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THE UNIVERSITY OF OKLAHOMA
GRADUATE COLLEGE

COGNITIVE PERSONALITY AND LEADERSHIP BEHAVIOR OF
VOCATIONAL REHABILITATION AGENCY SUPERVISORS

A DISSERTATION
SUBMITTED TO THE GRADUATE FACULTY
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degree of
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By
STEVEN ARVID SCHERLING
Norman, Oklahoma

1974

COGNITIVE PERSONALITY AND LEADERSHIP BEHAVIOR OF
VOCATIONAL REHABILITATION AGENCY SUPERVISORS

APPROVED BY

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PREFACE

Each of us is in truth an idea of the Great Gull,
an unlimited idea of freedom. . .
and precision flying is a step toward expressing
our real nature. . . .

The trick was to know that his true nature lived,
as perfect as an unwritten number,
everywhere at once across space and time. . . .

We can start working with time if you wish. . .
till you can fly the past and the future. . . .
You will be ready to begin to fly up and know
the meaning of kindness and of love.

Jonathan Livingston Seagull

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Steven Arvid Scherling

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CHAPTER I
PURPOSE, OBJECTIVES, AND METHODOLOGY

Introduction

One of the main challenges facing both business and governmental organizations is responding and adapting to rapidly changing conditions. The ability of an organization to meet this challenge and achieve its objectives depends upon the individuals who perform the necessary functions of the organization.

The influence of the formal organization on the activities of the individuals who constitute the organization has continued to increase. Although the formal organization has provided the individual with the means for accomplishing society's complex tasks, it has also threatened to submerge his individual identity. Modern society has placed a high value on the effective and rational¹ operation of its organizations, which today require the simultaneous achievement

¹Fromm's approach to rational thinking requires objective reasoning with the emotional attitude of humility. The objective is to "see the difference between my picture of a person and his behavior, as it is narcissistically distorted, and the person's reality as it exists regardless of my interests, needs and fears . . . The ability to love. . . depends on our capacity to grow, to develop a productive orientation in our relationship toward the world and ourselves." See E. Fromm, The Art of Loving (New York: Harper & Row Publishers, Inc., 1956), p. 121.

of the organization's objectives and the fulfillment of the individual's needs.²

The leadership necessary to achieve these organizational goals requires the understanding of the organization's objectives and the understanding of other persons' points of view. A greater interpersonal understanding on the part of the leader, it is felt, will result in increased productiveness and increased fulfillment on the part of the individual subordinate. Shuman suggests that the phenomena of leadership and followership constitute an important segment of the area of interpersonal understanding.

All organization problems deal primarily with the relationship of a man with men; and no matter how "practical" the problem in hand may appear to be, a satisfactory solution must stem from an understanding of the nature of man; . . .³

The administrator and the scientist have a common task in attempting to understand the nature of human behavior. Argyris has suggested that the understanding of human behavior has been researched from four viewpoints:

1. Individual factors - requires an understanding of personality factors and principles.
2. Small informal group factors - requires an understanding of principles of social psychology.

²The essence of human existence can be thought of as self-transcendence. Frankl's categorical imperative of logotherapy, "So live as if you were living already for the second time as wrongly as you are about to act now," is a self-transcendent maxium to develop our capacity to grow. The goal of the individual is to develop his capacities for freedom. See V. E. Frankl, Man's Search for Meaning (New York: Washington Square Press, 1959), p. 173.

³Ronald B. Shuman, The Management of Men (Norman: University of Oklahoma Press, 1948), p. vi.

3. Formal organizational factors - requires an understanding of traditional principles of organizing people.
4. Organization as a whole - requires the dynamic understanding of the above factors.⁴

The dynamic nature of the whole organization presents the administrator with a formidable task in his attempt to understand its activities. In order to improve the effectiveness of an organization the administrator must first acquire the knowledge of the principles underlying each of these four viewpoints. The administrator must utilize this knowledge for increasing his self-awareness, which in turn will enhance his understanding of the nature of man. Knowles and Saxberg state that an administrator should know where his personality fits on the range of leadership styles and should anticipate certain consequences.

Self-awareness and personal change go deeper than mere intellectual curiosity and mental calculation. They reach into the shadows of the mind seeking discovery and control of hitherto unknown aspects of the personality. The successful leader needs to find and accept himself in order to be sensitive and responsive to the full range of needs in his environment. In no other way can he adapt himself effectively to the demands of a changing organizational society.⁵

A leader's increased self-awareness which leads to an increased sensitivity and responsiveness has been termed by many authors as one's human relations skill. The effective manager in addition to understanding the administrative and technical aspects of his job, must also understand and deal with

⁴Chris Argyris, Personality and Organization-The Conflict Between System and the Individual (New York: Harper and Row Publishers, Inc.), 1957, p. 7.

⁵Henry P. Knowles and Borje O. Saxberg, Personality and Leadership Behavior (Massachusetts: Addison-Wesley Publishing Company, 1971), p. 150.

interpersonal relations. The managerial tasks of structuring interactions and reinforcing worker expectations, which leads to group integration can adequately be performed only through understanding the relevant human relation variables.⁶ The early connotation of human relations skill was one of "be nice" to your subordinates attitude. It was also felt to be the concern of only upper management. The emphasis has changed considerably to where Georgopoulos and Mann feel that human relations retains its importance throughout the organizational structure and refers to:

. . . the ability to use pertinent knowledge and methods of working with or through people. It includes an understanding of general principles of human behavior, particularly those principles which involve the regulation of interpersonal relations and human motivation, and the skillful utilization of this understanding in day-to-day interaction with others in the work situation.⁷

The human relation skill is the ability of an individual to integrate his personality with those in his environment. Understanding the personality factors and principles of individual behavior will better equip the administrator in the "skill of living." Roethlisberger's definition of the human relation skill provides a unique view of the effective functioning personality. His definition includes the following:

⁶These tasks will be elaborated upon in Chapter II.

⁷Basil S. Georgopoulos and Floyd C. Mann, "Supervisor and Administrative Behavior," in R. A. Sutermeister, People and Productivity (New York: McGraw-Hill Book Company, 1963), p. 360.

1. Skill deals with the concrete and not the abstract; through skill one relates himself directly to concrete phenomena.
2. Skill is a way of learning; it is the elementary way one learns to improve his relations to the external environment.
3. Skill is a process of balanced growth. Through skill one develops a growing awareness of the complexity of relationships in concrete phenomena as well as a growing confidence in his capacity to deal with them.
4. Skill is thus an organic, working, growing system of capacity for response which allows a practitioner to respond more effectively to a particular point in a given situation.
5. Human relation skill in particular is the capacity of a person to communicate his feelings and ideas to others, to receive such communication from others, and to respond to their feelings and ideas in such a fashion as to promote congenial participation in a common task.⁸

An individual personality can be viewed as the "capacity" for perceiving and integrating the complexity of environmental relationships in order to communicate the feelings and ideas of the participants. This capacity springs largely from the way in which the individual perceives his world. The differentiating and integrating principles underlying coherent social behavior arise from the principles of social perception. Perception can be thought of as a basic cognitive process, which differentiates and organizes information, which in turn influences judgments and behavior. Cantril states:

The more one studies perception the more one sees that what we label "perception" is essentially a process which man utilizes to make his purposive behavior more effective and satisfying, and that his behavior

⁸Fritz Roethlisberger, Training for Human Relations (Boston: Harvard Graduate School of Business Administration, 1954), p. 142.

always stems from and is rooted in a personal behavioral center. Thus, perception involves numerous aspects of behavior which are rather artificially and necessarily differentiated in order to get a toehold for understanding, but which in the on-going process of living, orchestrate together in a most interdependent way.⁹

A person's personality has been described as the cognitive structure he uses for processing information in the surrounding environment. The information processing approach centers on the perceptual capacity of the individual to differentiate and organize social stimuli from his environment. A person's cognitive level can range from simple to complex. The cognitively simple individual is able to differentiate stimuli to a limited extent and uses only a few rules in integrating this differentiated information. The cognitively complex individual differentiates and integrates to a greater extent, resulting in less absolutism and a greater variety of thought and action.

The concept of perceptual differentiation of an individual's social environment was developed by G. A. Kelly, The Psychology of Personal Constraints.¹⁰ He states that each person functions as a scientist in that his major effort is to predict and control future events. Kelly maintains that each person develops a set of unique constructs or models of the universe and that these constructs are used by the individual to anticipate events in his world. Bieri states that the emphasis of this system is on:

⁹Hardley Cantril, "Perception and Interpersonal Relations," American Journal of Psychiatry, 114, 1957, p. 119.

¹⁰George A. Kelly, The Psychology of Personal Constructs, I (New York: W. W. Norton and Company, 1955).

... the processes used by the individual in construing others and the manner in which the various types of organizations of these "constructs" lead to either more or less efficient anticipation and prediction of the person's social environment.¹¹

Shuman points out the importance of this process for contemporary society.

Since man must live in the present, the principal interest of most people is with immediate problems. The managers of society, however, must pay the penalty of leadership. They must be largely concerned with both future and past without neglecting provision for the present. The extent to which present decisions are affected by remembrance and anticipation constitutes a measure of the complexity of mental processes in the individual--his degree of intellectual sophistication.¹²

Identification of those individuals who will make more effective managers of society is an important decision facing both business and governmental organizations. A state vocational rehabilitation agency, which participated in this research project, will require a more effective supervisor-counselor relationship in servicing their clients. The effectiveness of this relationship will depend upon the managerial abilities of the supervisors.

The rehabilitation supervisor is receiving increasing attention as the direct link between the counselor and the administration. The supervisor's influence flows downward by presenting management's programs for accomplishing the agency's objectives and upward by representing his counselors' position to management. The rapid expansion of state rehabilitation agency's services

¹¹James Bieri, "Complexity-Simplicity as a Personality Variable in Cognitive and Preferential Behavior," in D. W. Fiske and S. R. Maddi (eds.), Functions of Varied Experience (Homewood, Ill.: Dorsey Press, 1961), p. 357.

¹²Shuman, The Management of Men, p. 6.

in the past decade has increased the need for adequately trained supervisors. If the agencies are to accomplish their program goals, individual supervisors must be fully developed and utilized. Voyle C. Scurlock, past Director of Vocational Rehabilitation for the State of Oklahoma, comments on the supervisor's leadership role as follows:

If supervision is to rest upon a complete understanding of philosophy, aims, purposes, and activities, we might best describe supervision by the use of one word, leadership. The function of the supervisor is to guide, to help, to stimulate--to lead counselors to a critical appraisal and study of their own performance as affected by their individual attitudes and practices.

If the agency seeks to develop individual counselors to their highest potential, then independence of thought must be encouraged and differences in opinion recognized. Both are important as providing a spring board for progress.

All this means, therefore, that the supervisor is to be truly a top-flight rehabilitation leader--a person of superior ability, adequately prepared educationally. He must be skilled in human relations, group processes, personnel administration and evaluation; and with all of this he must be constantly seeking new truths and relating them to program aims and objectives.¹³

The effectiveness of the supervisor-counselor relationship depends on a supervisory leadership style emphasizing the human relation skill. The human relation skill of a supervisor may possibly be related to the cognitive complexity of the individual's personality and, therefore, if the perceptual differentiation and integrative capacity of the individual's personality can be related to his behavior a means of identifying and training effective supervisors may be possible. Hemphill states:

¹³Voyle C. Scurlock, "Supervision in State Rehabilitation Agencies," Journal of Rehabilitation, 24, 1958, p. 8.

Both laymen and scientists agree that if we can understand the selection and training of leaders, we can begin to take adaptive steps toward controlling our own social fate.¹⁴

Research Statement

The purpose of this research is to determine whether any relationship exists between the supervisor's cognitive complexity and the dependent variables: (1) supervisor leadership behavior, (2) supervisor effectiveness, and (3) counselor job satisfaction. It is hypothesized that a supervisor with a more cognitively complex information processing personality should manifest a leadership style that will more effectively accomplish the rehabilitation agency's objectives and result in higher rehabilitation counselor job satisfaction. Hypotheses are also stated testing the interrelationship between all the subscales on the instruments utilized.

Research Methodology

Sample and Procedure

This research was conducted in a state vocational rehabilitation agency. The sample consisted of those individuals with the job title of chief of rehabilitation services, area supervisor, and rehabilitation counselor. The assessments in this research were as follows: (1) an evaluation of the supervisor's effectiveness by the chief of rehabilitation services, (2) measurement of the area supervisor's level of cognitive complexity, (3) measurement of the area supervisor's

¹⁴John K. Hemphill, Situational Factors in Leadership (Columbus, Ohio: Bureau of Educational Research, Ohio State University, Monograph #32, 1949), p. 3.

leadership style as seen by himself, (4) measurement of the area supervisor's leadership style as seen by the counselors he supervises, (5) measurement of the counselors' job satisfaction, and (6) collection of supervisor and counselor personal data.

The chief of rehabilitation services was requested to group his area supervisors into upper and lower categories of effectiveness. Then he was asked to select from these two groups those supervisors comprising a middle category of effectiveness. Finally, he was requested to list the criteria he used in making the above categorizations.

One hour at the agency's bimonthly supervisory meeting was set aside for the collection of data on the supervisors. After a brief comment on the nature of the research study and the assurance of anonymity, two packages were distributed to the supervisors. The supervisors were then requested to remove the contents of the unmarked package. It contained a direction sheet, a Personal Data Form, the Paragraph Completion Test, the Modified Repertory Test, and the Leadership Opinion Questionnaire. The Paragraph Completion Test is a timed instrument and, therefore, was completed first. The remaining instruments were self-administered. In order to match the supervisor with his counselor and also to identify the high and the low effective supervisors the envelopes containing the instruments were coded.

The package with the supervisor's name contained from four to eight stamped, self-addressed envelopes, which each supervisor was requested to distribute to his counselors. The contents of the counselor's envelopes were

explained to the supervisors. The counselor envelope contained a letter of introduction, a direction sheet, a Personal Data Form, the Leadership Behavior Description Questionnaire, and the Job Satisfaction Inventory (see Appendix I for the letter, direction sheets, and Personal Data Forms for the counselor and supervisors).

Instruments

The selection of instruments for this research was based on the following factors: (1) the theoretical and operational frameworks of Kelly; Bieri; Schroder, Driver, and Streufert; Stogdill; Muthard and Miller¹⁵; (2) the extensive research utilizing these instruments; (3) the reported reliability and validity of each instrument; (4) the extensive research in rehabilitation agencies utilizing these instruments; and (5) the efficiency with which each instrument is administered.

Leader Behavior Description Questionnaire and Leader Opinion Questionnaire

One of the outstanding characteristics of the Ohio State Leadership Studies was the change in approach to studying leadership. The focus changed from seeking answers to the question--"What does an individual do while he

¹⁵Kelly, The Psychology of Personal Constructs, I (New York: W. W. Norton and Company, 1955); James Bieri, "Cognitive Complexity-Simplicity and Predictive Behavior," Journal of Abnormal and Social Psychology, 51, 1955, pp. 263-268; Harold M. Schroder, Michael J. Driver, and Siegfried Streufert, Human Information Processing (New York: Holt, Rinehart and Winston, Inc., 1967); Ralph M. Stogdill, Individual Behavior and Group Achievement-A Theory, the Experimental Evidence (New York: Oxford University Press, 1959); John E. Muthard and Leonard A. Miller, The Criteria Problem in Rehabilitation Counseling (Iowa City, Iowa: University of Iowa, 1966).

operates as a leader?" --to answering the question --"How does he go about what he does?" The Leader Behavior Description Questionnaire (LBDQ) was developed to measure the behavior of leaders as perceived by their subordinates and superiors. The Leader Opinion Questionnaire (LOQ) was developed to measure the leader's attitude towards his own behavior.

The supervisor's leadership behavior was assessed with the Leader Behavior Description Questionnaire Form XII (Appendix II) which provides an assessment of the leader's behavior from the counselor's viewpoint. Form XII is the fourth revision of the LBDQ, which developed out of the initial work of Hemphill.¹⁶ The theoretical model underlying the LBDQ was outlined by Morris and Seeman.¹⁷ Hemphill and Coons describe the questionnaire's development.¹⁸ Halpin and Winer¹⁹ and Fleishman's²⁰ factor analysis of the questionnaire items identified "Consideration" and "Initiation of Structure" as

¹⁶Hemphill, Situational Factors in Leadership.

¹⁷Richard T. Morris and Melvin Seeman, "The Problem of Leadership: An Interdisciplinary Approach," American Journal of Sociology, 56, 1950, pp. 149-155.

¹⁸John K. Hemphill and Alvin E. Coons, "Development of the Leader Behavior Description Questionnaire" in Ralph M. Stogdill and Alvin E. Coons, Leader Behavior: Its Description and Measurement (Columbus, Ohio: Bureau of Business Research, Ohio State University, Monograph #88, 1957), pp. 6-38.

¹⁹Andrew W. Halpin and James B. Winer, "A Factorial Study of the Leader Behavior Descriptions," in Ralph M. Stogdill and Alvin E. Coons, Leader Behavior: Its Description and Measurement (Columbus, Ohio: Bureau of Business Research, Ohio State University, Monograph #88, 1957), pp. 39-51.

²⁰Edwin A. Fleishman, "A Leader Behavior Description for Industry" in Ralph M. Stogdill and Alvin E. Coons, Leader Behavior: Its Description and Measurement (Columbus, Ohio: Bureau of Business Research, Ohio State University, Monograph #88, 1957), pp. 103-119.

sufficiently independent to measure two different kinds of leader behavior.

These two factors accounted for 83.2% of the total factor variance. Studies conducted in the military by Halpin²¹ and in industry by Fleishman,²² have further substantiated the existence of the factorial independent subscales of "Consideration" and "Initiation of Structure."

A new theory of leadership role and group achievement was developed by Stogdill.²³ After a survey of research data supporting this new theory and a number of empirical research studies, Form XII of the LBDQ was developed. Ten additional subscales were hypothesized which are composed of either five or ten items. The twelve subscales selected and defined by Stogdill are:

1. Representation - speaks and acts as the representative of the group. (5 items)
2. Demand Reconciliation - reconciles conflicting demands and reduces disorder to system. (5 items)
3. Tolerance of Uncertainty - is able to tolerate uncertainty and postponement without anxiety or upset. (10 items)
4. Persuasiveness - uses persuasion and argument effectively; exhibits strong convictions. (10 items)

²¹Andrew W. Halpin, "The Leadership Behavior and Combat Performance of Airplane Commanders," Journal of Abnormal and Social Psychology, 49, 1954, pp. 19-22; Andrew W. Halpin, "The Leader Behavior and Leadership Ideology of Educational Administrators and Aircraft Commanders," Harvard Education Review, 25, 1955, pp. 18-32.

²²Edwin A. Fleishman, "The Description of Supervisory Behavior," Journal of Applied Psychology, 37, 1953, pp. 1-6; Edwin A. Fleishman, Edwin F. Harris, and Harold E. Burt, Leadership and Supervision in Industry: An Evaluation of Supervisory Training Program (Columbus, Ohio: Bureau of Business Research, Ohio State University, Monograph #33, 1955).

²³Ralph M. Stogdill, Individual Behavior and Group Achievements - A Theory, the Experimental Evidence (New York: Oxford University Press, 1959).

5. **Initiation of Structure** - clearly defines own role, and lets followers know what is expected. (10 items)
6. **Tolerance of Freedom** - allows followers scope for initiative, decision, and action. (10 items)
7. **Role Assumption** - actively exercises the leadership role rather than surrendering leadership to others. (10 items)
8. **Consideration** - regards the comfort, well being, status, and contributions of followers. (10 items)
9. **Production Emphasis** - applies pressure for productive output. (10 items)
10. **Predictive Accuracy** - exhibits foresight and ability to predict outcomes accurately. (5 items)
11. **Integration** - maintains a closely knit organization; resolves inter-member conflicts. (5 items)
12. **Superior Orientation** - maintains cordial relations with superiors; has influence with them; is striving for higher status. (10 items)²⁴

Using the modified Kuder-Richardson formula, a series of studies provide the reliability coefficients shown in Table 1. The modification consisted of each item being correlated to the remainder of items in its subscale. This procedure yielded adequate results, which were a conservative estimate of the subscale reliability. Halpin reports that "In several studies where agreement among respondents in describing their respective leaders has been checked by a 'between- vs. within-group' analysis of variance, the F ratios all have been found significant at the .01 level. Followers tend to agree in describing the same

²⁴Ralph M. Stogdill, Manual for the Leader Behavior Description Questionnaire - Form XII: An Experimental Revision (Columbus, Ohio: Bureau of Business Research, Ohio State University, 1963), p. 3.

TABLE 1
RELIABILITY COEFFICIENTS OF THE LBDQ

Subscale	Army Division	Highway Patrol	Aircraft Executives	Ministers	Communi- ty Leaders	Corpora- tion Pres- idents	Labor Presidents	College Presidents	Senators
1. Representation	.82	.85	.74	.55	.59	.54	.70	.66	.80
2. Demand Reconciliation			.73	.77	.58	.59	.81		.81
3. Tolerance Uncertainty	.58	.66	.82	.84	.85	.79	.82	.80	.83
4. Persuasiveness	.84	.85	.84	.77	.79	.69	.80	.76	.82
5. Initiating Structure	.79	.75	.78	.70	.72	.77	.78	.80	.72
6. Tolerance Freedom	.81	.79	.86	.75	.86	.84	.58	.73	.64
7. Role Assumption	.85	.84	.84	.75	.83	.57	.86	.75	.65
8. Consideration	.76	.87	.84	.85	.77	.78	.83	.76	.85
9. Production Emphasis	.70	.79	.79	.59	.79	.71	.65	.74	.38
10. Predictive Accuracy	.76	.82	.91	.83	.62	.84	.87		
11. Integration	.73	.79							
12. Superior Orientation	.64	.75	.81			.66		.60	

Source: Ralph M. Stogdill, Manual for the Leader Behavior Description Questionnaire-Form XII: An Experimental Revision (Columbus, Ohio: Bureau of Business Research, Ohio State University, 1963), p. 11.

leader, and the descriptions of different leaders differ significantly."²⁵

The LBDQ is composed of 100 short, descriptive statements indicating ways a supervisor may behave. The respondent, who in this study is a counselor, is to indicate the frequency he observes the supervisor engaging in each leadership behavior by checking one of five adverbs: always, often, occasionally, seldom, or never. The scoring on each item ranges from 1-5 or 5-1 depending on the construction of the item (Appendix III).

The supervisor's leadership attitude was assessed using the Leader Opinion Questionnaire. The LOQ has the same theoretical and research background as the LBDQ. This scale was developed by Fleishman and measures the leader behavior dimensions "Consideration" and "Structure."²⁶ Fleishman defines supervisory behavior as follows:

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

Structure (S). Reflects the extent to which an individual is likely to define and structure his own role and those of his subordinates toward goal attainment. A high score on this dimension characterizes individuals who play a very active role in directing group activities through planning, communicating information, scheduling, criticizing, trying new ideas, and so forth. A low score characterizes individuals who are likely to be relatively inactive in giving direction in these ways.²⁷

²⁵ Andrew W. Halpin, Manual for the Leader Behavior Description Questionnaire (Columbus, Ohio: Bureau of Business Research, Ohio State University, 1957).

²⁶ Fleishman, "A Leader Behavior Description for Industry," in Stogdill and Coons, op. cit., p. 103-119.

²⁷ Edwin A. Fleishman, Manual for Leadership Opinion Questionnaire (Chicago, Illinois: Science Research Associates, Inc., 1969), p. 1.

The initial reliability of the LOQ was determined by internal consistency, inter-rater agreement, and stability of repeated measures over time. Table 2 presents the reliability correlations which were compiled using the split-half method. These reliabilities are at an acceptable level across these samples. Adequate test-retest reliabilities were achieved for a sample of First-line Supervisors with a three-month retest period and for a sample of Air Force NCO's with a one-month retest period.

TABLE 2
RELIABILITY ESTIMATES OF THE LOQ

N	Sample	C	S
122	First-line supervisors	.70	.79
202	ROTC cadets	.80	.82
394	Manufacturing employees	.89	.88
120	Executives	.62	.80
31	First-line supervisors	.80*	.74*
24	Air Force NCOs	.77*	.67*
80	Foremen in a pharmaceutical company	.70	.69
90	Supervisor applicants in Swedish company	.74	.82

Source: Edwin A. Fleishman, Manual for Leadership Opinion Questionnaire (Chicago, Illinois: Science Research Associates, Inc., 1969), p. 1.

*Test-retest reliabilities.

The LOQ was developed to maximize construct validity. The validity of the LOQ is continuing to be determined in other research studies by correlations with independent measures of leadership. The LOQ's factor analysis background and careful item analysis accounts for the independence of the questionnaire's scales. Table 3 presents the correlations between "Consideration" and "Structure" scores. A median correlation of around zero indicates that "halo" and "social desirability" tendencies do not seem to be operating in these scales.

TABLE 3
CORRELATIONS BETWEEN CONSIDERATION AND
STRUCTURE SCORES FOR VARIOUS SAMPLES

N	Sample	r
122	First-line industrial supervisors	-.01
46	First-line industrial supervisors	-.07
22	Top executives	.03
80	Bakery supervisors	-.19
202	ROTC cadets	-.19
247	Naval officer candidates	-.23*
274	Naval officer candidates	-.21*
47	Air Force NCOs	.02
47	Air Force NCOs	.08
394	Industrial employees	.04
60	General foremen	-.23
100	College seniors	-.05
59	Utility supervisors	.05
80	Pharmaceutical foremen	.10
21	Chemical supervisors	.06
57	Motor trucking production foremen	-.33
75	Swedish supervisory candidates	.16

Source: Edwin A. Fleishman, Manual for Leadership Opinion Questionnaire (Chicago, Illinois: Science Research Associates, Inc., 1969), p. 1.

*Significant at the .01 level.

The LOQ is composed of 40 short, descriptive statements indicating a supervisor's leadership attitude. The supervisor is to select for each item the alternative which most nearly expresses his opinion on how frequently he should do what is described by that item. Variations of the adverb format: always, often, occasionally, seldom, or never are selected for each leadership attitude alternative. The scoring on each item is the same as the LBDQ and ranges from 0-4 or 4-0 depending on the construction of the item. Means and standard deviations for the LBDQ and the LOQ are presented in Appendices IV and V.

Modified Role Construct Repertory Test and Paragraph Completion Test

Cognitive complexity was assessed with the Modified Role Construct Repertory Test (MRT) and the Paragraph Completion Test (PCT). The measurement of cognitive complexity has three levels of methodological problems: (1) relating the definition of the concept to a general class of measurement operations; (2) selecting specific forms of these measurement operations; and (3) deriving scores from these specific forms of measurement operations.²⁸

Bieri's definition of cognitive complexity as "the tendency to construe social behavior in a multidimensional way" implies that the subject has available social stimuli upon which he can perform operations indicating the relative degree of complexity. The "social stimuli" are persons well-known to the subject.

²⁸James Bieri, "Cognitive Complexity and Personality Development," in O. J. Harvey (ed.) Experience, Structure, and Adaptability (New York: Springer Publishers Company, 1966), p. 25.

Bieri selects a measurement form that uses a six-category articulation along various dimensions of behavior provided to the subject. Complexity is measured by a row-by-row matching technique.

The supervisor's cognitive complexity was assessed with Bieri's Modified Repertory Test (Appendix VI). This instrument is a modification of Kelly's Role Construct Repertory Test. The major modification consisted of providing the subject with the construct dimensions rather than requiring him to generate his own dimensions. A number of research studies²⁹ provide support for Bieri's assumption that "the sampling of personal constructs provided for a judge is representative of that judge's own constructs elicited in describing similarities and differences among people."³⁰

The MRT consists of a 10 x 10 grid. Each column is identified with a different role type, which should be representative of a meaningful person in the subject's social environment. Each row is identified with a bipolar construct, which is divided into a six-step Likert-type scale ranging from +3 to -3. The subject first lists the name or initial of the ten persons who best correspond to the ten role types. Next the subject rates each of the ten persons on each of the

²⁹Marc Irwin, Tony Tripodi, and James Bieri, "Affective Stimulus Value and Cognitive Complexity," Journal of Personality and Social Psychology, 5, 1967, pp. 444-448; J. Jaspars, "Individual Cognitive Structure," in The Proceedings of the 17th International Congress of Psychology (Amsterdam: North-Holland, 1964); W. S. Torgerson, Theory and Methods of Scaling (New York: Wiley, 1958); Tony Tripodi and James Bieri, "Cognitive Complexity as a Function of Own and Provided Constructs," Psychological Reports, 13, 1963, p. 26; Joseph S. Vannoy, "Generality of Cognitive Complexity-Simplicity as a Personality Construct," Journal of Personality and Social Psychology, 2, 1965, pp. 385-396.

³⁰James Bieri, et al., Clinical and Social Judgment (New York: John Wiley and Sons, Inc., 1966), p. 190.

ten construct dimensions.

The grid is scored for cognitive complexity by comparing each rating in a row with the rating directly below it. A score of one is given for every identical comparison. Each column will have 45 possible comparisons which yields a total possible score of 450. A subject who utilizes no differentiation in his social perception would give identical ratings on all construct dimensions and would score a maximum of 450. A score of 100 has been found to represent a relatively complex individual.

Schroder's definition of conceptual complexity as "the number of different ways an individual learns to combine and relate a set of information items," focuses on the number and connectedness of integrating rules used in organizing the information process.³¹ Schroder selects a projective technique for measuring the level of information processing that an individual uses in a particular situation. Complexity is measured by inferring structural properties from verbal responses.

The supervisor's conceptual complexity was assessed with Schroder's Paragraph Completion Test (Appendix VII). The PCT "measures the extent to which dimensional units of information can be interrelated in different ways in order to generate new and discrepant perspectives about stimuli."³²

³¹ Harold M. Schroder, "Conceptual Complexity and Personality Organization," in H. M. Schroder and P. Suedfeld (eds.), Personality Theory and Information Processing (New York: The Ronald Press Company, 1971), p. 240.

³² Harold M. Schroder, Michael J. Driver, and Siegfried Streufert, Human Information Processing (New York: Holt, Rinehart and Winston, Inc., 1967), p. 25.

This standardized paper and pencil test was developed with the intention of measuring structure in the area of social interaction, which more specifically is labelled the "interpersonal-uncertainty" domain.

The PCT presents the subject with 5 sentence stems in the interpersonal area and asks him to write 3 or 4 sentences in approximately 100 seconds to complete each item. The responses are rated for the degree of differentiation and the number of degrees of freedom in the rules of integration. It is from these verbal responses that the mediating processes or conceptual structure is inferred.

The integrating complexity of the conceptual structure is measured along a seven point scale. The scale is divided into four gross points: 1-Low, 3-Medium Low, 5-Medium High, and 7-High structural properties of verbal responses. A score of 1 is given to a response generated by a single rule or perspective, 3 indicates alternative but unconnected perspectives, 5 indicates a relationship between two perspectives, 7 indicates multiple relationships. Points 2, 4, and 6 represent intermediate judgments. A sum of the top two sentence scores is taken to indicate the individual's conceptual complexity. A sum of top two scores of 7 or above indicates an individual functioning at the more "abstract" or higher end of the conceptual complexity continuum. A score of 4 or below is indicative of an individual who is functioning at the more "concrete" or lower end of the continuum. The responses recorded in this research were scored under the direction of Professor Schroder.

Schroder, et al. report three measures of internal consistency on the

PCT.³³ Table 4 shows that the correlations between the individual stem scores and the total scores vary between .57 and .75. Total scores computed with all six stems³⁴ or the top two stems do not substantially differ on the split halves test. An equal split halves correlation of .70 was found for scores on stems "doubt", "rules", and "when criticized" versus scores on "confusion", "parent", and "criticism means." Intercorrelations among the similar pairs of stems, ambiguity stems, external imposition stems, and interpersonal conflict stems are .46, .38, and .56, respectively. Schroder suggests that while different classes of stems (stimuli) produce somewhat different levels of conceptual functioning, the correlations are sufficient to warrant the summation of scores across these stems to arrive at a general score.

Verbal fluency and social desirability in the test responses can reduce the validity of the scores. Proper scoring procedures will reduce the influence of these variables. Intelligence tests were significantly related to conceptual structure with a correlation range from .12 to .45. Schroder found that when the low intelligence subjects were eliminated the correlation is considerably reduced.

Faletti experimentally studied the validity of the PCT using the structural manual.³⁵ Three information processing structures were presented to three

³³Schroder, et al., Human Information Processing, p. 196.

³⁴Recent modification has reduced the PCT to five stem items.

³⁵M. V. Faletti, "An Experimental Validation of Some Measures of Cognitive Complexity," (unpublished thesis, Princeton University, 1968).

TABLE 4

TYPICAL CORRELATIONS BETWEEN PARTS OF THE PARAGRAPH
COMPLETION TEST AND WITH OTHER TRADITIONAL MEASURES

	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Integrative index		70	59	76	68	75	57	65	86	86	12	50	-07
2 Stem I Doubt...			48	46	62	35	33	94	55	35	12	33	-01
3 Stem II Confusion...				41	39	56	21	48	39	51	22	35	-02
4 Stem III Rules...					41	49	33	33	89	48	17	40	-17
5 Stem IV Parents...						41	39	50	57	50	21	30	-01
6 Stem V Criticism...							44	29	55	85	09	33	-08
7 Stem VI Criticism means...								26	35	78	00	22	02
8 Ambiguity stems (1 and 2)									46	38	06	38	-02
9 External imposition stems (2 and 3)										56	12	42	-08
10 Interpersonal conflict stems (4 and 5)											04	36	-05
11 Verbal Fluency												10	17
12 Verbal IQ													-41
13 Social desirability													

Source: H. M. Schroder, M. J. Driver, and S. Streufert, Human Information Processing, (New York: Holt, Rinehard and Winston, Inc., 1967), p. 197.

matched groups using the simulated personnel selection situation. The information processing structures were (1) two-dimensional single combinatory rule, (2) three-dimensional single combinatory rule, and (3) three-dimensional connected multiple combinatory rule. The subjects were taught to use single or multiple combinatory rules to think about each applicant in the simulated situation. It was found that the induced organizational differences affected the structural properties of the PCT. The integrative complexity scores for group 3 were higher than for groups 1 and 2.

Faletti's study demonstrated two effects: (1) as the degree of experimentally induced differentiation was increased, scores on the Modified Rep Test systematically increased, but scores on the PCT remained substantially unchanged; (2) as the degree of experimentally induced organizational complexity was increased, while holding the number of dimensional scale values of information constant, scores on the PCT systematically increased while scores on the Rep Test remained substantially the same. Vannoy reports scores of the PCT were factorially independent of scores on the MRT.³⁶ Gardiner's factorial study showed that the PCT defined a factor as the level of conceptual complexity which is relatively unrelated to factors of differentiation.³⁷ Therefore, the measurement of cognitive complexity will consist of two aspects: the degree of social stimuli differentiation and the degree of organizational integration. These two

³⁶Joseph S. Vannoy, "Generality of Cognitive Complexity-Simplicity as a Personality Construct," Journal of Personality and Social Psychology, 2, 1956, pp. 385-396.

³⁷G. S. Gardiner, "Some Correlates of Cognitive Complexity," (unpublished master's thesis, University of Alberta, 1968).

facets of cognitive complexity will be further outlined in Chapter III.

Job Satisfaction Inventory

The counselor's job satisfaction was assessed with the Job Satisfaction Inventory (JSI) (Appendix VIII). The JSI was originally developed by Johnson³⁸ and later revised by Muthard and Miller for use with rehabilitation counselors.³⁹ The revision consisted of reducing the number of items from 99 to 70 and changing the format of the item response. Muthard and Miller selected the JSI because it appeared to cover most of the major dimensions of job satisfaction, and the validation studies using self-estimates and co-worker criteria seemed promising.

Muthard and Miller used a sample of 143 counselors from six rehabilitation agencies to modify and test the JSI. Using the split half procedure and the Spearman-Brown correlation, the authors report the reliability of the total score from the JSI is .88. The corrected split-half reliability coefficients for the eight dimensions ranged from .47 to .89, with the mean, using the Fisher Z transformation, being .80. Intercorrelation of the JSI dimensions indicate relative independence.⁴⁰

Studies using the JSI in rehabilitation agencies have continued to substantiate the instrument's validity. Pacenilli, and Smits and Aiken, found the JSI

³⁸George Johnson, "An Instrument for the Measurement of Job Satisfaction," Personnel Psychology, 8, 1955, pp. 27-37.

³⁹John E. Muthard and Leonard A. Miller, The Criteria Problem in Rehabilitation Counseling (Iowa City, Iowa: University of Iowa, 1966).

⁴⁰Ibid., p. 43.

to be significantly correlated with counselor perceptions of supervisory behavior. Muthard and Miller, and Hanson related JSI scores to counselor productivity. Smits, and Irzinski related JSI to counselor turnover.⁴¹

The rehabilitation counselor was asked to rate his feelings, beliefs, and attitudes on seventy items which measure job satisfaction in the following areas: (1) Physical and Mental Exertion; (2) Relations with Associates; (3) Relations with Employer; (4) Security, Advancement and Finance; (5) Interest in, Liking for, and Emotional Involvement in the Job; (6) Job Information, Training, and Status; (7) Physical Surroundings and Work Conditions; (8) Future, Goals and Progress.

