior in delineating the relationship between himself and members of the work-group and endeavoring to establish well-defined patterns of organization, channels of communication, and methods of procedure. The Initiating Structure subscale of LBDQ--XII (Stogdill, 1963) will be used to measure this variable.

Consideration. Consideration refers to behavior indicative of friendship, mutual trust, respect, and warmth in the relationship between the leader and the members of the work group. The Consideration subscale of the LBDQ--XII (Stogdill, 1963) will be used to measure this variable.

Effectiveness. "Effectiveness is the ability of the leader to adjust the situation in order to accomplish the goals of the organization" (Remmers & Hobson, 1951, p. 1).

This variable will be measured by the Purdue Rating Scale for Administrators and Executives.

Interiority. Interiority is a concept used by Neugarten and Associates in a study of adults (Becker, 1968). It is defined as a movement from an outer to an inner world orientation. People with higher interiority become preoccupied with their inner lives, develop a lessened sensibility to the reaction of others and a lessened sense of relatedness to others. In this study, interiority was measured with the Dominance (Do) Scale of the California Psychological Inventory. Low Do scorers "tend to be seen as retiring, inhibited, commonplace; as indifferent, silent, and unassuming; as being slow in thought and action; as avoiding situations of tension and decision; and as lacking self-confidence" (Gough, 1969, p. 10). Since low Do scorers have similar characteristics to those of high interiority people, the Do Scale appears to be an adequate measure of interiority for this study.

Time in Position. Time in Position refers to the number of years the individual has been in his or her present position. This variable was measured by item 105 of the Leadership Survey (Appendix A).

Conformity to Organizational Rules. Conformity to Organizational Rules is the tendency of the leader to

observe procedural regularities before making decisions. This variable was measured by A. P. MacDonald, Jr.'s, Conformity Scale (Katz & Danet, 1973, p. 410-413) (Items 82-102, Appendix A).

Age. Age is a term used for any stage in the life of a person; in this study age refers to chronological age. This variable will be measured by item 103 of the Leadership Survey (Appendix A).

#### The Thesis: Its Statement and Theoretical Basis

The main thesis of this study is that as leaders age, they tend to become less effective. The qualifier "tend to" is based on two assumptions: First, aging is an individual process; it occurs at different rates in different individuals; therefore, effectiveness can be expected to begin to decline at different ages. Secondly, the behaviors and attitudes which accompany aging set in at different times for different individuals. Some people become preoccupied with themselves (interiority) at a younger age than others. Some are more readily affected by the pressures of organizational rules and regulations at a younger age than others. Such exceptions, however, should not preclude the search for underlying tendencies in age-related behavioral patterns of leaders.



The thesis that diminished leadership effectiveness is associated with advancing age is based on the following assertions. As leaders age, they increase concern for their personal lives (interiority) and rely more heavily upon existing organizational rules and regulations in their decision making. As they become more self-centered and rule-oriented, they show less concern for fellow employees and subordinates (consideration) and take less interest in developing new systems to run their organizations (initiating structure). As a result, they become less effective as leaders. The following research hypotheses further define these relationships:

1. As the age of a leader increases, the leader's interiority increases.
2. As the leader's time in position increases, the leader's interiority increases.
3. As the age of a leader increases, the leader's conformity to organizational rules increases.
4. As a leader's time in position increases, conformity to organizational rules increases.
5. As interiority and conformity to organizational rules increase, the leader becomes less considerate of the needs of others.

6. As interiority and conformity to organizational rules increase, the leader initiates less structure.
7. As the age of the leader increases, initiating structure decreases.
8. As the age of the leader increases, consideration for others decreases.
9. As the leader's time in position increases, consideration decreases.
10. As the leader's time in position increases, initiating structure decreases.
11. As initiating structure and consideration decrease, the leader becomes less effective.

Support for the assertions comes from a number of sources (Glass & Rosenthal, 1974). These sources are reported in the following sections which contain the research and theoretical work associated with each set of relationships in the theory illustrated in Figure 1.

#### Age, Time in Position (Experience), and Leadership

Gross and Herriott examined the relationship of age to Executive Professional Leadership (EPL). The authors defined Executive Professional Leadership as the effort of an executive of a professionally staffed organization to conform to a definition of the leader's role as one that stresses the obligation to improve the quality of staff

performance. Gross and Herriott found differences among the principals' EPL scores when they were classified into five age groups. On the average the older the principal, the lower the EPL score. The data lend support to the proposition that older principals provide less leadership than do younger principals (Gross & Herriott, 1965, p. 8). The Gross and Herriott study was a national investigation of 501 principals.

In a sample of 160 Montana elementary and secondary school administrators, Carleton (1956) stated it is of interest to note the ineffective administrators showed some tendency to be older and to have had more experience in education and in administration than did effective administrators.

Parks (1970), in a study of 119 elementary principals in Upstate New York, using the LBDQ, Form XII, found age to be related to representation, reconciliation, tolerance of uncertainty, persuasion, tolerance of freedom, role assumption, consideration, predictive accuracy, integration, and superior orientation; years in present position were related to tolerance of uncertainty and superior orientation; and years of experience as elementary principal were related to superior orientation. His findings were as follows:

(1) Principals less than forty years of age are more reconciling, tolerant of uncertainty, persuasive, tolerant of freedom, role assuming, considerate, accurate in prediction, integrative, and superior oriented than principals fifty or over.

(2) Principals less than forty years of age are more representative and superior oriented than principals forty to fifty years of age.

(3) Principals forty to fifty years of age are more reconciling, tolerant of uncertainty, tolerant of freedom, considerate, accurate in prediction, and superior oriented than principals fifty or over.

(4) Principals who have been in their positions three years or less are more tolerant of uncertainty and superior oriented than principals who have been in their positions ten or more years.

(5) Principals who have been in their positions three years or less are more superior oriented than principals who have been in their positions four to ten years.

(6) Principals with three years or less experience as elementary principals are more superior oriented than principals with more than three years of experience.  
(p. 103)

In each significant relationship, older principals were perceived as having less of the leadership quality than younger principals.

#### Time in Position and Leadership

Hemphill, Griffiths, and Frederiksen (1962) studied the actions of 232 elementary principals in a simulated school. All participants were confronted with the same problems and all were provided with identical resources for coping with these problems.

The simulation exercise presented each participant with a group of "in-basket" items which an elementary principal might encounter in the daily administration of a school. Each individual was required to respond in writing to the problem by describing how it could be solved or by developing a course of action for solving the problem.

In order to score the responses of the participants, a scoring manual was developed. Included in this manual were a brief description of the in-basket test, a set of general directions, lists of courses of action for the items in all in-baskets, a list of suggested steps in scoring the responses, and detailed definitions, rules, and examples for use in scoring each behavior category. It was within this setting that each individual displayed his or her administrative performance.

Hemphill, Griffiths and Frederiksen (1962) were able to make some generalized distinctions according to the age and experience of the individual. They found that experienced principals preferred to discuss problems with others before they acted. They noticed that less experienced principals tended to be relatively self-confident and relaxed, and to have interests suggesting needs to conform. These principals tended not to be well regarded by either their superiors or teachers.

Hemphill, Griffiths and Frederiksen found the more experienced principals were in the majority of those who had the ability to reason and to see relationships and whose administrative behavior included an emphasis upon analyzing the situation. Principals with more experience also tended to handle their administrative chores by giving them to someone else as tasks to be done. This group also tended to include those individuals with lower ability and less professional knowledge. The authors concluded that these principals, in emphasizing this style of work (directing others), have found through long experience assigning tasks to others to be a useful method of getting work done which they themselves are not capable of doing well.

One may speculate that once leaders become familiar with the tasks to be achieved and develop the systems to routinize or delegate the work, they then have time to focus their interests upon themselves (interiority). They rely upon the established rules, regulations, and routines for making decisions (conformity to organizational rules). As they become more self-centered and rule-oriented, they show less concern for people and take less interest in developing or changing the systems to run their organizations. The individuals tend to lose sight of the leadership goals and functions of group maintenance and open, two-way

communication to accomplish tasks and/or solve problems. As a result they become less considerate, thus decreasing their effectiveness.

In another study Bridges (1964) found that experience and age were related to teachers' perceptions of principals' attitudes toward teacher participation in decision making. The older experienced principals involved teachers to a greater extent than did any other grouping of principals (the modus operandi for the older, experienced principals was characterized by a heavy reliance on soliciting behavior, i.e., seeking suggested courses of action from teachers when faced with problems). Younger principals, regardless of experience, most often resolved problems by choosing a course of action and announcing their decision to the teacher.

There are several reasons that explain why older, experienced principals are the ones who encourage teacher participation. They are the principals who are likely to be secure in their positions, to be less eligible for promotion, and to have the patience to use the participative process. Their behavior may reflect the older, experienced principals' desire to maintain a stable situation through increasing the teacher's opportunity to participate in the decision-making process. The more stable the school

environment, the more time the leader has to use energy for personal purposes, to be "interior."

Younger principals seem to be action oriented; older principals seem to be willing to delegate and seek opinions and encourage participation. These differences seem to account for teachers' differences in perception of leader style.

### Age and Interiority

Birren described the concept of personality as the characteristic way in which an individual responds to the events of life (Glass & Rosenthal, 1972, p. 65). Personality has to do with the choices one makes and the characteristic behavior one exhibits while making choices and interacting with others. When studying age-related personality change, one is concerned with orderly and sequential changes that occur over time.

There are two major schools of personality theory. These diametrically opposed schools are (1) psychoanalytic or ego-oriented theory and (2) socio-psychological theory. Neither of these schools has developed a comprehensive theory of adult development, although each is continuously adding to the existing body of knowledge.

Ego-oriented personality theory sees the personality as developing from the interaction of psychological forces



within the individual. This theory affirms that the sense of identity is established in childhood and adolescence. This sense of identity produces consistency in behavior throughout life. In this school of thought, personality is seen as a static fixed variable, and its essential nature remains stable.

Jung and Erickson (Glass & Rosenthal, 1972) belong to this school of thought, but they differ somewhat in their interpretation of ego personality. Jung describes adult development in stages and notes an increase in introversion in the middle and late years. Erikson also disagreed with ego psychology in that he delineated the life cycle and personality changes into eight stages--each stage being characterized by a choice of crisis for the ego.

The socio-psychological school sees personality as an interactional process between the organism and the social environment. Brim (Glass & Rosenthal, 1972) argues that there are no traits of personality which persist across situations. In this school of thought, personality is not seen as a developmental process, but, instead, as a process by which the social situation has an effect upon behaviors. Becker (Glass & Rosenthal, 1972), an advocate of this school of thought, did see two alternatives for personality change in adulthood: (1) a process of situational adjustment, and

(2) a process of commitment. These two processes account for age-related change and stability in adult personality.

The Kansas City studies (Glass & Rosenthal, 1972), conducted by researchers from the Committee on Human Development at the University of Chicago, investigated three areas of personality: (a) intrapsychic area or inner-life process, (b) adaptational area; and (c) social interaction area. Data from the intrapsychic area revealed significant findings of age-related personality changes. The subject's perception of self as related to the external environment which coexists with his inner world of life experience caused a change of style in dealing with situations as age changed. Analysis of the data revealed

(1) Preoccupation with inner life became greater with age, (2) there was a movement from outer to inner world orientation; this change is described as increased interiority, (3) there was an inability to integrate wide ranges of stimuli with age, (4) there was a reduction in willingness to deal with complicated and challenging situations, and (5) older people gave evidence of lessened sensitivity to the reaction of others and a lessened sense of relatedness to others. (p. 65)

The third area of the Kansas City studies revealed a significant relationship between age and social interaction. Neugarten and Havighurst (1969) reported that, on the average, the level of role activity was lower in successive groups from the ages of 55 to 85; the degree of ego involvement in roles was lowest with advancing age. There

is some evidence to indicate that levels of social interaction are not ego related. From this perspective a person develops a level of role activity that tends to persist throughout life. The activity inventory used in the study was composed of nineteen items designed to assess differences in the contact with the environment which individuals report as typical for themselves; questions on the inventory concern physical mobility, intimate social contact with friends and relatives, use of leisure time, organizational participation and membership, and maintenance of the usual work role in the labor market.

The Kansas City studies concluded that developmental processes account for age-related differences. Although there was not a general decrease in competency of performance in social roles or a lessening of interaction until the mid 60s or early 70s, there were significant increases in inward orientation beginning in the late 40s and early 50s (Glass & Rosenthal, 1972). Lakin and Eisdorfer also found that as people age they seem to progress from active involvement in the world to a more introversive or passive position (Glass & Rosenthal, 1972, p. 67).

