AN INDEX OF INTERPERSONAL COMMUNICATIVE

COMPETENCE AND ITS RELATIONSHIP TO

SELECTED SUPERVISORY DEMOGRAPHICS,

SELF-ACTUALIZATION AND LEADER

BEHAVIOR IN ORGANIZATIONS

DISSERTATION

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The purpose of this study was basically twofold: 1) to develop an evaluative instrument to measure interpersonal communicative competence, and 2) to determine its relationship to three other supervisory variables--demographic characteristics, self-actualization, and leader behavior.

Purpose number one was accomplished by the construction of a self-report instrument entitled the Index of Interpersonal Communicative Competence (IICC). The IICC measures the capability of a supervisor to effectively solve a series of simulated employee-related problems seen as important to both the subordinate and the organization.

The IICC along with two other research instruments-- the Personal Orientation Inventory (POI) and the Supervisory Behavior Description Questionnaire (SBDQ)--was used in collecting data for purpose number two in the study. The sample selected to participate in the study was composed of seven separate organizations in the Dallas-Fort Worth area. To further diversify the sample, both first level supervisors

as well as several higher-level managerial positions (N=94) were utilized.

Hypotheses testing, via the Pearson correlation coefficient, indicated the following relationships between interpersonal communicative competence (as measured by the IICC) and supervisory demographics, self-actualization (as measured by the POI), and leader behavior (as measured by the SBDQ):

1. The age of the supervisor was negatively related to the IICC at the .001 level of statistical significance.

2. Years of formal education was positively related to the IICC at the .001 level.

3. The sex of the supervisor (females scoring higher) was related to the IICC at the .01 level.

4. No significant relationship existed between years of supervisory experience and the IICC.

5. Six scales of the POI (I, Ex, Fr, S, A, C) were related to the IICC at the .001 level of statistical significance, one scale (Sy) at the .01 level and two scales (Tc, Sa) at the .05 level. Three scales (SAV, Sr, Nc) were not significantly related to the IICC.

6. No significant relationship existed between the IICC and the two dimensions of leader behavior--structure and consideration.

Hypotheses testing, via multiple regression/correlation analysis, indicated the following relationships among the four groups of test variables:

1. The personal demographics of the supervisor were capable of predicting self-actualization on all 12 scales of the POI to at least the .10 level of statistical significance. However, decomposition of the variables indicated education plays the dominant role, being related to all 12 scales. Age was second, being related to four scales of the POI. Supervisory experience and sex were the least significant, being related to only three and two scales, respectively.

2. The personal demographics and self-actualization of the supervisor were capable of predicting the level of interpersonal communicative competence at the .001 level. However, upon decomposition of the variables, only education and one scale of the POI were statistically significant.

3. The personal demographics, self-actualization, and interpersonal communicative competence of the supervisor were not capable of predicting leader behavior.

The multiple regression/correlation analysis indicated that certain supervisory demographics are related to self-actualization which is in turn related to interpersonal communicative competence. However, the single most important

predictor of both self-actualization and interpersonal com-
petence in supervisory situations appeared to be formal edu-
cation. It was suggested that other undetermined intervening
variables within the organization itself were responsible for
the non-significant relationship between demographics/self-
actualization/interpersonal communicative competence and
leader behavior.

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CHAPTER I

INTRODUCTION

Practitioners and scholars alike have long been aware of the need for a precise model of interpersonal communication. The organizational world recognizes the importance of human communication in shaping employee attitudes and behavior. Indeed, the goals of any organization can only be met through the conscious interaction of humanistic needs with organizational goals. Interpersonal communication can provide the impetus and esprit de corps so essentially necessary for the accomplishment of these goals.

Thus, this study proposes to examine the role of interpersonal communication in organizations and the complex associative relationships that accompany the dyadic interchange. More specifically, the study focuses upon the interpersonal communication process itself--a precise definition of interpersonal communication, what influences it, and how it influences other variables in the supervisor/ subordinate relationship. Certainly such an important concept is worthy of intense research.

Purpose of the Study

The purpose of this dissertation is basically twofold: 1) to develop an evaluative instrument to accurately measure

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interpersonal communicative competence in a supervisory
situation, and 2) to determine the relationship between inter-
personal communicative competence and three other supervisory
variables--demographic characteristics, self-actualization,
and leader behavior. Purpose number one is such a complex
undertaking that it is discussed fully in chapter three.
Purpose number two is partially accomplished via a correla-
tion analysis of the following six hypotheses.

Hypothesis One: A relationship exists between a
supervisor's interpersonal communicative competence
and age of the supervisor.

Hypothesis Two: A relationship exists between a
supervisor's interpersonal communicative competence
and formal education of the supervisor.

Hypothesis Three: A relationship exists between a
supervisor's interpersonal communicative competence
and years of supervisory experience.

Hypothesis Four: A relationship exists between a
supervisor's interpersonal communicative competence
and sex of the supervisor.

Hypothesis Five: A relationship exists between a
supervisor's interpersonal communicative competence
and the supervisor's level of self-actualization.