The item response format is a five-point Likert scale using the following adverbs and percent of time as guides: rarely (0 to 15 percent of the time), sometimes (16 to 35 percent of the time), frequently (36 to 65 percent of the time), generally (66 to 85 percent of the time), and almost always (86 to 100 percent of the time). Following Pacinelli's suggestion the adverb format was changed to

⁴¹Ralf N. Pacinelli, "Rehabilitation Counselor Job Satisfaction as it Relates to Perceived Leadership Behavior and Selected Background Factors," (unpublished doctoral dissertation, Pennsylvania State University, 1968); Stanley J. Smits and Wilbur J. Aiken, A Descriptive Study of Supervisory Practices as Perceived by Counselors in State Vocational Rehabilitation Agencies (Bloomington: Indiana University, 1969); Leonard A. Miller and John E. Muthard, "Job Satisfaction and Counselor Performance in State Rehabilitation Agencies," Journal of Applied Psychology, 49, 1965, pp. 280-283; J. C. Hanson, "Job Satisfaction and Effective Performance of School Counselors," Personnel and Guidance Journal, 46, 1968, pp. 864-869; Stanley J. Smits, Leadership Behavior of Supervisors in State Rehabilitation Agencies (Atlanta: Georgia State University, 1971); Stanley M. Irzinski, "Factors Related to Turnover in a State Rehabilitation Agency," (unpublished doctoral dissertation, Pennsylvania State University, 1968).

"rarely," "seldom," "occasionally," "often," and "always" to conform to the LBDQ format and thereby clarify the instruments for the counselors.⁴² The seventy items are scored on a scale from 1-5 or 5-1 depending on the statement. A total job satisfaction score can range from 70 to 350, and eight dimensional scores can be computed (Appendix IX). A high total score or dimensional score represents a high level of job satisfaction.

The following instruments were administered at each organizational level. The chief of rehabilitation services grouped his supervisors according to their effectiveness. The supervisor completed a Personal Data Form, the Paragraph Completion Test, the Modified Repertory Test, and the Leadership Opinion Questionnaire. The counselor completed a Personal Data Form, the Leadership Behavior Description Questionnaire and the Job Satisfaction Inventory.

Hypotheses to Be Tested

The following null hypotheses will be tested.

- Hypothesis I: **There is no difference between the supervisors' cognitive complexity when classified according to effectiveness.**
- Hypothesis II: **There is no difference between the supervisors' LOQ subscale scores when classified according to effectiveness.**
- Hypothesis III: **There is no difference between the supervisors' LBDQ subscale scores when classified according to effectiveness.**
- Hypothesis IV: **There is no difference between counselors' JSI subscale scores when classified according to their supervisor's effectiveness.**

⁴²Ralf N. Pacinelli, "Rehabilitation Counselor Job Satisfaction as it Relates to Perceived Leadership Behavior and Selected Background Factors," (unpublished doctoral dissertation, Pennsylvania State University, 1968).

- Hypothesis V:** There are no significant correlations between the supervisors' cognitive complexity and the LOQ subscale scores.
- Hypothesis VI:** There are no significant correlations between the supervisors' cognitive complexity and the LBDQ subscale scores.
- Hypothesis VII:** There are no significant correlations between the supervisors' cognitive complexity and the counselors' JSI subscale scores.
- Hypothesis VIII:** There are no significant correlations between the supervisors' LOQ dimension scores and the LBDQ dimension scores.
- Hypothesis IX:** There are no significant correlations between the supervisors' LOQ subscale scores and the counselors' JSI subscale scores.
- Hypothesis X:** There are no significant correlations between the supervisors' LBDQ subscale scores and the counselors' JSI subscale scores.

Analysis of Data

Two nonparametric statistical models are utilized in testing these research hypotheses. These models were selected because of the assumptions underlying the population and the instrumentation. The Mann-Whitney U test was used to test for a significant difference between the effectiveness classifications. Spearman Rank correlation analysis was conducted to test the remaining hypotheses. The function of the correlation analysis was to determine the closeness of the relationship between any two variables. Multiple regression analysis was conducted on the JSI total score. The objective of the multiple regression analysis is the derivation of an equation by which the dependent variable, JSI total, can be estimated from the other variables being investigated. The alternate hypotheses state that the effective supervisors will score higher on the

variables under consideration, and that there is a positive relationship between the variables correlated.

Scope and Limitations

This research study was conducted in a state vocational rehabilitation agency. The data were collected from the chief of rehabilitation services, 29 supervisors, and 147 counselors. Three supervisors were not included in the study. One was sick during the testing period; a second was excused since she had no counselors reporting to her; and, the third supervisor was eliminated from the analysis because of apparent bias. A total of 190 counselors' packets were distributed. Of these, 160 were returned and 147 were usable. Four supervisors had less than the four counselor evaluations suggested for reliability on the LBDQ, but were included because three counselor evaluations were felt adequate considering that these supervisor's total number of counselors were small.⁴³

The concepts of individual job satisfaction and leadership behavior consist of many facets. The measurement of rehabilitation counselor job satisfaction was limited to his response on the Job Satisfaction Inventory. The measurement of leadership behavior was limited to the rehabilitation counselor's perception of his immediate supervisor and the supervisor's self-report. These measurements were made respectively with the Leadership Behavior Description Questionnaire and the Leadership Opinion Questionnaire. The measurement

⁴³Ralph M. Stogdill, Managers, Employees, Organizations (Columbus, Ohio: Bureau of Business Research, Division of Research, College of Commerce and Administration, Ohio State University, 1965).

of the supervisors' cognitive personality was limited to responses to the Paragraph Completion Test and the Modified Repertory Test.

Several limitations occurred as a result of the research design. What constitutes an "effective" supervisor is a difficult conceptual question to measure. No attempt was made to operationally define supervisor effectiveness. Instead, the chief of rehabilitation services' designation of "effective" and "less effective" supervisors, and the counselors' job satisfaction scores were accepted as indicative of supervisory effectiveness.

Studies involving self-reporting and description of others' behavior risk the collection of inaccurate information. In order to insure greater accuracy the participants were instructed on the objectives and procedure of the research study. Instructions and example questions preceded each instrument. Since the anonymity of each respondent was assured, it was assumed that the participants' responses were a truthful reflection of their feelings.

The scope and limitations of this research study caution the generalization of the results to other state population of rehabilitation supervisors and counselors. Caution is also extended to making any inferences about the causality of the variables that are statistically interrelated. Richmond states:

The use of the terms dependent and independent to describe the variables in correlation analysis stem from the mathematical functional relationship and is not necessarily related to the dependence in a causal sense of one variable on the other. As a matter of fact, there is nothing in correlation analysis, regression analysis, or any other mathematical procedure that can establish causality. We can and do measure the nature and the degree of the association or covariation between the true variables; but we cannot and do not from the procedures

described here, form any conclusions about the causality or lack of it in the relationship between the two variables.⁴⁴

It is further pointed out that the ex post facto research design limits the manipulation of the independent variables and the control over the randomization of the subjects. The inferences about the relations among the variables are therefore made without direct manipulation of the variables. Kerlinger defines ex post facto research as:

Ex post facto research is systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable. Inferences about relations among variables are made, without direct intervention, from concomitant variation of independent and dependent variables.⁴⁵

The major design approach in the Ohio State Leadership Studies was to discover the relation of group and individual factors to differentials in leader behavior. These relationships could have been causal or concomitant in nature. Although the ultimate effort is to establish a causal relation, this study focuses on what phenomena are concomitant with certain kinds of leader behavior. Morris and Seeman state that "seeking out such concomitancies is a vital preparatory step toward the establishment of causal patterns."⁴⁶

⁴⁴Samuel B. Richmond, Statistical Analysis (New York: Ronald Press Company, 1964), p. 426.

⁴⁵Frederick N. Kerlinger, Foundations of Behavioral Research; Educational and Psychological Inquiry (New York: Holt, Rinehart and Winston, Inc., 1973), p. 379.

⁴⁶Morris and Seeman, "The Problem of Leadership," p. 154.

Justification for the Research

The Ohio State Leadership Studies have developed a theoretical framework directed at the understanding of intragroup relations, which emphasizes the integration of other theoretical constructs. Using this framework the theoretical works of Stogdill, Individual Behavior and Group Achievement; Kelly, The Psychology of Personal Constructs; Bieri, Cognitive Complexity-Simplicity and Predictive Behavior; and Schroder, et al., Human Information Processing are integrated in an attempt to test the hypothesized relation between perception and behavior. Stogdill makes the following comments on the importance of theoretical integration in the social sciences:

Strong efforts are being made in the social sciences to bring about the integration of subsets of statements heretofore regarded as separate and independent theories. The convergence of theories relating to individual with those relating to group events is apparent in research on interpersonal perception and interpersonal reinforcement. Much other integrative work is being done at different levels of generality. . . . Increase in understanding is dependent upon the development of methods for demonstrating that theories are not only verifiable, but logically consistent. Understanding is further increased when two or more separate systems can be put together in such a manner as to form an integral system of verifiable and logically consistent statements.⁴⁷

It is hoped that the findings from this research will add to the theoretical base from which an experimental research program can be built to analyze further the relationship between agency effectiveness and the human factors in the organization. The following working principles, which have been utilized

⁴⁷Ralph M. Stogdill, "Intragroup-Intergroup Theory and Research," in Muzaffer Sherif (ed.) Intergroup Relations and Leadership (New York: John Wiley and Sons, Inc., 1962), p. 48.

in the Ohio State Leadership Studies, provide a framework for continued rehabilitation agency research.

1. Description should precede evaluation. Let us discover what exists before attempting to evaluate it.
2. Understanding is based on the demonstration of relationships. Theory should be based on an empirically established system of interrelationships.
3. Methods should be developed for the measurement of all variables thought to be necessary for a logically complete and coherent system. Whenever possible, scaled measures should be developed for every variable thought to be essential to the system. That which cannot be categorized or quantified cannot be related to other variables.
4. Empirical research should be conducted on a systematic basis.
5. Structural designs are necessary for systematic research.⁴⁸

A number of research efforts on agency supervision have been conducted. Pacinelli related two dimensions of leader behavior of counselor job satisfaction; Miller and Muthard examined job satisfaction and performance criteria; Irzinski studied the factors underlying counselor turnover; Smits and Aiken described supervisory practices as perceived by counselors; Bostic studied the effects of perceived leadership climate in state agencies; and Viaille, Hills and Ledgerwood studied the management practices of more effective and less effective district offices.⁴⁹ Synthesis of these research efforts will add further understanding to the already existing empirical relationships.

⁴⁸Stogdill, "Intragroup-Intergroup Theory and Research," p. 49.

⁴⁹Pacinelli, "Rehabilitation Counselor Job Satisfaction as it Relates to Perceived Leadership Behavior and Selected Background Factors;" Miller and Muthard, "Job Satisfaction and Counselor Performance in State Rehabilitation Agencies;" Irzinski, "Factors Related to Turnover in a State Rehabilitation

The Rehabilitation Service Administration Management Training Program initiated at the University of Oklahoma provides a means by which research findings can be utilized in the training of rehabilitation personnel.⁵⁰ The importance of human relation training has been pointed out by Smits and Aiken's survey of counselors' assessments of the in-service training needs of their supervisors. The overall assessment of supervisor competency was favorable, with ratings of inadequacy ranging from 13.0% to 35.2%. The major needs in order of priority were seen as:

Rank	Supervisor's Knowledge/Skill Area	Counselors Checking "Inadequate"
1	Ability to handle interpersonal relationships in administrative settings, directing, motivating, and stimulating staff performance.	35.2%
2	Ability to identify strengths and weaknesses in individual performance, to develop techniques for stimulating professional growth and improvement of services.	33.5%

Agency;" Smits and Aiken, A Descriptive Study of Supervisory Practices as Perceived by Counselors in State Vocational Rehabilitation Agencies; Carroll R. Bostic, "The Effect of Perceived Leadership Climate in the State Rehabilitation Agency" (unpublished doctoral dissertation, University of Missouri, 1969); Harold D. Viaille, William G. Hills and Donna E. Ledgerwood, Management Practices in Vocational Rehabilitation District Offices (Norman, Oklahoma; Regional Rehabilitation Research Institute, The University of Oklahoma, 1973).

⁵⁰This program offers seminars in the following areas: (1) Basic Principles of Management, (2) Program Planning, (3) Manpower Development, (4) Human Relations and Communication, (5) Problems in Organization, (6) Management of Managers, (7) Problems of State Directors, (8) Supervisory Management, (9) Managerial Decision Making, (10) Program Evaluation, (11) Management of Change.

- | | | |
|---|---|-------|
| 3 | Ability to track casework methods in such a way as to improve case study evaluation, diagnosis, and planning for rehabilitation services. | 31.7% |
| 4 | Knowledge of related regulations such as those associated with Public Welfare, Workmen's Compensation, Wage and Hour, etc. | 28.7% |
| 5 | Understanding of the principles of human behavior, the significant aspects of interpersonal relationships as reflected in client-counselor and supervisor-counselor activities. ⁵¹ | 27.4% |

Moriarty, Director of the Ohio Bureau of Vocational Rehabilitation, rests the agency's success as a whole on the relationship the supervisor develops with his counselors. Belonging to a meaningful group association is a basic counselor need, which is the supervisor's major responsibility.

It is a fact well recognized by state directors and by the federal Office of Vocational Rehabilitation that supervision in vocational rehabilitation is important, that supervisory techniques and skills can be improved through training, and that good supervision is closely related to successful recruitment and retention of competent counseling staff. This area of training need has long been given high priority by the Council of State Directors of Vocational Rehabilitation.⁵²

Argyris has suggested that the effective training of supervisors in "Human Relations and Communication" may require new techniques that will bring a change in "general or total behavior." He states:

⁵¹Stanley J. Smits and Wilbur J. Aiken, A Descriptive Study of Supervisory Practices as Perceived by Counselors in State Vocational Rehabilitation Agencies (Bloomington, Indiana: Indiana University, 1969), p. 31.

⁵²Edward J. Moriarty, "The Supervisor in a State Rehabilitation Agency," Journal of Rehabilitation, 25, 1959, p. 25.

Thus, training in human relations, no matter how simple, is not only a matter of "getting the subject matter across clearly," but it is also a matter of understanding how to help the foreman to incorporate the subject matter as part of his personality.⁵³

Increasing the individual's perceptual accuracy may be one means of incorporating the "Human Relation Skill" into the supervisor's personality.

Zalkind and Costello feel that:

We are not yet sure of the ways in which training for perceptual accuracy can best be accomplished but such training cannot be ignored. In fact, one can say that one of the important tasks of administrative science is to design research to test various training procedures for increasing perceptual accuracy.⁵⁴

The purpose of this research will attempt to assess the supervisor's perceptual complexity and its relationship to leadership behavior, effectiveness and job satisfaction. It is hypothesized that a more cognitively complex supervisor will make more accurate perceptual judgments of people which in turn allows him a wider range of freedom for accomplishing agency programs. Developing the capacity of individual freedom will be the future challenge to the administrative sciences. Schroder, Karlins and Phares state:

The noblest goal of the individual is to develop the capability to be free, and the aim of all institutions and governments should be to help the individual in his quest for freedom. Individuals differ in their ability

⁵³Argyris, Personality and Organization--The Conflict Between the System and the Individual, p. 22.

⁵⁴Sheldon S. Zalkind and Timothy W. Costello, "Perception: Some Recent Research and Implications for Administration," Administrative Science Quarterly, 7, 1962, p. 235.

to be free. It is a learned ability--an information-processing ability--unrelated to the amount of knowledge a person learns or his memory capacity. Freedom is the ability of a person to produce his own conceptions, to generate alternative and conflicting conceptions, to think and value in terms of multiple perspectives, and to define one's identity and his relationships to others on the basis of these self-generated conceptions of the world.⁵⁵

Organization of the Research

This research study is organized into five chapters. The introduction, methodology, and justification are presented in Chapter I. In Chapter II definitions of leadership are presented and three theoretical concepts of leadership are reviewed. The theoretical framework for the Ohio State Leadership Studies outlines the direction for this research study. Next, Stogdill's theory of Individual Behavior and Group Achievement is presented. This theory attempts to synthesize some diverse research findings and also leads to the development of Form XII of the LBDQ. Finally, the Human Relations Research Groups' leadership paradigm is outlined. This paradigm emphasizes the perceptual capacities of the leader.

In Chapter III the definition of personality is discussed, and the philosophical and theoretical concept of personality is presented. The philosophical and theoretical position of Kelly's The Psychology of Personal Constructs is outlined. The Repertory Test was developed from this theory. Next, the theoretical positions of Bieri and Schroder, et al. outline the theory of human information processing. From these works the Modified Repertory test and the

⁵⁵Harold M. Schroder, Marvin Karlins and Jacqueline O. Phares, Education for Freedom (New York: John Wiley and Sons, Inc., 1973), p. 77.

Paragraph Completion test were developed.

In Chapter IV the research literature, utilizing the theoretical approaches mentioned above, is reviewed. In Chapter V the results and discussion of this research project are presented.

CHAPTER II

LEADERSHIP

Introduction

A persistent theme throughout history has been to identify the nature and quality of leadership. The trait approach focused first on identifying characteristics pertinent to the leader. Finding the trait approach inadequate the Ohio State Leadership studies turned to examining and measuring performance or behavior in the situation. Stogdill's synthesization of theory and experimental studies resulted in the formulation of a theory of leadership and group achievement, which proposes expectation theory as an important element in determining group outputs. Tannenbaum, et al. represent the newest emphasis in leadership research and focuses attention on identifying the psychological capacities that undergird the leadership process.¹

Kelly's formal expectations theory outlines the necessary connection between the leadership process and group achievement. Finding the current psychoanalytical thought inadequate Kelly proposed a theory that is an anticipatory rather than a reactive system. The additional concepts of Bierl and

¹Robert Tannenbaum, Irving R. Weschler, and Fred Massarik, Leadership and Organization--A Behavioral Science Approach (New York: McGraw-Hill Book Company, 1961).

Schroder, et al. complete the system of psychological processes.²

The approach taken in this leadership research can be considered to be situational and interactional. Leadership is explained as an interaction between the leader and follower in the situation. Gibb's summary of the situational approach emphasizes the process of social interaction which focuses on the leader's capacity for the perception of individual differences. He states:

First, leadership is always relative to the situation. This relativity may be broken down with respect to each of the major variables in the situation: (a) It is relative to the group task and goal. Individual accession to the leader role is dependent upon the group goal. Insofar as there can be no leadership in the abstract, it must be toward a goal, however weakly that goal may be valued. (b) It is relative to group structure or organization. Leader behavior is determined in large part by the nature of the organization in which it occurs. (c) It is relative to the population characteristics of the group or, in other words, to the attitudes and needs of the followers. The leader inevitably embodies many of the qualities of the followers, and the relation between the two may be so close that it is often difficult to determine who affects whom and to what extent. For this reason it is possible for leadership to be nominal only.

Second, the basic psychology of the leadership process is that of social interaction. It is distinctly a quality of a group situation. No individual can be conceived of as a leader until he shares a problem with others, until he communicates with them about the problem, until he has succeeded in enlisting their support in giving expression to his ideas. Leader and follower must be united by common goals and aspirations and by a will to lead, on one side, and a will to follow on the other, i. e., by a common acceptance of each other. It is a corollary of this principle that the leader must have membership character in the group which sponsors him for that role, because leader and followers are interdependent. The leader must be a member of the group, and must share its norms, its objectives, and its aspirations.

Finally, given group-membership character. . . leader status depends upon perception of individual differences. It is because there are

²Chapter V will more fully interrelate these concepts.

individual differences of capacity and skill that one of a group emerges as superior to others for meeting particular group needs.³

The interactional approach emphasizes the quality of interaction between the leader and follower. The basic assumption is that leadership cannot be studied in isolation, since a major requirement for analysis is group interaction. The situational factors are seen to play a minor role in leadership effectiveness. It is the interaction of the leader's characteristics with those in his social field that are the relevant factors. Jennings identifies the primary individual leader characteristics in the following statement:

The individual's extent of emotional expansiveness towards others is seen to be his individual characteristic, a characteristic which finds consistent expression without relevance to the environmental factors which may exert "press" for or against its fulfillment. . . .

In the inter-personal structure related to the criteria of living-working, the choice--status of the individual appears directly attributable to the capacities he shows in interaction with colleagues to lessen or augment the satisfaction of common group life. In this sense, choice is found to be evoked towards him or withheld from him, more or less in proportion to how he carries his role in relation to other members' roles, or, to state it more precisely, in proportion to how others perceive him to interact with them for the benefit of their group regime. Individuals whose behavior in this context enable other members to have an expanding experience (by the latter's definition) appear to earn a high choice-status. Individuals whose behavior in this context are considered to retard or be disruptive to the kind of group experience wanted are found to be isolated or near isolated from the choice of their fellow members.⁴

³Cecil A. Gibb, "Leadership," in Gardner Lindzey (ed.) Handbook of Social Psychology (Cambridge: Addison-Wesley Publishing Company, 1954), p. 915.

⁴Helen Hall Jennings, Leadership and Isolation--A Study of Personality in Interpersonal Relations (New York: Longmans, Green, and Company, 1950), p. 265.

Thus, the existentialist view of man is the basic orientation of this leadership research. This view looks at the totality of man and situation and considers that man is conscious of himself as an important part of his experience. Man's capacities for interaction with others is the determining factor in his self development and leadership status. The situation may limit his choices, but it does not define behavior. In Knowles and Saxberg's view, the subjective personality "reflects man's interactions with his environment in terms of the 'inner man' looking out, developing self and self-awareness." The individual "has the potential to define himself 'free', and he should do so."⁵

According to Cartwright and Zander , understanding leadership from a scientific point of view has presented behavioral scientists with two major problems. The first problem is the confusion surrounding the question of what leadership should be from the question of what consequences follow specific leadership practices. The second problem is to find an acceptable definition of leadership.⁶

In answering these two questions this chapter will first present some definitions of leadership and discuss the change in leadership research methodologies. Secondly, the Ohio State University Leadership Paradigm, Stogdill's Individual Behavior and Group Achievement Theory, and the Human Relation Research Group Leadership Paradigm are presented. This chapter and Chapter III

⁵Henry P. Knowles and Borje O. Saxberg, Personality and Leadership Behavior (Reading, Mass: Addison-Wesley Publishers Company, 1971), p. 69.

⁶Dorwin Cartwright and Alvin F. Zander (eds.), Group Dynamics: Research and Theory (Evanston, Ill.: Row, Peterson Company, 1953), p. 535.

on personality theory were developed with the important stress Rychlak places on psychological theory as:

. . . one which views theory as a coherent set of hypothetical, conceptual (meaning, in psychology, operational defined), and pragmatic (predictive) principles forming the general frame of reference for a field of inquiry. From this coherent entity, the theoretician deduces principles, formulates hypotheses, and then undertakes the action necessary to validate these hypotheses.⁷

Leadership Definitions

Definitions of leadership have varied according to the disciplinary background of the researcher and the various approaches utilized in identifying a leader. Gibb categorizes the definitions of a leader into the following classifications: (1) the leader as an individual in a given office, (2) the leader as one who exercises influence over others, (3) the leader defined in terms of influence upon syntality, (4) the leader as focus for the behavior of group members, (5) the leader as one who engages in leadership behavior, and (6) the leader in terms of sociometric choice.⁸ The following leadership definitions can be placed into one of these six classifications.

The initial approach adopted by Shartle and Stogdill in the Ohio State University studies in Naval Leadership was that individuals who occupy positions which are commonly presumed to demand leadership ability are proper and likely

⁷Joseph F. Rychlak, A Philosophy of Science for Personality Theory (Boston: Houghton Mifflin Company, 1968), p. 11.

⁸Gibb, "Leadership," pp. 880-884.

subjects for the study of leadership.⁹ This was a convenient starting place for their investigation since there was such a high degree of structure in the organization they studied. Morris and Seeman in the Ohio State Leadership studies say:

One tentatively adaptable definition of leadership emphasizes its influence aspect: leadership acts are by persons which influence other persons in a shared direction. This definition implies a positional relationship between the "leader" and other persons. A leader position is defined in terms of relative status in an influence hierarchy (or relative degree of influence).¹⁰

Cattell suggested that the existence and nature of leadership can be found in either the group structure (i. e., the internal organization and interactions of the group) or in the group syntality (i. e., the final group performance). Although there are significant correlations between structure and syntality, he states that:

If the ultimate criterion of leadership is to be the effect of leadership structure upon the actual group performance. . . then it is better to measure this directly as such, at the group performance level, rather than try to infer it from the structure level.¹¹

⁹Ralph M. Stogdill and Carrol L. Shartle, Methods in the Study of Administrative Leadership (Columbus: Bureau of Business Research, College of Commerce and Administration, Ohio State University, Monograph 80, 1955), p. 1.

¹⁰Richard T. Morris and Melvin Seeman, "The Problem of Leadership: An Interdisciplinary Approach," American Journal of Sociology, 56, 1950, p. 149.

¹¹Raymond B. Cattell, "New Concepts of Measuring Leadership in Terms of Group Syntality," Human Relations, 4, 1951, p. 174.

Cattell, therefore, defines the leader as "a person who has a demonstrable influence upon group syntality."¹²

Gouldner defines a leader as "any individual whose behavior stimulates patterning of behavior in some group. By emitting some stimuli, he facilitates group action toward a goal or goals, whether the stimuli are verbal, written, or gestural." In completing the interaction process between the leader and follower Gouldner states that not only does the leader "emit" stimuli, but he will also receive stimuli from the followers. "The norms the leader applies, the conflicts he resolves, the proposals he legitimates, involve his continual adaptation to, and organization of stimuli which are issued by the behavior of group members."¹³

Likert's interactional approach to management stresses the role of "effective communication" and "supportive interpersonal relationships." In applying the principle of supportive relationships, Likert maintains that the superior-subordinate relationship is essential for goal accomplishment. The principle is stated as follows:

The leadership and other processes of the organization must be such as to insure a maximum probability that in all interactions and in all relationships within the organization, each member, in the light of his background, values, desires, and expectations, will view the experience as supportive and one which builds and maintains his sense of personal worth and importance.¹⁴

¹²Cattell, "New Concepts of Measuring Leadership in Terms of Group Syntality," p. 175.

¹³Alvin Ward Gouldner, Studies in Leadership: Leadership and Democratic Action (New York: Harper and Row Publishers, Inc., 1950), p. 17.

¹⁴Rensis Likert, The Human Organization Its Management and Value (New York: McGraw-Hill Book Company, 1967), p. 47.

The findings on leader-subordinate relationships reveal a wide range of individual differences in personality. "Their reflection in ways of behaving show leadership to be definable by a manner of interacting with others."¹⁵

Using a sociometry approach Jennings' definition views the individual's satisfaction and effectiveness to be a function of his interpersonal relationships.

She maintains that as the self grows, the individual becomes more affected by the interpersonal relationships that exist for him. Jennings states:

The emotional milieu of the self is affected by the other selves with whom the self is in contact and the interpersonal experiences that take place between the self and others. If the self is inadequate in capacity to enter into relationships with other selves, the individual may find himself in a relatively neutral relationship to almost all the surrounding selves so that he is neither able to act upon them nor to be contacted by them, and to the extent that this is true the individual has fewer effective avenues for contributing his experience to the experience of others or to be enriched by theirs.¹⁶

After an extensive review of definition of leadership Gibb finds Pigors' definition the most satisfactory:

. . . that leadership is a concept applied to the personality-environment relationship to describe the situation when a personality is so placed in the environment that his "will, feeling, and insight direct and control others in the pursuit of a common cause."¹⁷

Gibb regards the interactional theory of leadership, which considers leadership as a "function of personality, and of the social situation, and these two in

¹⁵Jennings, "Leadership and Isolation," p. 185.

¹⁶Ibid., p. 6.

¹⁷Gibb, "Leadership," p. 882.

interaction," as the most comprehensive. Gibb goes on to state that it's not the various variables that determine the interaction, "but that it is the perception of the leader by himself and by others, the leader's perception of those others, and the shared perception by leader and others of the group and the situation with which we must deal."¹⁸

Pigors' definition of the leadership situation is as follows:

Leadership is a process of mutual stimulation which, by the successful interplay of relevant individual differences, controls human energy in the pursuit of a common cause.

On this basis we can also construct a definition of a leader. Any person may be called a leader during the time when, and in so far as, his will, feeling, and insight direct and control others in the pursuit of a cause which he represents.

Similarly, we might define any person as a follower during the time when, and in so far as, he accepts and is directed by the will, feeling, and insight of another in the pursuit of a cause which that other represents.¹⁹

Effective leadership requires a flexibility in responsiveness to varying situational factors. The selection of a leadership approach first requires what Argyris calls "Reality Diagnosis." Reality-centered leadership diagnoses each situation with the predisposition that the individual has his own view of reality. Argyris maintains the essential ingredient is "self-awareness and awareness of others."²⁰ The kinds of diagnostic abilities he lists are:

¹⁸Gibb, "Leadership," p. 914.

¹⁹Paul Pigors, Leadership or Domination (Boston: Houghton-Mifflin Company, 1935), p. 16.

²⁰Chris Argyris, Personality and Organization— The Conflict Between the System and the Individual, p. 207.

1. **Knowing (cognitive) abilities:** the abilities which we use to know our world.
2. **Doing (motor) abilities:** the abilities which permit us to do things physically.
3. **Feeling abilities:** the ability to experience the many complex feelings in life and to be sensitive to other people's feelings.²¹

As the individual's personality grows and matures, Argyris states, "he not only acquires more parts (i. e. , more needs, abilities), but he also deepens many of them. As these parts are acquired, they are also integrated with the already existing parts of the personality." Argyris' definition of leadership as "the ability to effectively influence the opinions, attitudes, and behavior, of subordinates," depends upon the development of the leader's diagnostic abilities.²²

Based on the psychoanalytic theory of Freud,²³ Redl distinguishes ten different emotional relationships between the "central person"²⁴ and other group members. Whereas Freud called the person around whom group formative process crystalizes the leader, Redl reserves the leader term for only one type of the ten emotional relationships. The relationship termed leadership is restricted to one characterized by love of the members for the central person.

²¹Argyris, Personality and Organization — The Conflict Between the System and the Individual, p. 34.

²²Ibid., p. 47.

²³Sigmund Freud, Group Psychology and Analysis of Ego (London: International Psychoanalytic Library, 1922).

²⁴Redl defines the central person as one "around whom" group formative processes take place, the "crystallization" point of the whole affair.

The personality of the central person is incorporated into the ego ideal of the followers. On the basis of this similarity the group members wish to become the type of person the leader is, which results in the development of group emotions toward each other.²⁵

In describing "the leader" Redl uses an illustrative example of a teaching situation. Of the teacher leader he says:

He also stands for "work and discipline" and gets his youngsters to comply without much outward pressure. However, the basis on which he gets them to support his authority is a little different. He differs from the patriarch mainly in that he strongly sympathizes with the drives of the children. They are clearly aware of it. He plays a dual role in his teaching. In his own super-ego, he is identified with the order and the demands of the school which he represents; but he is keenly aware of the instinctual demands of the youngsters. In order to accomplish both he has to display considerable technical skill. . . . To be understood--accepted--is the minimum requirement for group happiness in this class.²⁶

As the above example portrays, whenever two or more persons interact on the basis of "mental similarity," the phenomena of leadership and fellowship is evident. Pigors defines mental similarity as "a community of mental content and intention which may range all the way from a general emotional congruence to explicit unity of purpose."²⁷ In most of these leadership definitions the underlying theme of congruence has been emphasized. The degree of congruence between the leader and his followers in a situation will depend on the

²⁵Fritz Redl, "Group Emotion and Leadership," Psychiatry, 1, 1942, p. 576.

²⁶Ibid., p. 577.

²⁷Pigors, "Leadership and Domination," p. 5.

leader's perceptual capacities. The "deeper" the leader's perceptual capacities the more effective communication and supportive interpersonal relationships will ensure.

Turning to Cartwright and Zander's first problem, Gibb states that the most objective approach to analyzing the leadership phenomenon is one in which the criterion of leadership "resides in the measurement of the influence of group members upon one another."²⁸ This approach concentrates on the leader's behavior by identifying leadership acts and the frequency they are exhibited. Gibb states:

To shift the problem of definition from that of defining the leader to that of defining leader behavior or leadership acts has advantages for particular researchers and for particular systematic psychologies, but it offers no solution to the definitional problem. Whether we couch our definitions in terms of the leader or the leadership act it is, of course, leader behavior with which the psychologist is concerned.²⁹

The first step for the researchers in focusing their attention on leader behavior was to circumvent the semantic problem, which emerged from the definitional dilemma of incorporating into the term leadership both descriptive and evaluative components. Stogdill and Coons in the Ohio State Leadership Studies approached this dilemma by deciding (1) that description and evaluation should be conducted as separated research operations,³⁰ and (2) that description

²⁸Gibb, "Leadership," p. 916.

²⁹Ibid., p. 884.

³⁰In actual practice the description and evaluation were often carried out simultaneously. For a review of concurrent and predictive validity studies see Korman, A. K., "'Consideration', 'Initiating Structure', and Organizational Criteria- a review," Personnel Psychology, 19, 1966, pp. 349-361.

should precede evaluation.³¹ Halpin states two methodological advantages to be gained from shifting the emphasis from "leadership" to the analysis of leader behavior.

In the first place, we can deal directly with observable phenomena, and need make no a priori assumptions about the identity or structure of whatever capacities may, or may not, undergird these phenomena. Secondly, this formulation keeps at the forefront of our thinking the importance of differentiating between the description of how leaders behave and the evaluation of the "effectiveness" of their behavior in respect to specified performance criteria.³²

Early leadership research studied the more convenient phenotypic data, which has resulted in no acceptable theory of leadership. During the past few decades the research emphasis has focused upon the situational determinants of leader behavior. A major benefit arising from this approach has been the new ways of constituting the crucial variables of leadership. One of these new approaches is to explore the relevance of the genotypic variables in predicting the leader's behavior.³³ This approach however, does require a priori assumptions about the structure of capacities that undergird the phenomena of leader behavior. Halpin states that "eventually, it may be

³¹Ralph M. Stogdill and Alvin E. Coons, Leader Behavior: Its Description and Measurement (Columbus, Ohio: Bureau of Business Research, Ohio State University, Monograph #88, 1957), p. 2.

³²Andrew W. Halpin, Theory and Research in Administration (New York: The Macmillan Company, 1966), p. 86.

³³The distinction between phenotypic and a genotypic research approach is described in chapter 1 of Kurt Lewin, Dynamic Theory of Personality (New York: McGraw-Hill Book Company, 1935).

possible to define a few variables of genotypic order that will prove predictive of leader behavior in a variety of situations."³⁴

The search for an acceptable definition of leadership will continue to be as varied as the research methodologies for studying leader behavior. Based on the methodology adopted in this research study the definition of leadership revolves around the cognitive capacities an individual possesses for understanding himself and his interpersonal relationships. The mental similarity among the leader and the group members will affect the degree of leadership present.

Leadership Theory

Ohio State University Leadership Paradigm

An interdisciplinary study on the performance or behavior of individuals in the leadership role was initiated in 1945 by the Personnel Research Board of the Ohio State University. The principal aim of the studies was to test hypothesis concerning the situational determinates of leader behavior. Stogdill's survey suggested that leadership is not a unitary human trait, but is a function of the interaction of individual, group, and organizational factors. Leadership exists in individuals to the extent of their interaction with others.³⁵ Stogdill and Shartle state that leadership must "be studied as a relationship between

³⁴Halpin, Theory and Research in Administration, p. 85.

³⁵Ralph M. Stogdill, "Personal Factors Associated with Leadership: A Survey of the Literature," Journal of Psychology, 25, 1948, pp. 35-71.

persons, and as an aspect of organizational activities, structures, and goals."³⁶

When the Ohio State studies were initiated there was no satisfactory definition or approach to studying the leadership phenomenon. Stogdill and Shartle emphasize the study's aim of improving,

. . . the methodology for studying leadership, to establish criteria for judging it, and to prepare information and techniques which may be useful in selecting and training persons who may occupy leadership positions in various types of organization structure.³⁷

The studies proceeded on the assumption that "leadership is a process of interaction between persons who are participating in goal oriented group activities." Stogdill and Shartle point out the three concepts implied in this assumption are (1) leadership resides in specific persons, (2) leadership is an aspect of group organization, and (3) leadership is concerned with attaining objectives.³⁸

The paradigm for the Ohio State University Leadership Studies is set forth in Figure 1. The paradigm provides a useful way of analyzing the nature of the leadership situation. The model stresses the analysis of group and individual factors from the following five perspectives: as results of the leader's behavior, as concomitants, determiners, or conditioners of the leader's behavior, and as criteria for evaluation. Morris and Seeman state:

³⁶Ralph M. Stogdill and Carrol L. Shartle, "Methods for Determining Patterns of Leadership Behavior in Relation to Organizational Structure and Objectives," Journal of Applied Psychology, 32, 1948, pp. 286-291.

³⁷Ibid., p. 286.

³⁸Ibid., p. 287.