The activity theory was developed as a result of further investigation of the data of the Kansas City Study

of Adult Life. The theory implies that except for changes in biology and health, older people are the same as middle-aged people with essentially the same psychological and social needs. Decreased social interaction results from withdrawal by society from the aging person, and the decrease in interaction is against the desire of most aging people. The individual who ages successfully stays active and resists the shrinkage of his or her social world. He or she maintains the activities of middle age as long as possible and uses substitutes for work after retirement and for loved ones whom they lose by death (Havighurst, 1977, p. 123).

Maddox (1963) reported a study which showed that persons over sixty whose activity levels initially were higher or lower than the group average maintained their ranks over a seven year period; nevertheless, these persons did show a shrinkage in social life space (the degree and kind of contact which elderly persons have with the environment) from the middle years to old age. The data were provided by a panel initially composed of 250 volunteer subjects participating in a longitudinal, multi-disciplinary investigation of human aging conducted by the Department of Psychiatry of the Duke University Medical Center. The subjects ranged in age from 60 to 90, with a median age of 70.

This concept of shrinkage of social life space has precipitated the so-called disengagement theory. Disengagement theory contends that as people grow older the activities that characterized their behavior in middle age are curtailed. Cumming and Henry (1961) characterized disengagement by the following attributes:

(1) There is a decrease in social interaction that is mutually acceptable to society and to the aged.

(2) Both society and the aged withdraw from one another.

(3) Withdrawal decreases the emotional involvement in activities and relationships.

(4) The disengaged person is the one who has a sense of psychological well-being and will be high in life satisfaction. (Glass and Rosenthal, 1972, p. 68).

Researchers from the University of Chicago (Cumming & Henry, 1961) later revised the fourth attribute. Further investigation seemed to indicate that high life satisfaction was more often found in socially active and involved persons. There appeared to be a positive correlation between engagement, not disengagement and life satisfaction.

The Kansas City Study of Adult Life (Havighurst, 1977) involved the study of two samples of men and women, age fifty to seventy, who were studied over a period of six years. The study indicated there is a slowing in activities and social roles as age increases. Disengagement began to take place in the sixties or early seventies.

The disengagement theory tries to explain why some people become more withdrawn as they advance into old age. It implies that disengagement is an inevitable, universal, self-perpetuating, gradual, and mutually satisfying process, prepared for in advance by society and the individual (Tallmer & Kutner, 1977).

In a later article, Cumming modified the theory but generally held to its main themes. She suggested possible variations in the pattern of withdrawal. Henry changed his original position and introduced both the possibilities of reengagement and the need for considering life style patterns of response. (Tallmer & Kutner, 1977, p. 131)

Although disengagement is a characteristic of aging people, according to many researchers (Havighurst, Neugarten and Tobin, Parsons, Rose, Williams and Wirths), they differ in their explanations and assessments of the data (Tallmer & Kutner, 1977).

At the present time the data describing the relationship between aging and interiority are inconclusive. This study will provide further information related to this issue.

#### Age, Time in Position (Experience), and Conformity to Organizational Rules

Bridges noted that the older principal's behavior is affected by the bureaucratic role. He found that the personality diversities among young principals tended to

disappear with age. Principals it seems tend to become more alike, with behavioral differences attributal to personality becoming less evident as the principal learns how to behave in the bureaucratic role (Bridges, 1965).

Personality and role exert different degrees of pressure on the principal depending on the length of time the individual has had in the position. Initially the individual may develop his own leadership style; however, with increased exposure to the expectations associated with the bureaucratic role, the personality of the principal becomes submerged. Principals tend as their time in position increases to conform to organizational expectations.

A major problem which confronts the individual who works in a situation where organizational rules predominate is that of maintaining a balance between individual needs and organizational needs. The individual requires opportunities for self-actualization, autonomy, creativity and initiative; the organization requires commitment and conformity (Katz & Danet, 1973).

There is a possibility that the individual's personality can be too easily adapted to the requirements of the organization as one ages. Merton (1952) contended that the individuals who fit the organization best are the ones

who may be most likely to subvert the goals of the organization. The rigid following of organizational rules causes the leader to narrow his or her focus and lose sight of the goals of the organization.

Opposing these theories of bureaucracy and personality is the optimistic position of Kohn (1971) who argued that individuals in a bureaucratic organization have a better chance for the expression of independence and creativity than have individuals in non-bureaucratic organizations. Individuals who are employed by bureaucratic organizations tend to value, not conformity, but self-direction. They are more open-minded, have higher standards of morality, and are more receptive to change than are individuals who work in non-bureaucratic organizations. They demonstrate greater flexibility in dealing with perceptual and ideational problems. They also spend their leisure time in intellectually demanding activities.

Conformity is the influence which the group exerts on individuals to get them into roles, keep them in the roles, make them follow group norms, and in general meet the group's expectations. In order for groups to survive, most of their expectations must be realized. If a sufficient number of group members do not meet the expectations of the group, the basic processes of the group will break down.



The members must conform to the group norms. A norm is a behavioral role accepted by a majority of group members.

Conformity to group norms is rewarded and lack of conformity punished. Conformity offers several inducements to individuals: approval, acceptance, recognition, and positive feedback. Sanctions include denial of membership, rejection, isolation, and negative feedback. Complete conformity is neither good for the organization nor the individual.

Without conformity, organizations could not survive. Just as the individual must balance dependence and independence, the organization must strike a balance in how hard it exerts influence on members to comply and identify with it (Kelly, 1974).

#### Conformity to Organizational Rules and Leadership

Principals, as bureaucrats, are governed by the norm of impersonality. They are expected to minimize personal relations and to ignore the peculiarities of individual cases. Their contacts with people, including teachers as well as students and parents, involve social situations which call for a certain kind of reaction by them. If they substitute personalized relationships for the structurally required impersonal relationships, they are likely to encounter a conflict within the bureaucratic setting.

Principals do this by playing certain roles and exhibiting certain attitudes habitually. They guard against displays of favoritism and conform to their bureaucratic role in order to protect themselves (Bridges, 1965).

Apparently, personality and role exert different degrees of pressure on the principal depending upon the amount of experience which the individual has had in the principal's role. Initially, the individual may stamp a particular role with the unique style of one's own character behavior. However, with increased exposure to the expectations associated with the bureaucratic role, the personality of the principal becomes submerged. Principals tend to become alike with behavioral differences attributable to personality becoming less evident as they learn what is expected in a particular role (Bridges, 1965).

Bridges (1965) adapted the Getzels-Guba role-personality diagram in order to graphically picture the nature of these interactions. Figure 2 depicts Bridges' application of this diagram. The model indicates that the less experienced principal's behavior is more influenced by personality traits than the more experienced principal. Bridges explained that personality and role exert different degrees of pressure on the performance of the principal depending upon the amount of experience which the individual has had in the principal's role.

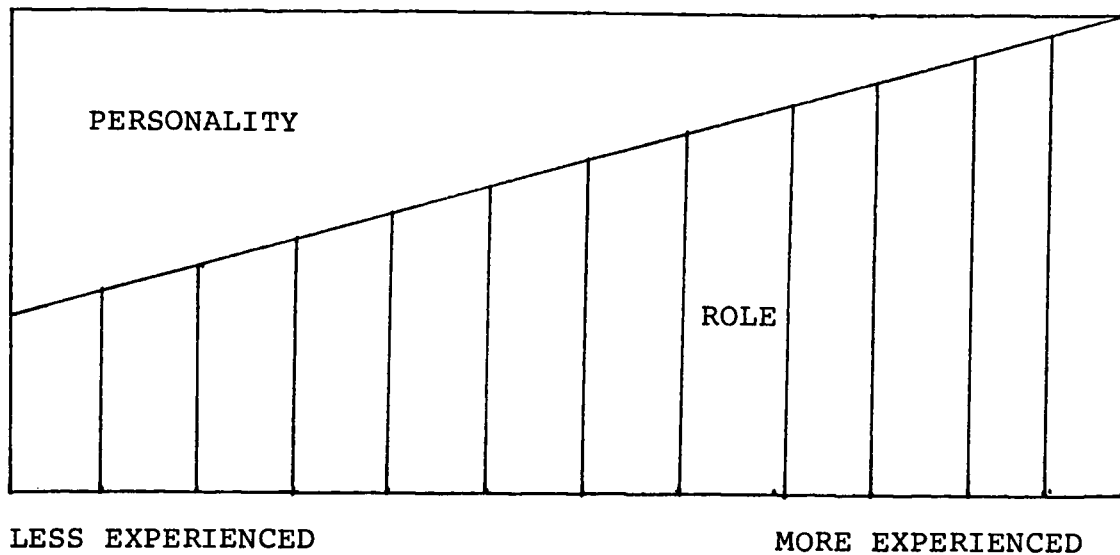


FIGURE 2. INFLUENCE OF ROLE AND PERSONALITY ON THE ORGANIZATIONAL BEHAVIOR OF MORE AND LESS EXPERIENCED SECONDARY PRINCIPALS.

Note. From "Bureaucratic Role and Socialization: The Influence of Experience on the Elementary Principal" by E. M. Bridges, 1965, Educational Administration Quarterly, 12, p. 26.

Many schools today would meet Weber's definition of a bureaucracy:

(1) Tasks are distributed among various members as official duties.

(2) Offices or roles are organized into hierarchical structures where the scope of authority of superordinates over subordinates is clearly defined.

(3) A formal set of rules governing behavior is specified which insures uniformity of organization.

(4) Principals are expected to assume an impersonal attitude in contacts with teachers and other officials, which inevitably produces a considerable measure of psychological distance between superiors and subordinates.

(5) Employment in a school system is usually assumed to be a career and promotion is by experience or seniority. (Kelly, 1974, pp. 68-74)

What happens to the personalities of principals who work in these bureaucracies? The mind of the principal develops a particular perceptual frame of reference within which rules become more important than people. This condition induces a kind of astigmatism which makes individuals see the real world in such a way that both their self-interest (in terms of seniority, tenure, and salary)

and their administrative convenience (in terms of finding blanket generalized solutions to problems that facilitate record keeping) become paramount (Kelly, 1974).

The type of leadership one displays is to a large extent dependent on the features of the reference groups to which one has belonged, belongs, or aspires to belong. The leader's behavior is unlikely to be completely determined by membership in any single group. Organizations are made up of people. The potential leaders who are entering the organization have to be taught the ropes before they can acquire the rules, roles and relations of the game. They have to be socialized. The process of socialization or conformity is the assimilation of the values and behaviors to survive and prosper in the organization. Leaders have to be sold the organization so that they will step on the conveyor system from which there is little chance of escape. The leaders have a choice, but they see themselves as members of an elite which has a coveted, distinctive status (Kelly, 1974).

### Interiority and Leadership

One of the most useful approaches to personality, from the point of view of aging, has been the developmental approach used by Bernice Neugarten and her associates. This approach views personality not as a rigid or fixed entity

but rather as an ongoing system that is continuously changing as the individual responds to internal and external events (Neugarten & Havighurst, 1969).

Neugarten and her associates (1969) did a comprehensive series of studies of adult personality with particular emphasis on the effects of age. They reported that in those cases where the investigator was concerned with intrapsychic processes, or internal processes, significant and consistent age differences emerged. For example, forty-year olds see the environment as one that rewards boldness and risk-taking. They also see themselves possessing energy congruent with the opportunities presented in the outer world. But sixty-year-olds see the environment as complex and dangerous, no longer to be reformed in line with one's wishes, and see themselves as conforming and accommodating to outer-world demands. This change is generally described as a change from an active to a passive orientation to the environment.

Neugarten interprets her data as supporting the notion that as age increases, there is less energy available for responding to the outside world. The older person tends to respond to inner rather than outer stimuli, to withdraw emotional investments, to give up self-assertiveness, and to avoid rather than embrace challenge (Atchley, 1972).

Three distinct areas of personality were investigated by researchers from the Committee on Human Development at the University of Chicago in order to answer the question: What are the changes in personality associated with chronological age in the second half of life?

Data from this study revealed significant findings of age-related personality changes. One's perception of self as related to the external environment and one's style of coping with the inner world of experience changed with age.

The data revealed:

1. A reduction in willingness to deal with complicated and challenging situations.
2. Lessened sensitivity to the reactions of others and a lessened sense of relatedness to others. (Glass & Rosenthal, 1972)

### Leadership and Effectiveness

"Leadership Behavior is the process (act) of influencing the activities of an organized group in its efforts toward goal setting and goal achievement" (Stogdill, 1974). In earlier years, the leader was the individual who knew the answers. Today, terminology has changed from directing and controlling to involving and motivating (Giammatteo & Giammatteo, 1981).