Hypothesis Six: A relationship exists between a
supervisor's interpersonal communicative competence
and the supervisor's leadership behavior.

Since a simple relationship between two variables is
often misleading, a model is developed to evaluate the
multiple relationships among the test variables. Thus,
multiple regression/correlation analysis is used to evaluate
the following four hypotheses.

Hypothesis Seven: A relationship exists between a
supervisor's level of self-actualization and the
demographic variables of age, education, years of
supervisory experience, and sex.

Hypothesis Eight: A relationship exists between a
supervisor's interpersonal communicative competence
and the variables of age, education, years of super-
visory experience, sex, and self-actualization.

Hypothesis Nine: A relationship exists between a
supervisor's leader behavior (consideration) and the
variables of age, education, years of supervisory
experience, sex, self-actualization, and inter-
personal communicative competence.

Hypothesis Ten: A relationship exists between a
supervisor's leader behavior (structure) and the
variables of age, education, years of supervisory
experience, sex, self-actualization, and inter-
personal communicative competence.

Role and Scope of the Research Problem

Interpersonal communication in an organization is an
extremely important factor in the relationship developed
between an employee and his supervisor. This is especially
true when the communication exchange centers around some
personal or highly emotional employee-related problem. Such
a relationship can be extremely destructive or very sup-
portive, depending upon several organizational as well as
personal variables. Since this day-by-day dialogue between
the supervisor and the subordinate is so influential in
shaping the employee's aspirations, attitudes, perceptions,
and productivity, it is certainly worthy of further study.
Thus, this dissertation concentrates on this verbal dialogue

and its attributes as one definition of interpersonal communicative competence.

Since interpersonal communicative competence (communication skills possessed by the supervisor) does not exist in a vacuum, it is going to influence and be influenced by other variables. What a supervisor is, in terms of personal characteristics such as age, sex, education, and years of supervisory experience, can often affect the communication exchange. Also, what the supervisor brings to the verbal dialogue, in terms of his behavioral dispositions, can influence the interpersonal communications. And finally, the amount of skills possessed by the supervisor should affect the style of leadership he or she uses in the immediate work group. Thus, for research purposes, this study concentrates only on these four variables: who a supervisor is (in terms of personal characteristics), what a supervisor is (in terms of values and behavioral disposition), how skilled a supervisor is (in terms of interpersonal communicative competence), and type of leadership used (in terms of leader behavior).

In any complex organization many variables are present to confound the relationship between a supervisor and the work group. Even though a supervisor may be disposed to communicate effectively with a subordinate and may possess the interpersonal skills to carry through, other personal

and/or situational variables are going to affect the communication process. For example, organizational variables such as company rules, pay policies, promotional possibilities, and job design could to some extent have an influence upon how the problem is solved. Also, organizational climate, in terms of being either supportive or restrictive, could play a part in effective communication. Likewise, the supervisor's personal prejudices and bias, his perceived position, power, and technical competence could also have an influence. Moreover, the supervisor's personal feelings toward the subordinate (either good, bad, or indifferent) and his perceived influence upon the subordinate are also important. And finally, time constraints, and the time of the interpersonal encounter itself will complicate the situation even further. Certainly many more variables could be added to the list.

Even though these outside personal, organizational, and situational variables are considered important in affecting the communicative exchange, they are not considered in the research study. To reiterate, the purpose of the dissertation is to ascertain the relative amount of influence a supervisor's personal characteristics (demographics) and psychological disposition (self-actualization) has upon his interpersonal communicative skills. Also important is how the work group perceives these characteristics through the concept of leadership behavior.

Limitations of the Study

Any type of empirical research is bound to have built-in limitations. Indeed, when dealing with the human element, absolute research control is impossible. However, if one is aware of the uncontrollable elements in the research design then the findings can still add to the existing body of applied psychological knowledge.

One of the possible limitations of this research study is the use of self-administered tests and questionnaires. Certainly respondent "faking" and "sabotage" are possible. Another limitation can be found in the selection of the respondents. Possibly the use of the managerial staff of seven organizations willing to cooperate in the study does not comprise a completely random study. And finally, the use for the first time of an instrument lacking in the necessary validity and reliability coefficients could be questioned. Hopefully this study will provide the necessary impetus for further research with the instrument being developed.

It is hoped that these limitations of the research design will not significantly reduce the credibility of the study. Given these constraints, meaningful conclusions can still be drawn. After all, the truthfulness of any research is only a matter of degree.

Significance and Application

The findings of this study could have many specific as well as general relevances in both the academic and practical areas. For the practitioners it could mean a new tool for judging personnel and/or organizational effectiveness. For the academician this study could shed some light on some old theories and possibly provide the impetus for the formulation of new ones.

A test designed to measure a person's interpersonal skills would be of tremendous importance to the total organization. It would be used as a pre and post test measure of management development programs. Also, it might prove useful as a selection and placement device. Hopefully, it would have a certain amount of predictive validity in terms of managerial success. Indeed, in those positions which involve dealing with people (which is almost all), a measure of interpersonal communicative competence may be one of the most valuable indicators of supervisory and organizational success possible.