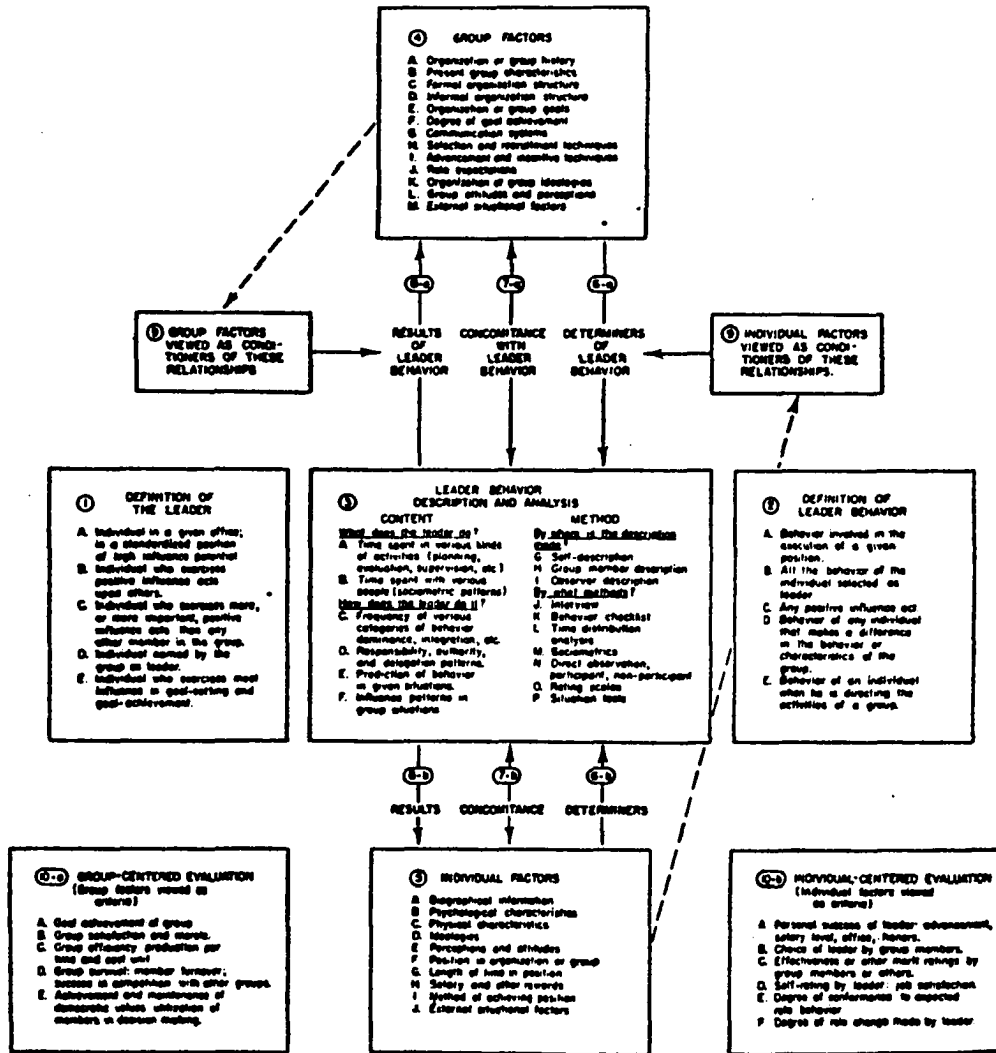


Figure 1 -- A Paradigm For the Study of Leadership
 Morris and Seaman, "The Problem of Leadership," Chart 1, p. 151.

For even the simplest definition of a leader, i. e. , an individual influencing group effectiveness, indicates the need to study the attributes of groups--group morale, integration, and productivity--as well as the attributes of individuals--motivations, aspirations, and perceptions.³⁹

The research studies conducted under this paradigm, sampled from group and individual factors and analyzed their relationship to leadership behavior. Morris and Seeman define group factors as "characteristics of the group in which the individual designated as leader exercise the function of leader" and individual factors as "characteristics of the individual designated a leader." The analyses under this paradigm can be conducted in either of the following four methodologies: a job analysis and organizational structure approach, a status factor approach, a group dimension approach, and a communication and leader effectiveness approach. The authors describe the communication and leadership effectiveness approach as one:⁴⁰

. . . in which are examined first, the relation of leader effectiveness to specific leader differences, e. g. , the ability to estimate group opinion (5E); and, second, the relation among multiple criteria for effectiveness, e. g. , high group morale (10-aD) and ratings by subordinates (10-bC).⁴¹

The communication and leader effectiveness approach is the methodological approach used in this research study. This study is interested in discovering the individual factors which determine differences in leader behavior.

³⁹Morris and Seeman, "The Problem of Leadership," p. 149.

⁴⁰The numbered letters refer to Figure 2.

⁴¹Morris and Seeman, "The Problem of Leadership," p. 153.

The theoretical relation postulated is that the individual factors (5E, Perception and attitudes) are determiners (6-b) of leader behavior (3C, frequency of various categories of behavior), which in turn affects the individual-centered evaluation criteria (10-b-C, effectiveness or other merit ratings by the members or others) and the group-centered evaluation criteria (10-a-A, goal achievement of group). The method used for leader behavior description is the behavior checklist (3K). Morris and Seeman state the reason for research of this nature.

We are interested here in discovering the group or individual factors which determine differences in leader behavior (6-a, 6-b). As such factors are found, we will be in a better position to test our findings by controlled experimentation in the selection, training, and evaluation of leaders.⁴²

Individual and Group Achievement Theory

Drawing on Learning Theory, Interaction Theory, and Expectation Theory, Stogdill assumes that performances, interactions, and expectations represent the basic input variables to the development of a theoretical system explaining the internal structure and operations of a group.⁴³ The assumption underlying the theoretical system are:

1. A social group can be described in terms of the performances, interactions, and expectations of its members.

⁴² Morris and Seeman, "The Problem of Leadership," p. 154.

⁴³ Ralph M. Stogdill, Individual Behavior and Group Achievement - A Theory, the Experimental Evidence (New York: Oxford University Press, 1959).

2. Human beings act, sense, perceive, feel, and learn, and that these experiences determine to some extent their behavior in relation to other persons.
3. A social order determines to some extent the behaviors of individuals as well as the kinds of groups that are formed in a given culture.
4. The nature of the group will be determined by the kinds of people who make up its membership as well as by the social environment of which it is a part.⁴⁴

Stogdill's theoretical input-output system is illustrated in Figure 2.

This representation contains the variables that are needed to outline the structural requirements of the theory. Performances, Interactions, and Expectations are the member input variables and are aspects of individual or interpersonal behavior. These three elemental concepts are structurally quite complex and are sufficient in Stogdill's terms to "generate a theory of organization achievement."⁴⁵ The interaction of these three behavioral variables result in the properties of role differentiation and role performance or in Group Structure and Operation. The mediating variables of Group Structure and Operation, which are designated as Formal Structure and Role Structure, provide the structuring and patterning of the input variables necessary for the Group outputs of Productivity, Morale, and Integration. Stogdill states:

The proposed theoretical system is concerned only with the group and what happens inside it. It is concerned with the individuals who make up the group membership, their relationships to each other, and their joint action as an entity. It seeks to isolate and define basic dimensions

⁴⁴ Stogdill, Individual Behavior and Group Achievement, p. 17.

⁴⁵ Ibid., p. 13.

<u>MEMBER INPUTS</u>	<u>MEDIATING VARIABLES</u>		<u>GROUP OUTPUTS</u>
Behaviors	Formal Structure	Role Structure	Achievement
Performances	Function	Responsibility	Productivity
Interactions	Status	Authority	Morale
Expectations	(Purpose, Norms)	(Operations)	Integration
GROUP STRUCTURE AND OPERATIONS			EFFECTS

Figure 2 -- Structure of a Theory of Organization Achievement
 Stogdill, Individual Behavior and Group Achievement, Figure 1, p. 13.

1. Performance is a response which may be identified as one of the actions or reactions that constitute the operations of an interaction system.
2. Interaction is an action-reaction sequence in which the reactions of each participant in the sequence are responses to action initiated by other participants.
3. Expectation as a readiness for reinforcement, is a function of drive, the estimated probability of occurrence of a possible outcome, and the estimated desirability of the outcome. Motivation is regarded as a function of drive and confirmed desirability estimates.
4. Group Structure and Operations are the formal structural characteristics, Function and Status, defined in relation to group purpose, and the role structural characteristics, Responsibility and Authority, defined in relation to group operations.
5. Productivity is the degree of change in expectancy values created by the group operations.
6. Morale is the degree of freedom from restraint in action toward a goal.
7. Integration is the extent to which structure and operation are capable of being maintained under stress.
8. A group is an open interaction system in which actions determine the structure of the system and successive interactions exert coequal effects upon the identity of the system.

of group organization as a foundation for the development of a theory of group achievement and to show how these variables operate to generate group structure and achievement.⁴⁶

The system operates from left to right in the modification or transformation of the input variables; performances, interactions, and expectations, through the mediating variables; formal structure and role structure, into output variables; productivity, morale and integration. Stogdill regards the input-output system as unstable, but makes the assumption in regards to the transformation process:

. . . it is difficult to substantiate the assumption of absolute input-output equality. However, a high degree of equivalence may be assumed. In order to increase output above a standard level, it appears necessary to increase input energy or values.⁴⁷

Based on this theoretical outline a theory of leadership is generated, which is based upon the performance, expectations, and interactions of group members. Once the group has agreed upon a common task it continues to operate to achieve the three outcomes of (1) the maintenance of group productivity, (2) the maintenance of structural and operational integration, and (3) the maintenance of sufficient freedom of action for individual initiative in the performance of defined roles.⁴⁸ These three maintenance requirements are the basic functions of the leader's role.

⁴⁶Stogdill, Individual Behavior and Group Achievement, p. 13.

⁴⁷Ibid., p. 13.

⁴⁸Stogdill, "Intragroup-Intergroup Theory and Research," p. 56.

The concept of role is central to this theoretical outline. Roles are defined in terms of the expectations a group member has relative to his own and others' performances and interactions. Each member acquires a differentiated role dependent upon his performance, interaction, and expectation.

Leadership is one aspect of role differentiation. Stogdill states:

Roles are defined in terms of mutual expectations. In view of this consideration, it would seem that leadership can best be defined in terms of the initiation and maintenance of structure in expectation and interaction.⁴⁹

Leadership is defined in terms of two of the input variables, expectations, and interactions that generate the theoretical system of group purpose, structure, operations, and achievements. The leader is expected to initiate interaction structure, reinforce the expectation of a continuing structure and provide the freedom for initiation of performance in other member roles. Performance is not included in the definition of leadership because the leader can not do all the members' work and it is not confined only to leadership. It appears that greater leadership status is granted to a member who exhibits tolerance in the initiation of task performance. Stogdill states:

. . . one of the prime functions of leadership is that of providing freedom for the initiation of performance in other roles. The only restriction of this freedom for initiative that concerns leadership is such a restriction as may result from the maintenance of structure in role definition. Within this range of definition, initiative for performance remains with the

⁴⁹Stogdill, "Intragroup-Intergroup Theory and Research," p. 57.

occupant of each position in the group. Any serious violation of this freedom for initiative is likely to reduce group productivity, and possibly integration as well.⁵⁰

Human Relations Research Group Leadership Paradigm

The Human Relations Research Group at the University of California, Los Angeles, has developed a frame of reference based on the following conclusions of Sanford.

It now looks as if any comprehensive theory of leadership will have to find a way of dealing in terms of one consistent set of rubrics, with the three delineable facts of leadership phenomenon:

1. The leader and his psychological attributes,
2. the follower with his problems, attributes, and needs, and
3. the group situation in which followers and leaders relate with one another.⁵¹

The purpose of the research group's frame of reference was to develop a comprehensive theory which would guide future research and practice by (1) pointing to variables that needed to be identified and measured, (2) stating hypotheses of these variables that underlying leader effectiveness, and (3) providing meaningful objectives for the development of more adequate leaders.⁵²

Tannenbaum et al. theoretical approach defines leadership as:

⁵⁰ Stogdill, "Intragroup-Intergroup Theory and Research," p. 57.

⁵¹ Fillmore H. Sanford, Current Trends: Psychology in the World Emergency (Pittsburgh: University of Pittsburgh Press, 1952), p. 60.

⁵² Robert Tannenbaum, Irving R. Weschler and Fred Massarik, Leadership and Organization—A Behavior Science Approach (New York: McGraw-Hill Book Company, 1961), p. 22.

. . . interpersonal influence exercised in situations and directed, through the communication process, toward the attainment of a specific goal or goals. Leadership always involves attempts on the part of a leader (influences) to affect (influence) the behavior of a follower (influence) or followers in situation.⁵³

The authors' definition treats leadership as a process which is primarily concerned with the interpersonal influence a leader exerts on his followers through the scope of his "repertory of communication behavior." The effectiveness of this leadership process is a function of the "dynamic interrelationship of the personality characteristics of the leader, the personality characteristics of the follower, and the characteristics of the situation within the field of each individual."⁵⁴

The Human Relations Research Group finds little conceptual differences between communication and the leadership process. Communication is the influence process through which the leader can function. Tannenbaum et al. state:

The leader uses communication stimuli as tools by which he may affect the perceptual-cognitive structure of the follower. He attempts to select from his alternative communication behaviors those which he believes will appropriately affect the followers so that the desired attitude change may in turn result in the desired behavioral changes.⁵⁵

The leader's effectiveness is, therefore, determined by the selection of those communication behaviors that result in the follower changing his attitudes and behavior in line with the leader's desired goals. In the view presented the communication capacities receive exclusive focus, which in turn rely upon the

⁵³Tannenbaum, et al., Leadership and Organization, p. 24.

⁵⁴Ibid., p. 31.

⁵⁵Ibid., p. 33.

perceptual sophistication of the leader.

Figure 3 represents the dynamics of the leadership process which places primary emphasis upon the leader's perceptual capacities. Tannenbaum, et al. sequentially defines the leadership process as follows:

1. Perceptual capacities are the leader's potential for responding to a variety of external stimuli.
2. Action capacities are the leader's potential for responding behaviorally under a variety of conditions.
3. Needs of the leader are important in two respects:
 - (a) The leader's needs significantly determine what he can see or do in the course of his influence attempts.
 - (b) The leader's needs by affecting other aspects of his personality structure, have impact on how he is perceived by the follower.
4. Perceptual flexibility is the range of stimuli of which the leader is cognitively aware in an actual leadership situation. The perceptual flexibility of a leader is his responsiveness towards attributes of the follower and attributes of the situation.
5. Actual relevance refers to a link in the mind of the leader between the stimulus perceived and the goal desired. "Structuring the situation" and "understanding the follower" are the stimuli perceived.
6. Social sensitivity is used synonymously with the social perceptual accuracy of the leader. The type of social sensitivity Tannenbaum's model refers to is interpersonal sensitivity is the understanding of others.
7. The psychological map is the end result of the leader's "structuring the situation" and "understanding the follower." The leader forms a mental image which will facilitate the achievement of his desired goal. The image is an end result of the perceptual preliminaries (perceptual flexibility, judging relevance, sensitivity).
8. Action flexibility is the repertory of behavior the leader has available for responding to his environment. The authors' definition of

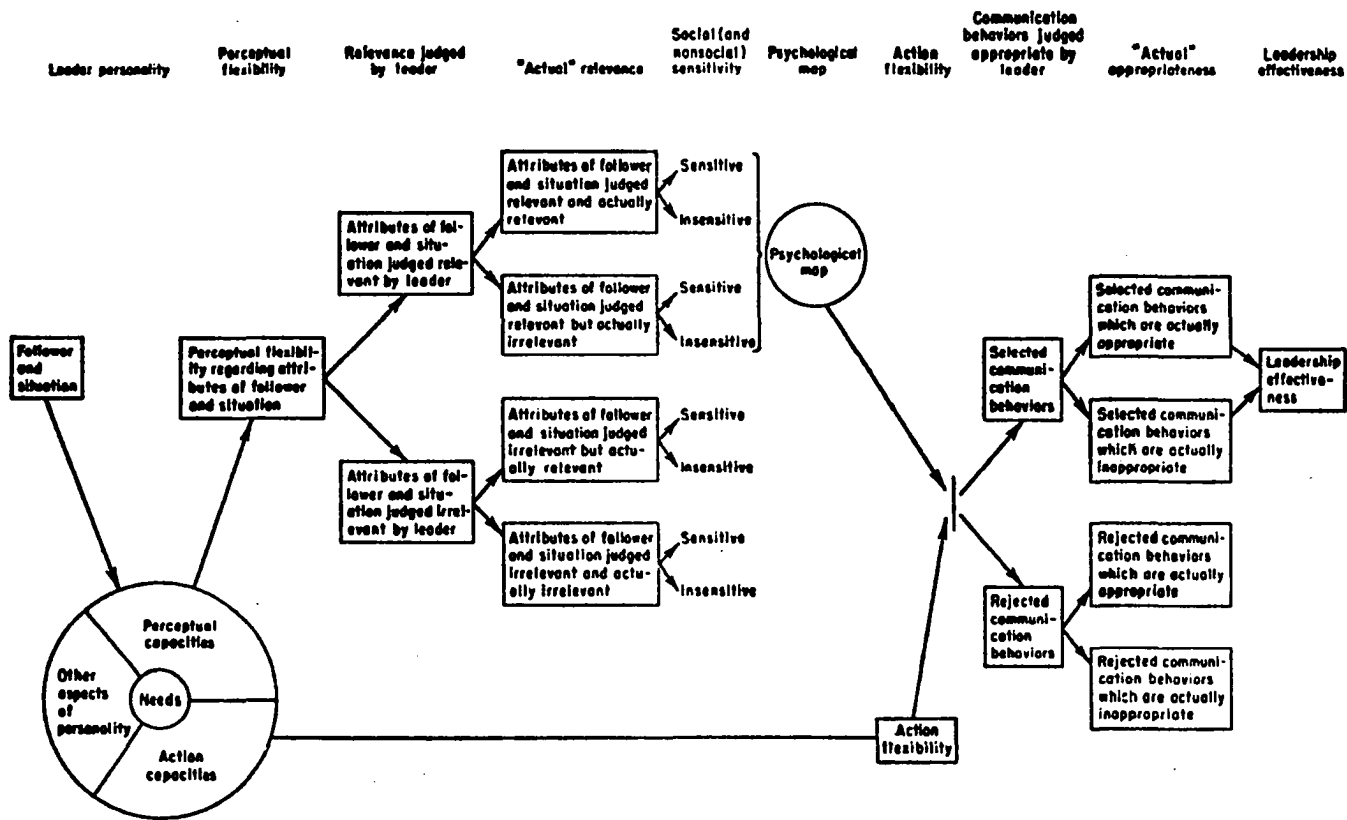


Figure 3 -- The Leadership Process.
 Tannenbaum, et al., Leadership and Organization, Figure 2-1, p. 32.

leadership limits this action to the range of communication flexibility available to the leader.

9. Selection of communication behavior judged appropriate by leader and "actual appropriateness" is the leader's evaluation of his psychological map of the follower and the situation. With the information provided by his map the leader will select the most appropriate communication behavior. The authors state that the communication capacities are the exclusive focus, which are seen as 'potential skills for the production of symbolic stimuli, including verbal behavior, facial expressions, gestures, etc., for the purpose of changing followers' attitudes.⁵⁶

The dynamics of the leadership process can be described as follows.

The leader interacts with the follower in a particular situation. The interaction first begins with the leader's perception of a range of individual and situational stimuli. The needs of the leader along with other aspects of his personality will affect his perceptual capacities.

Together with the leader's personality attributes and the quality and quantity of available stimuli the leader's realized potential for perception is determined. The perceptual flexibility of the leader, as defined by his perceptual capacity, determines the range of stimuli that the leader becomes aware of cognitively. From this range of stimuli the leader will distinguish which stimuli are relevant to accomplishing his goals.

The range of relevant stimuli perceived by the leader may be accurate as it agrees with some stipulated criterion of reality. When the attributes of the follower and the situation are judged relevant and actually are relevant, the leader accuracy of perception is termed social sensitivity. The end result of

⁵⁶Tannenbaum, et al., Leadership and Organization, pp. 34-41.

this cognitive perceptual structuring of the follower and situation is called the psychological map.

The psychological map forms a mental image for the leader of the "barriers and facilitating circumstances that bear on the desired goals of his leadership behavior."⁵⁷ It is at this point in the model that the leader's personality (needs and action capacities) enters the system in order to determine the leader's action flexibility. When the range of possible communicative actions has been determined, the psychological map of the leader will facilitate the selection of that communication behavior judged appropriate by the leader. Tannenbaum, et al. state that:

The effective leader has available an adequate repertory of communication behaviors (as part of his action flexibility). In the utilization of this repertory, the effective leader will be skillful in selecting those behaviors which are most appropriate for the accomplishment of the goals which he seeks.⁵⁸

The essence of the leadership process is the interpersonal influence exhibited by the leader. This influence is directly dependent upon the leader's perceptual capacities. Tannenbaum, et al. state that the individual's perceptual and action capacities are viewed as "internal bases for subsequent behavior." The authors feel that these capacities are conceptually analogous to variables such as intelligence and emotional stability and can be characterized by some stability and generality.⁵⁹

⁵⁷Tannenbaum, et al., Leadership and Organization, p. 39.

⁵⁸Ibid., p. 42.

⁵⁹Ibid., p. 34.

The "internal" basis underlying the leader's perceptual capacities will directly influence his "social perceptual accuracy" which is synonymously defined in the model as social sensitivity. Various "levels of depth" can be associated with the leader's social perceptual accuracy. It is the "deeper levels" of the "internal" basis that facilitate the understanding of a follower's unconscious dynamics. Tannenbaum, et al. state with respect to prediction that:

It may be that superficial behavioral characteristics, public attitudes, feelings and attitudes privately held, and unconscious processes represent increasing degrees of depth and therefore of difficulty. Further, the task of prediction becomes increasingly difficult as the leader is required to make many and complex extrapolations from available stimuli to the desired judgment.⁶⁰

The effectiveness of the leadership process is a function of the inter-relationship of the models three major variables: the personality characteristics of the leader, the personality characteristics of the follower, and the characteristics of the situation. The degree to which a leader's selected behaviors are appropriate will be determined by the psychological attributes facilitating social perceptual accuracy, in particular, the social sensitivity of the leader in understanding others. Tannenbaum, et al., state:

The personality of the follower (as it manifests itself in a given situation) becomes a key variable with which the leader must deal. The needs, attitudes, values, and feelings of the follower determine the kinds of stimuli produced by the leader to which the follower will respond. The

⁶⁰Tannenbaum, et al., Leadership and Organization, p. 38.

personality of the leader (also manifesting itself in a situation) influences his range of perception of follower and situation, his judgment of what is relevant among these perceptions, and thence his sensitivity to the personality of the follower and to the situation. The leader's personality also has impact on his behavioral repertory (action flexibility) and on his skill in selecting appropriate communication behaviors.⁶¹

Rogers' self theory provides the basic assumptions upon which the leadership processes are based.⁶² The importance of perception and communication, in the process of leadership proceeds from nineteen propositions that develop a general theory of personality. A tentative formulation of a general law of interpersonal relationships is centered on the concept of congruence. Congruence indicates an accurate matching of experience, awareness, and communication. Rogers states:

The greater the congruence of experience, awareness, and communication on the part of one individual, the more the ensuing relationship will involve: a tendency toward reciprocal communication with a quality of increasing congruence; a tendency toward more mutually accurate understanding of the communications; improved psychological adjustment and functioning in both parties; mutual satisfaction in the relationship.

Conversely the greater the communicated incongruence of experience and awareness, the more the ensuing relationship will involve; further communication with the same quality; disintegration of accurate understanding; less adequate psychological adjustment and functioning in both parties; and mutual dissatisfaction in the relationship.⁶³

Rogers continues by stating: "With probably even greater formal accuracy

⁶¹ Tannenbaum, et al., Leadership and Organization, p. 31.

⁶² Carl R. Rogers, Client-centered Therapy; Its Current Practice, Implications, and Theory (Boston: Houghton Mifflin Company, 1951).

⁶³ Carl R. Rogers, On Becoming a Person (Boston: Houghton Mifflin Company, 1961), p. 344.

this general law would be stated in a way which recognizes that it is the perception of the receiver of communication which is crucial." Two of Rogers' propositions, which will be further explored in the next chapter, indicate the importance of perception in understanding leader behavior:

The best vantage point for understanding behavior is from the internal frame of reference of the individual himself. . . .

When the individual perceives and accepts into one consistent and integrated system all his sensory and visceral experiences, then he is necessarily more understanding of others and is more accepting of others as separate individuals.⁶⁴

Summary

The research approach adopted in this study considers the existential view of man. The individual's adjustment to the world is predominantly determined by his own capacities for interacting with his surroundings. While a final solution to the definitional problem was not found, the definitions of leadership presented, emphasized the perceptual and integrative capacities of the individual personality. The mental similarity between the supervisor and his subordinates underlies the leadership process presented.

The supervisor's behavior is an important variable in any organization's effectiveness. The Ohio State Leadership Studies have provided a broad theoretical framework (Figure 1) for conducting research into the determinates of leadership behavior. Within this framework the approach utilized for the present research was the communication and leader effectiveness approach. The

⁶⁴Rogers, Client-centered Therapy, p. 494 and p. 520.

emphasis is upon identifying the genotypic variables in predicting leader behavior. The paradigms of Stogdill (Figure 2), and Tannenbaum, et al. (Figure 3) further illustrate the leadership process that is outlined by the Ohio State theoretical framework.

In Chapter III the theoretical framework of the individual's perceptual capacities will be presented. This theory is predicated on the idea that as the self grows in its self awareness, the "perception of individual differences" and the "emotional expansiveness towards other" deepens. The more congruent the leader's perceptual capacities the more he will be accepting of others as separate and unique individuals. In Humphreys' words:

Man is earth when conforming to earth,
He is heaven when conforming to heaven,
He is Tao when conforming to Tao.
Let him thus conform himself to the suchness of things.⁶⁵

⁶⁵Christmas Humphreys, The Way of Action (London: George Allen and Unwin, Ltd., 1958), p. 63.

CHAPTER III
PERSONALITY

Introduction

Personality is viewed as the mediating structure that an individual uses in the perception of his world. A basic axiom of perceptual psychologists is that the individual's behavior is a product of his perceptual capacities. Human behavior is studied from the internal frame of reference of the individual, which has been defined as the information processing model of personality.

The information processing model presented is based on the theoretical frameworks of Kelly, Bieri, and Schroder, Driver and Streufert.¹ The model postulates the two interdependent properties of dimensions and integrative rules. The attempt is to build a system emphasizing the processes the individual utilizes in construing and organizing his perception of others, in order to efficiently anticipate his social environment.

The "self" has an important place in the framework of this model. When the "self" becomes a part in an individual's personal construct system he is able to structure his own behavior with respect to others in his social environment.

¹Kelly, The Psychology of Personal Constructs; Bieri, "Cognitive Complexity-Simplicity and Predictive Behavior"; Schroder et al., Human Information Processing.

This development enables the individual to respond meaningfully to the frame of reference of others. Kelley reveals the relation between the perceptual process and the growth of "self."

One of the most revealing facts about perception is that it is selective. We do not see everything in our surroundings. There are thousands of coincidences in the situation in which we find ourself at any point of time. To perceive them all would cause pandemonium. We therefore choose that which the self feeds upon. The direction of the growth of self depends upon those choices. The choices seem to be on the basis of experience and unique purpose. We all have a background of experience upon which perception is in part based. We cannot see that which we have no experience to see. But experience is not enough to account for what happens, for there are many objects in our surrounding with which we have had experience, but which we do not perceive.

The additional element which appears to determine perceptive intake is purpose. There is ample evidence now to show that all living tissue is purposive, and, of course, in man this purpose is partly, but only partly, on the conscious level. In perception, purpose operates automatically most of the time. And so, just as we do not eat everything, our psychological selves are particular as to what they feed on. What they take in has to suit their purpose and has to fit onto their past experiences.²

In this chapter Allport's approach to defining personality is presented.³

Allport's comprehensive definition of personality sets the framework for the theoretical positions discussed in this chapter. The philosophical and psychological framework of Kelly's Psychology of Personal Constructs provides the

²Earl C. Kelley, "The Fully Functioning Self," in Association for Supervision and Curriculum Development Yearbook Committee's, Perceiving, Behaving, Becoming: A New Focus for Education (Washington: National Education Association, 1962), p. 14.

³Gordon W. Allport, Personality: A Psychological Interpretation (New York: Henry Holt and Company, 1937).

basis upon which Bieri and Schroder et al., expand the information processing model of personality.

Personality Definitions

The diversity of personality definitions is considerable and no substantive definition of personality has been applied with any generality. The definitions adopted by experimenters are a result of their particular theoretical preference. Instead of presenting a number of personality definitions based on varying theoretical frameworks, a general classification of definition will be presented. Allport's survey of the literature extracted fifty definitions which were classified into two broad categories.⁴

The term personality had its origination in the Greek theatrical mask Persona. The persona came to stand for the opposite meanings of the Mask and the Player. Allport reports that in the early writings of Cicero (106-143 BC) the four distinct meanings of persona are (1) as one appears to others (but not as one really is), (2) distinction and dignity (as in a style of writing), (3) the part someone (e.g., a philosopher) plays in life, and (4) an assemblage of personal qualities that fit a man for his work.⁵ Using these four meanings Allport developed his classification of personality definition. Meanings (1) and (2) can be categorized as biosocial definitions and meanings (3) and (4) can be categorized as biophysical definition.

⁴The definitions of personality are the subject matter of Chapter II in G. W. Allport, Personality.

⁵Ibid., p. 26.

The biosocial definition stresses the outer appearance of the individual, in terms of his stimulus value. This approach assumes that it is the reaction of other individuals to the subject that determines his personality. Burgess' sociological definition, while biosocial in nature, contains remnants of the original Ciceronic usages:

Personality is the integration of all the traits which determine the role and status of the person in society. Personality might, therefore, be defined as social effectiveness.⁶

Allport objects to the implication that the individual's personality resides in the "responding other" and prefers the biophysical definitions, which locates the personality in the capacities of the individual. The focus of attention is upon the organization of the individual's mental life. Thus, Hetherington and Muirhead define personality as:

That form of individuality. . . which is rendered possible by the possession of mind and will. To be a person is to be one and indivisible, but it is a unity that is achieved, not by the suppression of natural instincts, temperament, and capacities, but by the permeation of them with a common spirit--the power of finding freedom, not from them but in them.⁷

The biophysical definitions of personality are classified into five psychological types. Omnibus definitions include everything about the individual from biological dispositions to tendencies acquired by experience. Integrative and

⁶E. W. Burgess, "Personality." In The Proceedings of the Second Colloquium on Personality Investigation (John Hopkins University Press, 1930), p. 149.

⁷Hector W. Hetherington and J. H. Muirhead, Social Purpose (New York: The Macmillan Company, 1918), p. 104.

configurational definitions stress the organization of personal attributes.

Hierarchical definitions are known by the various levels of integration or organization, with a unifying principle at top. Adjustment definitions stress the individuals adjustment to his environment based on his integrative capacities. Distinctiveness definitions stress the organized system that differentiate individuals in a group.

For the psychologist some definitions seem to be more serviceable than others. Completely unsuitable are the biosocial and the omnibus definitions. The intervening variable definitions, suggested by the last four definitional approaches, are the types most widely accepted by psychologists. Allport's comprehensive definition represents a synthesis of contemporary psychological usage and considers personality as a system that intervenes between the person as a stimulus to other people and the responses he makes.

Personality is the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to his environment.⁸

Many theorists who study the ways in which an individual adjusts to his environment have adopted the concept of information processing. The information processing model emphasizes the identification and acquisition of useful stimuli, the transformation of the information received into meaningful organizations, and the use of these organizational structures in choosing an optimal response. The major interest is in the cognitive processes. Bieri states:

⁸Allport, Personality, p. 48.

The cognitive theorist accepts as a basic assumption that a process of stimulus or information transformation mediates any antecedent-consequent relation in behavior.⁹

There are two major approaches to studying information processing structures as personality characteristics. One group of theories emphasizes specific structural tendencies and the second classifies structures according to their general ability to differentiate and integrate information. The second approach which this research effort adopts, deals with information processing complexity. A basic aspect of personality is how the individual discriminates along and across stimulus dimensions and how varied he is in ways of organizing and integrating information.

Kelly's theoretical framework places cognitive structure at the center of personality theory and attempts to use this concept as a major explanatory variable in behavior. The Fundamental Postulate of his personality theory is that, "a person's processes are psychologically channelized by the ways in which he anticipates events."¹⁰ Subsequently, Bieri introduced the concept of cognitive complexity-simplicity, reflecting the idea that a cognitively complex individual has available more construct dimensions than does a cognitively simple individual.¹¹ Schroder, et al., view personality as the style a person uses in

⁹James Bieri, "Cognitive Structures in Personality," in Harold M. Schroder and Peter Suedfeld (eds.), Personality Theory and Information Processing (New York: The Ronald Press Company, 1971), p. 178.

¹⁰Kelly, The Psychology of Personal Constructs, p. 46.

¹¹Bieri, "Cognitive Structures in Personality," in Schroder and Suedfeld, op. cit., p. 263.

processing information. The focus is "on the number and connectedness of conceptual as integrating rules used for organizing such information in thinking, judging, and valuing."¹² Personality is defined by the particular theoretical framework employed by these authors, and as such, is viewed as the cognitive capacities a person utilizes in interaction with his environment.

Personality Theory

The Psychology of Personal Constructs

Kelly's theoretical framework builds a system of personality which looks forward and sees behavior as anticipatory not reactive. The central core of Kelly's theory is that man is continually attempting to predict and control the events he experiences. In this way man's task of living is likened to a scientist's pursuit of truth, which is the empirical procedure of stating hypotheses and testing them out in the world of experience. Kelly states:

It is customary to say that the scientists ultimate aim is to predict and control. This is a summary statement that psychologists frequently like to quote in characterizing their own aspirations. Yet, curiously enough, psychologists rarely credit the human subjects in their experiments with having similar aspirations. It is as though the psychologist were saying to himself, "I, being a psychologist, and therefore a scientist, am performing this experiment in order to improve the prediction and control of certain human phenomena; but my subject being merely a human organism, is obviously propelled by inexorable drives welling up within

¹²Harold M. Schroder, "Conceptual Complexity and Personality Organization," in H. M. Schroder and P. Suedfeld (eds.) Personality Theory and Information Processing (New York: The Ronald Press Co., 1971), p. 240.

him, or else he is in gluttonous pursuit of sustenance and shelter."¹³

Man the scientist bases his thinking on certain prior convictions about the universe. Kelly's philosophical system makes three assumptions about the nature of the universe and the nature of man. Kelly assumes (1) that the universe is real and that man is gradually coming to understand it, (2) that the universe is integral, and (3) that the universe can be understood along a dimension of time.¹⁴ These assumptions have important implications for the psychological theory that is developed.

Kelly accepts that the universe contains real objects, events, and thoughts. The reality of thoughts have two important implications. First, an accurate awareness of the universe comes about by man's successive interpretations of it. Rogers indicates this is a phenomenological theory, which "superimposes normative thinking upon the phenomenological data."¹⁵ Secondly, the reality of thoughts emphasizes the viability of a theory without relying on more substantial events.

Kelly presumes that the universe is integral. This means that the universe functions as a unit with everything affecting everything else. Since man is coming to know the world an integrated system of thought is necessary in order

¹³Kelly, The Psychology of Personal Constructs, p. 5.

¹⁴Ibid., p. 6-7.

¹⁵Carl R. Rogers, "Intellectualized Psychotherapy, Review of G. A. Kelly, The Psychology of Personal Constructs," Contemporary Psychology, 1, 1956, p. 357.

to explore and analyze the system of interrelated relationships. The essence of this assumption is that man is continually construing these relationships in an attempt to develop a coherent view of the universe. Life, Kelly states:

. . . is an interesting relationship between parts of our universe wherein one part, the living creature, is able to bring himself around to represent another part, his environment. Sometimes it is said that the living thing is "sensitive," in contrast to the nonliving thing, or that he is capable of "reaction." It emphasizes the creative capacity of the living thing to represent the environment, not merely to respond to it. Because he can represent his environment, he can place alternative constructions upon it and, indeed, do something about it if it doesn't suit him. To the living creature, then, the universe is real, but it is not inexorable unless he chooses to construe it that way.¹⁶

A represental model of the universe is construed by each man which permits him to understand and react to the world. As the universe unfolds the constructions of reality will be modified for better future predictions. Time, Kelly says, "provides the ultimate bond in all relationships."¹⁷

A universe measured along a time line is a universe that is continually changing. In order to contemplate change the dimension of time is essential. Kelly sees man existing primarily in the dimension of time and secondarily, in the dimension of space. The events of a man's life make sense only when the past, present, and future are properly considered. Kelly states:

If we want to know why man does what he does, then the terms of our whys should extend themselves in time rather than space; they should be events rather than things; they should be mileposts rather than

¹⁶Kelly, The Psychology of Personal Constructs, p. 8.

¹⁷Ibid., p. 6.

destinations. Clearly, man lives in the present. He stands firmly astride the chasm that separates the past from the present. He is the only connecting link between these two universes. He, and only he, can bring them into harmony with each other.¹⁸

These philosophical statements about the nature of the universe provide the essence of Kelly's psychological statements concerning the nature of man. The nature of man's thinking is but a small replica of the moving universe. As a particle of the whole, man is continually evolving an integrated system of thought to transcend his past, present, and future. The destiny of man lies in his ability to properly anticipate the occurrence of future events. Kelly states:

But though our devices for interpreting circumstances are still meager, and the human adventure continues to be fraught with dire uncertainties, it does not follow that facts ever dictate our conclusions, except by the rules we impose upon our acts. Events do not tell us what to do, nor do they carry their meanings engraved on their backs for us to discover. For better or worse we ourselves create the only meanings they will ever convey during our lifetime. The facts of life may even be brutal, but they are nonetheless innocent of any evil intent, and we can scarcely accuse them of taking sides in our epistemological disputes. Our ever present task is to devise ways of anticipating their occurrences, and thus to prepare ourselves for assuming a more and more responsible role in the management of the universe.¹⁹

The philosophical position of constructive alternativism leads to Kelly's psychological theory. This theory envisions man as a form of movement, who

¹⁸George A. Kelly, "Man's Construction of His Alternatives," in Brendan Maher (ed.) Clinical Psychology and Personality: The Selected Papers of George Kelly (New York: John Wiley and Sons, Inc., 1969), p. 86.