The Michigan studies, under the leadership of Rensis Likert (1961), revealed five dimensions of a leader's

effectiveness: (1) their definition of the role, (2) their orientation toward the work group, (3) the closeness of their supervision, (4) the quality of their group relations, and (5) the type of supervision they receive from their supervisors.

Like the Michigan studies, the Ohio State studies, under the leadership of Carrol Shartle and Ralph M. Stogdill, studied the dimensions of on-the-job leadership. They discovered two variables: consideration and initiation of structure. A leader may find himself anywhere along a continuum with regard to each dimension. Consideration connotes rapport between leader and subordinates, a mutual warmth and trust, a concern for the needs of the members of the work group, an attitude that encourages participative management and two-way communication. Structure refers to the efforts to insure that the work of the group is organized, coordinated, sequential, organizationally relevant, and effective in attaining the objectives of the organization. A relationship was found among consideration, initiating structure and leader effectiveness. The fact that a leader who is high on consideration can increase structuring behavior without incurring a backlash of resentment was surprising. No less revealing was the finding that one can compensate for a relatively high degree



of structuring by increasing consideration, but lowering structuring will not compensate for a low degree of consideration (Blake & Mouton, 1972).

By using the Managerial Grid, Blake and Mouton (1972) help leaders become more aware of and sensitive to their managerial leadership style. Employing, as their dimensions, concern for production and concern for people and using a range of one to nine on each, they derived five major styles of leadership. In the most effective leadership style, the leader is concerned for both production (initiating structure) and the needs of people (consideration).

Effective leadership depends on the task, the situation and the group. Large organizations require a hierarchy of leaders. This is because their tasks are very complex. In crises a simpler form of leadership may be effective. There are two basic leadership functions: the first, the task function, is concerned with the achievement of some specific goal; the second, the human function, is concerned with the maintenance of the group itself. Leaders high in initiating structure make sure their role is understood by the group and that official procedures are followed. This type of leadership is effective when the group faces a task problem. Leaders who are high in consideration are group-oriented;

they reward good work and encourage participation in the setting of group goals.

Of course, in many cases group behavior cannot be classified under either the task or the human relations headings, but there is a tendency for specialists in these areas to emerge. The final products of organizational behavioral systems can be measured by such task indices as productivity, and innovation, and by such human indices as satisfaction, morale, absenteeism, and labor turnover. In Montana, Carleton (1956) had 160 administrators use the Purdue Rating Scale to estimate their own effectiveness and their perceived effectiveness by their staffs; the estimates were then compared. Administrators generally appeared to rate themselves as more effective than did their staffs consider them to be. The effective leader must develop a balance between initiating structure and consideration (Kelly, 1974).

#### The Delimitations

Only secondary school principals who were members of the National Association of Secondary School Principals participated in the study. All principals who have teaching responsibilities were excluded. The individual was currently employed as a principal of a school and had not exceeded the age for compulsory retirement in the respective state.

### Summary

The thesis of this study is that as leaders age they tend to become less effective. The interrelationships among age; time in position; interiority; conformity to organizational rules; two measures of leader behavior, initiating structure and consideration; and effectiveness were examined. Theoretical and operational definitions were developed for the major concepts. The purpose and potential value of the study were examined.

## CHAPTER 2

### METHODOLOGY

The purpose of this study was to investigate a set of relationships which comprise a theory of leadership effectiveness based upon time in position and age-related characteristics of leaders. The interrelationships among age; time in position; interiority; conformity to organizational rules; two measures of leader behavior, initiating structure and consideration; and effectiveness were examined. The path analysis technique was used to test the theory.

#### Instruments and Their Applicability to the Study

The following instruments were selected on the basis of their appropriateness and relevance to the objectives of the study. The instruments were field tested in Warren County, Virginia.

#### The California Psychological Inventory

The California Psychological Inventory is intended primarily for use with normal subjects. Its scales are addressed principally to personality characteristics important for social living and social interaction. Each scale is intended to cover one important facet of

interpersonal psychology, and the total set of eighteen scales is intended to provide a comprehensive study of an individual from the social interaction point of view (Gough, 1969). Only the Dominance subscale was used in this study.

Dominance - The purpose of this scale is to assess factors of leadership ability, dominance, persistence, and social initiative. One who scores high on this scale tends to be seen as aggressive, confident and planful; as being persuasive and verbally fluent; as self-reliant and independent, and as having leadership potential and initiative. One who scores low on this scale tends to be seen as retiring, inhibited, commonplace, indifferent, silent and unassuming; as being slow in thought and action; as avoiding situations of tension and decision; and as lacking in self confidence. (Gough, 1969, p. 10)

Because those who score low on this scale have many of the characteristics of people with high interiority, this scale is used in this study to measure that concept.

Validity of Scale. The Dominance scale is one of the better-validated California Psychological Inventory scales. Several studies have tested its concurrent validity, and Dominance is one of the few personality scales for which predictive validity has been established. One of the most popular and appropriate research strategies has been to compare the Dominance scores of leaders and nonleaders (Knapp, 1960). In an assessment study of one hundred military officers conducted at the University of California, Dominance correlated +.40 with staff ratings of dominance.

Results indicate the Dominance scale is effective in discriminating between appointed leaders and subordinates in the military, between successful and unsuccessful executives in authority firms such as police and fire departments, and between effective and ineffective managers of business organizations (Rawls & Rawls, 1968).

Reliability. The Dominance scale has been tested for both stability and internal consistency with various groups. Stability scores range from .63 (high school boys) to .72 (high school girls). A sample of 234 men and women produced a stability coefficient of .63. Internal consistency coefficients ranged from .70 (high school boys) to .81 (high school girls) (Gough, 1969).

Scoring. The Dominance scale contains a series of statements. If the participants agree with a statement, or feel that it is true about them, they are to answer true. If they disagree with a statement, or feel that it is not true about them, they are to answer false. The scale is scored by totaling the number of items marked true.

#### Leader Behavior Description Questionnaire--Form XII

The original form of the Leader Behavior Description Questionnaire, Form II, was developed by the Personnel Research Board at Ohio State University under the direction

and supervision of John K. Hemphill and Alvin E. Coons. Studies with this instrument identified two primary dimensions of leadership: initiating structure and consideration (Stogdill, 1963). Since that time, these two dimensions have been accepted as the main descriptors of leader behavior by theoreticians and researchers (Fleishman, 1957; Fiedler, 1984; Hersey and Blanchard, 1969; House, 1971; Blake and Mouton, 1972).

Stogdill (1969) revised and added new dimensions in the development of the LBDQ--Form XII used in this study. Stogdill stated that it does not seem reasonable to believe that two factors are sufficient to account for all the observable variance in leader behavior. From his theory of role differentiation and group achievement, Stogdill suggested a set of new dimensions--variables which operate to differentiate roles in social groups: tolerance of uncertainty, persuasiveness, tolerance of member freedom of action, predictive accuracy, integration of the group, and reconciliation of conflicting demands. These--together with consideration, initiating structure, production emphasis, representation, role assumption, and superior orientation--form the dimensions of the LBDQ--Form XII. It should be noted that both Hemphill and Stogdill were concerned with developing an instrument for measuring

leadership in social groups of all kinds and not just those of school principals and superintendents.

An analysis of the LBDQ--XII, the fourth revision of the questionnaire, revealed similar findings as analysis of the original form. Kitchen (1968) reported that in a study of the leader behavior of ministers, Stogdill and his associates found sizable interdimensional correlations. The factor analysis suggested a general factor accounting for forty-five percent of the total factor variance, several subgeneral factors, and several specific factors each related almost entirely to one of the dimensions. In the same study, descriptions were obtained of the leader behavior of community leaders. From these descriptions the researchers concluded that for comparative studies there was merit in retaining the identity of the separate subscales and in attempting to strengthen the identity of each. Kitchen concluded that in not being reducible to the same factors each time, the dimensions appear empirically to have some independence, and for leader behavior studies across groups, these dimensions should probably be retained.

In a study of leadership and administration in twenty-two departments in a liberal arts college of a moderately large university, Hemphill scored only the consideration and initiating structure subscales of the LBDQ. The twenty-two



department chairmen had been asked to describe their own behavior. Their behavior was also described by the faculty members of their departments. Departments that achieve a reputation for good administration are those led by chairmen who attend to organizing departmental activities and initiating new ways of solving departmental problems, and at the same time develop warm, considerate relationships with members of the department (Stogdill & Coons, 1973).

Validity. Despite the fact that it is very difficult to present evidence on the validity of a behavioral description device, Stogdill concluded some attempt at validation seemed desirable. Validity of a questionnaire implies that a given subscale measures the pattern of behavior that it is intended to measure.

Stogdill (1969) attempted to establish the validity on six of the LBDQ--Form XII subscales--consideration, initiating structure, production emphasis, tolerance of freedom, influence with superiors, and representation--through an elaborate research design utilizing the following procedure:

- (1) Prepare a scenario that depicts a leader acting out the pattern of behavior described by the items in the subscale.
- (2) Make a motion picture of a leader (and followers) playing the role.
- (3) Show the movie to groups of observers who use the LBDQ to describe the behavior of the leader.
- (4) Test to determine whether the leader is described as significantly higher on the subscale (role) depicted by the movie than on other subscales of the LBDQ. (p. 153)

The rationale for this procedure was as follows: (1) the scenario for the role to be enacted is based on the items in a given subscale, and (2) the same items are used to describe the acting out of the role. If the attempt is successful, there should be congruence between the behavior represented by the items, the behavior portrayed in the movie, and the behavior reported by observers.

The research design tested the following hypotheses:

(1) Two different actors playing the same role will not be described as significantly different on the subscale for that role. (2) The same actor playing two different roles will be described as significantly different on the subscales for the two roles. (Stogdill, 1969, p. 153)

The results of the tests tended to support both hypotheses. Stogdill (1969) argued that the findings constitute evidence that the subscales of the Leader Behavior Description Questionnaire measure what they are purported to measure.

Hemphill and Coons indicate that a considerable portion of the research used to develop the LBDQ--XII was devoted to a comparison of the questionnaire as an instrument used by a leader for self-description and as a means for subordinates to describe their leader's behavior. Leaders tended to avoid making extreme statements about their behavior. The extreme responses always and never were less frequently used

by leaders in describing themselves than by subordinates in describing leaders (Stogdill & Coons, 1957, p. 36).

Reliability. The reliability of the subscales has been estimated with a modified Kuder-Richardson formula (Stogdill, 1963). The modification consisted of the correlation of each item with the total score of the remainder of the items in its subscale rather than with the subscale score including the item. This procedure yielded a conservative estimate of subscale reliability. The samples consisted of commissioned and noncommissioned officers in an army combat division, the administrative officers in a state highway patrol headquarters office, the executives in an aircraft engineering staff, ministers of various denominations of an Ohio community, leaders in community development activities throughout the state of Ohio, presidents of corporations, presidents of labor unions, presidents of colleges and universities, and United States Senators. Table 1 contains the subscale reliability coefficients of these various independent samples. The Alpha reliability coefficients for initiating structure and consideration for the sample in this study were .75 and .64 respectively.

TABLE 1

## RELIABILITY COEFFICIENTS FOR INITIATING STRUCTURE AND CONSIDERATION (MODIFIED KUDER-RICHARDSON)

Subscale	Army		Highway Patrol		Aircraft Company		Ohio Executives		Ministers		Community Leaders		Corporation Presidents		Union Labor		College Presidents		United States Senators	
1. Initiating Structure	.79	.75	.78	.70	.72	.77	.78	.78	.78	.78	.78	.78	.78	.78	.78	.78	.78	.78	.78	.78
2. Consideration	.76	.87	.84	.85	.77	.78	.84	.85	.85	.85	.85	.85	.85	.85	.85	.85	.85	.85	.85	.85

H. W. Kitchen, "Recent Studies Relating to Leadership," Leadership, ed. Robert B. Carson (Calgary: Department of Educational Administration, (1968), p. 21.

Scoring. The LBDQ is usually administered to followers to describe the behaviors of their leader or supervisor. However, the questionnaire may be used by peers or superiors to describe a given leader whom they know well enough to describe accurately. With proper changes in instructions, the questionnaire also may be used by a leader to describe one's own behavior (Stogdill, 1963).

In this study, principals were asked to describe their own behavior. The two scales of the Leader Behavior Description Questionnaire, Form XII, used for this purpose, were consideration and initiating structure. The participants indicated their responses to items on the questionnaire by recording the numbers of their answers on an NCS Trans-Optic sheet. Each number was representative of an adverb indicating frequency of behavior: 1-never, 2-seldom, 3-occasionally, 4-often, and 5-always.

The consideration subscale consisted of items 15, 16, 19, 20, 23, 24, 28, 31, and 32 on the questionnaire. The initiating structure subscale consisted of items 14, 17, 18, 21, 22, 25, 26, 29, 30, and 33 on the questionnaire. A copy of the questionnaire may be found in Appendix A. The sum of the scores of each of these items constituted the scores for the subscales consideration and initiating structure. Each item is worth from one to five points. Most items are

scored on a 5, 4, 3, 2, 1 basis. Of the questionnaire items used in this study, three (15, 19, and 31) were written in negative terms, rather than positive, and were scored in reverse order. Although there are no norms or standards for the LBDQ--XII, a high subscale score represents a higher level of behavior for the factor, a low score represents a lower level of behavior for the factor.

#### The Purdue Rating Scale for Administrators and Executives

The scale consists of thirty-six items. These items are classified under the following ten major headings, each containing from one to ten items: intellectual balance, emotional balance, administrative leadership, administrative planning, use of funds, capacity for work, accomplishment, relations with subordinates, public relations, and social responsibility (Remmers & Hobon, 1951).

A principal component factor analysis was conducted on the Purdue Rating Scale for Administrators and Executives. The items with the highest loadings on each factor determined the name assigned to each factor. Those factors which emerged were confidence (one's feelings about the probability of success on the job), intellectuality (one's ability to apply available knowledge and consider the welfare of society as the job is done), orderliness (one's ability to coordinate the tasks of the job), and

productivity (one's willingness to work hard); the factors are presented in Table 2. Eigenvalues and percentages of variance accounted for by each factor appear in Table 3. The eigenvalues indicate that one variable, confidence, accounts for 57.6% of the variance.

Validity. The validity of a test consists of the relationship between the scores on the test and those on some criterion. The criterion must be some measure of the characteristic which the test is supposed to measure. In the absence of an acceptable, objective measure to serve as a criterion, the investigator must rely upon the combined subjective judgment of a group of individuals competent to judge the characteristic. In the case of this rating scale, those individuals assumed to be best able to make competent judgments about administrative effectiveness are the administrators themselves. Therefore, the reliability and validity coefficients for the items of this scale are identical. The only question to arise here has to do with the frankness or honesty of the raters, and it would seem that this must be controlled through the manner of the administration of the scale and the maintenance of the anonymity of the raters (Horst, 1949, pp. 21-23). (The reader is referred to Table 4.)

TABLE 2

FACTOR LOADINGS FOR EFFECTIVENESS ITEMS

ITEM	SHORT DESCRIPTION	FACTOR LOADINGS			
		<sup>a</sup> FACTOR 1	<sup>b</sup> FACTOR 2	<sup>c</sup> FACTOR 3	<sup>d</sup> FACTOR 4
1	Applies available knowledge	.16	<u>.42</u>	.06	.11
2	Feel confident in handling job	<u>.47</u>	.17	.12	.06
3	Alert to innovations in my work	.32	<u>.41</u>	.15	.08
4	Systematize and coordinate work of personnel	.14	.16	.22	<u>.76</u>
5	Associates with other school employees after work	-.02	.10	-.17	.25
6	Strives to achieve results	.10	.10	<u>.75</u>	.04
7	Feel I should move up in the profession	.34	.21	-.11	.13
8	Work hard	.05	.16	<u>.48</u>	.00
9	Welcomes additional responsibilities	<u>.59</u>	.20	.06	-.05
10	Sincerely thank subordinates	.13	<u>.54</u>	.15	-.01
11	Able to get my message across when I speak	.16	.36	.02	.09
12	Orient work of school to welfare of society	.20	<u>.31</u>	.06	.22
13	Like my job	<u>.56</u>	.14	.08	.04

<sup>a</sup> Confidence.      <sup>b</sup> Intellectuality.      <sup>c</sup> Productivity.      <sup>d</sup> Orderliness.



TABLE 3

EIGENVALUES AND PERCENTAGES OF VARIANCE FOR EFFECTIVENESS FACTORS

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FACTOR	EIGENVALUE	PERCENTAGE OF VARIANCE
1	2.38	57.6
2	0.762	18.4
3	0.616	14.9
4	0.377	9.1

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TABLE 4

RELIABILITY COEFFICIENTS FOR EACH ITEM OF THE PURDUE RATING SCALE FOR ADMINISTRATORS AND EXECUTIVES

Scale Item No.	Public Schools	Business and Industry		Colleges and Universities	
	'Horst r'	10 raters	20 raters	10 raters	20 raters
1	.567	.760	.864	.806	.893
2	.605	.815	.898	.894	.944
3	.764	.881	.937	.751	.858
4	.642	.752	.858	.558	.716
5	.677	.608	.756	.840	.913
6	.678	.766	.867	.655	.792
7	.677	.742	.852	.889	.941
8	.566	.728	.843	.698	.822
9	.399	.849	.919	.712	.832
10	.700	.787	.881	.885	.939
11	.486	.729	.843	.820	.901
12	.510	.815	.898	.947	.973
13	.558	.856	.922	.829	.906
14	.588	.955	.977	.917	.957
15	.428	.622	.767	.628	.771
16	.674	.839	.919	.763	.866
17	.519	.680	.809	.841	.914
18	.798	.881	.937	.972	.986
19	.610	.848	.918	.861	.925
20	.687	.726	.841	.935	.966
21	.489	.727	.842	.815	.898
22	.641	.790	.883	.543	.704
23	.606	.781	.877	.725	.841
24	.799	.765	.867	.673	.805
25	.582	.714	.833	.718	.836
26	.686	.685	.813	.810	.895
27	.501	.821	.902	.622	.767
28	.677	.787	.881	.853	.921
29	.776	.794	.885	.755	.860
30	.634	.655	.791	.612	.759
31	.591	.791	.883	.769	.869
32	.578	.761	.864	.756	.861
33	.780	.850	.919	.767	.868
34	.778	.728	.843	.873	.932
35	.641	.727	.842	.862	.926
36	.542	.774	.873	.686	.814

## Table 4 continued

Source: H. H. Remmers and R. L. Hobson, Manual for the Purdue Rating Scale for Administrators and Executives. (West Lafayette, Indiana, University Book Store, The Purdue Research Foundation, 1951), p. 3.

Reliability. Reliability coefficients for the Purdue Rating Scale for Administrators have been obtained by a modified split-half method for business and industry and for colleges, and by the Horst technique for schools. By the split-half method, the range is from .54 to .98 with few items below .75. By the Horst method there was a range from .40 to .80 for public school administrators (Buros, 1959). The Horst technique takes the mean of the measures for each person as the best estimate of the function for that individual. By applying the formula to raw data, one may determine how any particular method of processing the data affects the reliability of the average measures. The formula is more general than some of the well-known reliability formulas, these formulas are special cases of the more general formula (Remmers & Hobson, 1951). The reader is referred to Figure 3.

In this study, Alpha coefficients for the three factors containing more than one item were as follows: confidence .57, intellectuality .60, productivity .54 (Table 5).

Scoring. Each item had five possible responses: (5) always, (4) usually, (3) sometimes, (2) seldom, (1) never. Scoring was accomplished by totaling the scores of the items with loadings over .40 on a factor.

$N$  = the number of persons,

$n$  = the number of measures (various evaluations) for each person,

$M$  = the mean of the measures (various evaluations) for each person,

$\sigma$  = the standard deviation of the measures (various evaluations) for each person,

$\sigma_M$  = the standard deviation of the means for the  $N$  persons

$r$  = estimate of the reliability of the means

The estimate of the reliability of the means,  $M$ , is given by the formula below

$$r = 1 - \frac{\frac{\sum \sigma^2}{n-1}}{\sigma_M^2}$$

FIGURE 3. HORST  $r$  used to estimate reliability of the means of a set of measures.

TABLE 5

ALPHA RELIABILITIES FOR THE EFFECTIVENESS FACTORS

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Factor	Label	Number of Items	Number of Subjects	Alpha
1	Confidence	3	240	.57
2	Intellectuality	4	240	.60
3	Production	2	240	.54
4	Orderliness	1	240	---

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### Self-rating Versus Staff-rating

The Purdue Rating Scale for Administrators and Executives was originally designed to appraise administrative and executive effectiveness. The authors of this scale recommend that use of the scale should be voluntary on the part of administrators, and that the results should be confidential. The scale is particularly suitable for providing administrators with a picture of themselves as subordinates see them (Remmers & Hobson, 1951). In a study of 160 administrators in Montana, Carleton (1956) had administrators compare their own estimate of effectiveness with their staff's estimate of their effectiveness using the Purdue Rating Scale. Administrators generally appeared to rate themselves higher than did their staffs; that is, there was some tendency for the staff to rate their administrators as slightly less effective than their administrators considered themselves to be. In this study the researcher asked the administrators to rate themselves.

#### A. P. MacDonald, Jr.'s, Conformity Scale

In 1953 Barron developed his Independence of Judgement Scales which had twenty-two true-false items that he found distinguished yielders from nonyielders. Subsequently, Crutchfield (1971) developed twenty-five items with similar

ability to discriminate yielders from nonyielders in his experiments. But Crutchfield did not present his list of items in the form of a test. MacDonald carried this work forward by developing a conformity scale which controlled for acquiescence response set by including an equal number of items scored true and false.

In a study at West Virginia University, MacDonald collected data from one hundred twenty-three male engineering students. Barron's twenty-two items were combined with twenty-three of Crutchfield's twenty-five items to produce a forty-five item pool. Responses were summed to produce a forty-five item total score. Correlations between each item and the total were computed. Barron's items 4, 12 and 19 were found to correlate low or negatively with the total score. The remaining forty items showed correlations ranging from .13 to .60 with a median correlation of .30. Thirty of the forty items were scored true and ten were scored false. In order to produce a balanced score, the ten true items that showed the highest correlation with the total score were retained along with the ten items for which false was the correct response, thus yielding a twenty item balanced scale (MacDonald, 1971, p. 2).



Validity. In order to obtain information concerning the validity of the conformity scale, the test was administered to sixty-three undergraduate students (44 male and 19 female) enrolled in Sociology I at West Virginia University (MacDonald, 1971). At the same time, the following instruments were administered: (1) a short personal history form that included information about frequency of church attendance and father's level of education; (2) Rotter's Internal-External Locus of Control Scale; (3) The James Internal-External Locus of Control Scale; (4) Hogan's Survey of Ethical Attitudes, Form A; and (5) The Mirels-Garrett Protestant Ethic Scale.

No significant correlations were found between MacDonald's Conformity Scale scores and age of subject or scores on the James Internal-External Locus of Control Scale. But conformity was found to be significantly related to frequency of church attendance (with conformists attending more frequently) and father's level of education (higher conformity was associated with fewer years of schooling) (MacDonald, 1971).

Reliability. Five hundred eighty-six students enrolled in Psychology I at West Virginia University were administered both the Barron Independence of Judgment Scale and the MacDonald Conformity Scale (MacDonald, 1971).

MacDonald's Conformity Scale did not appear to lose in internal consistency by the reduction from forty to twenty items. The reliability of the forty item test was computed by the Kuder-Richardson Formula 20 to be .643. The twenty item scale was found to be reliable at .618. In this study, the alpha coefficient for McDonald's Conformity Scale was .63.

Scoring. The MacDonald Conformity Scale was scored by totaling the item scores for the scale (1 indicated a true response, 0 indicated a false response).

#### Population and Sample

The population for this study consisted of secondary principals in the United States who were members of the National Association of Secondary School Principals as of October, 1981. To ensure a minimum of 30 responses for each of the six independent variables, and taking into consideration an estimated return rate of 50%, a random sample of four hundred principals was drawn from the population by the research department of the National Association of Secondary School Principals. Names and addresses also were provided by the research department.

### Data Collection Procedures

Data were collected using the instruments previously described. The principals were contacted by letter and asked if they would volunteer to participate in the study. After agreeing to participate in the study, the principal was asked to fill out the questionnaire. Upon completing the questionnaire, the principal was to place it in a return envelope and mail it. Instruments were coded for follow-up purposes. A follow-up mailing to non-respondents was made three weeks after the initial mailing. The follow-up mailing included another cover letter requesting cooperation and another instrument with a stamped return envelope.

### Method of Analysis

Path analysis following the recommended procedures of Wolfle (1980) and Pedhazur (1982) was applied to test the relationships in the proposed theory.