¹⁹George A. Kelly, "A Brief Introduction to Personal Construct Theory," in Donald Bannister (ed.) Perspective in Personal Construct Theory (New York: Academic Press, 1970), p.3.

is the link between the past and the future. The Fundamental Postulate and eleven Corollaries are formulated with a conjunctive view of man anticipating his experiences.²⁰

Fundamental Postulate: A person's processes are psychologically channelized by the ways in which he anticipates events. Man is considered a form of perpetual motion with his direction controlled by the ways events are anticipated.

Construction Corollary: A person anticipates events by construing their replications. Man attempts to anticipate future events by detecting certain recurrent themes that he has experienced.

Individual Corollary: Persons differ from each other in their construction of events. Individuals have different interpretations of the same event based on their different constructions.

Organization Corollary: Each person characteristically evolves for his convenience in anticipating events, a construction system embracing ordinal relationships between constructs. Personality is conceptualized as a personal hierarchial system, which is the person's way of viewing himself and the world.

Dichotomy Corollary: A person's construction system is composed of a finite number of dichotomous constructs. A person's construction system is abstracted on the basis of similarity and contrast.

Choice Corollary: A person chooses for himself that alternative in a dichotomized construct through which he anticipates the greater possibility for the elaboration of his system. The direction of a person's choice depends on the betterment of his anticipations and is governed by his awareness of the possibilities.²¹

Range Corollary: A construct is convenient for the anticipation of a finite range of events only. A construct is not relevant to all perceptual events. It has a focus of convenience.

²⁰The Fundamental Postulate and its eleven Corollaries are the subject of Chapter II in G. A. Kelly, The Psychology of Personal Constructs I (New York: W. W. Norton and Company, 1955), pp. 46-104.

²¹The 1955 version referred to "the extension and definition" of the system, but the term "elaboration" is now used to cover both.

Experience Corollary: A person's construction system varies as he successively construes the replication of events. As a person's anticipation of events unfold, his construction system will be altered to improve his prediction.

Modulation Corollary: The variation in a person's construction system is limited by the permeability of the constructs within whose range of convenience the variants lie. A permeable construct is one that is more open to the inclusion of new events than is an impermeable construct.

Fragmentation Corollary: A person may successively employ a variety of construction subsystems which are inferentially incompatible with each other. A person's reactions to a similar event may seem inconsistent until viewed from a superordinate construct.

Commonality Corollary: To the extent that one person employs a construction of experience which is similar to that employed by another, his processes are psychologically similar to those of the other person. The events two people experience don't have to be the same or similar, but their construction has to be the same or similar in order to have psychological congruence.²²

Sociality Corollary: To the extent that one person construes the construction processes of another, he may play a role in a social process involving the other person. The extent to which one person construes another's viewpoint determines the interpersonal understanding and interaction that will ensue.

Kelly carefully worded his fundamental postulate and eleven corollaries to surmount the problems of, why is man motivated and what determines the direction of his choices. First, Kelly rejects the push theories based on stimuli and the pull theories based on needs, and instead simply defines man as active. Secondly, man moves in the direction that will result in increased meaning for himself.

Kelly points out that when the individual begins to use himself as a datum in the context of a superordinate system, his behavior in comparison to others

²²Kelly originally used the term "psychological" to modify "processes," but revised it to modify "similar."

is significantly affected.²³ The constructs the individual forms with his self operates as a tight control on his own social behavior. As the individual moves toward increased meaning, the self constructs make it possible to organize his own behavior in relation to others.

Cognitive Complexity-Simplicity

Bieri sets forth a theoretical framework, which focuses on the differentiation of interpersonal perception. The central core of this framework is based on the predictive accuracy of an individual's behavior. Predictive accuracy is the extent to which one person's expectations of another's behavior are accurate. Following the perceptual framework of Kelly, Bieri assumes that:

. . . a basic characteristic of human behavior is its movement in the direction of greater predictability of an individual's interpersonal environment. It is further assumed that each individual possesses a system of constructs for perceiving his social world. These constructs are invoked and form the basis for making predictions. The constructs composing the system are the characteristic modes of perceiving persons in the individual's environment.²⁴

The personal constructs are fundamental in predicting a person's behavior. The predictive efficiency of an individual's system of constructs lies in its versatility. Bieri states:

Inasmuch as constructs represent differential perceptions or discriminations of the environment, it would be expected that the greater the degree of differentiation among the constructs, the greater will be the predictive

²³Kelly, The Psychology of Personal Constructs, p. 131.

²⁴James Bieri, "Cognitive Complexity-Simplicity and Predictive Behavior," Journal of Abnormal and Social Psychology, 51, 1955, p. 263.

power of the individual. In other words, there should be a positive relationship between how well an individual's system of constructs differentiates people in the environment and how well the individual can predict the behavior of these people.²⁵

The concept of differentiation refers to the relative number of dimensions used in construing another's behavior. The degree of differentiation is defined as its cognitive complexity-simplicity. A cognitively complex individual has a more versatile system that mediates the perception of other individuals and anticipates their behavior. The position taken is that an individual's anticipatory behavior and its accuracy are viewed within the conception of a personality structure.²⁶

Human Information Processing

Schroder et al., set forth a theoretical framework which focuses on the level of information processing. The levels of information processing refers to the nature and interdependence of conceptual rules for organizing dimensional values. Four conceptual-complex structural levels will be described, which are points along a somewhat continuous dimension. These four structural levels are low, moderately low, moderately high, and high integration indices.²⁷

Figure 4 illustrates the low integration structure, which is characterized

²⁵Bieri, "Cognitive Complexity-Simplicity and Predictive Behavior," p. 263.

²⁶Ibid., p. 263.

²⁷The theoretical description is the subject of Chapter II in Schroder, et al., Human Information Processing (New York: Holt, Rinehart and Winston, Inc., 1967), pp. 14-28.

by compartmentation and hierarchical integration of parts (rules). When the dimensional perception of a range of stimuli are organized in a fixed way, the structure is hierarchical and lacks sets of alternate interacting parts. A hierarchical structure can have a small or a large number of parts, but the relationship between them are relatively static and may be expressed as a single circle.

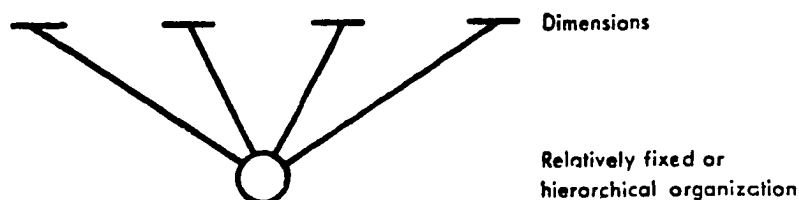


Figure 4 -- Low Integration Index
Schroder et al., Human Information Processing, p. 15.

The following implications derived from these characteristics are (1) at any given time, stimuli are "read" or interpreted unidimensionally, (2) comparatively few degrees of freedom exist for generating conflict or ambiguity or for resolving ambiguity, and (3) dimensions are dichotomous with respect to the distribution of stimuli.²⁸

Certain behavioral patterns are generated by the low integrative structure. There is categorical thinking in terms of black or white. Since the structure of thinking is based upon a single fixed rule the individuals' ability to think in terms of relativity is reduced. Conflict is minimized, since stimuli either fit into

²⁸Schroder, et al., Human Information Processing, p. 16.

a category or are excluded from consideration. The conceptual apparatus prevents alternative generation. Behavior is anchored in external condition. Absolute categorization restricts the integral integrative processes resulting in no internal causation. As a result of the above factors behavior is generalized to a great extent. The perception of the other person is over-generalized and viewed from the subject's point of view.

The central feature in the further evolvment of higher level structural properties is the development of rules for categorizing stimuli, and for articulating structure and order. The differentiation of stimulus placement within a single dimension opens up the developmental possibilities. As the conceptual level increases, alternative perspectives and interrelationships are generated from the same dimensional values. This development represents an increase in the concept of "self" as an internal causal agent. Schroder et al., state:

The more integratively complex the information processing structure, the more the "self" enters as a causal agent in generating new perspectives and new ways of relating to objects. In simple attitudes, the ways of relating are fixed and absolute and the potential for generating alternate perspectives is low. Conceptual level defines the level of awareness of self as agent and provides an objective measure of self-development.²⁹

Figure 5 illustrates the moderately low integration structure, which is characterized by the emergence of alternate combinations of dimensional scale values. The evolvment of this conceptual level requires the generation of alternative interpretations of a stimulus on any one dimension at the same time. This

²⁹Schroder, et al., Human Information Processing, p. 9.

information processing system results in the generation of more information and evaluations which are less fixed. The major characteristics of this integrative structure is the presence of a conceptual apparatus that can generate alternate organizations of dimensions, but lacks apparatus for relating as organizing differentiated rules.

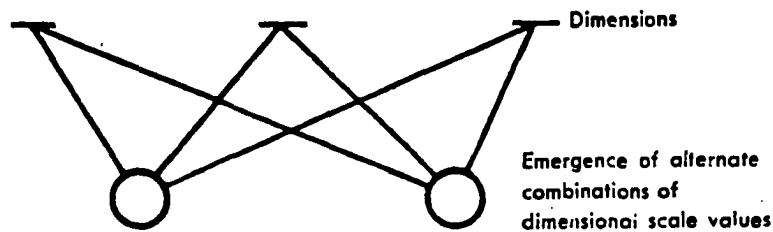


Figure 5 -- Moderately Low Integration Index
Schroder et al., Human Information Processing, p. 18.

Certain behavioral patterns are generated by the moderately low integrative structure. With the emergence of the internal causation processes there is a movement away from absolutism. There is less categorical thinking because of the availability of alternate schemata, but at the same time there is more instability and noncommitment because of the absence of complex rules for integrating the alternate schemata. A form of rigidity and negativism is still present at this level due to the fact that when one perceptual alternative is selected the other becomes almost completely ineffective.

Figure 6 illustrates the moderately high integration structure which is characterized by the emergence of more complex rules for comparing and relating

different perspectives. At this level, the person is able to combine various perspectives in his decision making. The major implication of this development is the increase in the amount of functional information available. This is due to

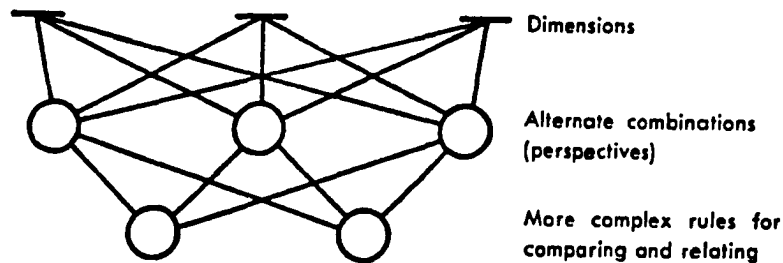


Figure 6 -- Moderately High Integration Index
Schroder et al., Human Information Processing, p. 20.

the fact that in the process of comparing, the alternative perspectives become more independent and therefore remain open to the perception and effects of other alternatives.

A number of behavioral patterns are generated by the moderately high integration structure. As the system becomes less deterministic the causal "self" enters more into the internal processes. The information processing structure is now more selfreflective. The person is able to generate strategic adjustment processes, which means he can view the effects of his behavior from a number of viewpoints. Therefore, the individual's behavior becomes less anchored in the past and increasingly determined by the internal processes of

the structure.

Figure 7 illustrates the high integration structure which is characterized by a structure for generating complex relationships. At this highest level, comparison rules can be further integrated resulting in highly abstract functioning.

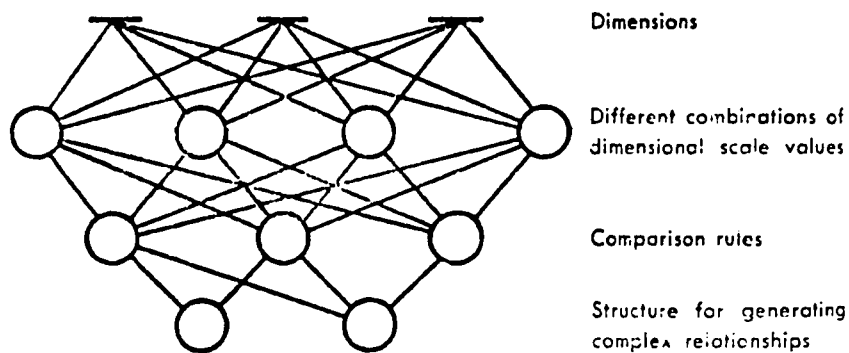


Figure 7 -- High Integration Index
Schroder et al., Human Information Processing, p. 22.

Schroder et al., state that as the number and complexity of the parts of a structure increase it is accompanied by:

(a) an increase in the degree of diversity the system can generate and handle, in the number of schemata and dimensions, and in the complexity of their organization; (b) greater discrimination between stimuli within dimensions; and (c) an increased potential for the structure to generate alternate patterns of interaction and new schemata without the imposition of new external conditions. Internal processes can produce alternate organizations of rules for viewing the world. These schemata can then be tested by exploration.³⁰

³⁰Schroder, et al., Human Information Processing, p. 23.

Behaviorally the high integration structure should be effective in adopting to a complex and changing situation. The effectiveness of this structure will be maximized if the performance criteria are based upon the utilization of the alternate interactive processes and the ability to cope with a changing situation. With the delineation of many systematically related alternatives, decisions at a particular time should be most effective for adapting to future events.

At each successive level of integrative evolvment the information processing structure acquires additional functioning parts. In the low integrative structure rules specify the conditions that govern the choice of stimulus categories. Then in the moderately integrative structure additional rules specify conditions under which alternate schemata are used. Next, the moderately high integrative structure specifies additional rules in which schemata are compared. Finally, at the high integrative structures general laws are generated that systematize a large body of differentiated information. This evolvment process represents a growing self awareness, which ultimately will have a considerable influence on an individual's interpersonal interactions. The more integratively complex the information processing structure the more ways a person has of perceiving and interacting with his world.

Organization of Dimensional Scale Values of Information

The organization of dimensional scale values of information is a persistent and important problem in psychology. The learning process and personality development stress both the acquisition of dimensions and the organization of dimensional information. The conceptual framework presented here emphasizes

the degree of differentiation and integration of interpersonal stimuli. Operationalizing the processes of integration has been described by a linear additive model and by a more complex configural model.

Figure 8 illustrates the multidimensional single-rule structure for processing information. Compared to other relevant people, stimulus person A is differentiated at scale points x , y , and z along the three independent dimensions: c (creativity), o (orderliness), and r (reciprocity - the ability to understand another's point of view). The combinatory rule expresses the weights (65%, 25%, and 10%) utilized when the scale values are combined in decision making. The linear additive model assumes that regardless of the scale value or the value of other dimensions the scale value is weighted the same for all persons.

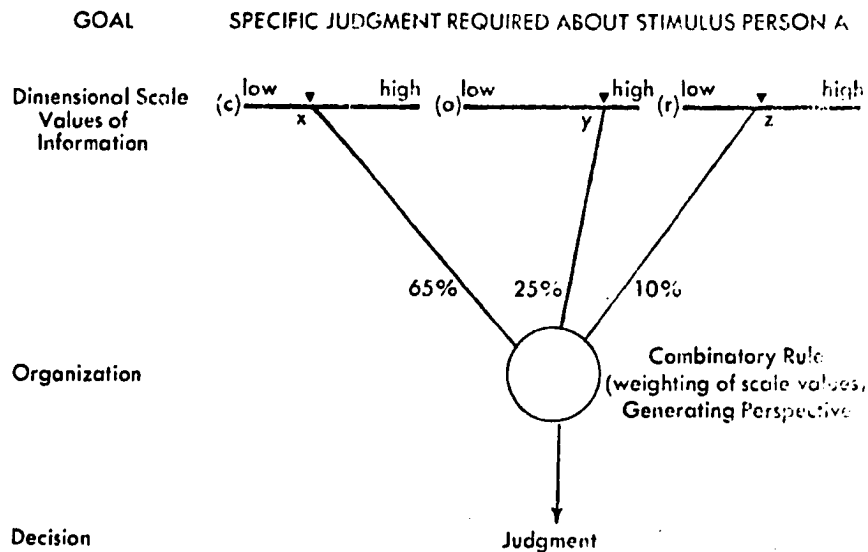


Figure 8 -- A Multidimensional Single-rule Structure.
Schroder, "Conceptual Complexity and Personality Organization," p. 249.

Figure 9 illustrates the multidimensional multirule structure for processing information. Using the same informational input creativity, orderliness, and reciprocity the three scale values x , y , and z are organized by two combinatory rules which generate two alternative judgments. The configural model assumes that differential weighting of scale values produces different perspectives. Schroder states:

This ability to generate multiple perspectives by weighting similar dimensional scale values of information differently, represents a critical step in personality development in any stimulus domain. In the interpersonal domain it may be observed as a reduction in absolutistic thinking. It represents the ability to view and understand events from another person's perspective and to arrive at alternative judgments or opinions about people or events. It represents a marked advance in the complexity of thinking, in providing the foundation for an individual to generate conflict and uncertainty for himself.³¹

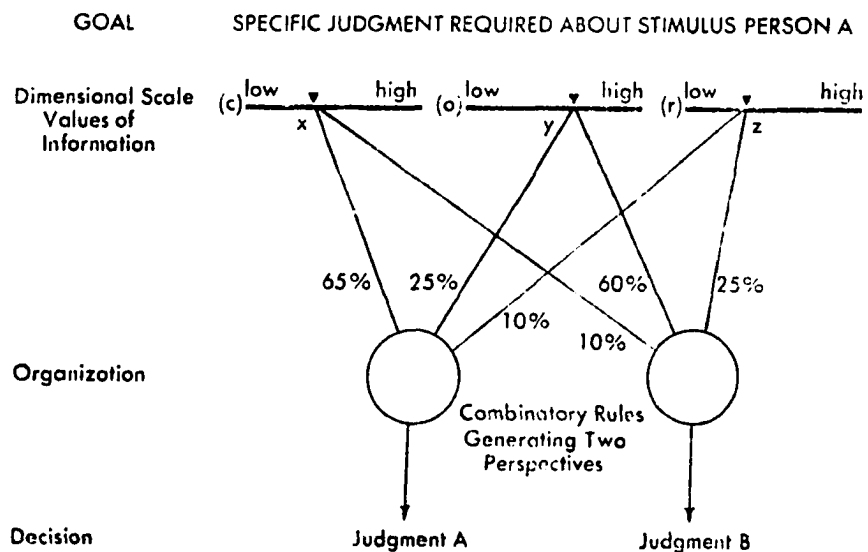


Figure 9 -- A Multidimensional Multi-rule Structure.
Schroder, "Conceptual Complexity and Personality Organization," p. 252.

³¹Schroder, "Conceptual Complexity and Personality Organization," p. 253.

Figure 10 illustrates the multidimensional multiconnected rule structure for processing information. The information processing structure advances to high degree of complexity as the combinatory rules for generating perspectives are connected in formulating a judgement. Further conceptual advancement would be represented by additional combinatory rules and connectors between perspectives. A situational model for combining cues considers the linear additive, configural, or both methods for generating alternative constructions.

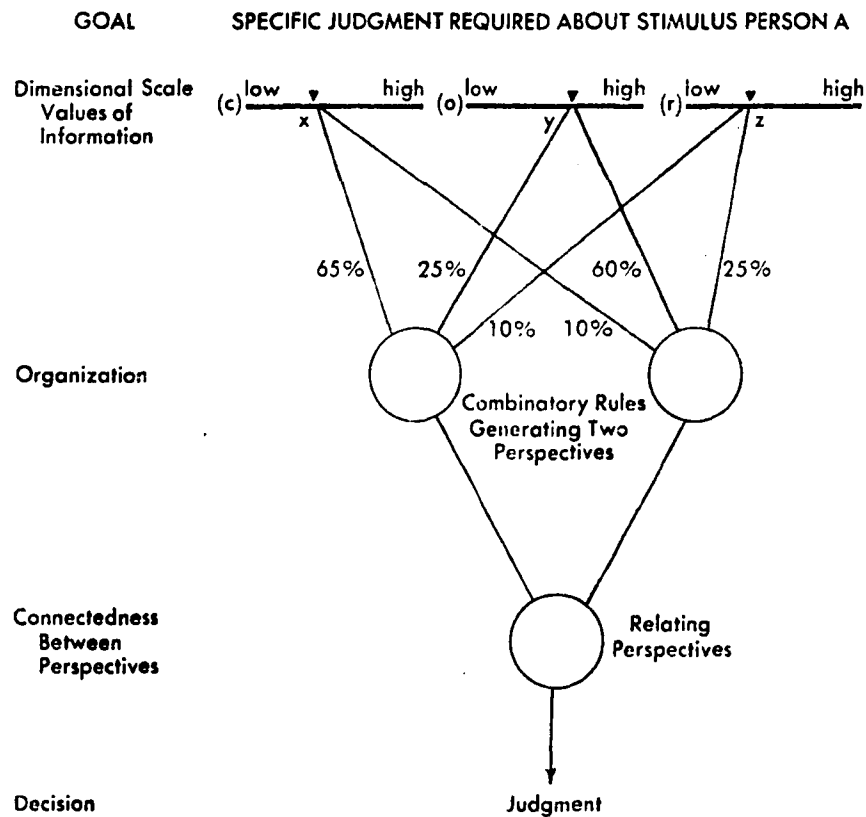


Figure 10 -- A Multidimensional Multiconnected Rule Structure. Schroder, "Conceptual Complexity and Personality Organization," p. 254.

Summary

The philosophical assumptions of a universe that is real, integral, and primarily understood along the dimension of time determine the essential nature of man. As a scientist, man is postulated as seeking truth in order to improve his anticipations of his world. Each man is in truth seen as an idea of an unfolding universe. It is man's ability to place alternative constructions on the events he experiences that leads to the Fundamental Postulate that "a person's processes are psychologically channelized by the ways in which he anticipates events." Personality is defined as the internal system a person utilizes in processing information and its cognitive complexity is the degree of differentiation and integration of interpersonal stimuli. A more cognitively complex system indicates a more fully functioning person. Behaviorally, there is a greater congruence of experience, awareness, and communication on the part of the individual. In the words of Knowles and Saxberg:

Acceptance of another person involves positive attitudes of respect, interest, caring, and trust, as well as the assumption of dependability, consistency, and the preservation of separateness based on an honest appraisal of differences. Self-acceptance is synonymous with self-awareness. Awareness, in turn, increases the capacity of individuals to attend to and respond to another individual or group. The degree to which this is possible can be measured by the extent to which an individual can respond meaningfully to a frame of reference other than his own. Thus, communication is inextricably bound to cooperation. "No man is an island," said the poet Donne, each is "a part of the main." Nowhere is this more true and more critical than in the life of the organization.³²

³²Knowles and Saxberg, Personality and Leadership Behavior, p. 93.

CHAPTER IV

Research Review

Introduction

The research literature relevant to the theoretical frameworks previously presented, is reviewed in this chapter. The research studies utilizing the LBDQ and the LOQ will be summarized in tabular form along with some general comment. This will be followed by a more detailed presentation of State Vocational Rehabilitation Agency studies. Next, the research studies utilizing the MRT and the PCT are reviewed and, finally cognitive complexity and leadership behavior studies are presented.

Leadership Research Studies

There have been numerous research studies describing the leader's behavior and his effectiveness. Leader behavior has been identified as "employee-centered" and "production centered"; "support" and "production emphasis"; "concern for people" and "concern for production"; "psychologically-distant" and "psychologically-close"; and "democratic" and "autocratic." In the "Leadership in a Democracy" research program, the Ohio State Leadership Studies isolated "consideration" and "initiating structure" as basic dimensions of leadership behavior in formal organizations. These dimensions were identified in a

series of factor-analytical studies, which described the leader's behavior as seen by his subordinates and by himself. Consideration and Initiating Structure were found to be orthogonal in the original factor-analytic studies and this is interpreted as indicating independence of the two dimensions. The independence of the dimensions suggests that the leader's behavior with respect to one dimension does not necessarily influence the other dimension. Lowin, et al. state:

This is a very significant argument for it suggests that it is possible to exert considerable direction on the activities of one's subordinates, yet still maintain a highly supportive relationship with him. Just this delicate fusion of a high level of consideration and a high level of initiating structure may be the key to effective supervision.¹

Korman has cataloged some of the literature on the relationship of consideration and initiating structure with organization effectiveness. The review is not exhaustive and the original studies contain far more data than is presented. Korman's review was interested only in the dimensions as independent variables and specific independent organization criteria. Table 5 and Table 6 provide a summary review of the relationship between various criteria and the LBDQ and the LOQ, respectively.²

The studies reviewed were conducted under a wide variety of conditions and most followed the concurrent validity approach of simply correlating the test

¹Aaron Lowin, William J. Hrapchak, Michael J. Kavanagh, "Consideration and Initiating Structure an Experimental Investigation of Leadership Traits," Administrative Science Quarterly, 14, 1969, p. 238.

²Abraham K. Korman, "'Consideration', 'Initiating Structure' and Organizational Criteria — A Review," Personal Psychology, 19, 1966, pp. 349-361.

TABLE 5
VALIDITY STUDIES OF THE LEADER BEHAVIOR DESCRIPTION
QUESTIONNAIRE

Investigator	Type of Sample	Type of Validity	Type of Criteria	r with Consideration	r with Initiating Structure	N
I. Objective Measures of Performance as Criteria						
Fleishman (1953) Fleishman, Harris & Burt (1955)	Supervisors Production Supervisors	Concurrent	Work Group Grievances	-.43	.23	23
		Concurrent	Work Group Absenteeism	-.49**	.27*	72
			Work Group Accidents	-.06	.15	72
			Work Group Grievances	-.07	.45**	72
			Work Group Turnover	.13	.06	72
Fleishman, Harris & Burt (1955)	Non-Production Supervisors	Concurrent	Work Group Absenteeism	-.38	-.06	23
			Work Group Accidents	-.42*	.18	23
			Work Group Grievances	.15	.23	23
Fleishman & Harris (1962)	Supervisors	Concurrent	Work Group Turnover	.04	.51*	23
			Work Group Grievances	-.51***	.71***	57
			Work Group Turnover	-.69***	.63***	57
II. Superior Ratings As Criteria						
Halpin & Winer (1957)	Air Crew Commanders	Concurrent	Rating			
			Technical Competence	-.38**	.36*	29
			Effectiveness of Working with Crew Members	-.33	.40*	29
III. Combined Peer-Subordinate Ratings As Criteria						
Hemphill (1955)	Academic Department Heads	Concurrent	Administrative Reputation	.36	.48*	18
IV. Peer Ratings As Criteria						
Bass (1957)	Sales Supervisors —Sample A	Concurrent	Visibility	-.04	-.11	34
			Popularity	.06	.12	34
			Value to Company	.08	.10	34
			Problem-Solving Ability	.05	-.06	34
Bass (1957)	Sales Supervisors —Sample B	Concurrent	Ability to Influence Rater	-.18	.15	34
			Visibility	-.03	.25	28
			Popularity	-.09	-.04	28
			Value to Company	-.11	-.09	28
			Problem-Solving Ability	.00	.14	28
			Ability to Influence Rater	-.00	.15	28

Source: Korman, "'Consideration', 'Initiating Structure', and Organizational Criteria - A review," p. 356-358.

TABLE 5 (Continued)

Investigator	Type of Sample	Type of Validity	Type of Criteria	r with Consideration	r with Initiating Structure	N
V. Subordinate Ratings as Criteria						
Halpin & Winer (1957)	Air Crew Commanders	Concurrent	Satisfaction	.57** ³	-.03	29
			Conformity to Standard Operating Procedures	-.52**	.51**	29
			Performance Under Stress	-.24	.26	29
			Attitude & Motivation to be Effective	-.50**	.42*	29
Halpin (1957)	Aircraft Commanders	Concurrent	Over-All	-.46*	.48**	29
			Technical Competence	.09	.30**	87
			Effectiveness in Working with Others	.18	.28**	87
			Conformity to Standard Procedures	-.03	.32**	87
			Performance under Stress	.18	.32**	87
			Attitude & Motivation	.03	.29	87
Over-All Effectiveness	.17	.30**	87			

V. Subordinate Ratings as Criteria—Cont.

Investigator	Type of Sample	Type of Validity	Rating	r with Consideration	r with Initiating Structure	N
Fleishman, Harris & Burt (1955)	Production Foremen	Concurrent	Over-All	-.31**	.47**	72
Fleishman, Harris & Burt (1955)	Non-Production Foremen	Concurrent	Over-All	.28	-.19	23
Bass (1957)	Sales Supervisors—Sample A	Concurrent	Merit	-.02	-.05	34
	Sales Supervisors—Sample B	Concurrent	Merit	.02	.15	28
Halpin (1957)	Air Craft Commanders	Concurrent	Confidence & Proficiency	.69**	.68**	84
			Friendship & Cooperation	.84**	.51**	84
			Morale	.27**	.28**	84
			Satisfaction	.75*	.47**	88

¹ These are correlation ratios. All other correlations in Tables 5 and 6 are Pearson r 's.

² All predictor-criterion correlations reported for the Halpin and Winer (1957) study are partial r 's with the effect of the other predictor-criterion correlation removed. Unlike most studies, "Consideration" and "Initiating Structure" were highly negatively related for this sample.

³ See Footnote 2 above.

* $p < .05$.

** $p < .01$.

Source: Korman, "'Consideration', 'Initiating Structure', and Organizational Criteria - A review," pp. 356-358.

TABLE 6

VALIDITY STUDIES OF THE LEADERSHIP OPINION QUESTIONNAIRE

Investigator	Type of Sample	Type of Validity	Type of Criteria	Correlation with Consideration	Correlation with Initiating Structure	N
I. Objective Measures of Performance as Criteria						
Parker (1963)	Supervisors	Concurrent	Group Productivity	.13	.07	80
			Order-Filling Errors Group	-.11	.15	80
			Order-Pricing Errors Group	-.10	.23*	80
Spitzer & McNamara (1964)	Various Mgmt. Levels	Concurrent	Corrected Salary—Sample A	.02	.09	51
			Corrected Salary—Sample B	.14	-.05	51
II. Superior Ratings as Criteria						
			Rating			
Bass (1956)	Supervisors	Predictive	Over-All	.29*	-.09	53
Bass (1958)	Supervisors	Predictive	Over-All	.32*	.05	42
Fleishman & Peters (1962)	Various Mgmt. Levels	Concurrent	Over-All	.02	-.02	35
Oaklander & Fleishman (1964)	Large Hospital Mgmt.	Concurrent	Inter-Unit Stress Sample A	.16	.06	60
	Medium Hospital Mgmt.		Inter-Unit Stress Sample B	.19	-.39**	36
	Small Hospital Mgmt.		Inter-Unit Stress Sample C	.15	-.30	22
Spitzer & McNamara (1964)	Various Mgmt. Levels	Concurrent	Over-All—Sample A	.04	-.07	51
			Over-All—Sample B	-.06	.13	51
III. Peer Ratings As Criteria						
Spitzer & McNamara (1964)	Various Mgmt. Levels	Concurrent	Over-All Ratings Sample A	-.17	.14	51
			Over-All Weighted Ratings—Sample A	-.12	.15	51
			Over-All Rankings Sample A	-.09	.01	51
			Over-All Ratings Sample B	.03	-.11	51
			Over-All Weighted Ratings—Sample B	.01	-.09	51
			Over-All Rankings Sample B	-.02	-.01	51
Fleishman (1957)	OCS Group	Concurrent	Over-All Ratings	-.01	.03	116
			Over-All Ratings	-.02	.08	247
IV. Self-Ratings As Criteria						
Oaklander & Fleishman (1964)	Large Hospital Mgmt.	Concurrent	Intra-Unit Stress Sample A	-.37**	-.41**	60
	Medium Hospital Mgmt.	Concurrent	Intra-Unit Stress Sample B	-.46**	-.07	36
	Small Hospital Mgmt.	Concurrent	Intra-Unit Stress Sample C	-.02	.45*	22
V. Subordinate-Ratings As Criteria						
Parker (1963)	Supervisors	Concurrent	Attitudes Toward Supervisor	.51*	.22*	80
			Supervisory Recognition	.45**	.05	80
			Performance Instrumentality	.24*	.18	80

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

Source: Korman, "'Consideration', 'Initiating Structure', and Organizational Criteria - A review," pp. 352-353.

variable with the criterion variable. Studies of the LBDQ indicate a slightly consistent pattern of effective performance being related positively to consideration and negatively to initiating structure, but there are some inconsistencies (Bass, 1957; Hemphill, 1955), even among studies using somewhat similar populations (Halpin and Winer, 1957; Halpin, 1957).

A possible explanation of these research results is the concurrent nature of these studies. In a research design where the same people make both predictor and criterion ratings the rater might distort one or both of his perceptions in order to attain a more "balanced" cognition.³ Anderson states another reason:

Consideration and Initiation of Structure ratings generally have shown reliable relationships with leadership-effectiveness ratings. The relationships are crucially dependent, however, upon the source of the effectiveness rating: i. e., whether the leader is being evaluated by his superiors or by his subordinates. Subordinates generally rate the leader as being effective to the extent that he displays considerate behavior. When rated by his superiors, however, the effectiveness of this same leader is positively correlated with the structuring behavior that he is seen as instigating in his group.⁴

Studies of the LOQ reveal that most of the correlations are insignificant for consideration and initiating structure. Consideration seems to have some relation to a "pleasantly affective" work situation as it is rated both by self (Oaklander and Fleishman, 1964) and by subordinates (Parker, 1963), but the

³Andrew W. Halpin, "The Leader Behavior and Effectiveness of Aircraft Commanders, in Ralph M. Stogdill and Alvin E. Coons (eds.), Leader Behavior: Its Description and Measurement, (Columbus, Ohio: Bureau of Business Research, Ohio State University, 1957), pp. 52-64.

⁴Lynn R. Anderson, "Leader Behavior, Member Attitudes, and Task Performances of Intercultural Discussion Groups," Journal of Social Psychology, 69, 1966, p. 306.

results for initiating structure are inconsistent and indicate no discernible pattern. Korman points out that the concurrent nature of these studies make it difficult to know whether the patterns of consideration or initiating structure are the cause or the effect of managerial effectiveness. This is probably the major reason the results with the LOQ are less promising than those with the LBDQ.

After a thorough reading of the relevant literature Lowin, et al. conclude:

There appears to be much evidence that consideration and initiating structure can each correlate positively, negatively, both positively and negatively (depending on other variables), and only weakly if at all with effectiveness and morale indices. There seems to be no apparent preponderance of any one of these kinds of findings. It must be emphasized that many of the correlations are sufficiently high (given the number of subjects) to very satisfactory levels of statistical significance. We are dealing, therefore, with truly complex relationships, not merely with a sampling distribution about a (probably weak) correlation value.⁵

Fleishman compiled the following results on these dimensions: (1) No cases where low consideration goes with good supervisory performance; (2) the most undesirable pattern is one in which supervisors are low in both consideration and initiating structure; (3) the low consideration and high initiating structure supervisor is more likely to show more turnover, grievances, and stress among his subordinates, but supervisors high in consideration can be higher in structure without these adverse effects; and (4) for many criteria and situations, the above average consideration and initiating structure pattern seems most likely to optimize a variety of different effectiveness criteria.⁶ After reviewing the available evidence,

⁵Lowin, et al., "Consideration and Initiating Structure An Experimental Investigation of Leadership Traits," p. 240.

⁶Fleishman, Manual For Leadership Opinion Questionnaire, p. 2.

Shartle comes to the same conclusion that leader behavior, which is high on both consideration and initiating structure rather than on one factor alone is more likely to enhance group performance.⁷

State Vocational Rehabilitation Agency Research Studies

Interpersonal influence is accepted as an essential factor in the behavior of a leader. The effectiveness of a leader's influence is a function of the interpersonal values that he holds. Interpersonal values are interpreted as the "kinds of human relations" considered important and they represent "motivational patterns that are relatively stable traits within individuals."⁸ The human relation skill of perceiving accurately the position of others has been defined as "empathy." The empathic leader's motivational patterns enable him to perceive and structure accurately his psychological map of the follower and the situation. The first three studies examine the relationship between the leader's behavior, his interpersonal values and his empathy toward subordinates. This same theme is next investigated in three State Vocational Rehabilitation Agency research studies. Finally, five additional agency research studies are presented.

Fleishman and Peters studied the interrelationships among criteria of leadership effectiveness, value dimensions, and leader behavior and attitudes. Their subjects included four plant managers, ten group managers, and twenty-five subordinate department managers of a manufacturing plant. The plant managers

⁷Carrol L. Shartle, Executive Performance and Leadership (Englewood Cliffs, New Jersey: Prentice-Hall, 1956).

⁸Edwin A. Fleishman and David A. Peters, "Interpersonal Values, Leadership Attitudes and Managerial Success," Personnel Psychology, 15, 1962, p. 127.

completed effectiveness ratings for each of their group and department managers. The Survey of Interpersonal Values and the LOQ were completed by the group and department managers. The effectiveness ratings were not related to leadership attitudes, but were significantly correlated with the value conformity ($r = -.44$, $p < .02$).⁹ The leadership pattern of Structure was significantly correlated with the interpersonal value of Independence ($r = -.39$, $p < .05$). Consideration and Benevolence were correlated ($r = .35$). The authors conclude that "if a person's interpersonal needs and values are considered as reflecting stable personality traits, the results are encouraging."¹⁰

Litzinger studied interpersonal values and leadership attitudes of managers in centralized and decentralized organization. The subjects consisted of 33 managers from a centralized and 32 managers from a decentralized bank. The survey of Interpersonal Values and the LOQ were completed. No significant differences were found between these two categories of managers. Structure and Support were correlated for the centralized managers ($r = .25$). Consideration and Independence were significantly correlated for the centralized manager ($r = -.36$, $p < .05$). The author concluded that the leadership and value climate of the two groups are relatively homogeneous.¹¹

⁹The Survey of Interpersonal Values has the following subscales: Support, Conformity, Recognition, Independence, Benevolence, Leadership.

¹⁰Fleishman and Peters, "Interpersonal Values, Leadership Attitudes and Managerial Success," p. 142.

¹¹William D. Litzinger, "Interpersonal Values and Leadership Attitudes of Branch Bank Managers," Personnel Psychology, 18, 1965, p. 198.

Fleishman and Salter examined the relation between the leader's behavior and his empathy toward subordinates. The subjects were 12 departmental supervisors and 24 subordinates in two small business organizations. An empathy measure was developed based on the Self-Description Questionnaire. The leader behavior was measured by the Supervisory Behavior Description Questionnaire.¹² The empathy score was significantly correlated with Consideration ($r = .40, p < .05$). Structure and empathy did not correlate significantly. The authors conclude that the study should be repeated with a larger sample. It was emphasized that concepts like empathy, self-awareness, and social sensitivity can be useful when related to leader behavior.¹³

Smits describes the leadership styles, interpersonal problem-solving orientations, and work activities of supervisors in State Rehabilitation Agencies. The subjects were 252 supervisors in 32 State Rehabilitation Agencies. The Leadership Opinion Questionnaire, the Interpersonal Orientation Scale, and the Work Activities Questionnaire were distributed to the supervisors.¹⁴ The supervisors described themselves as being more "considerate" than "structured" and more "altruistic" than "manipulative." Consideration was significantly correlated

¹²The Supervisory Behavior Description Questionnaire measures the same dimensions as the Leadership Opinion Questionnaire.

¹³Edwin A. Fleishman and James A. Salter, "The Relation Between the Leader's Behavior and His Empathy Toward Subordinates," Journal of Industrial Psychology, 1, 1963, p. 84.

¹⁴The Interpersonal Orientation Scale consists of two types of relatedness: altruistic and manipulative. The Work Activities Questionnaire is composed of administrative items, consultive items, and evaluative items.

with Altruism ($\rho = .15, p < .05$) and Manipulation ($\rho = -.16, p < .05$). Structure was significantly correlated with Altruism ($\rho = -.24, p < .01$) and Manipulation ($\rho = .23, p < .01$). Supervisors more frequently engaged in consultative work activities were significantly related to Consideration ($\rho = .12, p < .05$), Altruism ($\rho = .14, p < .05$), and Manipulation ($\rho = -.14, p < .05$). The leadership styles, interpersonal problem-solving orientation, and work activities were analyzed with respect to size of the supervisory unit. Smits concludes:

The hierarchical organizational system places role demands upon the supervisors most removed from the counselors which are different from those placed upon supervisors who are in direct contact with counselors on a daily basis. The role demands in turn, influence both leadership style and interpersonal problem-solving orientation. If this assumed state-of-affairs is accurate, leadership behavior could be changed most easily by changing the role demands placed upon the supervisor. Such changes would probably begin with a change in the size of the unit supervised.¹⁵

Smits and Aiken studied the supervisory practice as perceived by counselors in State Vocational Rehabilitation Agencies. The subjects were 230 counselors in 31 State Rehabilitation Agencies. The LBDQ, the Relationship Inventory (RI), and the JSI were distributed to the counselors.¹⁶ The counselors saw their supervisors' leadership behavior as being more characteristic of "tolerance of freedom" and "consideration" than of "initiation of structure" and "production

¹⁵Stanley J. Smits, "Supervisory Practices: From the Supervisor's Point of View," in S. J. Smits, Leadership Behavior of Supervisors in State Rehabilitation Agencies (Atlanta, Georgia: Georgia State University, 1971), p. 47.

¹⁶The Relationship Inventory attempts to measure an individual's ability to demonstrate to another person his capacity for emphatic understanding, level of regard, unconditionality of regard, congruence or genuineness, and total relation score. Initiation of Structure, Tolerance of Freedom, Consideration, and Production Emphasis were the only LBDQ scales utilized on the LBDQ.

emphasis." Twenty-one out of the 32 correlations between the subscales on the LBDQ and the JSI are significant. Fifteen out of the 20 correlations between the subscales on the LBDQ and the RI are significantly correlated (Appendix X).

When the sample was analyzed in terms of eight regional areas only one significant F value was found among the subscales ($F = 2.97$, $p < .01$ for Security/Advancement/Finances). When the sample was analyzed in terms of agency size only one significant F value was found among the subscales ($F = 4.33$, $p < .05$ for Initiating Structure). The authors conclude that the data substantiates the relationship of supervisory behavior and counselor job satisfaction, but they indicated that further research was needed to isolate the leader's interpersonal values.¹⁷

Aiken, Smits and Lollar factor-analyzed the data from the previous study. The first factor, Interpersonal Aspects of the Work Environment, accounted for the largest percentage of common variance (52.2%). High loadings were obtained on the RI subscales, LBDQ Consideration subscales, and the JSI Relationship with Employer subscale. The results of the factor analysis suggests that:

The most important aspect of employment in State Rehabilitation Agencies as far as counselors are concerned is the interpersonal behavior in which the supervisor and counselor engage. How the supervisor treats the counselor seems to be far more important than working conditions or the reward system of the agency.¹⁸

¹⁷Stanley J. Smits and Wilbur J. Aiken, A Descriptive Study of Supervisory Practices As Perceived by Counselors in a State Vocational Rehabilitation Agency (Bloomington, Indiana: Indiana University, 1969), p. 38.

¹⁸Wilbur J. Aiken, Stanley J. Smits, and Donald J. Lollar, "Leadership Behavior and Job Satisfaction in State Rehabilitation Agencies," Experimental Publications Systems, No. 5, Ms No. 181A (Washington, D. C. : American Psychological Association, 1970), p. 5.

In a follow-up study to Smits and Aiken, Smits examined the job satisfaction and employment turnover in State Rehabilitation Agencies. The directors of the 31 agencies were asked to report each counselor's employment status one year after the JSI was initially administered. The results demonstrated the predictive validity of the JSI in medium and large-size agencies. The JSI was successful in differentiating between counselors retained and terminated (Appendix XI). Smits states:

Because of the representativeness of the subjects, i. e., counselors from 30 State Rehabilitation Agencies from all regions of the country, it seems appropriate at this time to conclude that the JSI can be of applied value as a management tool and a research criterion measure in "medium sized" and "large" State Rehabilitation Agencies.¹⁹

Smits studied the relationship between the accuracy of a counselor's understanding of agency policies, procedures, resources and goals, and his supervisor's leadership behavior. The subjects included 16 supervisors and 28 counselors in a State Vocational Rehabilitation Agency. The LOQ was completed by the supervisors and the Information Questionnaire was completed by the counselors. A significant correlation ($r = .48$, $p < .05$) was found between the supervisor's structure and the counselor's accuracy of information.²⁰

Pacinelli examined the relationship of counselor perceptions of leadership

¹⁹ Stanley J. Smits, "Job Satisfaction and Employment Turnover in State Rehabilitation Agencies: Results of a Follow Up Study," in S. J. Smits, Leadership Behavior of Supervisors in State Rehabilitation Agencies (Atlanta, Georgia: Georgia State University, 1971), p. 31.

²⁰ Stanley J. Smits, "A Communication Experiment in a State Rehabilitation Agency," in S. J. Smits, Leadership Behavior of Supervisors in State Rehabilitation Agencies (Atlanta, Georgia: Georgia State University, 1971), pp. 50-57.

behavior and job satisfaction. The LBDQ and the JSI were administered to 250 counselors in a State Rehabilitation Agency. The study contrasted scores on the JSI of counselors who perceived their supervisors as high vs. low in Consideration and high vs. low in Initiating Structure. Consideration was significantly different between the two groups on all scales of the JSI. Initiating Structure was significantly different between all scales except Physical and Mental Exertion and the total JSI scores. When the counselors were placed into two groups based on a combination of the two perceived leadership behaviors, counselors perceiving their supervisors as high in Consideration and Initiating Structure had significantly higher scores on the JSI than supervisors perceived as low in these two leadership behaviors. Consideration correlated significantly with all the JSI scales. Initiating Structure correlated significantly with all except Physical, Mental Exertion, and Total JSI (Appendix XII). Pacinelli concludes that "both styles of leadership behavior are required in the supervisor if counselor and agency goals are to be efficiently and effectively attained."²¹

Bostic studied the perceived leadership climate and its effects on job satisfaction and job performance in a State Rehabilitation Agency. The LBDQ and the JSI were completed by 66 counselors, and 23 supervisors provided personal data and job performance information. The counselor perceptions of leadership behavior were analyzed by a two-way analysis of variance of counselor and supervisor levels of training and experience. Untrained counselors perceived their

²¹Pacinelli, "Rehabilitation Counselor Job Satisfaction As it Relates to Perceived Leadership Behavior and Selected Background Factors," p. 58.

supervisor's behavior significantly higher in Tolerance for Freedom and Consideration. Experienced counselors perceived their supervisor's behavior significantly higher in Production Emphasis. Counselors with under-experienced supervisors perceived their supervisor's behavior significantly higher in Production Emphasis. The correlation between Initiating Structure and the total JSI score was significant for trained counselors (Appendix XIII). Bostic summarizes the relationship between leader behavior and the criterion of successfully closed cases as follows:

- (1) Counselors who perceive their supervisors as tolerating more freedom tend to achieve greater numbers of successful closures when employed under inexperienced supervisors.
- (2) Counselors who perceive their supervisors as being considerate tend to achieve greater numbers of successful closures when employed under untrained supervision.
- (3) Counselors who perceive their supervisors as emphasizing production tend to achieve greater numbers of successful closures.²²

Viaille, Hills and Ledgerwood studied the management practices in ten Vocational Rehabilitation District Offices. The subjects included 25 supervisors and 115 counselors. The state directors were requested to designate one office within his state as being among the lower 20 percent and one office as being among the upper 20 percent in effectiveness. The three major criteria repeatedly specified as indicating effectiveness were (1) production, (2) administration and management practices, and (3) community relations. In addition to extensive subjective data, objective data were gathered with Likert's Profile of Organizational

²² Bostic, "The Effects of Perceived Leadership Climate in a State Rehabilitation Agency," p. 90.

Characteristics, Marvin's Management Matrix, and The Minnesota Satisfaction Questionnaire. Both the counselors and the supervisors in the more effective offices perceived the district and state offices as being more participative in their management approach, than did counselors in the less effective offices. The ratings on the Management Matrix were higher for the counselors and the supervisors in the more effective offices. The counselors and supervisors were more satisfied with employment or work factors than personnel in less effective offices. The authors conclude that, "each measuring device has consistently differentiated between the offices described as either more effective or less effective. It is hoped that with further refinement these instruments can indicate a direction of future office development."²³

Cognitive Complexity-Simplicity Research Studies

The theoretical system reviewed in the following research studies conceives predictive behavior to be a function of one's perceptions of others. Current research dealing with social perception, interpersonal perception, understanding others, empathy, or social sensitivity are forms of behavior which rest operationally upon the predictive behavior of the individual. Bieri assumes that predictive behavior depends upon the interpersonal discriminations or constructs which the individual invokes in making his predictions. The extent to which different interpersonal constructs are applied differentially to the other person determines the cognitive complexity.

²³Viaille, et al., Management Practices in Vocational Rehabilitation District Offices, p. 71.

In the first study on the measurement of cognitive complexity, Bieri examined the relationship between cognitive complexity-simplicity and predictive behavior. The Role Construct Repertory Test (RCRT) developed by Kelly and a Situation Questionnaire designed to measure predictive accuracy, were administered to 32 college students. The underlying assumption is that making "adequate differentiations in one's perceptions of others is basic to an optimum predictability of their behavior." A significant correlation exists between cognitive complexity and predictive accuracy ($r = .29, p < .05$). Of the two components of predictive accuracy, accurate projection and accurate perceived differences, only the latter correlated significantly ($r = .35, p < .05$). A significant correlation exists between the degree of cognitive complexity and the tendency to engage in assimilative projection in one's predictions ($r = -.32, p < .05$). Of the two component scores of assimilative projection, accurate projection and inaccurate projection, only the latter correlated significantly ($r = -.40, p < .05$). Bieri concludes that:

. . . Cognitive complexity relates especially to the tendency to predict accurately the differences between oneself and others. Similarly, the tendency to engage in inaccurate projections concerning the similarity between self and others relates significantly to cognitive simplicity.

. . . the complexity of one's cognitive system for perceiving others is effectively related to one's ability to predict accurately the behavior of others and to one's tendency to engage in assimilative projection in such behavior.²⁴

Leventhal studied the relationship between the cognitive processes and interpersonal predictions of a group of 253 male undergraduates. The RCRT

²⁴Bieri, "Cognitive Complexity-Simplicity and Predictive Behavior," p. 267.

was administered along with an experimental design in which simple and complex judges made predictions after hearing tape-recorded interviews involving varying amounts of information about simple and complex interviewees. Cognitively complex subjects tended to be more accurate in their predictions than cognitively simple subjects. With complete information the cognitively simple subjects showed relatively greater improvement in predictive accuracy. Further analysis indicated significantly greater assimilative projection by cognitively simple subjects. Component analysis of predictive accuracy reveals an insignificant trend showing simple subjects correctly predicting a greater proportion of similarities and complex subjects correctly predicting a greater proportion of differences between themselves and others. Cognitively complex subjects were more able to rank order interviewees in terms of similarity to themselves ($r = .49, p < .01$). Leventhal concludes in general that:

. . . Complex judges respond in terms of difference between people, while simple judges respond in terms of similarities. Viewing people as similar to oneself as an initial hypothesis may help simple judges to understand and adjust to their own interpersonal environments. They differentiate only when sufficient information is available. Complex judges, on the other hand, seem to seek a unique characterization of a person and to be fairly able to pick out aspects of his individuality even with little information.²⁵

Sechrest and Jackson examined the relationship between social intelligence and accuracy of interpersonal predictions of 60 college subjects. A predictive accuracy measure similar to that used by Bieri and Leventhal and a measure

²⁵Howard Leventhal, "Cognitive Processes and Interpersonal Predictions," Journal of Abnormal Social Psychology, 55, 1957, p. 180.

of "differential" accuracy developed by the authors were correlated with the following four measures of cognitive complexity: (1) the RCRT, (2) a method for assessing number of determinants in ink blot responses, (3) the Barron-Welsh Art Scale, and (4) a measure of the complexity of stimuli afforded by one's family background. All four measures of complexity correlated positively with effectiveness of interpersonal relations (social intelligence), but only the art preference and family background measures were significant. A weighted composite complexity score correlated significantly with the social intelligence measure ($r = .54, p < .01$). The RCRT was positively correlated to the predictive accuracy measure, but this was not significant ($r = .22$). None of the measures of complexity in social intelligence correlated significantly with differential accuracy. Sechrest and Jackson suggest that "cognitive complexity may contribute substantially to increased social effectiveness."²⁶

Plotnick studied the relation between cognitive complexity of 129 graduate social work students and their accuracy in predicting the behavior of clients. The subjects completed the RCRT and predicted the attitude responses, made by three clients, on an acceptance of authority scale. The three clients were high, medium and low in acceptance of authority. Cognitive complexity was positively correlated with the predictive accuracy for clients with low and medium degrees of acceptance of authority attitudes, but only the latter correlation was significant. The cognitively complex subjects correctly differentiated the three clients in

²⁶Lee Sechrest and Douglas N. Jackson, "Social Intelligence and Accuracy of Interpersonal Predictions," Journal of Personality, 29, 1961, p. 181.

terms of the rank order of the client's actual attitude scores. Cognitive complexity and acceptance of authority were independent for the subjects.²⁷

Higgins investigated the relationship between cognitive complexity and probability preferences. The subjects completed a modified version of the RCRT, and made probability estimates and confidence ratings on a series of items concerning events whose frequency of occurrence was unknown to them. Higgins reasoned that the cognitively complex individual should be more hesitant to advance extreme or definitive solutions to events with indeterminant probabilities and, therefore, cognitive complexity should be related to moderate probability preferences and less confidence in ratings. Cognitive complexity was significantly correlated with moderate probability preferences ($r = .70$) and lower confidence ratings ($r = .57$).²⁸

Lundy and Berkowitz investigated cognitive complexity and assimilative projection in attitude change. The RCRT and an attitude questionnaire were administered to undergraduate students. The second administration of the attitude questionnaire was preceded by information concerning expressed opinions of either generals or peers. The basic assumption is that the more cognitively complex subject would manifest greater attitude change because his personal construct system furnishes greater opportunity to evaluate new ideas. A significant

²⁷H. L. Plotnick, "The Relationship Between Selected Personality Characteristics of Social Work Students and Accuracy in Predicting the Behavior of Clients", unpublished doctor's dissertation, N. Y. School of Social Work, Columbia University, 1961.

²⁸J. C. Higgins, "Cognitive Complexity and Probability Preferences," unpublished manuscript, University of Chicago, 1959.

association was found indicating that the little attitude change group are lowest in cognitive complexity ($F = 5.0, p < .05$). High cognitive subjects increased their level of initial attitudes and moderate cognitive subjects were more susceptible to change. A significant association was found between assimilative projection and susceptibility to peers ($F = 4.12, p < .05$). No such association was found with respect to authority figures. Those highest in cognitive complexity reacted negatively to both peer and authority persuasion.²⁹

Mayo and Crockett studied cognitive complexity and primacy-recency effects in impression formation. The RCRT, a conflict questionnaire and an adjective check list were completed by 48 college students, who had listened to a tape recorded description of a man. The results showed that subjects high and low in complexity formed a univalent impression of the man from a univalent set of information. However, following a second presentation of opposite valence information, low complex subjects formed more univalent impressions, by changing their initial impressions in the direction of the subsequent information. High complex subjects retained both types of information resulting in a more ambivalent final impression. The complexity and response interaction was significant ($F = 14.735, p < .05$). Mayo and Crockett conclude:

These results lend support to the conception that the complexity of a subject's cognitions about people affects the manner in which he utilizes information about others in forming impressions of them.³⁰

²⁹Richard M. Lundy and Leonard Berkowitz, "Cognitive Complexity and Assimilative Projection in Attitude Change," Journal of Abnormal Social Psychology, 55, 1957, pp. 34-37.

³⁰Clara W. Mayo and Walter H. Crockett, "Cognitive Complexity and Primacy-Recency Effects in Impression Formation," Journal of Abnormal Social Psychology, 68, 1964, p. 338.

Leventhal and Singer studied cognitive complexity, impression formation and impression change. The RCRT, transcripts of interviews, impression measures and reactions to judgment tasks were administered to 97 college students. The overall results support the expectation that cognitively simple subjects have a greater change in impressions than do cognitively complex subjects. One of the clearest findings suggest that the cognitively complex subjects approach interpersonal relations searching for information concerning the "inner substance of people" while the cognitively simple subjects respond more to the outer qualities of behavior. These findings suggest that impression formation by subjects of differing cognitive complexity is due in part to a preference for different types of behavioral information.³¹

Miller and Bieri examined the relationship between cognitive complexity and affective stimulus value of the objects being judged. The MRT was administered to 126 graduate social work students. The ten role types were grouped into positive and negative valued categories. The subjects were significantly more complex in judging roles of greater social distance (Wilcoxon's $z = 8.67$, $p < .001$). The results were interpreted as:

When confronted with a relatively disliked or alien person, the judge may assume a more vigilant cognitive stance, leading to a greater differentiation of the person's behavior. Such an increase in differentiation may be considered to serve an adaptive function in terms of facilitating greater flexibility in anticipating the behavior of this more remote and possibly more threatening person.³²

³¹Howard Leventhal and David L. Singer, "Cognitive Complexity, Impression Formation and Impression Change," Journal of Personality, 32, 1964, pp. 210-226.

³²Henry Miller and James Bieri, "Cognitive Complexity As a Function of the Significance of the Stimulus Objects Being Judged," Psychological Reports, 16, 1965, p. 1204.

Irwin, Tripodi, and Bieri also examined the relationship between cognitive complexity and affective stimulus value. The MRT was administered to 105 undergraduate students and 80 undergraduate students in two independent studies. The positive and negative valued roles of the MRT were examined for their degree of differentiation. The results are consistent with Miller and Bieri's vigilance hypothesis. The negatively valued roles were differentiated significantly more than the positively-valued roles. The correlation between cognitive complexity scores for positive and negative roles was significant, indicating that subjects differentiating highly in judging positive persons also differentiate highly in judging negative persons.³³

Tripodi and Bieri investigated information transmission as a function of stimulus dimensionality and cognitive complexity. The MRT and a multi-dimensional experimental design were administered to 64 graduate social work students. The results indicate that as stimulus dimensionality increases from one dimension to two congruent dimensions, information transmission insignificantly decreased, but then when dimensionality increases to three dimensions information transmission increased. While the curvilinear function held for both complexity groups only the low complexity group showed a significant information transmission increase ($t = 3.0, p < .01$). Cognitively complex subjects as a group were significantly better able to discriminate incongruent information ($F = 2.29, p < .05$). The discriminability of the complex subjects was higher on eight of the ten

³³ Mark Irwin, Tony Tripodi and James Bieri, "Affective Stimulus Value and Cognitive Complexity," Journal of Personality and Social Psychology, 5, 1967, pp. 444-448.

stimulus conditions. The mean confidence judgments indicate that complex subjects were consistently less confident except under incongruent information conditions.³⁴

Tripodi and Bieri studied the relationship between cognitive complexity, perceived conflict and certainty. Two independent studies tested the following hypotheses: (1) There is a positive association between cognitive complexity and the attribution of interpersonal conflict in stories about imaginary persons, (2) High complex subjects are relatively more certain of their judgments of conflicting information, while the obverse is expected to hold for low complex subjects. The MRT and a storytelling task were completed by 64 graduate social work students. In the second study the MRT and various stimulus conditions requiring a pathology rating and estimates of certainty were administered to 72 graduate social work students. Cognitive complexity was significantly associated with interpersonal conflict in the stories ($\chi^2 = 6.64, p < .05$). Cognitively complex subjects have significantly higher mean certainty ratings in their judgments of conflicting versus nonconflicting stimulus information ($t = 2.29, p < .05$). The authors conclude:

. . . more cognitively complex Ss project more conflicting themes because of their greater versatility in conceptualizing dimensions of behavior.
 . . . the judge's tendency to perceive conflict and his certainty in judging conflicting information are two facets of an underlying disposition to seek a congruency between internal and external structure.³⁵

³⁴Tony Tripodi and James Bieri, "Information Transmission in Clinical Judgments As A Function of Stimulus Dimensionality and Cognitive Complexity," Journal of Personality, 32, 1964, pp. 119-137.

³⁵Tony Tripodi and James Bieri, "Cognitive Complexity, Perceived Conflict and Certainty," Journal of Personality, 34, 1966, p. 152.

Human Information Processing Research Studies

The information processing framework developed by Schroder, et al. views the level of information processing as an interactive consequence of dispositional and conditional factors. The environmental factors are dimensionalized in terms of their relevance to the processes of differentiation and integration. The preceding research studies analyze independently the environmental inputs, mediating structures, and behavioral outputs, but they are based on a common foundation. These three components develop an interactive framework with the following general hypotheses:

1. Information processing by "people in general" (individual differences disregarded) reaches a maximum level of structural complexity at some level of environmental complexity.
2. Individual differences in the level of integrative complexity of information processing may be expressed as a family of U curves.
3. Compared to the U curve for integratively simple structures, that for complex structures (a) is always higher (generates more integratively complex information-processing behavior) over the mid-ranges of environmental complexity, and equal at the extreme ranges of environmental complexity; and (b) reaches its optimal point at higher levels of environmental complexity.³⁶

Figure 11 illustrates the relationship between environmental and behavioral complexity for different levels of personality structure. As the environmental complexity increases information processing increases to an optimal level and then decreases. Curve A represents a complex structure (abstract) which reaches an optimal level of information processing at point E in an environmental complexity represented at point D. Curve B represents a simple structure (concrete)

³⁶Schroder, et al., Human Information Processing, p. 36-40.

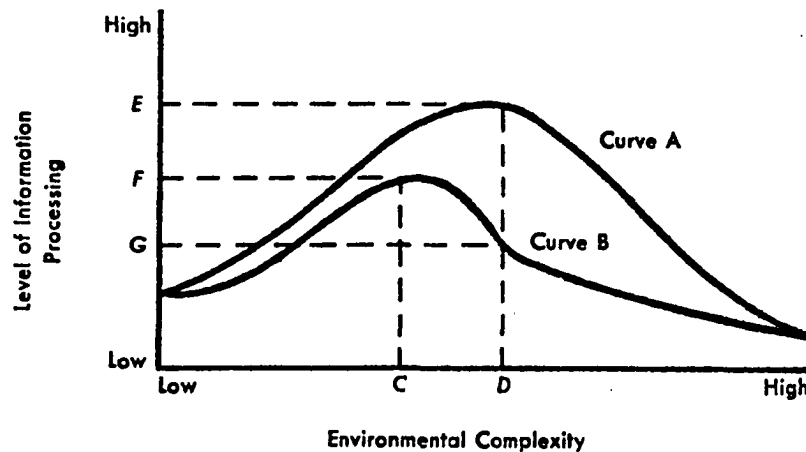


Figure 11 -- Relationship Between Environmental and Behavioral Complexity for Different Levels of Personality Structure. Schroder, et al., Human Information Processing, p. 40.

which reaches an optimal level of information processing at point F in an environmental complexity represented at point C. The maximal differences between behavioral complexity occurs at the optimal level for the more complex structure and is evident by comparing E-F with E-G.

Streufert and Schroder studied the relationship between conceptual structure, environmental complexity, and task performance. Twenty equally intelligent groups of four subjects participated in a tactical game experiment which explored the relationship between environmental complexity and the differentiation and flexibility of integration in decision making.³⁷

³⁷A variable program [S. Streufert, M. Clardy, M. J. Driver, M. Karlins, H. M. Schroder and P. Suedfeld, "A Tactical Game For the Analysis of Complex Decision Making in Individuals and Groups," Psychological Reports, 17, 1965, pp. 723-729] and a fixed program [Marvin Karlins, Siegfried Streufert and Harold M. Schroder, A Controlled Input Program for a Tactical War Game. American Documentation Institute, Auxiliary Publications Project, Library of Congress. No. 8621, 1965] describe the experimental procedure.

Ten groups were composed of integratively complex subjects and ten groups were composed of integratively simple subjects as measured by the PCT. Six behavioral measures were used to assess the abstractness in the integration of information in decision making. These were:

1. The number of integrations in a period.
2. The relative number of integrations per decision (average multiplexity of decisions).
3. The time spanned by information integrated in a period.
4. The relative time spanned by information integrated in each decision.
5. The combined time-weighted multiplexity of decision (general quality of all decisions).
6. The quality of high-level decisions.

It is hypothesized that when the periods of the game are arranged in order of ascending complexity, the increase in input complexity will first rise and then lower the level of information processing. Figure 12 illustrates that the hypothesized curvilinear function is apparent for all indices. As the environmental complexity increases the degree of flexibility of integration in decision making increases to an optimal point and then decreases. The medium environmental complexity of periods 1, 3, and 4 showed the highest ranks. The low environmental complexity period 2 showed the lowest rank. The differences between the rank of period 2 and the ranks averaged over periods 1, 3, and 4 are significant for each index. The most satisfactory index is the high-level integration frequency. There appears to be an inverse relationship between the quality and quantity of decisions.

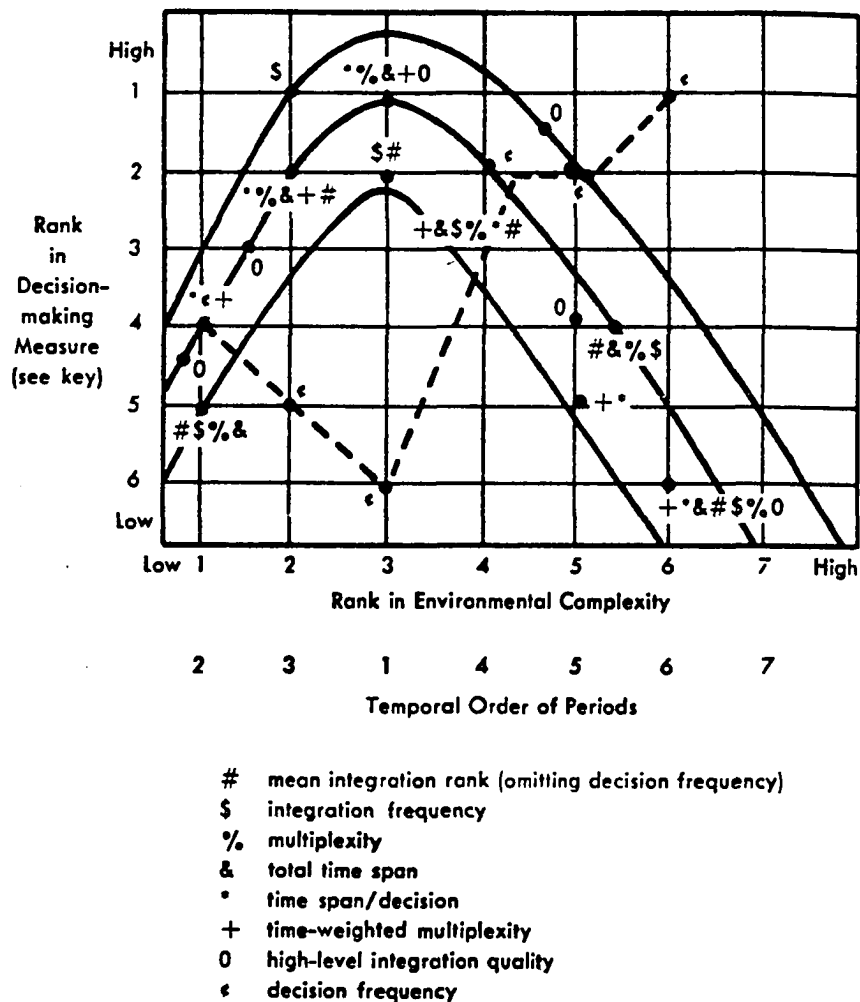


Figure 12 -- Decision Making Qualities as a Function of Informational Complexity Load in a Tactical Game.

Schroder, et al., Human Information Processing, p. 60.

Figure 13 illustrates the number of integrations in task performance for the abstract and concrete group of subjects. Except for the low input condition, the differences in complexity of rule structure in decision making for the two conceptual levels are significant. The results do not substantiate the hypothesis that complex structures reach an optimal point at higher levels of environmental

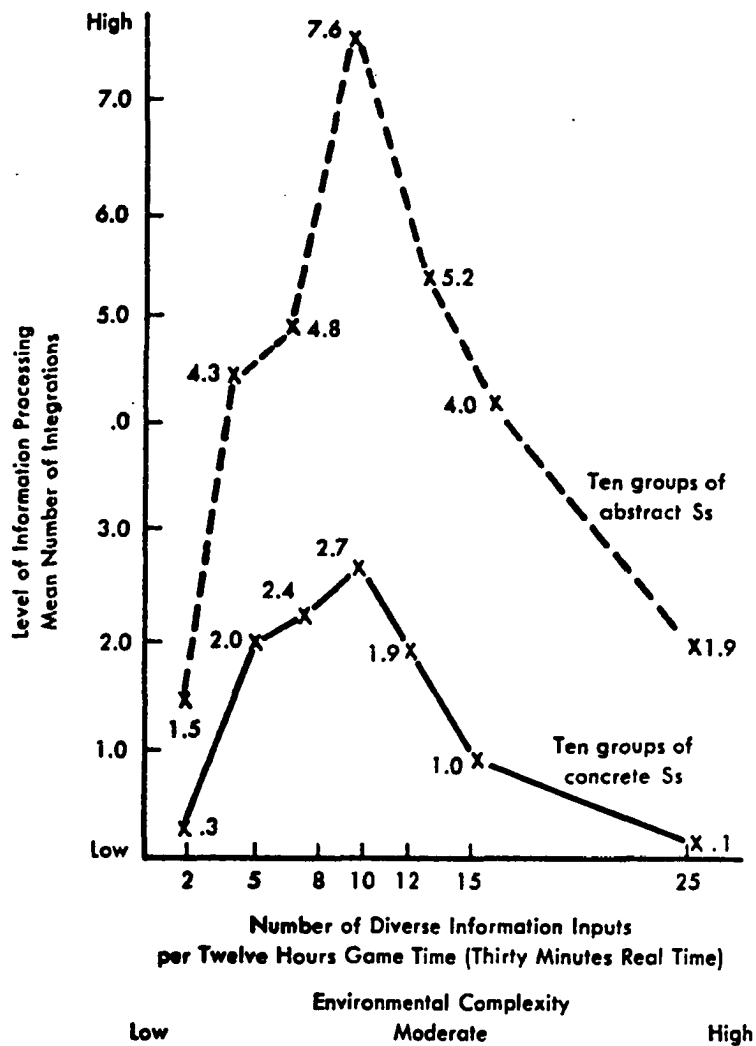


Figure 13 -- Performance Based On An Integration Criterion For Groups of Concrete and Abstract Subjects Under Varying Conditions of Information Load.

Schroder, et al., Human Information Processing, p. 151.

complexity.³⁸

Streufert and Driver studied the relationship between conceptual structure,

³⁸Siegfried Streufert and Harold M. Schroder, "Conceptual Structure, Environmental Complexity, and Task Performance," Journal of Experimental Research in Personality, 1, 1965, pp. 132-137.

information load and perceptual complexity. The experimental procedure employed the same method used by Streufert and Schroder, but substitutes measurements of differentiation and integration in perception for the differentiation and integration in performance. The results for perception are highly similar to the previous study results with performance. Figure 14 illustrates that as the environmental complexity increased both abstract and concrete group perceptions increased to an optimal point and then decreased. Conceptually abstract subjects were significantly higher in differentiation and integration in perception.³⁹

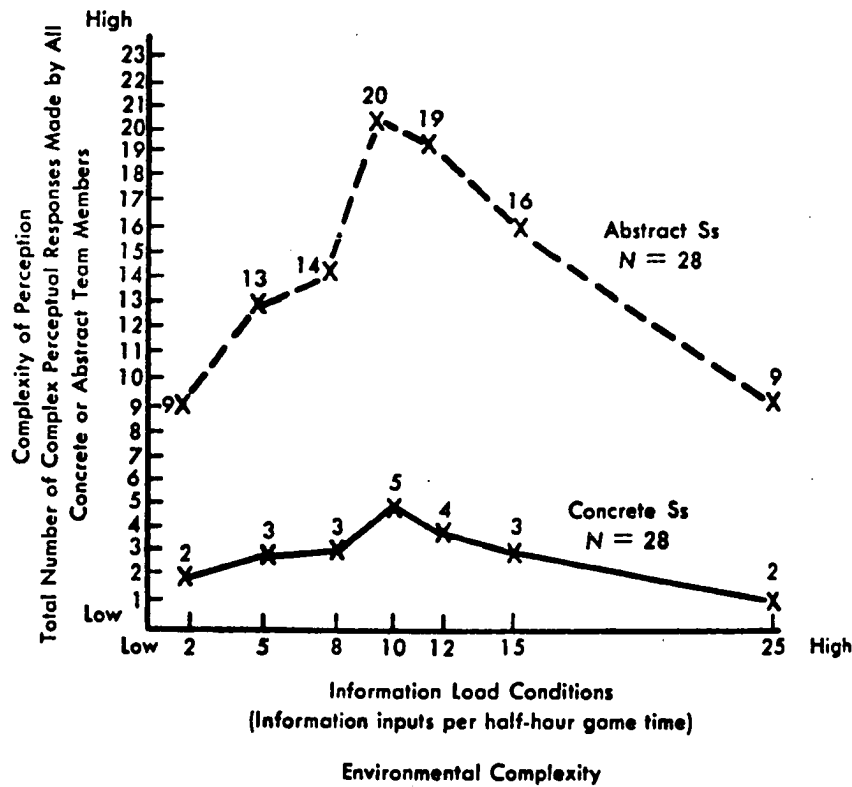


Figure 14 -- Integrative Complexity of Perceptual Responses of 28 Concrete and 28 Abstract Subjects Under Varying Conditions of Information Load. Schroder, *et al.*, Human Information Processing, p. 156.

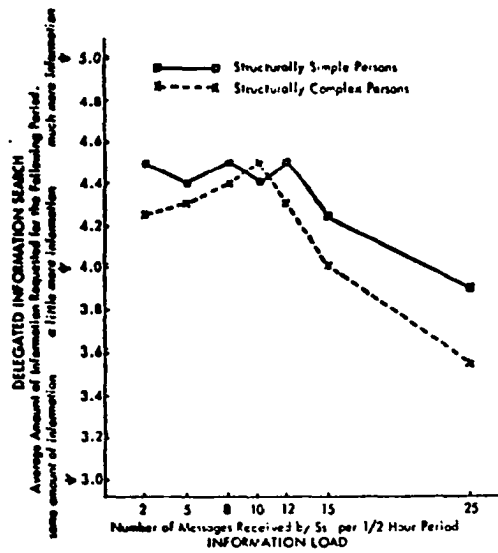
³⁹Siegfried Streufert and Michael J. Driver, "Conceptual Structure, Information Load and Perceptual Complexity," Psychonomic Science, 3, 1965, pp. 249-250.