### Summary

In this chapter, the four instruments used in the study--A. P. MacDonald, Jr.'s, Conformity Scale, the Dominance Scale of the California Psychological Inventory, the Leader Behavior Description Questionnaire--Form XII, and the Purdue Rating Scale for Administrators and Executives--were described. The MacDonald Conformity Scale

was used to measure the variable Conformity to Organizational Rules. The Dominance Scale of the California Psychological Inventory was used to measure the variable, Interiority. The Initiating Structure and Consideration subscales of the Leader Behavior Description Questionnaire--Form XII were used to measure those variables. The Purdue Rating Scale for Administrators and Executives was used to measure the four effectiveness variables: confidence, intellectuality, production, and orderliness.

The internal consistency coefficients of secondary principals in this study were determined by a general formula, alpha. The alpha reliabilities for this study were: (1) confidence .57, (2) intellectuality .60, (3) production .54, (4) orderliness --<sup>1</sup>, (5) conformity .63, (6) consideration .64, and (7) initiating structure .75.

The population for this study consisted of secondary school principals in the United States who were members of the National Association of Secondary School Principals as of October, 1981. The names and addresses were provided by the research department of the National Association of Secondary School Principals. A random sample of four hundred principals was drawn from the population. Finally,

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<sup>1</sup> Only one item.

recursive path analysis was established as the appropriate procedure for testing the relationships in the proposed theory.

## CHAPTER 3

### FINDINGS

The purpose of this study was to investigate a set of relationships that comprise a theory of leadership effectiveness based upon time in position and age-related characteristics of leaders. The interrelationships among age; time in position; interiority; conformity to organizational rules; two measures of leader behavior, initiating structure and consideration; and effectiveness were examined. The path analytical technique was used to assess the extent to which data support the theory.

The analysis was based on the responses of 241 members of the National Association of Secondary School Principals who returned questionnaires in October 1981 (see Table 6).

The theoretical constructs and their measures were:

1. Age--the principal's chronological age in years.
2. Time in position--the number of years as a principal in the current school.
3. Interiority--the Dominance Scale of the California Psychological Inventory.
4. Conformity--A. P. MacDonald, Jr.'s, Conformity Scale.
5. Consideration--the Consideration subscale of the LBDQ--XII.
6. Initiating Structure--the Initiating Structure subscale of the LBDQ--XII.
7. Effectiveness--four factors--intellectuality, productivity, confidence, and orderliness--from the Purdue Rating Scale for Administrators.

TABLE 6

BIOGRAPHICAL INFORMATION ON RESPONDING SECONDARY SCHOOL PRINCIPALS (N = 241)

Characteristic	n	%	Characteristic	n	%
<b>Age</b>			<b>Total Years in Administration</b>		
26-30	1	.4	0-5	47	19.5
31-35	36	14.9	6-10	55	22.8
36-40	48	19.9	11-15	72	29.9
41-45	37	15.4	16-20	37	15.4
46-50	50	20.8	21-25	23	9.5
51-55	35	14.5	26-30	7	2.9
56-60	27	11.2	<b>Years as a Secondary Principal</b>		
61-65	5	2.1	0-5	84	34.9
66-70	2	.8	6-10	56	23.2
<b>Education</b>			11-15	61	25.3
Bachelor's deg	0		16-20	24	10.0
Bachelor's plus hours	8	3.3	21-25	13	5.4
Master's deg	14	5.8	26-30	3	1.2
Master's plus hours	199	82.6	<b>Years in Present Position</b>		
Doctorate	20	8.3	0-5	124	51.5
<b>Total Years in Education</b>			6-10	55	22.8
6-10	17	7.1	11-15	42	17.4
11-15	54	22.4	16-20	14	5.8
16-20	39	16.2	21-25	4	1.7
21-25	58	24.1	26-30	2	.8
26-30	37	15.4	<b>Marital Status</b>		
31-35	27	11.2	Married	215	89.2
36-40	5	2.1	Single	18	7.5
41-45	3	1.2	Other	8	3.3
46-50	1	.4			
<b>School Size (Number of Students)</b>					
0-100	7	2.9			
101-500	94	39.0			
501-1000	86	35.7			
1001-1500	34	14.1			
1501-2000	15	6.2			
Above 2000	5	2.1			

Since there were four measures of leadership effectiveness used as dependent variables, four path models were required to test the relationships in the theory. The models were exactly the same, with the exception of the leadership effectiveness variable (see Figures 4, 5, 6, and 7).

The first test of the theory was to determine whether the constructs and their associated variables in the path models accounted for sufficient variance in the leadership effectiveness measures to be worth further analysis. A review of Table 7 indicates that the R-squares resulting from regressing each of the effectiveness measures on all preceding variables in their respective models are significant at the .01 level. The percentage of variance in the effectiveness measures accounted for by the other variables in the models ranged from 10.2% for productivity to 31.1% for intellectuality. All were judged to be large enough to merit closer review of the models.

The second test of the theory was to determine the extent to which the data support the proposed models. This test is used only when models contain overidentifying restrictions. Such restrictions occur when one or more possible relationships in the model are hypothesized to be zero.



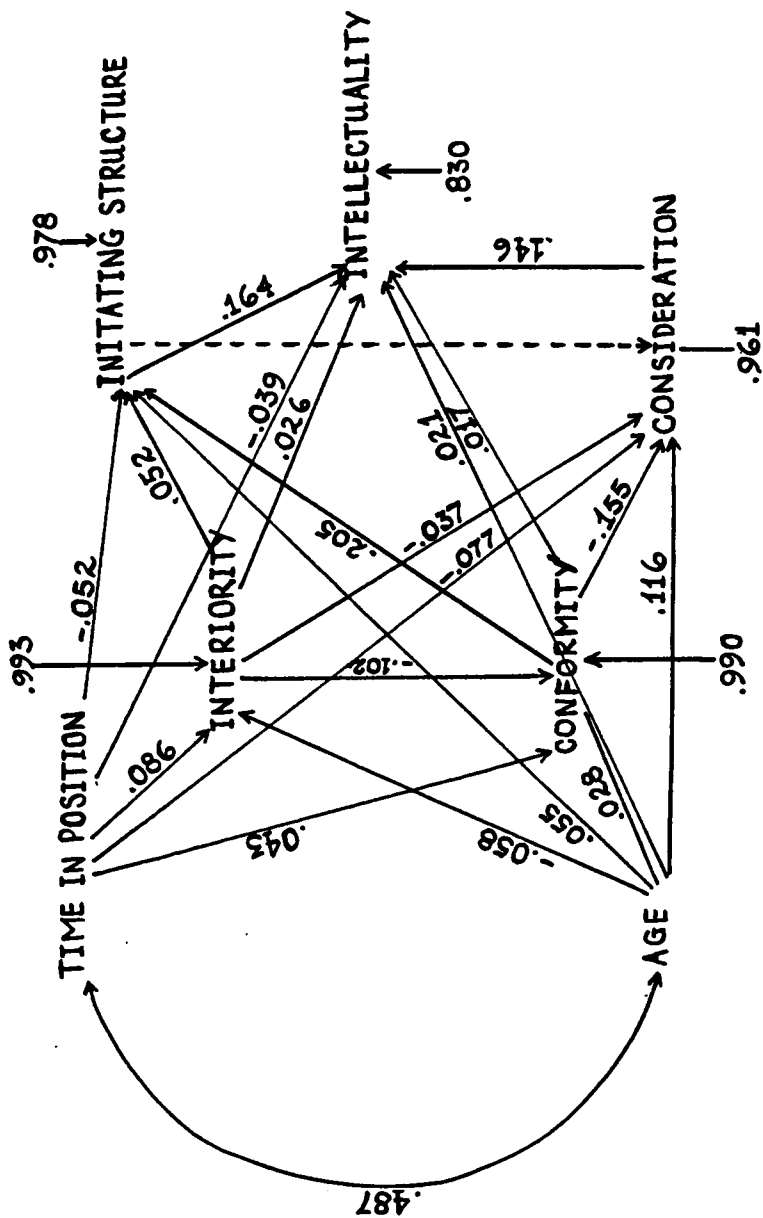


FIG. 4.-- PATHS TO LEADER INTELLECTUALITY. UNSTANDARDIZED REGRESSION COEFFICIENTS

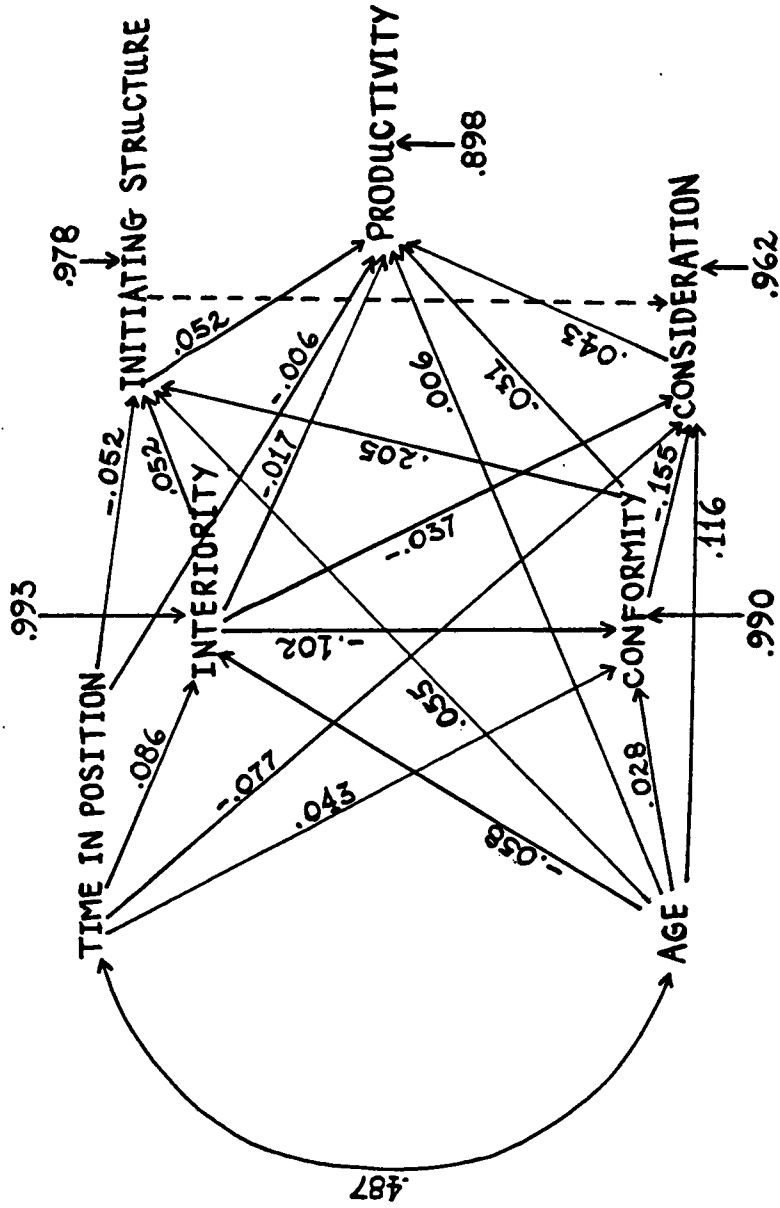


FIG. 5.-- PATHS TO LEADER PRODUCTIVITY UNSTANDARDIZED REGRESSION COEFFICIENTS.

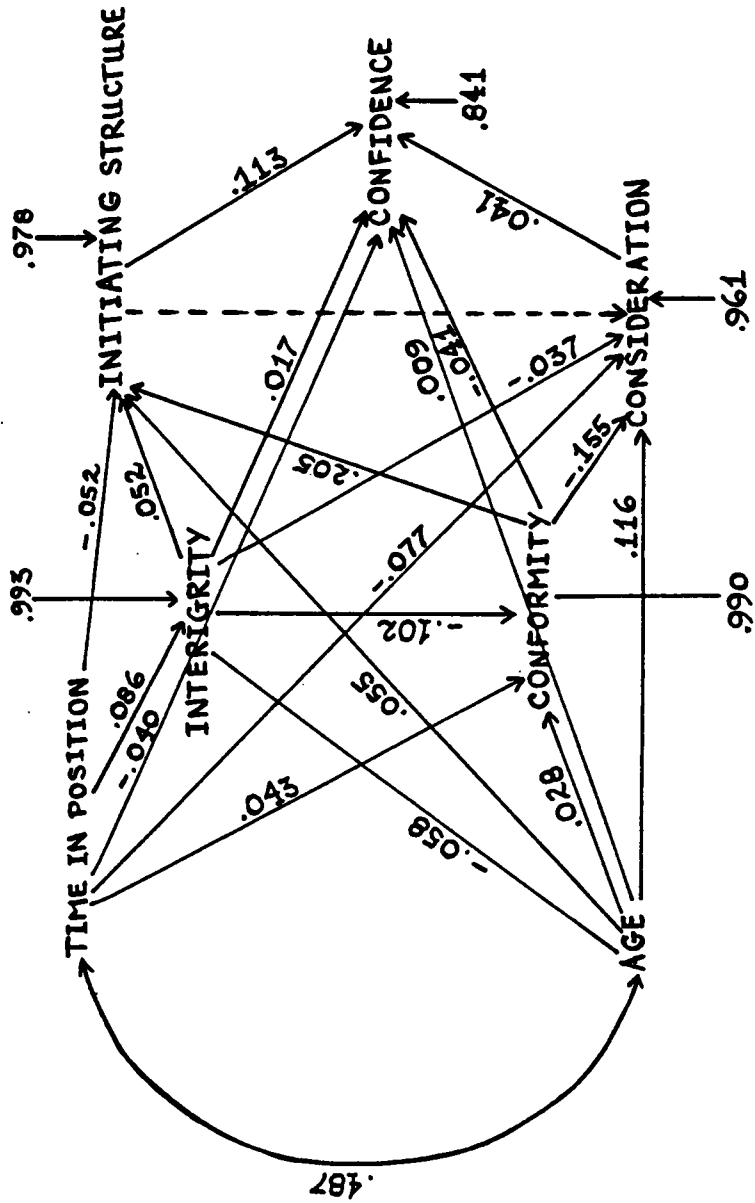


FIG. 6.-- PATHS TO LEADERSHIP CONFIDENCE. UNSTANDARDIZED REGRESSION COEFFICIENTS.

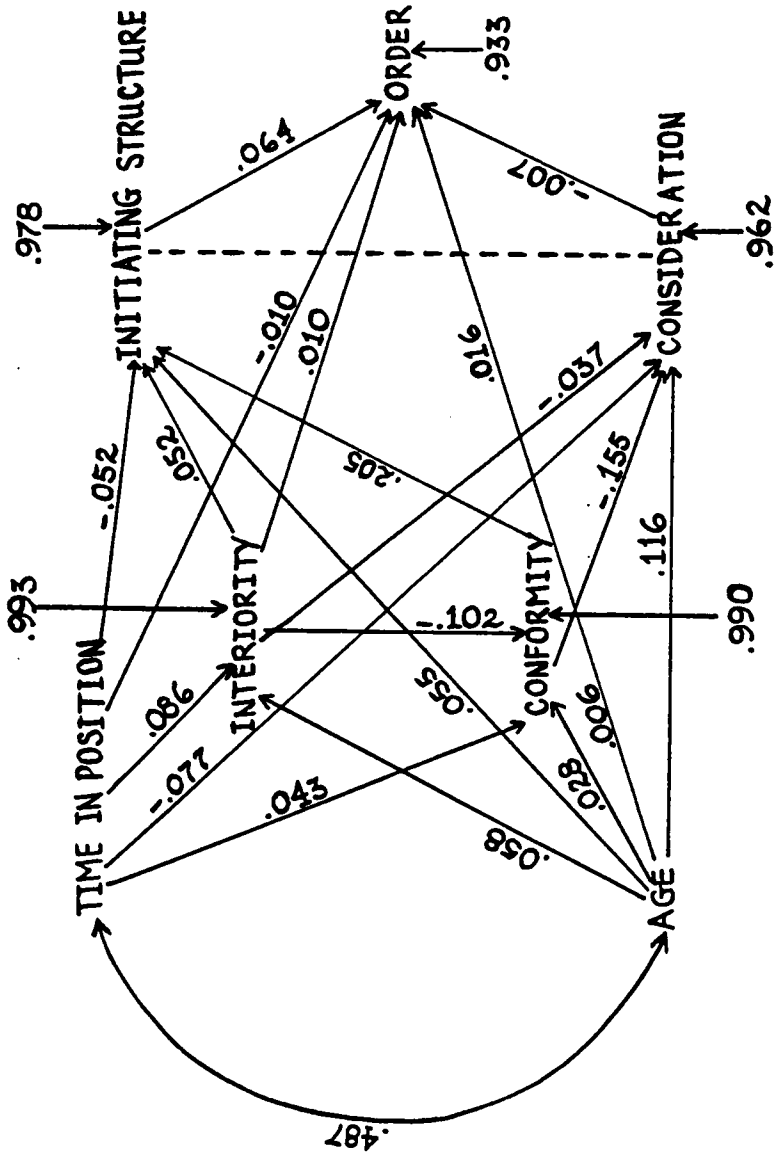


FIG. 7. -- PATHS TO LEADER ORDERLINESS. UNSTANDARDIZED REGRESSION COEFFICIENTS.

Table 7  
Summary of Unstandardized Direct and Indirect Effect Coefficients in Paths Leading to Leader Intellectualty, Leader Productivity, Leader Confidence, and Leader Orderliness

Predetermined Variables	Endogenous Variables							
	Intellectualty	Productivity	Confidence	Orderliness	Initiation of Structure	Consideration	Conformity	Interiority
	Direct Effects							
Initiation of Structure	.164** (.029)	.052** (.019)	.113** (.025)	.064** (.013)				
Consideration	.146** (.031)	.043* (.020)	.041 (.027)	-.007 (.014)				
Conformity	-.017 (.034)	-.031 (.022)	-.041 (.029)	.016 (.015)	.205* (.079)	-.155* (.075)		
Interiority	.026 (.023)	-.017 (.015)	.017 (.020)	.010 (.010)	.052 (.056)	-.037 (.053)	-.102* (.045)	
Time in Position	-.039* (.020)	-.006 (.013)	-.040** (.017)	-.010 (.009)	-.052 (.047)	-.077 (.045)	.043 (.039)	.086 (.055)
Age	.021 (.013)	.006 (.009)	.009 (.011)	.006 (.006)	.055 (.032)	.116** (.030)	.028 (.026)	-.058 (.037)

(table continues)

Table 7 (continued)

Predetermined Variables	Endogenous Variables						
	Intellectuality	Productivity	Confidence	Orderliness	Initiation of Structure	Consideration	Conformity Interiority
	Indirect Effects						
Conformity	.011 (.019)	.004 (.008)	.017 (.012)	.014* (.007)			
Interiority	.004 (.013)	.004 (.005)	.007 (.008)	.001 (.004)	-.021 (.012)	.016 (.010)	
Time In Position	-.017 (.011)	-.008* (.004)	-.008 (.007)	-.001 (.004)	.011 (.010)	-.008 (.008)	-.009 (.007)
Age	.024** (.008)	.008** (.003)	.009 (.005)	.003 (.003)	.004 (.007)	-.003 (.006)	.006 (.005)
Intercept	2.764	6.084	6.285	1.048	35.371	36.105	8.752
R	.311**	.102**	.160**	.129**	.043**	.075**	.019
							37.035
							.014

Note. Standard errors are in parentheses. \* p < .05. \*\* p < .01.

Overidentified models are tested by comparing the observed and the reproduced correlation matrices for the variables under consideration. The determinants of these matrices are used to calculate a chi square with degrees of freedom equal to the number of overidentifying restrictions. A significant chi square at a prespecified level of alpha leads to the rejection of the null hypothesis that the model doesn't fit the data. In this case, since there is only one overidentifying restriction--no correlation between initiating structure and consideration--the test is whether the correlation between these two variables is zero. The greater the probability associated with the chi square, the better the fit of the model to the data (Pedhazur, 1982, p. 618).

Since there were four models--one for each effectiveness criterion--there were four tests conducted. The results are presented in Table 8. The data in the table indicate that the four proposed models do not fit the data. The poor fit is due to the assumption that consideration and initiating structure are independent measures of leader behavior. As the correlation matrix indicates (Table 9), this is not true. These two variables have one of the highest correlations in the matrix ( $r = .39$ ,  $p < .01$ ). Thus, this test of the correspondence between the theory and

TABLE 8  
 CHI SQUARE GOODNESS OF FIT TESTS FOR THE PROPOSED PATH MODELS FOR LEADER INTELLECTUALITY,  
 PRODUCTIVITY, CONFIDENCE, AND ORDERLINESS: SECONDARY PRINCIPALS IN THE UNITED STATES IN  
 OCTOBER 1981

Leader Effectiveness Variable	N	da	R <sup>2</sup> <sub>mb</sub>	MC	qd	We
Intellectuality	240	1	.6597	.5935	.8371	42.4838**
Productivity	240	1	.4217	.3091	.8370	42.5256**
Confidence	240	1	.4940	.3955	.8371	42.5097**
Orderliness	240	1	.3758	.2541	.8369	42.5580**

\* Significant at .05 level

\*\* Significant at .01 level

$d$  = number of overidentifying restrictions.

$R^2_M = 1 - (1 - R_1^2)(1 - R_2^2) \dots (1 - R_p^2)$ , where  $R_i^2 = R^2$  for each regression equation in a

fully recursive model.

$C_M = 1 - (1 - R_1^2)(1 - R_2^2) \dots (1 - R_p^2)$ , where  $R_i^2 = R^2$  for each regression equation when some

paths are restricted.

$$d_Q = \frac{1 - R_M^2}{1 - M}$$

$e_W = -(N - d) \log_e Q$  (distributed as  $\chi^2$  with  $df = d$ ).



Table 9  
Means, Standard Deviations, and Original and Reproduced Correlation Coefficients for Variables in Four Models of Leadership Effectiveness: Secondary School Principals in the United States in October, 1981 (N = 240)

	Inlt.									
	Time in Posit.	Age	Interior. Conform.	Struct.	Consid.	Intellect.	Product.	Confid.	Orderliness	
	1	2	3	4	5	6	7	8	9	10
1 Time in Position	1.00	.49**	.06	.11	.00	-.00	-.08	-.02	-.15*	-.03
2 Age	.49	1.00	-.06	.13*	.11	.21**	.13*	.08	.02	.07
3 Interiority	.06	-.06	1.00	-.14*	.02	-.05	.05	-.07	.06	.05
4 Conformity	.11	.13	-.14	1.00	.17**	-.10	-.01	-.07	-.07	.12
5 Initiation of Structure	.00	.11	.02	.17	1.00	.39**	.46**	.24**	.33**	.34**
6 Consideration	-.00	.21	-.05	-.10	.01	1.00	.44**	.25**	.24**	.10**
7 Intellectuality	-.08	.13	.05	-.01	.34	.31	1.00	.26**	.39**	.29**
8 Productivity	-.02	.08	-.07	-.07	.18	.18	1.00	1.00	.19**	.24**
9 Confidence	-.15	.02	.06	.07	.29	.12	.12	1.00	1.00	.17**
10 Orderliness	-.03	.07	.05	.12	.35	.03	.03	.03	1.00	1.00
M	7.01	45.36	34.99	10.48	41.49	39.91	16.76	9.29	12.89	4.17
SD	5.64	6.47	4.22	3.02	3.62	3.49	1.75	.97	1.36	.69

Note. The original coefficients are above the diagonal; the reproduced coefficients from the hypothesized path models are below the diagonal.

the observed data fails to support one of the assumptions on which the study was based, the independence of consideration and initiating structure.

The third test of the correspondence between the theory and the data was the detailed analysis of the direct and indirect effects in the proposed path models. The questions of concern were (1) how much of the effects of age and time in position on each of the four leadership effectiveness measures is transmitted directly and how much of the effects is transmitted indirectly through interiority, conformity, and the two hypothetically independent measures of leadership behavior--initiating structure and consideration, and (2) do the empirical relationships correspond to the relationships hypothesized in the theory?

The direct and indirect effects in each model were calculated and tested for significance using the Gemini program of Wolfle and Ethington (1985). Since there was one overidentifying restriction--no causal relationship between initiating structure and consideration--each of these variables was omitted from the analysis when the other was the dependent variable. Table 6 contains the unstandardized direct and indirect effect coefficients, their standard errors, the intercepts, and R-squares. The direct effect of each independent variable upon a dependent variable was

equal to the unstandardized partial regression coefficient (b) when a dependent variable was regressed on all preceding independent variables. The total indirect effect consisted of the extent to which intervening variables accounted for the relationships between predetermined and dependent variables. The total effect of each independent variable was the sum of the direct effect and the indirect effects. Spurious effects and joint associations were ignored.

In terms of the direct and indirect effects, how well do the data fit the theory? The analyses produced results which force the conclusion that the correspondence between the data and the theory is not very good. Specifics follow.