Streufert, Suedfeld and Driver studied the relationship between conceptual structure, information search, and information utilization. The experimental procedure employed the same method used by Streufert and Schroder, except that the following data were collected on the subjects: (1) delegated information search, (2) self-initiated information search, and (3) integrative information utilization. Figure 15 illustrates that conceptually complex subjects were significantly lower in delegated information search at the higher environmental complexity. The mean scores for self-initiated information search showed that structurally simple subjects are considerably more sensitive to changes in information load than are structurally complex subjects, indicating that simple subjects respond more directly to immediate environmental information. Integrative information utilization was significantly higher for structurally complex subjects ($F = 33.61, p < .01$). The authors state:

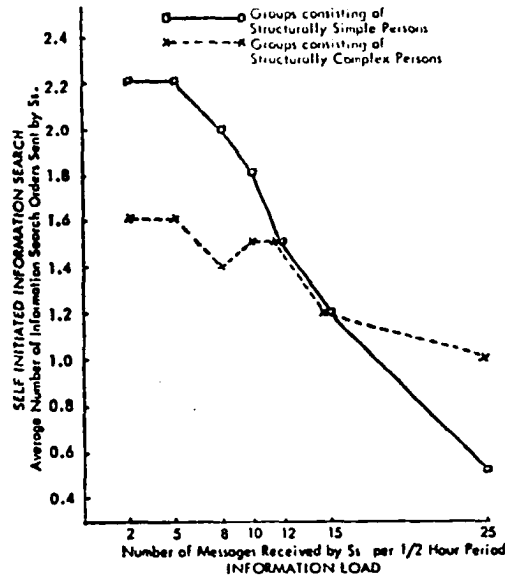
... structurally simple groups, who would tend to relate one stimulus to one response, should require more information under suboptimal loads than structurally complex groups, who can reutilize information for more complex indegtrated decisions. On the other hand, under superoptimal load conditions structurally simple groups should be satisfied with available information, since it gives them sufficient stimuli to produce responses. Structurally complex groups, who make more integrated stategic decisions, would be likely to require additional relevant information to permit integration no matter what the information load level may be.⁴⁰

Suedfeld and Streufert also studied the relationship between conceptual structure and information search. This study is a partial replication of Streufert,

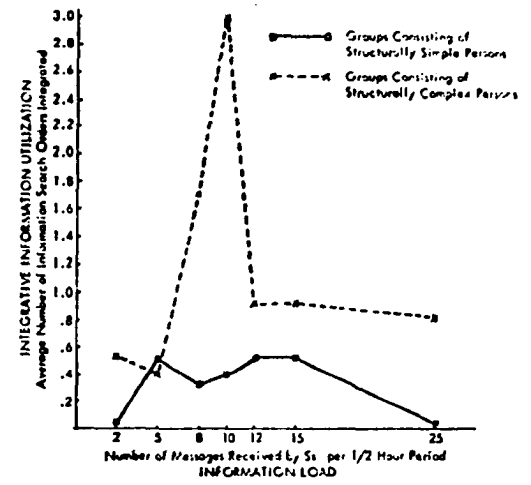
⁴⁰Siegfried Streufert, Peter Suedfeld and Michael J. Driver, "Conceptual Structure, Information Search, and Information Utilization," Journal of Personality and Social Psychology, 2, 1965, p. 740.



1. Average amount of information requested through delegated search under changing load conditions for subjects differing in the complexity of conceptual structure.



2. Average number of self-initiated information search decisions under changing load conditions for groups of subjects differing in the complexity of conceptual structure.



3. Integrative utilization of previously sought information under changing load conditions for groups of subjects differing in the complexity of conceptual structure.

Figure 15 -- Delegated Information Search, Self Initiated Information Search, and Integrative Information Utilization Under Varying Conditions of Information Load. Streufert, et al., "Conceptual Structure, Information Search, and Information Utilization," p. 738.

et al. study, except individual players were used rather than groups. The amount and kind of information which the subjects requested was investigated. The subject exchanged messages with the experimenter in order to play the game. Conceptually simple subjects requested significantly more information in the low and the moderate environmental complexity considerations. Conceptually complex subjects exhibited more information search at high levels of environmental complexity. Complex subjects requested a significantly higher proportion of new information to the simple subjects request for information about ongoing activities ($\chi^2 = 4.24, p < .05$). The authors state:

The fact that simple Ss performed more information search in the low and moderate conditions is in accordance with the theory (Schroder, et al., 1967) because such Ss are thought to use information in a more temporally isolated fashion. Since the individual bases only one or a few responses on each piece of information, he needs more information to maintain effective play than does the complex person who can use each item, in combination with other items, as the basis for many moves.⁴¹

Lawrence investigated the relationship between personality structure and group functioning. An exploratory version of tactical game experiment was utilized. In addition to task-oriented data-processing measures, interpersonal attitude measures were introduced, which consisted of ratings on group cohesiveness. The task-oriented data-processing results were in the expected U curve shape, but were not significant. The results on the interpersonal attitude measure indicate that at high levels of environmental complexity the ratings of

⁴¹Peter Suedfeld and Siegfried Streufert, "Information Search As A Function of Conceptual and Environmental Complexity," Psychonomic Science, 4, 1966, p. 352.

cohesiveness became more extreme and negative. This finding offers some indication that structures for processing social stimuli also vary with overload.⁴²

Suedfeld and Hagen examined conceptual structure and information pattern as factors in information processing. The PCT was administered to 100 college students from which ten complex and ten simple subjects were selected. These 20 subjects were administered the Kent-Rosanoff Word Association test which gathered evidence concerning information-processing behavior. Conceptually complex subjects were found significantly more effective in solving problems when more clues must be considered ($t=2.17, p<.05$). Conceptually complex subjects also used significantly more clues than simple subjects in arriving at solutions ($t=3.66, p<.01$). These results indicate that conceptually complex subjects were more effective in processing complex information patterns, by using available information in a more complex way.⁴³

Streufert studied conceptual structure and interpersonal attitudes toward conforming and deviant group members. The Sentence Completion Test and the Impression Formation Test were administered to assess conceptual complexity. The experimental procedure was concerned with the effects of conceptual structure on interpersonal attitudes under varying interaction-distance conditions. A higher interaction distance represents lower levels of importance attracted to

⁴²E. A. Lawrence, "An Investigation of Some Relationships Between Personality Structure and Group Functioning," unpublished senior thesis, Princeton University, 1962.

⁴³Peter Suedfeld and Richard L. Hagen, "Measurement of Information Complexity: I. Conceptual Structure and Information Pattern As Factors in Information Processing," Journal of Personality and Social Psychology, 4, 1966, pp. 233-236.

the co-communicator. Conceptually simple subjects attitudes were not affected by the changes in interaction distances. Conceptually complex subject attitudes changed more toward the mean as interaction distance increased.⁴⁴

Stager investigated the conceptual level as a composition variable in small group decision making. The tactical war game was utilized in studying the relationship of conceptual level to emergent group information processing structures and the characteristic predecisional subprocesses. The PCT was used to select 20 four-man teams which varied in composition of members with high conceptual level (25, 50, 75, and 100%). The groups were observed and rated on various decision making behaviors. Assessment of group uncertainty and group structure were calculated by the following formulas:

$$H = - \sum_i p_i \log p_i \quad \text{and} \quad C = \frac{(t-1) d_h - (d_{h-1} + d_{h-2} + d_{h-3})}{(t-1) D} \quad 45$$

Figure 16 presents the research results confirming the following hypotheses:

1. With an increase in the percentage of members of a high conceptual level in the group, there is an increase in the role flexibility or, conversely, a decrease in structure and more functional role uncertainty.
2. Groups in which the members are all of a high conceptual level (100%) generate more interpersonal (substantive) conflict than groups in which the members differ in conceptual level.
3. The extent to which generated conflict is utilized in the synthesis of decisions increases with an increasing percentage of members of a high

⁴⁴Siegfried Streufert, "Conceptual Structure, Communicator Importance and Interpersonal Attitudes Toward Conforming and Deviant Group Members," Journal of Personality and Social Psychology, 4, 1966, pp. 100-107.

⁴⁵For a description of these formulas see W. R. Garner, Uncertainty and Structure As Psychological Concepts (New York: John Wiley and Sons, Inc., 1962); and H. Hutte, "Decision-making In a Management Game," Human Relations, 18, 1965, pp. 5-20.

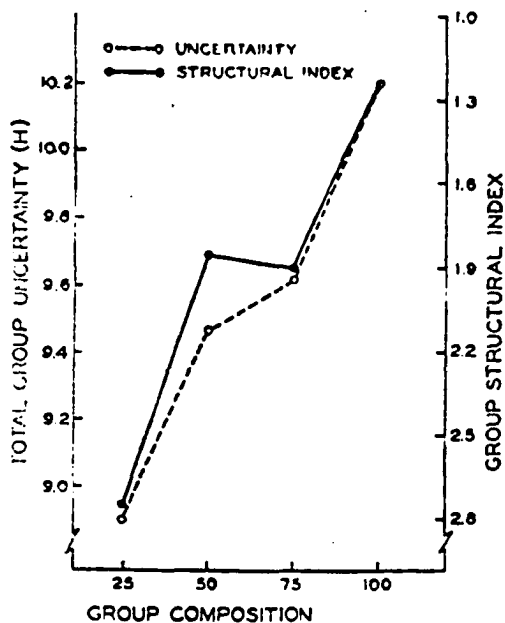
conceptual level in the group. With an increasing percentage of high conceptual level members, there is increasingly more synthesizing of generated alternatives and evaluating of alternatives in the pre-decisional phase.

4. The extent of search for novel information increases as the percentage of members of a high conceptual level in the group increase, whereas total information search is not dependent upon group composition.

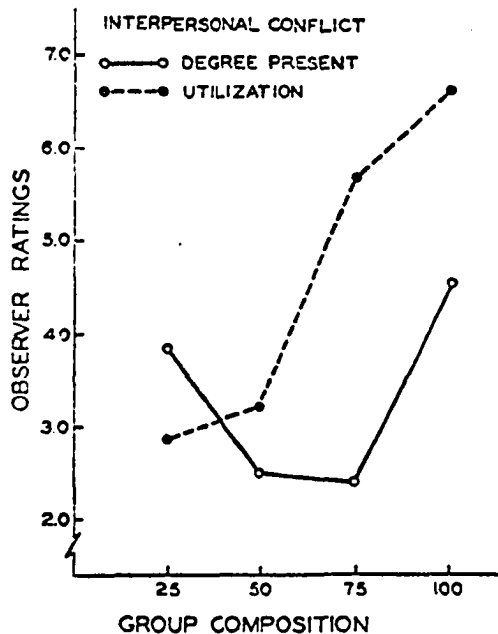
Communication complexity correlated significantly with interpersonal conflict utilization ($r = .95$, $p < .01$), the suggestion to evaluation ration S/E ($r = -.67$, $p < .01$), the number of evaluations ($r = .53$, $p < .01$), group structural index ($r = -.70$, $p < .01$) and group uncertainty ($r = .73$, $p < .01$). The group structural index correlated significantly with S/E ratio ($r = .59$, $p < .01$) and interpersonal conflict utilization ($r = -.63$, $p < .01$). After analyzing these relationships, Stager suggests that the process of integrating discrepant information would seem to be preceded by the process of evaluation. The correlation data presented indicates that an increase in evaluation was paralleled by an increase in communication complexity (openness of communication channels), and that communication complexity was in turn highly correlated with interpersonal conflict utilization and negatively correlated with the S/E ratio. Therefore, the effects of communication complexity was considered the primary factor associating these variables, even though group structuring was also correlated with them. Stager states:

It would seem that flexibility in performing different functions is a necessary but not a sufficient requirement for effective decision making; an openness to multiple sources of information is required on the part of each group member.⁴⁶

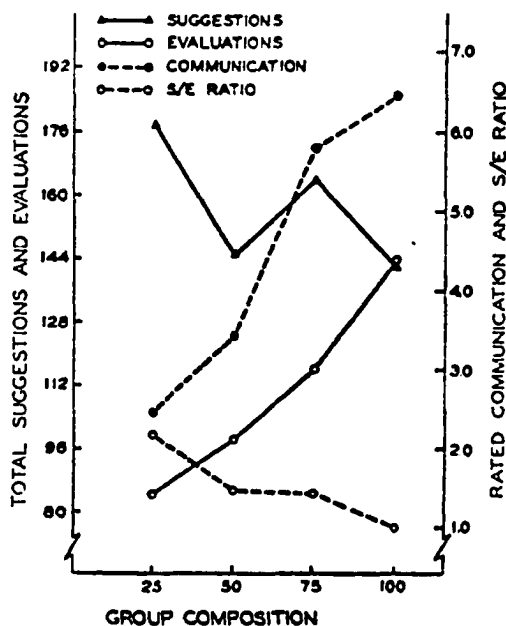
⁴⁶Paul Stager, "Conceptual Level As A Composition Variable in Small-Group Decision Making," Journal of Personality and Social Psychology, 5, 1967, p. 160.



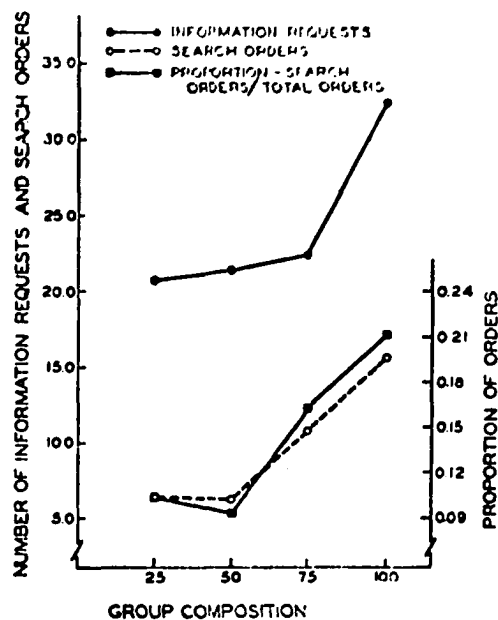
1. Group uncertainty (*H*) and structural index as functions of an increasing percentage of members of a high conceptual level in the group.



2. Interpersonal conflict and conflict utilization as functions of an increasing percentage of members of a high conceptual level in the group.



3. The effect of an increasing percentage of members of a high conceptual level in the group on the generation of alternatives, evaluation of alternatives, communication complexity, and S/E ratio.



4. Information requests, search orders, and proportion of search orders for novel information as functions of an increasing percentage of members of a high conceptual level in the group.

Figure 16 -- The Effects of An Increasing Percentage of Members of A High Conceptual Level On Various Indices.
 Stager, "Conceptual Level As A Composition Variable In Small-Group Decision Making," pp. 158-159.

Cognitive Complexity and Leadership Research Studies

Kelley studied the relationship between cognitive complexity-simplicity and leadership style in school superintendents. The MRT was administered to 24 school superintendents and the LBDQ was administered to their subordinates. Cognitive complexity was significantly correlated with demand reconciliation ($r = .54, p < .01$), and with predictive accuracy ($r = .53, p < .01$). Cognitive complexity correlated positively but not significantly with Persuasiveness ($r = .28$), Consideration ($r = .25$), and Tolerance of Freedom ($r = .17$). The superintendents were significantly more complex in perceiving the five negative role types on the MRT ($\chi^2 = 15.06, p < .01$). When the superintendents' building principals were placed in the MRT's role categories, their perception was significantly more simple ($\chi^2 = 12.04$) (Appendix XIV).⁴⁷

Tuckman investigated personality structure, group composition, and group functioning. A stock market game was utilized in studying the emergent group structure and information processing as a function of conceptual level. The Sentence Completion Test and the Situational Interpretation Test were used to select 12 three-man homogeneous groups designated system I-IV.⁴⁸ The groups were observed and rated on interpersonal and decision making behaviors. Table 7 presents a summary of the hypotheses and the predicted rankings of the four System

⁴⁷Wilbur R. Kelley, "The Relationship Between Cognitive Complexity and Leadership Style in School Superintendents," unpublished doctoral dissertation, State University at Albany, 1967.

⁴⁸System I, II, III, and IV are identical to low integration index, moderately low integration index, moderately high integration index, and high integration index outlined in Chapter 3. The Sentence Completion Test and the Situational Interpretation Test are designed to measure these structures.

TABLE 7

Summary of Hypotheses: Predicted Rankings of Four Group Systems On 13 Measures

Independent Variable	Dependent Variables (in rank)												
	Interpersonal Behaviors						Task-Related Behaviors						
	1a	1b	2a	2b	3a	3b	4a	4b	4c	4d	4e	4f	4g
Group System Abstractness of Group System (rank)	Abstractness of Structure	Abstractness of Decision Mechanisms	Extent of Leadership	Autocracy of Leadership	Conflict	Task-relevant Cooperation	Information Seeking	Task Activity	Ability to Forecast	Sensitive Index Tracking	Insensitive Index Tracking	Over-all Tracking	Gain
I	4	4	1	1	3	2	4	4	4	4	1	4	
II	3	3	2	2	1	3	3	3	3	3	2	3	
III	2	2	1	2	2	1	2	2	2	2	3	2	No Relation
IV	1	1	2	3	2	1	1	1	1	1	4	1	

Source: Tuckman, "Personality Structure, Group Composition, and Group Functioning," p. 473.

Groups on 13 measures. All the hypothesized rankings were significantly confirmed except 2a, 3a, and 4c.

Hypothesis two states that "emergent leadership will: (a) occur to a greater extent in Group System I and III groups than in Group System IV and II groups; (b) be most autocratic in Group System I groups, least autocratic in Group System IV groups, and of intermediate autocracy in Group System II and III groups." Hypothesis 2a was predicted because leadership in System I was a means of avoiding diversity and in System III of maintaining harmony. The results were in the expected direction but were not significant.

Hypothesis 2b was confirmed. Individuals were organized hierarchically under System I and leadership was autocratic with an intermediate amount of

cooperation. Leadership in System II groups was minimized, although where it did occur leaders reacted according to the anticipated wishes of the members. System III leaders were strong but functioned democratically. When leadership occurred in System IV it was democratic, but for the most part leadership was replaced by interdependency.⁴⁹

Schroder, Streufert and Weeden examined the effects of structural abstractness in interpersonal stimuli on the leadership role. The tactical war game was utilized to test the hypothesis that "the more simple the conceptual structure of the members composing a group, the more compartmentalized (i. e., the less substitution between) the roles which emerge." The Sentence Completion Test was used to select seven conceptually complex three-man teams and seven conceptually simple three-man teams. After each run the subject rated himself and each group member on amount of leadership contributed to the group. Observers also rated the subjects. The conceptually simple groups showed a significantly lower number of leadership role changes than the conceptually complex groups. The authors conclude that:

The data provides strong evidence indicating that integrative complexity, an individual or organismic variable, affects the organizational structure of groups, at least in the early stages of development. It demonstrates that the emergence of alternate leaders as the situation changes and evolves can be significantly affected by composition factors.⁵⁰

⁴⁹Bruce N. Tuckman, "Personality Structure, Group Composition and Group Functioning," Sociometry, 27, 1964, pp. 269-487.

⁵⁰Harold M. Schroder, Siegfried Streufert and D. C. Weeden, "The Effect of Structural Abstractness in Interpersonal Stimuli On the Leadership Role," Office of Naval Research Technical Report No. 3, Princeton University, 1964.

Summary

The research literature dealing with the Ohio State Leadership studies, Cognitive Complexity-simplicity and Human Information Processing are reviewed. The research pertinent to leadership within a State Vocational Rehabilitation Agency is reviewed and finally, research on the relationship between a person's conceptual complexity and leadership behavior is presented. The nature of these findings suggest a positive relationship between a person's conceptual complexity, predictive accuracy, behavior, and effectiveness.

CHAPTER V
RESULTS, IMPLICATIONS, AND CONCLUSIONS

Introduction

The aim of this research was to investigate the personality structure and leadership behavior of vocational rehabilitation agency supervisors. The investigation was conducted in order to determine the relationship between the supervisor's cognitive complexity and the dependent variables: (1) supervisor leadership behavior, (2) supervisor effectiveness, and (3) counselor job satisfaction. The major hypothesis states that a supervisor with a more cognitively complex information processing personality should manifest a leadership style that will more effectively accomplish the rehabilitation agency's objectives and result in higher rehabilitation counselor job satisfaction.

The data collected for this research study are reported and discussed in this chapter. Included are the biographic data, the chief of field services' effectiveness classification, the measurement of the supervisors' cognitive complexity and leadership opinion, and the measurement of the counselors' perceived leadership behavior and job satisfaction. The relationships existing among these data are examined in light of the hypotheses that were developed. The results of the multiple regression analysis on the dependent variable, total JSI score, are also presented.

Results

Biographic Data

The supervisors were all males and ranged in age from 32-63 years with a mean age of 46.19. They all had masters degrees in Counseling, Psychology, or Administration. Three supervisors had advanced work towards their doctor's degree. They supervised from 5 to 19 counselors with the mean at 10.85. The number of years of supervisory experience ranged from 1 to 10 years with a mean of 4.77. The number of years of counselor experience preceding the appointment to supervisor ranged from 1 to 31 years with a mean of 8.27.

Effectiveness Classification

The chief of field services classified his supervisors into an effective or less effective group. This categorization resulted in 15 supervisors being classified effective and 14 supervisors being classified less effective. One supervisor in the effective group and two supervisors in the less effective group were eliminated as previously explained. The chief of field services was then requested to select from these two groups those supervisors who would comprise a middle group of effectiveness. Six supervisors from the effective group and six supervisors from the less effective group were selected. Supervisors 1-14 were classified effective with supervisors 9-14 being placed in the middle group. Supervisors 15-26 were classified less effective with supervisors 15-20 being placed in the middle group. A complete listing of the PCT, MRT, LOQ, LBDQ, and JSI scores for each supervisor appears in Appendix XV.

Establishing a criteria for measuring supervisory effectiveness has been a difficult research problem. The reasons for this is that the supervisors' jobs

are often multidimensional making it difficult to define and quantify their performance. In light of the emphasis to develop more objective measures, the superior's global rating of performance effectiveness still remains the most frequently used approach.¹ The superior's ratings are assumed to have the best overview of the situation and are the best evaluation of how a subordinate's job behavior contributes to the organizational goals. In this research the chief of rehabilitation services designated which supervisors were more and less effective and listed the criteria he utilized in making this designation.

In the Viaille, et al. study of management practices, the state directors designated one office among the upper 20 percent and one office among the lower 20 percent of effectiveness, and also specified the criteria used in making these designations. After carefully examining the 27 separate criteria, they were subsumed under the following three headings:

1. Production - Number of closures; cost-effectiveness; number of persons served; unsuccessful closures; quality of caseload, quality of casework.
2. Administrative and Management Practices - Quality of program development; counselor control of case flow; general office climate; staff morale; in-service training; delegation; problem solving; staff experience; paperwork; attitude toward paperwork; adequacy of case recording.
3. Community Relations - Community expression; complaints; counselor involvement in the community.

The general findings were that the more effective offices were orientated towards quality rather than quantity of production, were more participative in their management practices, seemed better satisfied with their employment, and spent

¹Edward E. Lawler III, "The Multitrait-Multirater Approach to Measuring Managerial Performance," Journal of Applied Psychology, 51, 1967, p. 369.

more time in their public relations activities. Viaille, et al. indicate that these findings "tend to verify the fact that the criteria specified by the director (production, management practices and community relations) are the actual operating criteria by which the district offices are judged on their effectiveness."²

The chief of field services classification criteria can also be subsumed under these three headings. These criteria in the order listed are:

1. Cooperativeness - the loyalty and ability to cooperate with the administration.
2. Ability to provide leadership and guidance to counselors - the education and development of counselors in case management.
3. Degree of control within a supervisory area - the management and control of counselor's case load.
4. Ability to act under pressure - the ability to handle conflict and confrontation in the work situation.
5. Public image of area supervised - the community relation in the supervised area.

Production emphasis is described by the degree of control within a supervisory area. Control is maintained by a computerized management information system which tracks every counselor's case load movement throughout the rehabilitation process. The chief receives a weekly output and the supervisor receives a monthly output of the length of time a case remains in any status position. Control of case load management is therefore quantitative, but since it stresses the management processing of cases rather than just numbers, it can also be considered to be qualitative. The administrative and management practices are

²Viaille, et al., Management Practices in Vocational Rehabilitation District Offices, p. 41.

described by the supervisor's cooperativeness, the ability to provide leadership and guidance to counselors, and the ability to act under pressure. These three criteria seem to indicate the ability to interact both upward and downward in the agency. The community relations is described by the public image of the area supervised. It seems apparent that the chief of rehabilitation services is evaluating the supervisor's effectiveness along the lines of other rehabilitation agencies.

Cognitive Complexity

The cognitive complexity of the supervisors was measured by their responses on the Modified Repertory Test and the Paragraph Completion Test. The lower the MRT score and the higher the PCT score the more cognitively complex the subject. The PCT stem scores are presented in Appendix XV. Table 8 summarizes the data derived from the PCT and the MRT.

The data derived from the MRT and the PCT indicate that the sample contained a full range of cognitive complexity scores. The mean for both measures

TABLE 8

COGNITIVE COMPLEXITY OF SUPERVISORS

Instrument	Range	Mean	Standard Deviation
Modified Repertory Test	81 - 238	144.08 ^a	35.36
Paragraph Completion Test	3 - 9	5.72 ^b	1.28

^aN = 24

^bN = 25

represent a middle degree of cognitive complexity. On the MRT eight scores ranging from 81 to 120 are considered complex, ten scores ranging from 125 to 159 are considered of moderate complexity and six scores ranging from 169 to 238 are considered cognitively simple. On the PCT five scores ranging from 7 to 9 are considered complex, fourteen scores ranging from 5 to 6 are considered of moderate complexity and five scores ranging from 3 to 4 are considered cognitively simple.

Leadership Opinion

The leadership opinion of the supervisor was reported by their responses on the Leadership Opinion Questionnaire. The supervisors reported their leadership opinion on the leadership dimensions Consideration and Structure. Table 9 indicates that supervisors in this study said they were "considerate" to a moderately-high degree and rather inactive in defining roles, setting goals, and directing group activities. These results are consistent with those found by Smits presented in Table X-5. Although norms have not been established for rehabilitation supervisors, comparing these results with Table V-1 indicates that the supervisor's consideration score is similar to most other occupational groups, but his structure score is considerably lower. However, the mean scores are virtually the same for the following occupational groups: male civil service supervisors, hospital administrators, management training students, and employees. Fleishman's data also indicates that generally consideration scores are higher than structure scores. Theoretically such a LOQ pattern is predictive

TABLE 9

LEADERSHIP OPINION OF SUPERVISORS (N = 26)

LOQ Subscales	Range	Mean	Standard Deviation
Consideration	43 - 60	54.08	4.09
Structure	25 - 59	43.31	7.80

of moderately-high subordinate morale, but low productivity. The moderately-high job satisfaction to be reported later could be expected to confirm a high level of morale.

Leadership Behavior

The leadership behavior of the supervisors studied was reported by their counselors through the Leadership Behavior Description Questionnaire. The supervisors were rated on twelve subscales of the LBDQ each of which assesses a different dimension of leadership behavior. The LBDQ summary presented in Table 10 indicates the counselors perceived their supervisors highest in Tolerance of Freedom and approximately equal on Consideration and Initiation of Structure. Comparing the mean LBDQ scores of this study with Tables X-4, XII-2, and XIII-1 indicates that these LBDQ results have similar rankings. The mean score for Production Emphasis places it last in order of these perceived leadership behaviors.

TABLE 10

LEADERSHIP BEHAVIOR DESCRIPTION OF SUPERVISORS (N = 26)

LBDQ Subscales	Range	Mean	Standard Deviation
Representation	14 - 21	18.69	1.72
Demand Reconciliation	8 - 22	17.81	3.45
Tolerance of Uncertainty	20 - 42	34.08	5.65
Persuasiveness	20 - 43	34.69	5.30
Initiation of Structure	27 - 43	37.62	4.21
Tolerance of Freedom	23 - 54	40.65	5.70
Role Assumption	21 - 49	37.38	5.80
Consideration	23 - 46	37.27	5.50
Production Emphasis	24 - 39	32.61	4.21
Predictive Accuracy	11 - 21	17.58	2.27
Integration	8 - 23	17.65	3.77
Superior Orientation	26 - 42	36.15	3.59

Job Satisfaction

The job satisfaction of the counselors was reported by their responses on the Job Satisfaction Inventory. The counselors rated their satisfaction on eight subscales of the JSI each of which assesses a different dimension of job satisfaction. A total JSI score is computed by summing the eight subscales. A higher total JSI score indicates higher job satisfaction.

The JSI summary presented in Table 11 indicates that there is a wide range of satisfaction among the counselors. Total JSI score ranged from 237 to

TABLE 11

JOB SATISFACTION INVENTORY OF COUNSELORS (N = 160)

LBDQ Subscales	Range	Mean	Standard Deviation
Physical and Mental Exertion	19 - 32	28.35	2.45
Relation with Associates	23 - 32	27.65	2.15
Relation with Employer	28 - 44	39.15	3.33
Security, Advancement, Finance	24 - 32	27.81	2.40
Interest in the Job	54 - 80	70.77	5.36
Job Information, Training, Status	30 - 37	34.19	1.58
Physical Work Conditions	15 - 24	20.11	2.21
Future, Goals, Programs	27 - 37	31.85	2.80
Total	237 - 310	279.96	16.12

310 with an average of 279.96. In general the overall level of job satisfaction is high within this state agency. Comparing the results of Table 11 with Tables X-3 and XII-2 illustrate the different levels of job satisfaction. The results of Table XII-2 indicate a state agency with a much lower level of job satisfaction than that evidenced by the indexes in this study.

Hypotheses

The first four hypotheses are concerned with testing for significant differences between the chief of field service's effectiveness classifications. When the supervisors were separated from two groups of effectiveness into upper and lower one-third groups of effectiveness the mean spread increased between the

variables. The results are discussed using the upper and lower one-third effectiveness classification.³

Hypothesis I states that there is no difference between the supervisors' cognitive complexity when classified according to effectiveness. Table 12 presents the means, standard deviations, and U-tests on the cognitive measures, when the supervisors were classified into upper one-third and lower one-third

TABLE 12

SUPERVISORS MEAN SCORES ON MRT AND PCT WHEN CLASSIFIED INTO UPPER ONE-THIRD AND LOWER ONE-THIRD GROUPS OF EFFECTIVENESS

	Effective (N = 8)		Less Effective (N = 6)		U
	Mean	S. D.	Mean	S. D.	
MRT	132.71	57.53	141.33	20.26	17
PCT	5.37	1.19	5.50	1.39	22

groups of effectiveness. The null hypothesis is accepted on both cognitive personality measurements. There are no significant differences between the cognitive complexity of effective and less effective supervisors.

Neither the MRT nor the PCT differentiated between the effective and less effective supervisors. The effective supervisors' mean MRT score is somewhat smaller, but the large standard deviation results in significant distribution overlap. The PCT scores are essentially identical for the two groups and are not affected

³In Appendix XVII the data for the two group classification is presented.

when the groups become more polar. These results may indicate either no relationship between cognitive complexity and effectiveness or that the criteria considered for the classification might not reflect the cognitive complexity of the supervisors. The connotation of the first criteria, cooperation, may reveal some preferential consideration. The MRT and PCT are significantly correlated ($r = .35, p < .05$).

Hypothesis II states that there is no difference between the supervisors' LOQ subscale scores when classified according to effectiveness. Table 13 presents the means, standard deviations and U-tests on the LOQ dimensions,

TABLE 13

SUPERVISORS MEAN SCORES ON THE LOQ WHEN CLASSIFIED INTO UPPER ONE-THIRD AND LOWER ONE-THIRD GROUPS OF EFFECTIVENESS

LOQ	Effective (N = 8)		Less Effective (N = 6)		U
	Mean	S. D.	Mean	S. D.	
Consideration	56.75	2.71	51.83	2.32	0.00**
Structure	44.38	4.24	39.17	7.68	10.00*

**Significant at .01 level.

*Significant at .05 level.

when the supervisors were classified into upper one-third and lower one-third groups of effectiveness. The null hypothesis is rejected on the LOQ dimension Consideration, and Structure. The effective supervisors are significantly higher on the leadership opinion dimension consideration and structure.

Hypothesis III states that there is no difference between the supervisors' LBDQ subscale scores when classified according to effectiveness. Table 14 presents the means, standard deviations and U-tests on the LBDQ dimensions, when the supervisors were classified into upper one-third and lower one-third groups of effectiveness. The null hypothesis is rejected on the dimensions Demand Reconciliation, Initiation of Structure, Role Assumption, Consideration, Production Emphasis, Integration, and Superior Orientation. The effective

TABLE 14

SUPERVISORS MEAN SCORES ON THE LBDQ SUBSCALES WHEN
CLASSIFIED INTO UPPER ONE-THIRD AND LOWER ONE-
THIRD GROUPS OF EFFECTIVENESS

LBDQ Subscales	Effective (N = 8)		Less Effective (N = 6)		U
	Mean	S. D.	Mean	S. D.	
Representation	19.12	1.12	18.50	1.76	15
Demand Reconciliation	20.25	1.28	14.67	4.50	00**
Tolerance of Uncertainty	36.25	4.77	30.67	6.91	12
Persuasiveness	37.38	1.41	32.33	7.84	16
Initiation of Structure	39.86	2.64	34.17	4.35	3**
Tolerance of Freedom	40.62	2.56	43.17	7.49	17
Role Assumption	40.62	2.06	32.50	6.72	2**
Consideration	40.38	2.32	34.17	5.49	6**
Production Emphasis	34.00	1.77	29.67	4.50	10*
Predictive Accuracy	18.75	1.39	16.00	3.16	12
Integration	20.12	1.46	15.00	4.73	9*
Superior Orientation	38.38	1.41	33.33	2.94	5**

*Significant at .05 level.

**Significant at .01 level.

supervisors are significantly higher on the above-mentioned leadership behavior dimensions.

Hypothesis IV states that there is no difference between the counselors' JSI subscale scores when classified according to their supervisor's effectiveness. Table 15 presents the means, standard deviations and U-tests on the JSI dimensions when the supervisors were classified into upper one-third and lower one-third groups of effectiveness. The null hypothesis is rejected on the dimension Physical Work Conditions.

TABLE 15
COUNSELOR JSI SUBSCALE SCORES WHEN CLASSIFIED ACCORDING TO
THE UPPER ONE-THIRD AND LOWER ONE-THIRD GROUPS
OF SUPERVISOR EFFECTIVENESS

JSI Subscales	Effective (N=8)		Less Effective (N=6)		U
	Mean	S. D.	Mean	S. D.	
Physical and Mental Exertion	28.75	1.83	26.83	4.17	22
Relation with Associates	28.87	1.96	26.50	2.43	15
Relation with Employer	40.37	2.00	37.83	2.71	12
Security, Advancement and Finance	28.00	2.67	27.50	2.34	24
Interest in the Job	72.37	4.17	70.00	3.63	17
Job Information, Training, and Status	33.62	2.00	34.67	1.63	16
Physical Work Conditions	21.25	2.12	18.50	2.26	10*
Future, Goals, and Programs	31.87	2.36	31.67	2.87	20
Total JSI	284.88	15.65	274.50	13.35	13

*Significant at .05 level.

Tables 13, 14, and 15 indicate some significant differences between the effective and less effective supervisors. The effective supervisors were significantly higher on the LOQ dimensions and scored higher on all the LBDQ dimensions except Tolerance of Freedom. The effective supervisors scored higher on all the JSI dimensions except Job Information, Training, and Status. Physical Work Conditions was the only JSI dimension with a significant difference but, Relation with Employer and Total JSI dimension U's were significant at the less than .10 level.

The chief of rehabilitation services effectiveness classification is substantiated by the counselors' perceptions of the supervisor's leadership behavior. The effective supervisors more actively exercised the leadership role, by exhibiting consideration and structuring the situation. The effective supervisors were seen as being more integrative, which is probably indicated by their higher Demand Reconciliation behavior. They also emphasized production and especially were seen to maintain cordial relations with their superiors. It is interesting to note that the less effective supervisors tolerated more freedom for their counselors. Without the necessary levels of Consideration and Initiation of Structure the freedom is probably not utilized in the most effective manner. Stogdill indicates that there is a curvilinear relationship between the level of freedom and group structure. The counselors under the effective supervisors indicated slightly higher job satisfaction scores.

Hypothesis V states that there is no significant correlation between the supervisors' cognitive complexity and the LOQ dimension scores. Table 16

TABLE 16

CORRELATION OF SUPERVISORY ATTITUDES LOQ AND COGNITIVE
COMPLEXITY MRT AND PCT (N = 24)

LOQ Subscales	MRT	PCT
Consideration	-.20	.14
Initiation of Structure	.07	.29

presents the correlation coefficients. The null hypothesis is accepted. There is no significant relationship between the supervisors' cognitive complexity and his leadership opinion.

Hypothesis VI states that there is no significant correlation between the supervisors' cognitive complexity and the LBDQ dimension scores. Table 17 presents the correlation coefficients. The MRT is significantly correlated with dimensions Representation, Tolerance of Freedom, Consideration, Predictive Accuracy, Integration, and Superior Orientation. The PCT is not significantly correlated with any of the LBDQ dimensions.

Hypothesis VII states that there are no significant correlations between the supervisors' cognitive complexity and the counselors' JSI dimension scores. Table 18 presents the correlation coefficients. The MRT is significantly correlated with the dimensions Relations with Employer; Interest in the Job; Job Information, Training, and Status; Future, Goals, and Programs; and Total Job Satisfaction. The PCT does not correlate significantly with any of the JSI dimensions.

TABLE 17

CORRELATION OF SUPERVISORY BEHAVIOR LBDQ AND COGNITIVE
COMPLEXITY MRT AND PCT (N = 24)

LBDQ Subscale	MRT	PCT
Representation	.46*	-.07
Demand Reconciliation	.13	.04
Tolerance of Uncertainty	.07	.20
Persuasiveness	.32	.07
Initiation of Structure	.33	-.06
Tolerance of Freedom	.51**	.09
Role Assumption	.28	.25
Consideration	.36*	-.06
Production Emphasis	.10	-.08
Predictive Accuracy	.46*	-.02
Integration	.46*	.08
Superior Orientation	.48**	.16

*Significant at .05 level.