First, it was hypothesized that age has a direct negative effect on both leader behavior and leader effectiveness. The data do not support these assumptions. Age had no direct effect--either positive or negative--on initiating structure or the four measures of effectiveness. Age did have a direct positive effect on consideration, an opposite effect of that assumed in the theory.

Second, it was hypothesized that time in position has a direct negative effect on both leader behavior and leader effectiveness. The data support the effects on two of the effectiveness measures--intellectuality and confidence--but fail to support the effects on initiating structure, consideration, productivity, and orderliness.

Third, age was hypothesized to operate indirectly through time in position, interiority, conformity, consideration, and initiating structure to produce a negative effect on leader effectiveness. Significant indirect effects of age were found for two effectiveness variables--intellectuality and productivity; however, the effects were positive rather than negative.

The way the indirect effects were to operate failed to materialize. Theoretically, age was to have a positive effect on interiority, interiority was to have a positive effect on conformity, conformity was to have a negative effect on consideration and initiating structure, and consideration and initiating structure were to have positive effects on the four leadership effectiveness variables--intellectuality, productivity, confidence and orderliness. The data, however, indicate that there is no significant effect of age on interiority; that interiority has a negative effect on conformity; that conformity has a positive effect on initiating structure and a negative effect on consideration; that initiating structure has a positive effect on each of the four effectiveness measures; and that consideration has a positive effect on intellectuality and productivity and no effect on confidence and orderliness.

The breakdown in the theory occurred between age and interiority (expected to be positive, but there was none), between interiority and conformity (expected to be positive, but it was negative), between conformity and initiating structure (expected to be negative, but it was positive), and between consideration and confidence (expected to be positive, but there was none), and between consideration and orderliness (expected to be positive, but there was none).

Parts of the theory were supported. Conformity was negatively associated with consideration, and consideration was positively associated with intellectuality and productivity as expected. Initiating structure was positively associated with all four measures of effectiveness as expected.

## CHAPTER 4

### SUMMARY, DISCUSSION AND CONCLUSION

The purpose of this study was to investigate a set of relationships which comprise a theory of leadership effectiveness based upon time in position and age-related characteristics of leaders. The interrelationships among age; time in position; interiority; conformity to organizational rules; two measures of leader behavior, initiating structure and consideration; and effectiveness were examined. Path analysis was used to test the theory. Regression analysis was applied following the recommendations of Wolfle and Ethington (1985). Four recursive models were tested, one for each of the four dependent effectiveness variables. Since there was one overidentifying restriction--no causal relationship between initiation of structure and consideration--each of these variables was omitted from the analysis when the other was the dependent variable.

Of the specific relationships hypothesized in the proposed models, only four of the hypothesized relationships were consistent with the theory: conformity was negatively associated with consideration ( $b = -.155$ ,  $p < .05$ ), consideration was positively associated with intellectuality

( $b = .146$ ,  $p < .01$ ) and productivity ( $b = .043$ ,  $p < .05$ ), and initiation of structure was positively associated with orderliness ( $b = .064$ ,  $p < .01$ ), intellectuality ( $b = .164$ ,  $p < .01$ ), confidence ( $b = .113$ ,  $p < .01$ ), and productivity ( $b = .052$ ,  $p < .01$ ). The remaining significant relationships--age and consideration ( $b = .116$ ,  $p < .01$ ), interiority and conformity ( $b = -.102$ ,  $p < .05$ ), conformity and initiating structure ( $b = .205$ ,  $p < .01$ ), and time in position and confidence ( $b = -.040$ ,  $p < .05$ )--were inverse to those hypothesized.

#### Conclusions

With such mixed results, there is only one fair conclusion: The theory explaining the relationship between age and leadership effectiveness proposed in this study is not adequate. The initial assumption that age is negatively associated with leadership effectiveness is cast in doubt. The two significant correlations between age and consideration and age and intellectuality indicate that the relationship, if any, between age and leadership is positive, not negative. In light of the evidence, the theory needs to be recast to consider the relationships that emerged from the analysis.

## Discussion

Gross and Herriott examined the relationship of age to Executive Professional Leadership. They stated that on the average the older the principal the lower the Executive Professional Leadership score. Executive Professional Leadership was a measure of the principal's internalization of the role of the principal as one of helping teachers to improve. Since this is an initiating role, one would expect a negative correlation between age and initiating structure. In addition, Parks (1970) found that older elementary principals in New York State were rated by their teachers as less considerate than younger principals. There was no relationship between age and initiating structure.

Further, in a sample of 160 Montana school administrators, Carleton (1956) stated that ineffective administrators showed some tendency to be older and to have had more experience in education and in administration than effective administrators. If the findings in this study are correct, and there is no reason to believe that they are not, then why do they differ from those of Parks, Carleton, and Gross and Herriott? It seems that this is a case of different researchers looking at different parts of the problem. In the case of the Parks and Carleton studies, this is clear. They studied individual states, and



conditions in individual states may differ sufficiently to produce results that differ from those one would get from the nation as a whole. In addition, Parks studied elementary principals while Carleton studied school administrators in general. Secondary principals nationwide were included in the present study. Thus, population differences may account for the differences in findings. Although Gross and Herriott's study was national in scope, they used elementary principals. Further, their measure of leadership, Executive Professional Leadership, is not the same as initiating structure, consideration, or any of the four measures of leadership effectiveness. Thus, the differences in findings may be due to the differences in the measures of leadership and populations studied.

One other difference in these studies may account for the difference in findings. Leadership in the Parks, Gross and Herriott, and Carleton studies was measured with instruments requiring external observers to rate the leadership of the subjects. In this study, the leaders rated their own behavior and effectiveness. Since age in America is not a valued quality (Hendricks & Hendricks, 1979, p. 30), external perceivers of leadership are more likely to rate older leaders as less effective than younger leaders. On the other hand, it seems reasonable that

leaders themselves would rate their leadership behavior and effectiveness more positively. They feel that their experience and maturity are valued assets in their leadership roles. The differences in these perspectives are summarized in the following quote from Randolph Bourne (1913/1967), an observer of the "youthification" of America in the early part of this century:

Old men cherish a fond delusion that there is something mystically valuable in the mere quantity of experience. Now the fact is, of course, that it is the young people who have all the really valuable experience. It is they who have constantly to face new aspects of life, who are getting the whole beauty and terror and cruelty of the world in all its fresh and undiluted purity. . . . Old age lives in the delusion that it has improved and rationalized its youthful ideas by experience and stored-up wisdom, when all it has done is to damage them more or less--usually more. (pp. 12-14)

#### Implications for Future Research

Future research on age and leadership should consider a number of concerns which emerged from this study. First, because of the differences between this study and earlier studies, further documentation of the nature of the relationship between age and leadership effectiveness is needed. This documentation must consider the population studied, the range of ages in the population, and the type of measurement (self-perceived or externally perceived) used.

Second, care must be used in measuring leadership effectiveness. The scale used in this study was developed in the early 1950s. The dimensions of leadership measured by the scale, although appearing to be valid on their face, may not be those most applicable to principals of today. The more recent effectiveness literature would be a good place to begin in the development of an updated leadership effectiveness scale.

Third, any new theory of age-related characteristics of leadership should include consideration of advances in medical technology which have pushed back the effects of aging and which have increased the productive years of all workers. This implies that the on-set of any negative effects of aging may be later than considered in this study; therefore, a broader age range may be required, especially increasing the number of subjects in later years, to accurately describe the relationship between age and leader effectiveness.

## BIBLIOGRAPHY

- Atchley, R. C. (1972). The social forces in later life. Oxford, OH: Wadsworth Publishing.
- Becker, H. S. (1968). Personal change in adult life. In Bernice L. Neugarten (Ed.), Middle age and aging: A reader in social psychology (pp. 148-156). Chicago: The University of Chicago Press.
- Blake, R. R., & Mouton, J. S. (1972). The managerial grid. Houston: Gulf Publishing.
- Bourne, R. S. (1913/1967). Youth and Life (Philosophy Monographs No. 74). New York: Franklin, Burt.
- Bridges, E. M. (1965). Bureaucratic socialization: The influence of experience on the elementary principal. Educational Administration Quarterly, 12, pp. 19-28.
- Bridges, E. M. (1964, May). Teacher participation in decision making. Administrator's Notebook.
- Carleton, L. J. (1956). A study of the relationship of the related effectiveness of school administrators and certain of their personality and personal background characteristics. Unpublished doctoral dissertation, University of Oregon, Eugene.
- Cribbin, J. J. (1972). Effective managerial leadership. New York: American Management Association.
- Fiedler, F. E., Chemers, M. M., & Mahar, L. (1984). Improving leadership effectiveness: The leader match concept (2nd ed.). New York: John Wiley & Sons.
- Fleishman, E. A. (1957). A leader behavior description for industry. In R. M. Stogdill & A. E. Coons, (Eds.), Leader Behavior: It's description and measurement (pp. 103-119). Columbus: Ohio State University.
- Giammatteo, M. C., & Giammatteo, D. M. (1981). Focus on leadership. Reston, VA: National Association of Secondary School Principals.
- Glass, C. J., Jr., & Rosenthal, H. P. (1974). Personality changes in adulthood: Literature review. Australian Journal of Adult Education, 14 (2), 65-69.

- Gough, H. G. (1969). California psychological inventory manual. Palo Alto, CA: Consulting Psychologists Press.
- Gross, N., & Herriott, R. E. (1965). Staff leadership in public schools: A sociological inquiry. New York: John Wiley and Sons.
- Harighurst, R. J. (1977). Personality and patterns of aging. In I. M. Hulicka (Abstractor), Empirical studies in the psychology & sociology of aging (pp. 123-130). New York: Harper & Row.
- Heaton, K. L. (1949). The Purdue rating scale for administrators and executives. In O. K. Buros (Ed.), The fourth mental measurements yearbook: Section 83 (pp. 144-145). Lincoln: University of Nebraska.
- Hemphill, J. K., Griffiths, D. E., & Frederiksen, N. (1962). Administrative performance and personality. New York: Columbia University.
- House, R. J. (1971). A path-goal theory of leader effectiveness. Administrative Science Quarterly, 16, 321-338.
- Horst, P. A. (1949). A generalized expression for the reliability of measures. Psychometrika, 14, 21-23.
- Katz, E., & Danet, B. (1973). Bureaucracy and the public. New York: Basic Books.
- Kelly, J. (1974). Organizational behavior. Homewood, Il: Richard D. Irwin.
- Kerlinger, F. N., & Pedhazur, E. J. (1973). Multiple regression in behavioral research. New York: Holt, Rinehart and Winston.
- Kitchen, H. W. (1968). Recent studies relating to leadership. In R. B. Carson, (Ed.), Leadership (pp. 18-32). Calgary, Alberta: University of Calgary.
- Knapp, R. R. (1960). A reevaluation of the validity of MMPI scales and dominance and social responsibility. Educational and Psychological Measurement, 20, 386-390.
- Kohn, M. L. (1971). Bureaucratic man: A portrait and an interpretation. American Sociological Review, 36, 461-474.

- Likert, R. (1961). New patterns of management. New York: McGraw-Hill.
- McCarthy, M. M. (1983). Discrimination in public employment: The evolving law. Topeka: National Organization on Legal Problems of Education.
- MacDonald, A. P. (1971). Conformity scale. Princeton, NJ: Educational Testing Service (ETS Test Collection No. 007211).
- Maddox, G. L. (1963). Activity and morale: A longitudinal study of selected elderly subjects. Social Forces, 42, 195-204.
- Merton, R. K. (1952). Bureaucratic structure and personality. In R. K. Merton, A. P. Gray, B. Hockey & H. C. Selvin (Eds.), Reader in bureaucracy (pp. 361-371). Glencoe, IL: Free Press
- Neugarten, B., & Harighurst, R. J. (1969). Disengagement reconsidered in a cross-national context. In R. J. Harighurst, J. M. A. Munnichs, B. Neugarten, & H. Thomae (Eds.), Adjustment to retirement (pp. 138-146). Assen, The Netherlands: Van Gorcum and Company.
- Parks, D. J. (1970). A study of relationships between interpersonal relations orientations and leader behaviors of elementary principals. Dissertation Abstracts International, 31/06, 2657-A. Unpublished doctoral dissertation, Syracuse University.
- Pedhazur, E. J. (1982). Multiple regression in behavioral research: Explanation and prediction. New York: CBS College Publishing.
- Rawls, D. J., & Rawls, J. R. (1968). Personality characteristics and personality history data of successful and less successful executives. Psychological Reports, 23, 1032-1034.
- Remmers, H. H., & Hobson, R. L. (1951). Manual for the Purdue rating scale for administrators and executives. West Lafayette, IN: The Purdue Research Foundation.
- Stogdill, R. M. (1974). Handbook of leadership: A survey of theory and research. New York: The Free Press.