**Significant at .01 level.

TABLE 18

CORRELATION OF SUPERVISORY COGNITIVE COMPLEXITY MRT AND
PCT AND COUNSELOR JSI DIMENSION SCORES (N = 24)

JSI Dimensions	MRT	PCT
Physical and Mental Exertion	-.18	.05
Relation with Associates	.29	.15
Relation with Employer	.35*	.09
Security, Advancement, and Finance	.24	.11
Interest in the Job	.53**	-.05
Job Information, Training, and Status	.56**	-.12
Physical Work Conditions	.20	.01
Future, Goals, and Programs	.54**	.01
Total JSI	.42*	.00

*Significant at .05 level.

**Significant at .01 level.

Examining the PCT's correlations with the LOQ, LBDQ, and the JSI dimensions indicates only a weak relation on two subscales. The PCT was positively related ($p = .10$) to the LOQ dimension Initiation of Structure and the LBDQ dimension Role Assumption. Although the relationships are weak it might be reasoned that the supervisors' cognitive complexity (PCT) is related to the active exercise of the leadership role. This relationship should be further substantiated.

Examining the MRT's correlations with the LOQ, LBDQ, and the JSI dimensions indicates that the more cognitively complex (MRT) supervisor allows his counselors more scope for initiative, decision making and action. He speaks and acts as the group's representative maintaining cordial relations with his superior and a closely knit organization. These supervisors show consideration in regards to their counselors and exhibit foresight and ability to predict outcomes accurately. The more cognitively complex the supervisor the higher the counselors total job satisfaction score. The dimension that contributes to the MRT's significant correlation with total JSI involve the more intrinsic factors of the job. The significant correlation between the supervisors' cognitive complexity (MRT) and the counselors' Relation with Employer would indicate the ability of these supervisors to identify the expectations of his counselors. Evidence for this might be seen in the counselors' interest in the job and agency programs.

Hypothesis VIII states that there is no significant correlation between the supervisors' LOQ dimension scores and the LBDQ dimension scores. Table 19

presents the correlation coefficients. The LOQ dimension Consideration correlates significantly with the dimensions Demand Reconciliation, Tolerance of

TABLE 19
CORRELATION OF SUPERVISORY BEHAVIOR LBDQ AND
SUPERVISORY OPINION LOQ (N = 26)

LBDQ Subscales	LOQ	
	Consideration	Structure
Representation	.12	.19
Demand Reconciliation	.54**	.06
Tolerance of Uncertainty	.40**	.00
Persuasiveness	.11	.13
Initiation of Structure	.20	.28
Tolerance of Freedom	.01	-.16
Role Assumption	.44**	.27
Consideration	.24	.16
Production Emphasis	-.08	.27
Predictive Accuracy	.31	.15
Integration	.35*	.14
Superior Orientation	.31	.24

*Significant at .05 level.

**Significant at .01 level.

Uncertainty, Role Assumption, and Integration. The LOQ dimension structure does not correlate significantly with any of the LBDQ dimensions.

Hypothesis IX states that there are no significant correlations between the supervisors' LOQ dimension scores and the counselors' JSI dimension scores. Table 20 presents the correlation coefficients. The LOQ dimension Consideration

TABLE 20
CORRELATION OF SUPERVISORY OPINION LOQ AND
COUNSELOR JOB SATISFACTION JSI (N = 26)

JSI Subscales	LOQ	
	Consideration	Initiation of Structure
Physical and Mental Exertion	.18	-.08
Relation with Associates	.23	.05
Relation with Employer	.34*	-.00
Security, Advancement, and Finance	-.20	.21
Interest in the Job	.08	.01
Job Information, Training, and Status	-.07	-.09
Physical Work Conditions	.28	.12
Future, Goals, and Programs	-.25	.10
Total	.07	-.04

*Significant at .05 level.

correlates significantly with the JSI dimension Relation with Employer. The LOQ dimension Structure does not correlate significantly with any of the JSI dimensions.

The LOQ dimension Consideration correlations indicate that the more considerate a supervisor sees his behavior the more satisfied the counselor is in his Relation with Employer. This relation might be further detailed by the fact that a more considerate supervisor is seen by his counselors as actively exercising the leadership role by anticipating uncertain outcomes and reconciling

conflicting demands. The lack of relationship between the supervisors' Structure score, and leadership behavior and job satisfaction seems to indicate that supervisor structure plays a lesser role in this work relationship. This can also be seen by the supervisors relatively low mean LOQ Structure score.

Hypothesis X states that there are no significant correlations between the supervisors' LBDQ dimension scores and the counselors' JSI dimension scores. The null hypothesis is rejected. Table 21 presents the correlation coefficients.⁴ The correlations indicate that the LBDQ dimensions Tolerance of Uncertainty, Productive Emphasis, Predictive Accuracy, and Superior Orientation failed to correlate significantly with the total JSI score. The JSI dimensions Physical and Mental Exertion; Security, Advancement, and Finance; Job Information, Training, and Status; and Future Goals and Programs failed to correlate significantly with any of the LBDQ dimensions. The remaining JSI dimensions correlated significantly with almost all the LBDQ dimensions.

The results indicate that the supervisors' behavior has a major influence on the job satisfaction areas dealing with interpersonal relations and interest, liking and involvement in the job. Production Emphasis' lack of significant correlation with any of the JSI dimensions and its relatively low mean score reported below indicate little supervisory pressure for closures of rehabilitation cases. These results are inconsistent with the research findings of Irzinski,

⁴The correlation coefficients appearing in Table 21 are Pearson product moment correlations. The assumption underlying this statistic were felt to have been met in this situation and these coefficients are reported so the reader can make comparisons with the same procedure used to calculate Table X-1 and Table XII-1.

TABLE 21

CORRELATION OF SUPERVISORY BEHAVIOR LBDQ AND COUNSELOR
JOB SATISFACTION JSI (N = 26)

LBDQ Subscales	JSI ^a								Total
	1	2	3	4	5	6	7	8	
Representation	-.24	.36	.64	.01	.54**	.14	.43*	.18	.40*
Demand Reconciliation	-.02	.50**	.72**	.13	.48*	.16	.55**	.10	.48*
Tolerance of Uncertainty	.02	.35	.42*	.14	.19	-.001	.31	-.05	.22
Persuasiveness	-.25	.42*	.72**	.17	.48*	.26	.40*	.15	.43*
Initiation of Structure	-.04	.48*	.60**	-.08	.44*	.20	.56**	.17	.42*
Tolerance of Freedom	-.29	.18	.66**	.24	.57**	.37	.30	.30	.45*
Role Assumption	.23	.56**	.54**	.08	.47*	-.13	.55**	.08	.45*
Consideration	-.21	.38	.67**	.34	.46*	.11	.41*	.19	.41*
Productive Emphasis	.01	.28	.11	-.20	.04	-.10	.25	.10	.07
Predictive Accuracy	-.18	.39	.64**	-.06	.48*	.22	.44*	.10	.38
Integration	-.20	.46*	.74**	.14	.51**	.16	.51**	.16	.45*
Superior Orientation	-.15	.41*	.52**	.02	.46*	.15	.41*	.22	.37

^a(1) Physical and Mental Exertion; (2) Relations with Associates; (3) Relations with Employer; (4) Security, Advancement, and Finance; (5) Interest in the Job; (6) Job Information, Training and Status; (7) Physical Work Conditions; (8) Future, Goals and Programs; Total Score.

*Significant at .05 level.

**Significant at .01 level.

Muthard and Jaques, and Wright, et al., who found pressures for closures to be a major problem reported by rehabilitation counselors.⁵ Smits found similar results to this study between Production Emphasis and job satisfaction and offered the explanation that production pressures might be communicated to counselors by someone other than the supervisors (see Table X-1).⁶ This agency's management information system seems to be one possible explanation for the lack of closure pressure in the supervisor's behavior.⁷

Multiple Regression Analysis

The object of the multiple regression analysis is the derivation of an equation by which the dependent variable may be estimated by the other independent variables. The dependent variable is the total score on the JSI. The independent variables are the MRT and PCT scores of cognitive complexity, the two dimensions on the LOQ, and the twelve dimensions on the LBDQ. Table 22 presents the first five variables as they were entered, the multiple R, the

⁵Stanley M. Irzinski, "Factors Related to Turnover In a State Rehabilitation Agency," unpublished doctoral dissertation, Pennsylvania State University, 1968; John E. Muthard and Marceline E. Jaques, "Barriers to Effective Rehabilitation: Counselor Opinion," Personnel and Guidance Journal, 39, 1961, pp. 710-716. George N. Wright, et al., A Survey of Counselor Perception (Madison, Wisconsin: University of Wisconsin, Rehabilitation Research Institute, Monograph II, 1968).

⁶Smits, "Supervisory Practices: From the Counselors' Point of View," in Smits, op. cit., p. 17.

⁷This agency is reported to have one of the most sophisticated information systems in operation within the United States. For an excellent description of the importance of such a system see Richard F. Ericson, "Organizational Cybernetics and Human Values," Journal of the Academy of Management, 1, 1970, pp. 49-65.

TABLE 22

MULTIPLE REGRESSION ANALYSIS

Variable Entered	Multiple R	Std. Error of Est.	d. f.	F-Ratio
Demand Reconciliation	.48	14.92	1/21	6.13*
MRT	.58	14.04	2/20	5.32*
Tolerance of Uncertainty	.65	13.58	3/19	4.58*
Predictive Accuracy	.68	13.40	4/18	3.91*
Structure	.71	13.26	5/17	3.46*

*Significant at .05 level.

Standard of Error of estimate, the degrees of freedom, and the F-ratio. Table 23 presents the constant and variable coefficients for the multiple regression analysis.

TABLE 23

MULTIPLE REGRESSION FUNCTION

Variable	Function	Constant
Demand Reconciliation	5.25	238.13
MRT	.19	
Tolerance of Uncertainty	-1.23	
Predictive Accuracy	-3.18	
Structure	.43	

Table 22 indicates the variables Demand Reconciliation, MRT, Tolerance of Uncertainty, Predictive Accuracy and Structure entered the Multiple Regression Analysis. The variables beyond these first five did not add any significant increase in R. Demand Reconciliation has the largest effect on total job satisfaction. The multiple regression analysis function is:

$$Y_i = 238.13 + 5.25(X_1) + .19(X_2) - 1.23(X_3) - 3.18(X_4) + .43(X_5).$$

Implications

Stogdill's theory of leadership is based upon the performances, interactions and expectations of group members. The role system is a central concept of Stogdill's theory and suggests that groups become structured by differential role expectations. The leadership role is expected to initiate interaction structure and provide the freedom for initiation of performance in other member roles.

Stogdill states:

That function of high status positions which defines the right to initiate structure for others implies acceptance of the correlative and inseparable obligation to provide freedom for others. Those expectations which specify the boundaries of roles define the authority of any one role in relation to the authority of other roles. The group tends, when possible, to elevate to high status a member whose performances, values, and responses to interaction confirm the expectations that, in maintaining groups structure and in exercising the authority defined for his role, he will respect the right of other members to initiate action in accordance with the degrees of freedom defined for their roles.⁸

⁸ Stogdill, Individual Behavior and Group Achievement, p. 130.

Kelly's Commonality and Sociality Corollary have direct implications to the leadership role. Kelly defines a role in terms of the theory of personal constructs as "a psychological process based upon the role player's construction of aspects of the construction systems of those with whom he attempts to join in a social enterprise."⁹ The extent that one person employs a construction of experience which is similar to another and also the extent that one person constructs the construction processes of another, he is in a strategic position to assume the leadership role. Kelly states:

The rallying leader's contribution to the acceleration of the group's social progress is dependent upon and proportional to his understanding of the relevant features in his colleagues' personal construct system. By "understanding" we do not mean that he necessarily holds the common viewpoint, but rather that he has a way of looking at his colleagues' ideas that makes sense and enables him to predict their behavior. Of course, a commonality of viewpoint may, to a certain extent, make it easier for him to subsume parts of the construction system of his colleagues within his own, but commonality is not a necessary prerequisite to subsuming.¹⁰

The leadership process outlined by Tannenbaum, et al., presents a theoretical framework which illustrates the leader's psychological process stressed by Kelly. The end result of the leader's psychological structuring of the follower and the situation is his psychological map. The leader then attempts to select the communication behaviors that will "strike the right chord" in the follower's personality. The leader's effectiveness will depend on the extent to which the

⁹Kelly, The Psychology of Personal Constructs, p. 97.

¹⁰Ibid., p. 101.

follower's attitudes and behavior is changed in line with the desired goals.

Tannenbaum, et al. state:

. . . effectiveness in leadership is a function of the dynamic inter-relationship of the personality characteristics of the leader, the personality characteristics of the follower, and the characteristics of the situation with the field of each individual.¹¹

The preceding discussion presents a broad framework for understanding the leadership process. Despite the efforts of social science researchers to understand the leadership process it still remains to a large extent an individual art. An art, however, that is dependent upon the manager's inner personality development. Managerial growth and advancement can be achieved by the continual evaluation of one's total personality and its effect on others. The total personality of an individual largely determines what and how he reacts in the leadership role and is essentially working out ones essential being in the form of action.

Owens states:

What "behavior theory" has taught us, over the years, is that, within certain limits imposed by the inner personality of the individual, each person has the capability of cultivating habits of behavior (by act of will) which optimize his effects upon people. . . . The most important contribution of "behavior theory"; however, is the development of a classification of leadership behaviors (styles) which provides a manager an analytical tool with which a manager can consciously and intelligently build a personally successful leadership style.¹²

¹¹Tannenbaum, et al., Leadership and Organization, p. 31.

¹²James Owens, "The Uses of Leadership Theory," Michigan Business Review, 25, 1973, p. 15.

The goal of this willful ¹³ development is stated by Count Hermann

Keyserling:

. . . the basic condition of leadership on whatever plane will henceforth consist in the attainment of an inner state in which man has as a matter of course grown beyond all specialization, professional determination and literal beliefs; in which he lives as a completely responsible being from out of his own creative self.¹⁴

Stogdill's theory of Individual and Group Achievement presents a set of concepts that may be useful in diagnosing and understanding the leadership role and activities of the group in reaching its goals. The input-output system was developed after a rather exacting examination of theory and experimental data. Beer feels that Stogdill's theory clarifies some of the conflicting research findings on job satisfaction and production. Leadership behavior is felt to interact with individual needs and expectations in a way that affects intergration, production, and morale. In Figure 17 the following relationships are outlined diagrammatically.

The output of organizations are group integration, production and moral. Satisfaction of members expectation leads to group integration and cohesiveness but is not related to production. Rather production is a function of group structure as is morale (defined as group enthusiasm to achieve group goals). Thus, morale and production are positively

¹³For an interesting theoretical discussion on the relation between the Will, the Intelligence, and the Sensibility, see Charles Finney, Attributes of Love — A section from Lectures on Systematic Theology (Minneapolis, Minnesota: Bethany Fellowship, Inc., 1963).

¹⁴Count Hermann Keyserling, Creative Understanding (New York: Harpers and Brothers Publishers, 1929), p. 477.

related to satisfaction only when conditions that lead to high morale and production, namely freedom of action for group members, lead to reinforcement of worker expectations.¹⁵

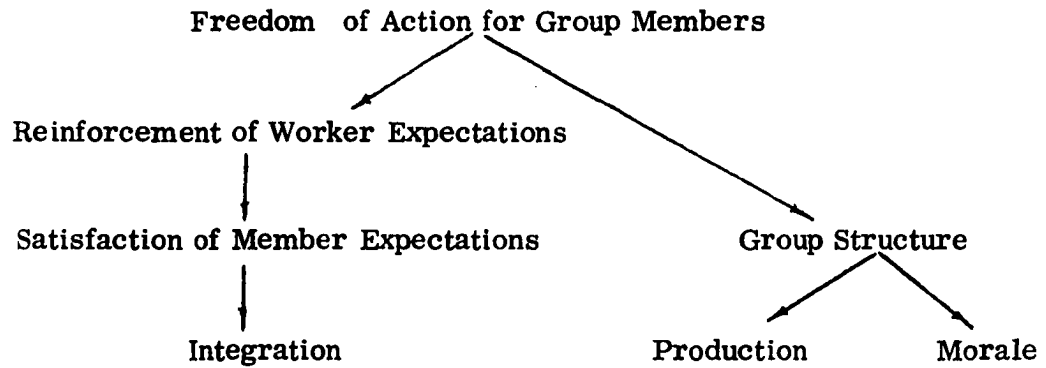


Figure 17 -- Relationship Between Integration, Production, and Morale.

The theory requires that group achievement be analyzed in terms of productivity, morale, and integration. An input-output balance is achieved throughout the system. An increase in the output values will require some increase in inputs, or else if inputs remain constant any increase in one of the outputs would be offset with a decrease in one or both of the other outputs. The objective then is to maintain the Group Structure and Operations that will optimize the Group Achievements. Productivity being the direct outcome of task performance, Stogdill states:

. . . both the formal group structure and the role structure are instrumental to productivity. Productivity is facilitated when function and status are clearly defined and when those members in high status positions maintain

¹⁵Michael Beer, Leadership Employee Needs and Motivation (Columbus, Ohio: Bureau of Business Research, Division of Research, College of Commerce and Administration, The Ohio State University, 1966), p. 67.

group structure and group direction. A type of leadership in high status positions which enlarges the responsibility and authority of subordinates to a degree that is permitted by the necessity for controlling operations also tends to facilitate productivity.¹⁶

Morale is directly related to productivity in that the goal direction of activity and freedom of action are its essential factors. Freedom of action increases as group structure increase to an optimum level and then decreases. Morale, therefore, is curvilinearly related to the degree of group structure. Stogdill states:

Since group structure and operations control are determined to a very high degree by the leadership of a group and since morale is a function of structure and control, it must be concluded that morale is closely related to group leadership.¹⁷

Member satisfaction was previously thought to increase group morale and productivity. The relation hypothesized is that satisfied members will be more highly motivated resulting in higher production. In questioning this relationship Stogdill observed that both the norms of subgroups and operations control tended to depress the effects of incentives on productivity and morale, but had no effect on reinforcement of group integration. It was concluded that member satisfaction "contributes toward group integration only when reinforcement of the members' expectation leads them to support the group structure, operations, and goals."¹⁸ The importance of satisfying expectations and increasing

¹⁶Stogdill, Individual and Group Achievement, p. 210.

¹⁷Ibid., p. 212.

¹⁸Ibid., p. 219.

integration depends on the group's value of its power and survival. The potential power a group exerts on an objective is determined by its integration and morale.

The probable nature of the input-output balance is stated in these hypotheses. Productivity and morale are positively related. Morale may be related either positively or negatively to integration. Integration and productivity are negatively related. Morale, productivity, and integration may be positively related when the group is strongly motivated in striving toward goal achievement or when motivation is very low. Stogdill concludes:

The present theory suggests that the leader is as fully responsible for the morale and integration of his organization as he is for its productivity.¹⁹

The vocational rehabilitation supervisor is considered as the direct link to improved client services and counselor job satisfaction. If the basic axiom of perceptual psychologists, that the individual's behavior is a product of his perceptual capacities is accepted, then the results of this study can be interpreted in the following manner. The supervisor's cognitive capacities, differentiation and integration, are manifested in his leadership behavior as Consideration and Structure. The higher the cognitive differentiation the more considerate is the supervisor in analyzing his counselors' needs. The higher cognitive integration the more structure the supervisor sees in his assumption of the leadership role. As Rogers indicated earlier, "when the individual perceives and accepts into one consistent and integrated system all his sensory and visual experiences, then he

¹⁹Stogdill, Individual and Group Achievement, p. 223.

is necessary more understanding of others and is more accepting of others as separate individuals. "

Accepting the philosophical and theoretical premise, that as the "self" becomes more differentiated and integrated the individual is able to respond more meaningfully to the frame of reference of others, has important implications for accomplishing the agency's goals. The professionally educated supervisor and counselor require a working atmosphere characterized by a high Tolerance of Freedom which allows scope for initiative, decision, and action. It is in this type of atmosphere that the participants will be free to explore the viewpoints held by each other. The "principle of supportive relationships" maintains that in the leadership process all interactions should be supportive and build and maintain a sense of personal worth and importance on the part of the participants. The continued effectiveness of the Vocational Rehabilitation Agencies is a function of the quality of supervisory personnel and the relationship they develop. Scanlan states:

The success of an organization depends chiefly on the quality of management existing within the organization. It is often acknowledged that organizational survival depends on effective management and that the main single ingredient that distinguishes a more successful organization from a less successful one is the ability to procure, train, and develop a competent management team. This is true whether the organization is public or private, profit or nonprofit. Effective management is the key factor that must be present if the organization is to exist.²⁰

²⁰Burt K. Scanlan, Principles of Management and Organizational Behavior (New York: John Wiley and Sons, Inc., 1973), p. v.

Explanation of Findings

The study's aim was to analyze the relationship between the supervisor's cognitive personality, leadership behavior, subordinates' job satisfaction, and the superior's effectiveness rating. The results of the correlation of cognitive complexity with leadership behavior and with job satisfaction indicate that only the MRT showed significant relationships. The MRT's significant correlations indicate the types of behaviors and satisfactions that would be expected. For example, a high cognitive complexity resulted in higher predictive accuracy leading to better superior and subordinate relationships. The MRT's usefulness in identifying leadership behavior seems to be substantiated. The PCT's failure to correlate significantly with leadership behavior or job satisfaction indicates the difficulty of measuring the individual's cognitive integration. The area of cognitive integration has proved the most difficult for perceptual psychologists to measure. The coarseness of the PCT's measurement (3-9) resulted in a number of tied ranks which reduces the correlational results. The PCT's usefulness in a practical application is therefore questioned.

The supervisors classified as effective did not have a more cognitive personality as hypothesized. A major emphasis of Schroder et al. is that the evaluation of individuals should be dimensionalized in terms of information processing variables. When this approach is taken, the more cognitively complex individual would be more effective in a dynamically changing situation, whereas a cognitively simple individual would be more adaptable to a static

situation. The acceptance of this null hypothesis indicates that the criteria considered for classification were not reflective of cognitive complexity.

The concept of effectiveness has proved difficult for researchers to quantify. This is compounded by the ever increasing machine pacing in processing, subsystem interdependence and work group norms. These changes suggest that the supervisor no longer has a direct effect on the productive effectiveness of the organization, but still maintains an influence on the loyalty and freedom of action of his subordinates. If the supervisor's effectiveness is thought of as being comprised of technical skill, administrative skill and human relation skill, then the results of the effectiveness classification and cognitive complexity, which is related to the human relation skill, indicate the need to consider these other skills in evaluating the supervisor's effectiveness. Future research might be directed at dimensionalizing the evaluation of supervisors in terms of information processing variables and also measuring the contribution that his technical and administrative skills make to such an evaluation.

The results of the multiple regression analysis determine the type and degree of association between independent variable, JSI total and the following dependent variables: Demand Reconciliation, MRT, Tolerance of Uncertainty, Predictive Accuracy and Structure. In the equation reported earlier, 238.13 is the Y intercept or the elevation of the fitted regression plane and the coefficients 5.25, .19, -1.23, -3.18, and .43 are the partial regression coefficients. These partial regression coefficients each measure the average influence on Y when the other coefficients are held constant.

Conclusion

Man's "ontological acceleration" has allowed him to move toward the realization of his inner "morphogenic property." Human behavior which is regarded as an expression of anticipation is man's means for understanding himself, his surroundings, and his behavior. This transforming of self occurs when the individual's responses come from the proper level of self and are adjusted by an internal feedback loop urging him to do it right. Maslow felt that, "Experiencing is only the beginning of knowledge" and in order to pursue the truth, to discover and develop a way of experiencing the highest levels of human awareness, to research the best social conditions in which man might bring himself to a full humanness necessitates the empirical methods of science and the aesthetics of philosophical inquiry.

If the "human use of human beings" remains as the vision, then managers of society must continue to synthesize the "cybernetics of organizational and human values." This "fusion process" focuses on the attempts to personalize the organization and to socialize the individual. Fulfilling both these needs requires a high order of managerial perceptual sensitivity and interpersonal communication. A psychocybernetic organizational system recognizes man's possibility of creating his own future. In the words of solar astronomer Roberts:

In our explosively changing world it is no longer sufficient to live with philosophies or religions simply handed down from an older generation. . . . Rather than simply fight for the preservation of the old things that are good, we must plan creatively also to shape the new. We must commit ourselves to dare to build the world we want, knowing that it is possible if we but demand it.²¹

²¹Walter Orr Roberts, "Science, A Wellspring of Our Discontent," American Scholar, 1967, p. 260.

EPILOGUE

. . . It is in fact nothing short of a miracle that the modern methods of instruction have not yet entirely strangled the holy curiosity of inquiry; for this delicate little plant, aside from stimulation, stands mainly in need of freedom; without this it goes to wrack and ruin without fail.

Albert Einstein

"TRUTH" is the eternal fitness of things. As a state of mind, it represents things and facts - AS THEY ARE. It is the opposite of falsehood.

"CHRIST IS THE TRUTH"

Arvid Rudolph Scherling

APPENDIX I

Dear Sir:

State Vocational Rehabilitation agencies for the past few years have been conducting studies into the relationship between the counselor's job satisfaction and their supervisor's leadership behavior. These studies have added valuable information to understanding the supervisor-counselor relationship. As a graduate student at the University of Oklahoma, I am conducting this research in order to extend the knowledge in this on-going research program.

This study has been approved by a faculty committee at the University and will be conducted under the supervision of the Regional Rehabilitation Research Institute at the University of Oklahoma. The Oklahoma Vocational Rehabilitation agency was approached and agreed to participate in this research study.

The number of responses received will have an effect upon the validity of this study. Therefore, I hope each of you will cooperate in the request to complete and return the questionnaires enclosed. The questionnaires will require your own personal feeling and therefore the result will be completely anonymous. Do not sign your name to any of the forms. At no time will any agency representative see your individual responses. Because I desire to get your own personal feelings, please do not discuss your answers with others.

The completion of these questionnaires should not require more than an estimated 45 minutes. I would appreciate your filling out these questionnaires and mailing them to me today or tomorrow. Your participation will have a direct influence on the research results. Thank you for your cooperation.

Sincerely,

Steven Arvid Scherling
University of Oklahoma

enclosures

DIRECTIONS (SUPERVISOR)

To facilitate the completion of this survey, please follow the steps outlined below in completing the questionnaires.

- STEP 1.** Read the directions before completing each questionnaire.
- STEP 2.** Complete the Personal Data Form.
- STEP 3.** Complete the Modified Repertory Test.
- STEP 4.** Complete the Leader Opinion Questionnaire. Please describe as accurately as possible your own leadership behavior. Be sure to answer all 40 questions.
- STEP 5.** When you have completed the three questionnaires check to see that all questions have been answered. Then, place all materials in the brown envelope and seal it.

PERSONAL DATA (SUPERVISOR)

1. Job Title _____
2. Male _____ Female _____
3. Age _____
4. Number of counselors or professionals supervised _____
5. Number of years employed as a supervisor _____
6. Number of years counseling experience prior to becoming a supervisor _____
7. Educational (answer those that apply)
 - a. Bachelor's Degree: Yes _____ No _____ Major _____
If "No" number of hours towards Bachelor's _____
 - b. Master's Degree: Yes _____ No _____ Major _____
If "No" number of hours towards Master's _____
 - c. Doctor's Degree: Yes _____ No _____ Major _____
If "No" number of hours towards Doctor's _____

DIRECTION (COUNSELOR)

To facilitate the completion of this survey, please follow the steps outlined below in completing the questionnaires.

- STEP 1.** Read the directions before completing each questionnaire.
- STEP 2.** Complete the Leader Behavior Description Questionnaire (in blue). Please describe as accurately as possible the leadership behavior of your immediate supervisor.
- STEP 3.** Complete the Job Satisfaction Inventory. This instrument asks that you indicate the amount of satisfaction that you derive from your counseling position in the agency.
- STEP 4.** When you have completed the three questionnaires check to see that all questions have been answered. Then, place all materials in the brown self-addressed envelope, seal it, and mail directly to the researcher.

PERSONAL DATA (COUNSELOR)

1. Job Title _____
2. Male _____ Female _____
3. Age _____
4. Number of years employed in present position _____
5. Educational (answer those that apply)
 - a. Bachelor's Degree: Yes _____ No _____ Major _____
If "No" number of hours towards Bachelor's _____
 - b. Master's Degree: Yes _____ No _____ Major _____
If "No" number of hours towards Master's _____

APPENDIX II

LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE--Form XII

**Originated by staff members of
The Ohio State Leadership Studies
and revised by the
Bureau of Business Research**

Purpose of the Questionnaire

On the following pages is a list of items that may be used to describe the behavior of your supervisor. Each item describes a specific kind of behavior, but does not ask you to judge whether the behavior is desirable or undesirable. Although some items may appear similar, they express differences that are important in the description of leadership. Each item should be considered as a separate description. This is not a test of ability or consistency in making answers. Its only purpose is to make it possible for you to describe, as accurately as you can, the behavior of your supervisor.

Note: The term, "*group*," as employed in the following items, refers to a department, division, or other unit of organization that is supervised by the person being described.

The term "*members*," refers to all the people in the unit of organization that is supervised by the person being described.

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College of Commerce and Administration
The Ohio State University
Columbus, Ohio**

DIRECTIONS:

- a. READ each item carefully.
- b. THINK about how frequently the leader engages in the behavior described by the item.
- c. DECIDE whether he (A) *always*, (B) *often*, (C) *occasionally*, (D) *seldom* or (E) *never* acts as described by the item.
- d. DRAW A CIRCLE around *one* of the five letters (A B C D E) following the item to show the answer you have selected.

- A — Always
- B — Often
- C — Occasionally
- D — Seldom
- E — Never

e. MARK your answers as shown in the examples below.

Example: He often acts as described..... A B C D E

Example: He never acts as described..... A B C D E

Example: He occasionally acts as described..... A B C D E

-
- 1. He acts as the spokesman of the group..... A B C D E
 - 2. He waits patiently for the results of a decision..... A B C D E
 - 3. He makes pep talks to stimulate the group..... A B C D E
 - 4. He lets group members know what is expected of them..... A B C D E
 - 5. He allows the members complete freedom in their work..... A B C D E
 - 6. He is hesitant about taking initiative in the group..... A B C D E
 - 7. He is friendly and approachable..... A B C D E
 - 8. He encourages overtime work..... A B C D E
 - 9. He makes accurate decisions..... A B C D E
 - 10. He gets along well with the people above him..... A B C D E
 - 11. He publicizes the activities of the group..... A B C D E
 - 12. He becomes anxious when he cannot find out what is coming next..... A B C D E

A — Always

B — Often

C — Occasionally

D — Seldom

E — Never

- | | | | | | |
|--|---|---|---|---|---|
| 13. His arguments are convincing..... | A | B | C | D | E |
| 14. He encourages the use of uniform procedures..... | A | B | C | D | E |
| 15. He permits the members to use their own judgment in solving problems. | A | B | C | D | E |
| 16. He fails to take necessary action..... | A | B | C | D | E |
| 17. He does little things to make it pleasant to be a member of the group... | A | B | C | D | E |
| 18. He stresses being ahead of competing groups..... | A | B | C | D | E |
| 19. He keeps the group working together as a team..... | A | B | C | D | E |
| 20. He keeps the group in good standing with higher authority..... | A | B | C | D | E |
| 21. He speaks as the representative of the group..... | A | B | C | D | E |
| 22. He accepts defeat in stride..... | A | B | C | D | E |
| 23. He argues persuasively for his point of view..... | A | B | C | D | E |
| 24. He tries out his ideas in the group..... | A | B | C | D | E |
| 25. He encourages initiative in the group members..... | A | B | C | D | E |
| 26. He lets other persons take away his leadership in the group..... | A | B | C | D | E |
| 27. He puts suggestions made by the group into operation..... | A | B | C | D | E |
| 28. He needles members for greater effort..... | A | B | C | D | E |
| 29. He seems able to predict what is coming next..... | A | B | C | D | E |
| 30. He is working hard for a promotion..... | A | B | C | D | E |
| 31. He speaks for the group when visitors are present..... | A | B | C | D | E |
| 32. He accepts delays without becoming upset..... | A | B | C | D | E |
| 33. He is a very persuasive talker..... | A | B | C | D | E |
| 34. He makes his attitudes clear to the group..... | A | B | C | D | E |
| 35. He lets the members do their work the way they think best..... | A | B | C | D | E |
| 36. He lets some members take advantage of him..... | A | B | C | D | E |

A -- Always

B -- Often

C -- Occasionally

D -- Seldom

E -- Never

- | | | | | | |
|--|---|---|---|---|---|
| 37. He treats all group members as his equals..... | A | B | C | D | E |
| 38. He keeps the work moving at a rapid pace..... | A | B | C | D | E |
| 39. He settles conflicts when they occur in the group..... | A | B | C | D | E |
| 40. His superiors act favorably on most of his suggestions..... | A | B | C | D | E |
| 41. He represents the group at outside meetings..... | A | B | C | D | E |
| 42. He becomes anxious when waiting for new developments..... | A | B | C | D | E |
| 43. He is very skillful in an argument..... | A | B | C | D | E |
| 44. He decides what shall be done and how it shall be done..... | A | B | C | D | E |
| 45. He assigns a task, then lets the members handle it..... | A | B | C | D | E |
| 46. He is the leader of the group in name only..... | A | B | C | D | E |
| 47. He gives advance notice of changes..... | A | B | C | D | E |
| 48. He pushes for increased production..... | A | B | C | D | E |
| 49. Things usually turn out as he predicts..... | A | B | C | D | E |
| 50. He enjoys the privileges of his position..... | A | B | C | D | E |
| 51. He handles complex problems efficiently..... | A | B | C | D | E |
| 52. He is able to tolerate postponement and uncertainty..... | A | B | C | D | E |
| 53. He is not a very convincing talker..... | A | B | C | D | E |
| 54. He assigns group members to particular tasks..... | A | B | C | D | E |
| 55. He turns the members loose on a job, and lets them go to it..... | A | B | C | D | E |
| 56. He backs down when he ought to stand firm..... | A | B | C | D | E |
| 57. He keeps to himself..... | A | B | C | D | E |
| 58. He asks the members to work harder..... | A | B | C | D | E |
| 59. He is accurate in predicting the trend of events..... | A | B | C | D | E |
| 60. He gets his superiors to act for the welfare of the group members..... | A | B | C | D | E |

- A — Always
- B — Often
- C — Occasionally
- D — Seldom
- E — Never

- 61. He gets swamped by details..... A B C D E
- 62. He can wait just so long, then blows up..... A B C D E
- 63. He speaks from a strong inner conviction..... A B C D E
- 64. He makes sure that his part in the group is understood by the group members A B C D E
- 65. He is reluctant to allow the members any freedom of action..... A B C D E
- 66. He lets some members have authority that he should keep..... A B C D E
- 67. He looks out for the personal welfare of group members..... A B C D E
- 68. He permits the members to take it easy in their work..... A B C D E
- 69. He sees to it that the work of the group is coordinated..... A B C D E
- 70. His word carries weight with his superiors..... A B C D E
- 71. He gets things all tangled up..... A B C D E
- 72. He remains calm when uncertain about coming events..... A B C D E
- 73. He is an inspiring talker..... A B C D E
- 74. He schedules the work to be done..... A B C D E
- 75. He allows the group a high degree of initiative..... A B C D E
- 76. He takes full charge when emergencies arise..... A B C D E
- 77. He is willing to make changes..... A B C D E
- 78. He drives hard when there is a job to be done..... A B C D E
- 79. He helps group members settle their differences..... A B C D E
- 80. He gets what he asks for from his superiors..... A B C D E
- 81. He can reduce a madhouse to system and order..... A B C D E
- 82. He is able to delay action until the proper time occurs..... A B C D E
- 83. He persuades others that his ideas are to their advantage..... A B C D E

A — Always

B — Often

C — Occasionally

D — Seldom

E — Never

- | | | | | | |
|---|---|---|---|---|---|
| 84. He maintains definite standards of performance..... | A | B | C | D | E |
| 85. He trusts the members to exercise good judgment..... | A | B | C | D | E |
| 86. He overcomes attempts made to challenge his leadership..... | A | B | C | D | E |
| 87. He refuses to explain his actions..... | A | B | C | D | E |
| 88. He urges the group to beat its previous record..... | A | B | C | D | E |
| 89. He anticipates problems and plans for them..... | A | B | C | D | E |
| 90. He is working his way to the top..... | A | B | C | D | E |
| 91. He gets confused when too many demands are made of him..... | A | B | C | D | E |
| 92. He worries about the outcome of any new procedure..... | A | B | C | D | E |
| 93. He can inspire enthusiasm for a project..... | A | B | C | D | E |
| 94. He asks that group members follow standard rules and regulations..... | A | B | C | D | E |
| 95. He permits the group to set its own pace..... | A | B | C | D | E |
| 96. He is easily recognized as the leader of the group..... | A | B | C | D | E |
| 97. He acts without consulting the group..... | A | B | C | D | E |
| 98. He keeps the group working up to capacity..... | A | B | C | D | E |
| 99. He maintains a closely knit group..... | A | B | C | D | E |
| 100. He maintains cordial relations with superiors..... | A | B | C | D | E |

APPENDIX III

LBDQ FORM XII -- RECORD SHEET

											<u>Totals</u>
1. Representation	1	11	21	31	41						()
2. Reconciliation						51	61*	71*	81	91*	()
3. Tol. Uncertainty	2	12*	22	32	42*	52	62*	72	82	92*	()
4. Persuasion	3	13	23	33	43	53*	63	73	83	93	()
5. Structure	4	14	24	34	44	54	64	74	84	94	()
6. Tol. Freedom	5	15	25	35	45	55	65*	75	85	95	()
7. Role Assumption	6*	16*	26*	36*	46*	56*	66*	76	86	96	()
8. Consideration	7	17	27	37	47	57*	67	77	87*	97*	()
9. Production Emph	8	18	28	38	48	58	68*	78	88	98	()
10. Predictive Acc	9		29		49	59			89		()
11. Integration		19		39			69	79		99	()
12. Superior Orient	10	20	30	40	50	60	70	80	90	100	()

*Starred items are scored 1 2 3 4 5
 All other items are scored 5 4 3 2 1

APPENDIX IV

TABLE IV-1
MEANS AND STANDARD DEVIATIONS

Subscale	Army Division		Highway Patrol		Aircraft		Ministers		Community Leaders	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1. Representation	20.0	3.0	19.9	2.8	19.8	2.8	20.4	2.4	19.6	2.4
2. Demand Reconciliation					19.2	2.8	19.8	3.1	19.7	3.3
3. Tolerance Uncertainty	36.2	4.7	35.6	4.6	33.2	6.2	37.5	6.3	37.7	5.6
4. Persuasiveness	38.3	6.2	37.9	5.9	36.5	5.5	42.1	4.7	39.5	5.5
5. Initiating Structure	38.6	5.7	39.7	4.5	36.6	5.4	38.7	4.9	37.2	5.7
6. Tolerance Freedom	35.9	6.5	36.3	5.3	38.0	5.9	37.5	6.0	36.4	5.0
7. Role Assumption	42.7	6.1	42.7	5.3	40.9	5.6	41.5	5.4	39.8	5.6
8. Consideration	37.1	5.6	36.9	6.5	37.1	5.8	42.5	5.8	41.1	4.7
9. Production Emphasis	36.3	5.1	35.8	5.7	36.1	5.6	34.9	5.1	35.4	6.8
10. Predictive Accuracy	18.1	2.1	17.8	2.1	19.2	2.6	20.5	2.3	19.8	2.5
11. Integration	19.5	2.6	19.1	2.7						
12. Superior Orientation	39.9	4.9	39.1	5.1	38.6	4.2				
Number of cases	235		185		165		103		57	

TABLE IV-1
MEANS AND STANDARD DEVIATIONS (Continued)

Subscale	Corporation Presidents		Labor Presidents		College Presidents		Senators	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1. Representation	20.5	1.8	22.2	2.2	21.4	1.9	20.7	2.5
2. Demand Reconciliation	20.6	2.7	21.5	3.2			20.7	3.5
3. Tolerance Uncertainty	35.9	5.4	40.4	5.6	37.2	5.5	35.3	7.6
4. Persuasiveness	40.1	4.2	43.1	4.8	41.1	4.2	42.5	4.6
5. Initiating Structure	38.5	5.0	38.3	5.6	37.7	4.2	38.8	5.5
6. Tolerance Freedom	38.9	4.9	38.0	4.0	39.6	3.9	36.6	6.2
7. Role Assumption	42.7	3.5	43.3	5.5	43.5	4.5	41.0	5.7
8. Consideration	41.5	4.0	42.3	5.5	41.3	4.1	41.1	5.9
9. Production Emphasis	38.9	4.4	36.0	5.0	36.2	5.0	41.2	5.2
10. Predictive Accuracy	20.1	1.8	20.9	2.0				
11. Integration								
12. Superior Orientation	43.2	3.1			42.9	2.9		
Number of Cases	55		44		55		44	

Source: Ralph M. Stogdill, Manual for the Leader Behavior Questionnaire--Form XII (Columbus, Ohio: Bureau of Business Research, College of Commerce and Administration, The Ohio State University, 1963), p. 9-10.

APPENDIX V

TABLE V-1

MEANS AND STANDARD DEVIATIONS FOR LOQ SCALES

Sample	Consideration		Structure	
	M	SD	M	SD
241 Industrial Foremen	54.4	7.5	53.3	7.8
394 Employees	57.0	5.5	44.2	3.9
60 General Foremen	58.0	6.4	52.4	7.6
80 Bakery Supervisors	62.1	7.1	48.9	8.5
68 Executives	55.3	6.5	50.6	7.0
51 Hospital Administrators	56.0	5.7	43.0	7.8
24 <i>Research and Engineering Managers</i>	54.0	5.3	50.3	5.4
38 Business School Professors	54.6	-	47.5	-
86 Office Supervisors	53.2	8.0	54.3	7.0
23 Research Managers (chemical)	55.2	6.0	50.9	5.6
21 Engineering Supervisors (aircraft)	52.8	5.9	50.2	8.2
118 Air Force NCOs	56.6	7.7	54.2	7.5
274 Navy OCs	44.2	8.5	55.4	7.0
80 Foremen of a Pharmaceutical Company	54.7	6.9	51.9	7.1
25 Department Managers of Soap and Detergent Company	56.8	7.2	55.6	6.2
33 Centralized Bank Managers	55.2	6.5	52.3	7.6
32 Decentralized Bank Managers	56.7	8.0	52.8	8.4
102 Electronics Managers (all levels)	53.9	6.6	49.0	5.9
84 Electronics Managers (first-line)	53.9	6.7	49.0	6.1
493 Middle Managers	52.0	5.5	49.7	5.9
18 Hospital Head Nurses	54.5	6.8	49.8	7.0
59 Utility Supervisors	54.7	6.6	46.8	6.4
169 Store Managers of National Chain	53.0	7.2	65.0	6.5
168 Assistant Store Managers of National Chain	51.0	7.6	56.7	7.1
28 Management Training Students	53.6	5.0	44.3	8.2
14 Production Line Foremen Candidates	49.3	9.7	54.8	8.2
41 University Night Class (male employed)	51.8	5.1	52.0	7.1
29 Chemical Managers	55.1	5.3	52.7	8.2
29 Bank Branch Managers	54.5	4.5	51.9	5.4
40 Central Bank Officers	56.7	8.1	53.2	8.8
45 Bank Management Trainee Applicants	53.9	6.2	53.9	7.9
582 Catalog Order Plant Supervisors				
158 Department Managers	56.3	8.3	53.8	8.2
424 Division Managers	56.4	7.2	53.1	5.5
71 Male Civil Service Supervisors	54.8	7.0	42.6	7.9
28 Youth Opportunity Center Supervisors	52.1	6.4	47.8	6.4

Source: Edwin A. Fleishman, Manual for Leadership Opinion Questionnaire (Chicago, Ill.: Science Research Associates, Inc., 1969), p. 9.

APPENDIX VI

MODIFIED REPERTORY TEST

Instructions:

At the top of each column are 10 role types. Please list in the space following each role type the name or initials of 10 persons who most closely match these descriptions. These should be people you know personally. Do not repeat any names. When you are finished, you may erase the names or initials since this is only intended to help you identify the same person throughout the following assessment.

Next, I would like you to rate each of these 10 persons on a number of characteristics. Each row is identified with a bipolar characteristic, which is divided into a six-step scale ranging from +3 to -3. For person "a" decide how you would rate him on the first characteristic, which is OUTGOING-SHY. +3 means he is very outgoing and -3 means he is very shy. You may also use +2, +1, -1 or -2 to indicate your estimate of this person on this characteristic. Place your rating in the square corresponding to the person being rated and that characteristic. Continue to rate the other persons on this first characteristic and then repeat the ratings using the other characteristics. When you have finished every square should contain a + or - number.

Initials

- a. Yourself
- b. Person you dislike
- c. Mother
- d. Person you'd like to help
- e. Father
- f. Friend of same sex
- g. Friend of opposite sex (or spouse)
- h. Person with whom you feel most uncomfortable
- i. Boss
- j. Person difficult to understand

Modified Rep Test

+3	+2	+1	-1	-2	-3
outgoing			shy		
adjusted			maladjusted		
decisive			indecisive		
calm			excitable		
interested in others			self absorbed		
cheerful			ill humored		
responsible			irresponsible		
considerate			inconsiderate		
independent			dependent		
interesting			dull		
+3	+2	+1	-1	-2	-3

APPENDIX VII

PARAGRAPH COMPLETION

On the following pages you will be asked to complete certain sentences and write a short paragraph.

On each page you will find the beginning of a sentence, and your task is to complete it.

For example: I like . . .

When you are given the signal, turn to Page 1. Complete the sentence given and write at least three additional sentences. You will be given 130 seconds. After 110 seconds, I will say "Finish your sentence," and at 130 seconds I will ask you to turn to the next page. Make sure you complete your last sentences. There are 5 pages in all.

Write your sentences as quickly but as clearly as possible.

Do not turn this page until you are given the signal.

When someone disagrees with me . . .

Try to write at least 3 sentences.

Do not turn this page until you are given the signal.

When I am in doubt . . .

Try to write at least 3 sentences.

Do not turn this page until you are given the signal.

Rules . . .

Try to write at least 3 sentences.

Do not turn this page until you are given the signal.

When others criticize me it usually means . . .

Try to write at least 3 sentences.

Do not turn this page until you are given the signal.

Confusion . . .

Try to write at least 3 sentences.

Do not turn this page until you are given the signal.

APPENDIX VIII

JOB SATISFACTION INVENTORY

The following specific statements concern your feelings, beliefs, and attitudes. There are 70 items in this inventory. For each statement, a five-point scale is provided indicating whether you always, often, occasionally, seldom, or rarely do, feel, or see others as doing as the statement suggests. Thus, for example, you would check the space "E" on the scale if you rarely engage in the activity described:

	A	B	C	D	E
I worry a lot about my job.	___	:	___	:	___
	___	:	___	:	X

Or, see others as engaging rarely in an activity:

The policies and problems of the people under whom I work are adequately explained to me.	___	:	___	:	___
	___	:	___	:	X

To aid you in answering this inventory, the terms always, often, occasionally, seldom, and rarely have been defined on a percentage basis, as follows:

"A"--Always:	means from 86 to 100 percent of the time.
"B"--Often:	means from 66 to 85 percent of the time.
"C"--Occasionally:	means from 36 to 65 percent of the time.
"D"--Seldom:	means from 16 to 35 percent of the time.
"E"--Rarely:	means from 0 to 15 percent of the time.

These percent listings have been given at the top of each page in the inventory. There are no "right" or "wrong" answers to these statements. Work as rapidly as you can without being careless, and do not spend too much time on any one statement.

"A"--Always (86% to 100%)	"D"--Seldom (16% to 35%)
"B"--Often (66% to 85%)	"E"--Rarely (0% to 15%)
"C"--Occasionally (36% to 65%)	

Answer every question.

A B C D E

1. If I had a choice, I would choose a job in my present line of work over one in any other line of work. _____:_____:_____:_____:_____
2. I feel that I have an adequate understanding of what is expected of me in my job. _____:_____:_____:_____:_____
3. It is necessary for me to do things I dislike in order to get promotions. _____:_____:_____:_____:_____
4. I feel that to me others could make my work easier if they cared to do so. _____:_____:_____:_____:_____
5. I worry a lot about my daily work. _____:_____:_____:_____:_____
6. I feel if I could start over again, at 18, I would choose a different line of work. _____:_____:_____:_____:_____
7. I feel that people in general respect my job. _____:_____:_____:_____:_____
8. There are too many people telling me what to do. _____:_____:_____:_____:_____
9. I feel that I can always trust the people under whom I work. _____:_____:_____:_____:_____
10. My life would seem empty without my work to occupy me. _____:_____:_____:_____:_____
11. My present job requires me to work too long hours. _____:_____:_____:_____:_____
12. I am glad to get back to my job after a vacation. _____:_____:_____:_____:_____
13. I feel that I am as efficient as the average person with whom I work. _____:_____:_____:_____:_____
14. My work is too confining to suit me. _____:_____:_____:_____:_____
15. I feel I am paid a fair salary for the work I do. _____:_____:_____:_____:_____
16. I feel that my work utilizes my full capacities. _____:_____:_____:_____:_____

"A"--Always (86% to 100%)

"D"--Seldom (16% to 35%)

"B"--Often (66% to 85%)

"E"--Rarely (0% to 15%)

"C"--Occasionally (36% to 65%)

Answer every question.

- | | A | B | C | D | E |
|---|-----|-------|-------|-------|-------|
| 17. I feel that I am "in a rut" vocationally. | ___ | : ___ | : ___ | : ___ | : ___ |
| 18. I feel that I know where I stand with my present employer. | ___ | : ___ | : ___ | : ___ | : ___ |
| 19. I feel that my work has a bad effect on my health. | ___ | : ___ | : ___ | : ___ | : ___ |
| 20. I come home upset, angry or irritable because of something that happened at work. | ___ | : ___ | : ___ | : ___ | : ___ |
| 21. I feel competent and fully able to handle my job. | ___ | : ___ | : ___ | : ___ | : ___ |
| 22. I feel my work suffers because I have too much to do. | ___ | : ___ | : ___ | : ___ | : ___ |
| 23. I would decline an opportunity to change my present job for one of equal pay, security and status. | ___ | : ___ | : ___ | : ___ | : ___ |
| 24. I think it is possible to attain my vocational goals in that portion of life that is still ahead of me. | ___ | : ___ | : ___ | : ___ | : ___ |
| 25. I feel that my family and friends respect my vocation. | ___ | : ___ | : ___ | : ___ | : ___ |
| 26. I feel there is adequate transportation available to me in going to and from work, as well as in my work when called for. | ___ | : ___ | : ___ | : ___ | : ___ |
| 27. I think I really wanted to enter my present job when I started it. | ___ | : ___ | : ___ | : ___ | : ___ |
| 28. I regard my present position as a lifetime career. | ___ | : ___ | : ___ | : ___ | : ___ |
| 29. I think my present job is in the area of work (not necessarily the same job) I wish to remain in permanently. | ___ | : ___ | : ___ | : ___ | : ___ |
| 30. I expect my job to give me more satisfaction the longer I have it. | ___ | : ___ | : ___ | : ___ | : ___ |

"A"--Always (86% to 100%)

"D"--Seldom (16% to 35%)

"B"--Often (66% to 85%)

"E"--Rarely (0% to 15%)

"C"--Occasionally (36% to 65%)

Answer every question.

A B C D E

- | | | | | | | | | | |
|--|-----|---|-----|---|-----|---|-----|---|-----|
| 31. I feel I have had definite adequate preparation for the job I now hold. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 32. I feel I have made real and lasting friends among my working associates. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 33. My position forces me to work with certain individuals whom I dislike. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 34. I get discouraged in my present job. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 35. I feel that my job detracts from my status in the community where I live. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 36. I consider my work surroundings to be as pleasant as they should be. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 37. I feel I have eventual retirement security in my job. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 38. I get restless during working hours, and feel that the day is dragging endlessly. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 39. I feel that there should be more people to help with the work I am doing. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 40. I like my present job better than any other I have ever had. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 41. My job gives me more real personal satisfaction than the things I do in my spare time. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 42. I feel my occupation forces me to live in home surroundings which are uncomfortable or inadequate according to my standards. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 43. I wonder whether the people under whom I work approve of my work. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 44. I think my job gets more difficult for me each year. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 45. My present job gets me badly flustered and jittery. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 46. The policies and problems of the people under whom I work are adequately explained to me. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |

"A"--Always (86% to 100%)	"D"--Seldom (16% to 35%)
"B"--Often (66% to 85%)	"E"--Rarely (0% to 15%)
"C"--Occasionally (36% to 65%)	

Answer every question.

A B C D E

- | | | | | | | | | | |
|--|-----|---|-----|---|-----|---|-----|---|-----|
| 47. I feel that my general interests and attitudes are about the same as those of my fellow workers who have similar jobs. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 48. The method of payment of my earnings causes me inconvenience. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 49. I feel at ease in the presence of the people under whom I work. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 50. I am so interested in my work that I talk about it a great deal even after working hours. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 51. I feel I am kept from living as I would like because of insufficient income. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 52. I am satisfied with the degree to which my present job gives me an opportunity to express my own ideas. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 53. I find my work so interesting that it is on my mind a lot when I am not at work. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 54. I feel I have made a success of my job thus far in my career. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 55. My present job forces me to maintain too fast a pace. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 56. I feel that my working associates regard me as an equal. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 57. I feel that I must look outside my work for those things that make life worthwhile and interesting. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 58. My income is sufficient to meet my financial obligations and support my family. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 59. I feel that my associates stimulate me to do better work. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |
| 60. I think my job has "smothered" my personality. | ___ | : | ___ | : | ___ | : | ___ | : | ___ |

"A"--Always (86% to 100%) "B"--Often (66% to 85%) "C"--Occasionally (36% to 65%)	"D"--Seldom (16% to 35%) "E"--Rarely (0% to 15%)
--	---

Answer every question.

A B C D E

- | | | | | | |
|--|-------|-------|-------|-------|-------|
| 61. My vocational future looks promising to me. | _____ | _____ | _____ | _____ | _____ |
| 62. I feel that I am really interested in my present job. | _____ | _____ | _____ | _____ | _____ |
| 63. I get along well with the persons with whom I work on my present job. | _____ | _____ | _____ | _____ | _____ |
| 64. The people under whom I work make available the materials, information and assistance required to do my best work. | _____ | _____ | _____ | _____ | _____ |
| 65. I feel that the people under whom I work make unfair demands on my free time. | _____ | _____ | _____ | _____ | _____ |
| 66. I am afraid of losing my job. | _____ | _____ | _____ | _____ | _____ |
| 67. I feel that I will become more proficient at my work the longer I have it. | _____ | _____ | _____ | _____ | _____ |
| 68. Those with whom I work seem unreasonable in their dealings with me. | _____ | _____ | _____ | _____ | _____ |
| 69. I feel my present job helps me toward the financial goals I have set for myself. | _____ | _____ | _____ | _____ | _____ |
| 70. The people under whom I work are desirous of and willing to make improvements in my working conditions. | _____ | _____ | _____ | _____ | _____ |

You may use the rest of this sheet for any comments you would like to make concerning this inventory. Thank you for your help.

APPENDIX IX

JOB SATISFACTION INVENTORY

Categories and Inventory Item Numbers:

1. **Physical and mental exertion (7)**
11*, 19*, 22*, 38*, 39*, 44*, 55*
2. **Relations with associates (7)**
4*, 32, 33*, 47, 59, 63, 68*
3. **Relations with employer (10)**
3*, 8*, 9, 18, 43*, 46, 49, 64, 65*, 70
4. **Security, advancement, and finances (7)**
13, 15, 37, 48*, 51*, 58, 66*
5. **Interest in, liking for, and emotional involvement
in the job (18)**
1, 5*, 10, 12, 17*, 20*, 23, 27, 29, 34*, 40, 41, 45*,
50, 53, 57*, 60*, 62
6. **Job information, training and status (8)**
2, 7, 16, 21, 25, 31, 35*, 56
7. **Physical surroundings and work conditions (5)**
14*, 26, 36, 42*, 52
8. **Future, goals and progress (8)**
6*, 24, 28, 30, 54, 61, 67, 69

The number in () after each category indicates the number of items in this area. The numbers below are the appropriate item numbers from the Job Satisfaction Inventory.

*Starred items are scored 1 2 3 4 5
All other items are scored 5 4 3 2 1

APPENDIX X

TABLE X-1

Relationship Between Counselor Assessments of Supervisory Behavior
and Counselor Job Satisfaction

Supervisory Behavior	JSI Areas ¹								Total
	1	2	3	4	5	6	7	8	
Initiation Structure	.08	.31*	.35*	.06	.22*	.21	.17	.29*	.30*
Tolerance of Freedom	.22*	.48*	.55*	.13	.30*	.27*	.41*	.30*	.45*
Consideration	.22*	.48*	.61*	.13	.27*	.23*	.35*	.27*	.43*
Production Emphasis	-.15	.11	.04	-.07	.14	.09	.01	.14	.08

*Significantly different from zero at or beyond .001 level of confidence.

¹The JSI areas are: (1) Physical and mental exertion, (2) relations with associates, (3) relations with employer, (4) security, advancement, and finances, (5) interest in the job, (6) job information, training, and status, (7) physical work conditions, (8) future, goals, and progress; Total job satisfaction.

TABLE X-2

Relationship Between Counselor Assessments of Supervisory Behavior
and Interpersonal Values

Supervisory Behavior	RI Areas ¹				Total
	1	2	3	4	
Initiation Structure	.41*	.30*	.26*	.41*	.38*
Tolerance of Freedom	.68*	.60*	.47*	.65*	.66*
Consideration	.72*	.61*	.57*	.72*	.72*
Production Emphasis	.02	.00	.01	.04	.02

*Significantly different from zero at or beyond the .001 level of confidence.

¹The RI areas are: (1) Empathic understanding, (2) level of regard, (3) unconditionality of regard, (4) congruence, total.

TABLE X-3

JSI Means and Standard Deviations (N = 230)

JSI Subscales	Mean	S. D.
Physical and mental exertion	29.9	3.9
Relations with associates	28.0	3.9
Relations with employer	40.3	6.7
Security/advancement/finances	27.4	4.2
Interest in job	69.8	10.8
Job information, training and status	33.3	3.8
Physical work conditions	20.7	3.1
Future, goals and progress	30.4	5.8
Total Job Satisfaction	279.9	31.9

TABLE X-4

LBDQ Means and Standard Deviations (N = 230)

LBDQ Subscales	Mean	S. D.	Range
Tolerance of Freedom	39.7	7.1	13 - 50
Consideration	37.8	7.5	12 - 50
Initiation of Structure	35.9	5.7	18 - 50
Production Emphasis	31.3	6.1	14 - 46

Source: Wilbur J. Aiken, Stanley J. Smits and Donald J. Lollar, "Leadership Behavior and Job Satisfaction in State Rehabilitation Agencies," Experimental Publications Systems, No. 5, Ms No. 181A, (Washington, D. C. : American Psychological Association, 1970).

TABLE X-5

LOQ MEAN, STANDARD DEVIATIONS AND RANGE

LOQ Subscales	Mean	S. D.	Range
Consideration	56.96	5.58	44 - 76
Structure	44.89	7.52	22 - 71

Source: Stanley J. Smits, Leadership Behavior of Supervisor in State Rehabilitation Agencies, (Atlanta: Georgia State University, 1971).

APPENDIX XI

TABLE XI-1

Discriminant Function Coefficients for Scores on the Job Satisfaction Inventory
Obtained From Counselors Retained vs. Terminated at Followup

JSI Variable	Discriminant Function I (Terminated, N = 41)	Discriminant Function II (Retained, N = 202)
Physical, mental exertion	1.713	1.760
Relations with associates	0.722	0.860
Relations with employer	-0.355	-0.356
Security/advancement/finances	0.744	0.851
Interest, involvement in the job	0.241	0.325
Job Information, training, status	1.684	1.444
Physical work conditions	0.342	0.311
Future, goals, progress	-0.946	-0.940
Constant	-62.632	-67.858

Generalized Mahalanobis $D^2 = 39.529$ with 8 degrees of freedom ($P < .001$). The D^2 of 39.529 is interpreted as a Chi-square with eight degrees of freedom, i. e. the number of variables plus the number groups minus one degree of freedom for groups and one for variables.

TABLE XI-2

Application of the Discriminant Function Coefficients to Predicting
Counselor Employment Status at Followup

	EMPLOYMENT STATUS	
	Correctly Predicted (Hits)	Incorrectly Predicted (Misses)
Terminated	27	14
Retained	148	54
Total	175	68
Percentage	72%	28%

Source: Stanley J. Smits, "Job Satisfaction and Employment Turnover in State Rehabilitation Agencies: Results of a Followup Study," in S. J. Smits, Leadership Behavior of Supervisors in State Rehabilitation Agencies (Atlanta: Georgia State University, 1971, pp. 22-31.

APPENDIX XII

TABLE XII-1

Correlation Coefficients Between Job Satisfaction Scores and Perceived Leader Behavior Scores (N = 250).

JSI ^a	Consideration	Initiating Structure
1	.20*	.09
2	.41*	.26*
3	.59*	.37*
4	.32*	.24*
5	.32*	.21*
6	.37*	.27*
7	.34*	.26*
8	.35*	.32*
Total Score	.46*	.33*

*Significant at the .01 level.

^a(1) Physical and mental exertion, (2) relations with associates, (3) relations with employer, (4) security, advancement, and finances, (5) interest in the job, (6) job information, training, and status, (7) physical work conditions, (8) future, goals, and progress; total job satisfaction.

TABLE XII-2

Mean and Standard Deviations of LBDQ and JSI Subscales (N = 250)

	Mean	S. D.
LBDQ		
Consideration	40.87	10.02
Initiating Structure	40.49	8.50
JSI		
Physical and mental exertion	18.70	4.32
Relations with associates	19.59	3.79
Relations with employer	26.50	6.49
Security/advancement/finances	20.12	4.18
Interest in job	50.93	9.78
Job information, training and status	25.42	3.54
Physical surroundings and work conditions	14.72	3.49
Future, goals and progress	23.51	5.16
Total Score	199.31	32.15

Source: Ralf N. Pacinelli, "Rehabilitation Counselor Job Satisfaction As It Relates to Perceived Leadership Behavior and Selected Background Factors," (unpublished doctoral dissertation, Pennsylvania State University, 1968), p. 58.

APPENDIX XIII

TABLE XIII-1

LBDQ Means (N = 66)

LBDQ Subscales	Mean
Consideration	36.50
Tolerance of Freedom	38.44
Superior Orientation	36.03
Initiating Structure	37.81
Production Emphasis	33.12

Source: Carroll R. Bostic, "The Effect of Perceived Leadership Climate in the State Rehabilitation Agency", (Unpublished Doctoral Dissertation, University of Missouri, 1969).

APPENDIX XIV

TABLE XIV-1

Central Tendency and Variation of Cognitive Complexity
Scores of Superintendents (N = 24)

Range	Mean	S. D.
107 - 173	137	17.2

TABLE XIV-2

Summary of Leader Behavior Ratings
for Superintendents (N = 24)

LBDQ Subscale	Range	Mean	S. D.
Representation	35.0-45.8	40.6	2.76
Demand Reconciliation	32.4-47.0	41.2	3.18
Tolerance of Uncertainty	21.8-44.3	36.4	5.08
Persuasion	32.4-45.9	38.8	3.20
Initiation of Structure	33.5-44.3	39.9	2.80
Tolerance of Freedom	29.5-44.2	39.6	3.75
Role Assumption	36.2-55.6	41.8	2.67
Consideration	29.8-46.5	39.4	3.94
Predictive Accuracy	34.0-43.0	39.2	2.38
Integration	31.6-45.6	39.3	3.05

Source: Wilbur R. Kelley, "The Relationship Between Cognitive Complexity and Leadership Style in School Superintendents," unpublished doctor's dissertation, State University at Albany, 1967.

APPENDIX XV

TABLE XV-1
SUPERVISOR SCORES ON EACH RESEARCH INSTRUMENT

Supervisor	PCT	MRT	LOQ ¹		LBDQ											
			1	2	1	2	3	4	5	6	7	8	9	10	11	12
1	6	81	59	49	20	19	37	38	40	36	40	38	35	18	19	38
2	6	113	59	45	20	22	41	39	40	40	41	40	33	19	20	39
3	4	114	53	40	18	19	28	36	40	41	36	39	35	17	18	36
4	3	-	60	40	19	19	34	37	40	38	42	38	35	17	20	38
5	6	159	56	40	20	22	40	38	43	43	42	42	32	20	21	39
6	6	132	56	50	19	20	31	37	40	41	42	39	32	19	20	38
7	6	193	53	43	20	21	39	39	42	43	42	43	37	21	23	41
8	6	137	58	48	17	20	40	35	34	43	40	44	33	19	20	38
9	6	203	52	54	21	17	34	36	43	46	36	46	39	19	22	39
10	7	238	57	43	20	19	38	36	40	41	43	35	33	19	18	42
11	4	113	59	32	19	20	38	33	37	41	38	35	31	17	18	36
12	6	118	56	34	19	20	42	34	37	46	36	39	31	19	18	36
13	9	158	54	43	16	14	24	28	30	37	49	33	25	14	13	26
14	6	106	47	36	14	12	30	24	34	23	26	23	39	15	9	33
15	5	-	43	56	19	18	34	40	41	39	42	37	37	19	18	37

TABLE XV-1 (Continued)

Supervisor	PCT	MRT	LOQ ¹		LBDQ											
			1	2	1	2	3	4	5	6	7	8	9	10	11	12
16	7	113	57	43	16	16	30	30	34	35	32	34	30	16	15	34
17	-	155	55	47	19	20	41	33	35	45	36	46	26	17	19	36
18	5	138	58	54	19	18	32	36	43	38	39	34	35	20	18	36
19	6	169	51	59	20	18	32	36	38	40	36	37	34	17	18	39
20	6	170	52	35	20	21	37	43	42	42	39	42	38	19	21	39
21	4	145	51	39	16	16	34	31	32	44	28	34	24	16	13	31
22	7	155	56	40	18	19	36	37	37	54	38	37	34	18	19	35
23	7	120	50	46	20	17	38	39	38	41	38	38	32	17	18	34
24	4	125	51	39	18	9	20	20	33	32	35	24	33	14	8	30
25	5	173	53	25	21	18	31	40	38	48	35	39	31	20	20	38
26	6	130	50	46	18	9	25	27	27	40	21	33	24	11	12	32

¹The LOQ areas are: (1) Consideration, (2) Structure.

The LBDQ areas are: (1) Representation, (2) Demand Reconciliation, (3) Tolerance for Uncertainty, (4) Persuasiveness, (5) Initiation of Structure, (6) Tolerance of Freedom, (7) Role Assumption, (8) Consideration, (9) Production Emphasis, (10) Predictive Accuracy, (11) Integration, (12) Superior Orientation.

TABLE XV-1 (Continued)

Supervisor	JSI ¹								Total	Age	Number Supervised	Years as a Supervisor	Years as a Counselor
	1	2	3	4	5	6	7	8					
1	28	28	38	24	69	30	19	28	264	46	8	5	15
2	27	27	40	28	68	34	21	32	276	41	12	5	8
3	28	27	39	26	73	34	22	33	286	41	13	4	6
4	31	30	42	32	73	35	21	33	298	46	16	3	3
5	29	29	43	28	72	35	21	30	286	49	7	3	6
6	32	31	43	31	80	35	24	34	310	39	15	5	5
7	27	32	39	26	76	35	24	35	295	32	8	4	2
8	28	27	39	29	68	31	18	30	268	40	5	1	10
9	26	27	39	29	70	34	20	33	276	34	11	6	5
10	29	29	39	27	79	35	21	35	295	36	17	2	6
11	30	28	39	25	67	33	21	28	271	47	9	3	4
12	30	27	42	29	74	34	22	32	288	47	14	5	5
13	29	27	37	29	68	33	19	31	274	45	10	2	6
14	28	24	28	25	54	33	15	28	237	49	6	6	10
15	28	26	36	30	74	35	20	35	285	45	13	10	4

TABLE XV-1 (Continued)

Supervisor	JSI ¹								Total	Age	Number Supervised	Years as a Supervisor	Years as a Counselor
	1	2	3	4	5	6	7	8					
16	29	27	39	28	67	35	19	30	274	41	8	5	5
17	31	27	41	26	65	33	21	27	270	47	19	1	5
18	27	26	42	24	70	35	21	32	277	56	10	6	31
19	30	30	42	30	77	35	22	35	300	39	11	4	4
20	29	31	44	32	76	37	21	37	306	43	7	3	4
21	28	27	36	30	72	37	18	34	284	59	9	8	15
22	28	28	42	27	74	35	21	34	291	47	11	5	12
23	29	29	38	30	66	33	20	28	274	63	9	7	8
24	31	28	36	26	72	33	20	33	280	58	6	9	16
25	19	23	40	24	71	36	15	28	256	55	14	4	1
26	26	24	35	28	65	34	17	33	262	56	15	8	19

¹The JSI areas are: (1) Physical and Mental Exertion, (2) Relation with Associates, (3) Security, Advancement and Finance, (4) Interest in the Job, (5) Job Information, Training, and Status, (6) Physical Work Conditions, (7) Future, Goals, and Programs.

TABLE XV-2

SUPERVISOR SCORES ON THE PARAGRAPH COMPLETION TEST

Supervisor	Disagree	Doubt	Rules	Criticism	Confusion	Sum of Top Two Scores
1	2	2	2	3	3	6
2	1	2	3	3	2	6
3	2	2	2	1	1	4
4	1	1	2	1	1	3
5	2	2	4	2	2	6
6	3	2	3	1	2	6
7	2	2	3	3	2	6
8	4	2	2	1	2	6
9	3	3	3	2	1	6
10	2	4	2	3	2	7
11	2	2	2	1	1	4
12	3	2	2	3	0	6
13	6	3	3	3	3	9
14	3	1	2	2	3	6
15	2	2	2	2	3	5
16	4	2	1	3	2	7
17	2	0	2	2	0	-
18	3	2	2	1	2	5
19	2	1	3	3	2	6
20	3	3	3	3	0	6
21	2	2	2	2	2	4
22	3	2	4	3	2	7
23	4	2	3	2	3	7
24	2	1	2	2	0	4
25	3	2	1	2	0	5
26	2	2	3	3	2	6

APPENDIX XVI

TABLE XVI-1

LBDQ SUBSCALE INTERCORRELATIONS¹

	1	2	3	4	5	6	7	8	9	10	11	12
1	1.00	.52	.42	.72	.70	.52	.38	.63	.31	.60	.73	.70
2		1.00	.82	.86	.75	.52	.60	.76	.34	.86	.88	.74
3			1.00	.70	.54	.44	.33	.64	.28	.71	.71	.67
4				1.00	.75	.61	.47	.83	.34	.80	.93	.75
5					1.00	.27	.50	.58	.71	.86	.78	.78
6						1.00	.23	.70	-.12	.47	.65	.35
7							1.00	.43	.19	.56	.54	.29
8								1.00	.22	.69	.93	.66
9									1.00	.53	.40	.58
10										1.00	.85	.79
11											1.00	.80
12												1.00

¹(1) Representation, (2) Demand Reconciliation, (3) Tolerance of Uncertainty, (4) Persuasiveness, (5) Initiation of Structure, (6) Tolerance of Freedom, (7) Role Assumption, (8) Consideration, (9) Production Emphasis, (10) Predictive Accuracy, (11) Integration, (12) Superior Orientation.

TABLE XVI-2

LOQ SUBSCALE INTERCORRELATION

	Structure
Consideration	.09

TABLE XVI-3
JSI SUBSCALE INTERCORRELATIONS¹

1	1.00	.61	.11	.42	.22	.17	.56	.25	.49
2		1.00	.52	.45	.66	.16	.82	.52	.83
3			1.00	.32	.76	.37	.65	.38	.74
4				1.00	.33	.32	.28	.50	.57
5					1.00	.46	.71	.70	.90
6						1.00	.18	.58	.50
7							1.00	.56	.84
8								1.00	.78
Total									1.00

¹(1) Physical and Mental Exertion, (2) Relation with Associates, (3) Relation with Employer, (4) Security, Advancement and Finance, (5) Interest in the Job, (6) Job Information, Training and Status, (7) Physical Work Conditions, (8) Future, Goals, and Programs.

APPENDIX XVII

TABLE XVII-1

SUPERVISORS MEAN SCORES ON MRT AND PCT WHEN CLASSIFIED
INTO TWO GROUPS OF EFFECTIVENESS

	Effective (N = 13)		Less Effective (N = 10)	
	Mean	S. D.	Mean	S. D.
MRT	143.46	44.94	143.80	22.09
PCT	6.00	1.22	5.70	1.16

TABLE XVII-2

COUNSELORS' JSI SUBSCALE SCORES WHEN CLASSIFIED ACCORDING TO
THE TWO GROUPS OF SUPERVISOR EFFECTIVENESS

JSI Subscales	Effective (N = 14)		Less Effective (N = 12)	
	Mean	S. D.	Mean	S. D.
Physical and Mental Exertion	28.71	1.64	27.92	3.17
Relation with Associates	28.07	2.02	27.17	2.29
Relation with Employer	39.07	3.69	39.25	3.02
Security, Advancement, and Finance	27.71	2.33	27.92	2.57
Interest in the Job	70.78	6.35	70.75	4.20
Job Information, Training and Status	33.64	1.55	34.83	1.40
Physical Work Conditions	20.57	2.34	19.58	2.02
Future, Goals and Programs	31.57	2.47	32.17	3.21
Total JSI	280.00	17.92	279.92	14.52

TABLE XVII-3

SUPERVISORS MEAN SCORES ON THE LOQ WHEN CLASSIFIED
INTO TWO GROUPS OF EFFECTIVENESS

LOQ	Effective (N = 14)		Less Effective (N = 12)	
	Mean	S. D.	Mean	S. D.
Consideration	55.64	3.56	52.25	4.02
Structure	42.64	6.27	44.08	9.51

TABLE XVII-4

SUPERVISORS MEAN SCORES ON THE LBDQ SUBSCALES WHEN
CLASSIFIED INTO TWO GROUPS OF EFFECTIVENESS

LBDQ Subscales	Effective (N = 14)		Less Effective (N = 12)	
	Mean	S. D.	Mean	S. D.
Representation	18.71	1.90	18.67	1.56
Demand Reconciliation	18.86	2.82	16.58	3.82
Tolerance of Uncertainty	35.43	5.43	32.50	5.73
Persuasiveness	35.00	4.26	34.33	6.50
Initiation of Structure	38.57	3.75	36.50	4.58
Tolerance of Freedom	39.93	5.69	41.50	5.82
Role Assumption	39.50	5.20	34.92	5.68
Consideration	38.14	5.65	36.25	5.36
Production Emphasis	33.57	3.61	31.50	4.72
Predictive Accuracy	18.07	1.90	17.00	2.59
Integration	18.50	3.61	16.67	3.87
Superior Orientation	37.07	3.89	35.08	2.99

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