- Stogdill, R. M. (1963). Manual for the leader behavior description questionnaire, form XII. Columbus: Ohio State University.
- Stogdill, R. M. (1969). Validity of leader behavior descriptions. Personnel Psychology, 22, 153-158.
- Stogdill, R. M., & Coons, A. E. (1973). Leader behavior: It's description and measurement. Columbus: Ohio State University.
- Tallmer, M., & Kutner, B. (1977). Disengagement and the stresses of aging. In I. M. Hulicka (Abstractor), Empirical studies in the psychology and sociology of aging (pp. 131-132). New York: Harper & Row.
- Wolfe, L. M. (1980). Strategies of path analysis. American Educational Research Journal, 17, 183-209.
- Wolfe, L. M. & Ethington, C. A. (1984, April). A program for standard errors of indirect effects in recursive causal models. Paper presented at the meetings of the American Educational Research Association, New Orleans, LA.

## APPENDICES



APPENDIX A  
Leadership Survey

## LEADERSHIP SURVEY

PART I INSTRUCTIONS: SELECT THE RESPONSE TO EACH ITEM WHICH BEST DESCRIBES YOU AS AN ADMINISTRATOR. FIND THE CORRECT ITEM NUMBER ON THE ANSWER SHEET AND DARKEN THE SPACE HEADED BY THE NUMBER WHICH CORRESPONDS TO YOUR ANSWER.

- 1 = NEVER
- 2 = SELDOM
- 3 = OCCASIONALLY
- 4 = OFTEN
- 5 = ALWAYS

1. I apply available knowledge in my field to solving on-the-job problems.
2. I feel confident in my ability to handle job responsibilities.
3. I am alert to recognize or devise useful innovations in my work.
4. I systematize and coordinate the work of school personnel.
5. I associate with other school employees after work.
6. I strive to achieve results.
7. In thinking about my career, I feel I should move up in the profession.
8. I work hard.
9. I welcome additional responsibilities.
10. I compliment and thank subordinates appropriately and sincerely.
11. I am able to get my message across when I speak to an audience.
12. I attempt to orient the work of the school to the welfare of society at large.
13. I like my job.
14. I let group members know what is expected of them.
15. I act without consulting the group.

16. I am friendly and approachable.
17. I ask that group members follow standard rules and regulations.
18. I encourage the use of uniform procedures.
19. I refuse to explain my actions.
20. I do little things to make it pleasant to be a member of the group.
21. I maintain definite standards of performance.
22. I try out my ideas in the group.
23. I am willing to make changes.
24. I put suggestions made by the group into operation.
25. I schedule the work to be done.
26. I make my attitudes clear to the group.
27. I look out for the personal welfare of group members.
28. I treat all group members as my equal.
29. I make sure that my part in the group is understood by group members.
30. I decide what shall be done and how it shall be done.
31. I keep to myself.
32. I give advance notice of changes.
33. I assign group members to particular tasks

PART II INSTRUCTIONS: FIND THE CORRECT ITEM NUMBER OF THE ANSWER SHEET AND DARKEN THE SPACE WHICH CORRESPONDS TO YOUR RESPONSE.

34. Sex. (1) Male (2) Female
35. Education. (1) Bachelor's Degree (2) Bachelor's Degree plus hours (3) Master's Degree (4) Master's Degree plus hours (5) Doctorate

36. Marital Status. (1) Married (2) Single (3) Other

PART III INSTRUCTIONS: THIS SECTION OF THE QUESTIONNAIRE CONTAINS A SERIES OF STATEMENTS. DECIDE HOW YOU FEEL ABOUT EACH AND THEN MARK YOUR RESPONSE AS FOLLOWS:

IF YOU AGREE WITH A STATEMENT OR FEEL THAT IT IS TRUE ABOUT YOU, MARK 1. IF YOU DISAGREE WITH A STATEMENT OR FEEL THAT IT IS NOT TRUE ABOUT YOU, MARK 2. PLEASE ANSWER ALL STATEMENTS.

FIND THE CORRECT ITEM NUMBER ON THE ANSWER SHEET AND DARKEN THE SPACE WHICH CORRESPONDS TO YOUR RESPONSE.

1 = AGREE OR TRUE ABOUT SELF  
2 = DISAGREE OR NOT TRUE ABOUT SELF

37. I doubt whether I would make a good leader.
38. I think I would enjoy having authority over other people.
39. I find it hard to keep my mind on a task or job.
40. I sometimes stray away from another person because I fear doing or saying something that I might regret afterwards.
41. When in a group of people I have trouble thinking of the right things to talk about.
42. School teachers complain a lot about their pay, but it seems to me that they get as much as they deserve.
43. I don't blame anyone for trying to grab all he can get in this world.
44. Every citizen should take time to find out about national affairs, even if it means giving up some personal pleasures.
45. I should like to belong to several clubs or lodges.
46. I am certainly lacking in self-confidence.
47. When I work on a committee I like to take charge of things.

48. If given the change I would make a good leader of people.
49. Sometimes at elections I vote for men about whom I know very little.
50. I very much like hunting.
51. A person does not need to worry about other people if only he looks after himself.
52. I can honestly say that I do not really mind paying my taxes because I feel that is one of the things I can do for what I get from the community.
53. When prices are high you can't blame a person for getting all he can while the getting is good.
54. In school I found it very hard to talk before the class.
55. I am a better talker than a listener.
56. I would be willing to give money myself in order to right a wrong, even though I was not mixed up in it in the first place.
57. We should cut down on our use of oil, if necessary, so that there will be plenty left for the people fifty or a hundred years from now.
58. When the community makes a decision, it is up to a person to help carry it out even if he had been against it.
59. I would rather have people dislike me than look down on me.
60. I must admit I try to see what others think before I take a stand.
61. People should not have to pay taxes for the schools if they do not have children.
62. In a group, I usually take the responsibility for getting people introduced.
63. I would be willing to describe myself as a pretty "strong" personality.

64. There are times when I act like a coward.
65. I must admit I am a pretty fair talker.
66. I have strong political opinions.
67. I think I am usually a leader in my group.
68. I seem to do things I regret more often than other people do.
69. Disobedience to any government is never justified.
70. I enjoy planning things, and deciding what each person should do.
71. I would rather not have very much responsibility for other people.
72. I usually have to stop and think before I act even in trifling matters.
73. It is pretty easy for people to win arguments with me.
74. I have not lived the right kind of life.
75. I have a natural talent for influencing people.
76. I like to give orders and get things moving.
77. I am embarrassed with people I do not know well.
78. The one to whom I was most attached and whom I most admired as a child was a woman (mother, sister, aunt or other woman).
79. I am not the type to be a political leader.
80. People seem naturally to turn to me when decisions have to be made.
81. I dislike to have to talk in front of a group of people
82. I have more trouble concentrating than others seem to have.
83. What the youth needs most is strict discipline, rugged determination, and the will to work and fight for family and country.

84. Some of my friends think that my ideas are impractical, if not a bit wild.
85. I don't understand how men in some European countries can be so demonstrative to one another.
86. I prefer team games to games in which one individual competes against another.
87. I could cut my moorings--quit my home, my family and my friends--without suffering great regrets.
88. The best theory is the one that has the best practical applications.
89. I like to fool around with new ideas, even if they turn out later to be a total waste of time.
90. The unfinished and the imperfect often have greater appeal for me than the completed and polished.
91. I would rather have a few intense friendships than a great many friendly but casual relationships.
92. Perfect balance is the essence of all good composition.
93. Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.
94. It is easy for me to take orders and do what I am told.
95. A person needs to "show-off" a little now and then.
96. People pretend to care more about one another than they really do.
97. I am often so annoyed when someone tries to get ahead of me in a line of people that I speak to him about it.
98. Compared to your own self-respect, the respect of others means very little.
99. The trouble with many people is that they don't take things seriously enough.
100. Sometimes I rather enjoy going against the rules and doing things I'm not supposed to do.

101. I am in favor of very strict enforcement of all laws, no matter what the consequences.

102. If I could start my career over again, I would select a field other than educational administration.

PART IV INSTRUCTIONS: PLEASE RESPOND TO THE FOLLOWING QUESTIONS BY WRITING YOUR RESPONSE IN THE SPACE PROVIDED AFTER EACH QUESTION. DO NOT RECORD YOUR RESPONSE ON THE NCS TRANS-OPTIC ANSWER SHEET.

103. What was your age at your last birthday? \_\_\_\_\_

104. What is your present position? \_\_\_\_\_

105. How many years have you held your present position? \_\_\_\_\_

106. Number of students enrolled in your school? \_\_\_\_\_

107. How many years of experience do you have as a secondary principal? \_\_\_\_\_

108. How many years of professional experience do you have in education? \_\_\_\_\_

109. How many years have you been an administrator? \_\_\_\_\_

PLEASE RETURN THIS PAGE WITH THE ANSWER SHEET TO:

John B. Blanton

Thank you for participating in this study.



**APPENDIX B**

**Communications with Participants**

STATEMENT OF POLICY

## Concerning the Leader Behavior Description Questionnaire and Related Forms

Permission is granted without formal request to use the Leader Behavior Description Questionnaire and other related forms developed at the Ohio State University, subject to the following conditions:

1. Use: The forms may be used in research projects. They may not be used for promotional activities or for producing income on behalf of individuals or organizations other than the Ohio State University.
2. Adaptation and Revision: The directions and the form of the items may be adapted to specific situations when such steps are considered desirable.
3. Duplication: Sufficient copies for a specific research project may be duplicated.
4. Inclusion in dissertations: Copies of the questionnaire may be included in theses and dissertations. Permission is granted for the duplication of such dissertations when filed with the University Microfilms Service at Ann Arbor, Michigan 48106 U.S.A.
5. Copyright: In granting permission to modify or duplicate the questionnaire, we do not surrender our copyright. Duplicated questionnaires and all adaptations should contain the notation "Copyright, 19-- , by The Ohio State University."
6. Inquiries: Communications should be addressed to:

Center for Business and Economic Research  
The Ohio State University  
1775 College Road  
Columbus, Ohio 43210 U.S.A.

January 23, 1986

Nina Stettner  
Sage Publications, Incorporated  
275 South Beverly Drive  
Beverly Hills, California 90212

Dear Madam:

Please send to me as soon as possible authorization to use the graph from the Edwin M. Bridges article entitled "Bureaucratic Role and Socialization: The Influence of Experience on the Elementary Principal" found in Volume 12 of Educational Administration Quarterly on page 26. This graph will be included in my doctoral dissertation to be submitted to Virginia Polytechnic Institute and State University.

Thank you in advance for sending to me this authorization/permission.

Yours truly,

John B. Blanton

JBB/mbh

## PURDUE RESEARCH FOUNDATION

WEST LAFAYETTE, INDIANA 47907

DIVISION OF PATENTS & COPYRIGHTS  
~~XXXXXXXXXXXXXX~~  
 221 Terminal Building

JOHN R. NESBITT, DIRECTOR

July 16, 1981

Mr. John B. Blanton

Dear Mr. Blanton:

Please forgive my belated official reply to your request for permission to include the Purdue Rating Scale for Administrators and Executives developed by H. H. Remmers and R. L. Hobson in the questionnaire which you have developed. However, I did talk to Margaret Herriott on March 27, 1981, and gave verbal permission so that your study could proceed. I told Ms. Herriott that I would follow with a written letter of permission and the conditions for use. Therefore, I am pleased to confirm that Purdue Research Foundation gives you, John B. Blanton, permission to include the above mentioned instrument in your questionnaire on the following conditions:

1. That the copyright marking be appropriately displayed on the first page which the material appears and all such material proprietary to the Purdue Research Foundation be clearly referenced and/or footnoted as appropriate.
2. That your questionnaire containing the above mentioned instrument will not be marketed commercially but used only in gathering data for your study necessary in meeting the requirements of your Ed.D. degree in Educational Administration at Virginia Polytechnic Institute and State University.
3. That you remit to the Purdue Research Foundation a royalty fee in the amount of 10¢ for each questionnaire in which the above mentioned instrument is printed, but not less than \$10.

If the above conditions are acceptable to you, would you please sign one copy of this letter and return it to me for our files?

Sincerely,

Accepted:

W. Charles Sherwood  
 Assistant Director

WCS:kkk

\_\_\_\_\_  
 Date: 8-26-81

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