The academic world could certainly use a test to measure interpersonal competence. The field of organizational psychology is abound with theories of interpersonal skills but as of yet no test with which to accurately measure it. Researchers would then have at their disposal an instrument to test for interpersonal skills and their relationship to motivation, productivity, satisfaction, etc.

The statistical analysis between all the variables involved in this study should prove valuable in several ways. First, the results should shed some light on how applicable the concpt of self-actualization is in supervisor/subordinate situations. Second, the findings should indicate the extent that a manager's behavioral and psychological disposition toward self-actualization is interwoven with his interpersonal skills of leadership. And third, the results could also predict the style of leadership used by the supervisor as he puts these values and skills to work for the organization through his day-by-day activities.

Basic Plan of the Dissertation

With the purpose, role and scope, limitations, and significance of the study in mind, chapter two proceeds to build upon chapter one by presenting some basic theories and research findings pertinent to the study. This is vital in that the hypotheses tested here are either directly or indirectly related to several theories in organizational psychology and personnel management.

The purpose of chapter three is to develop a test to measure interpersonal communicative competence in an organizational setting. First, the field of communication theory is used as a theoretical framework for understanding human communication and its impact on thought and behavior. Then, some basic theoretical underpinnings from the field of

counseling and psychotherapy are discussed along with its application to supervisory management. Finally, the methodology of designing the instrument itself is presented.

Chapter four discusses the methodology of the actual research variables involved. The main focal points of this section are the selection of the test instruments, the procedure for collecting the data, and the statistical techniques employed in analyzing the results.

Chapter five has a twofold purpose. First, the descriptive statistics of the sample are presented for verification purposes. Second, null hypotheses one through six are tested for either retention or rejection by the statistical technique of Pearson correlation analysis.

Three models of self-actualization, interpersonal communicative competence, and leader behavior are constructed in chapter six. Using the statistical technique of multiple regression/correlation analysis, the three predictive models are evaluated in conjunction with null hypotheses seven through ten.

And finally, the last chapter, chapter seven, summarizes the dissertation findings in light of the ten working hypotheses. Appropriate conclusions are drawn and recommendations presented.

CHAPTER II

A SELECTED REVIEW OF SELF-ACTUALIZATION,

LEADER BEHAVIOR, AND INTERPERSONAL

COMMUNICATIVE SKILL

Several relevant concepts and research findings exist
in the literature which have yet to be fully explored.
Specifically, the concepts of self-actualization, inter-
personal skill, and leader behavior are important individual
variables which could influence organizational effectiveness.
Just as important are the relationships among these three
primary variables.

Since the theories behind these concepts are either
directly or indirectly related to the crux of the disser-
tation, it is important that they be covered in as much
detail as possible. Thus, this section of the study presents
the theory and some of the more pertinent findings associated
with the concept of self-actualization. Inasmuch as leader-
ship and interpersonal communicative behavior could be
associated with self-actualization in organizations, they
are also treated in this selected review.

The Self-Actualization Motive

The concept of self-actualization has received a great
deal of attention in the last decade. It is considered by

many to be a viable theory of existence and therefore certianly worthy of further study. Vieually every textbook in management and/or organizational behavior makes at least a notation, and more likely, a detailed discussion of the eulsive concept. Its role in motivation is hardly questionable.

The Theory of Self-Actualization

Psychologist Abraham Maslow was the first person to coin the term "self-actualization" (52). Disenchanted with the emphasis on the "sick" personality by the Freudians and the "conditioning effects" of the Behaviorists, Maslow wanted to form a revolution in psychological circles by emphasizing the holistic nature of the human being (52, p. ix). In fact, his work has been referred to by some as "The Third Force" (26). Maslow believed a snythesis must be achieved between the two extreme views of the existing fields. Goble explains:

> Maslow felt that a comprehensive theory of behavior must include the internal or intrinsic determinants of behavior as well as extrinsic or external and environmental determinants. Freud has concentrated on the first, the Behaviorists on the second. Both points of view needed to be combined. An objective study of human behavior was not enough; for complete understanding the subjective must be considered as well. We must consider peoples' feelings, desires, hopes, aspirations in order to understand their behavior (26, pp. 19-20).

Maslow indicated that most of the psychological knowledge existing in 1947 came from psychotherapists treating neurotic patients. He believed that this alone provided

a great source of error when attempting to explain human behavior. Any theory of motivation must deal with the highest caliber of healthy humans. "Health is not simply the absence of disease or even the opposite of it" (52, p. 33).

Building upon the theories of James and Dewey, Freud, Goldstein, Fromm, Horney, Reich, Jung, and Adler, Maslow proceeded to build what he called a holistic-dynamic theory of human motivation. This theory classified the basic human needs into a "general" hierarchy: Physiological, safety, love, esteem, and self-actualization (52, pp. 35-47). These needs or motives could also be categorized as lower-level (physiological and safety) and higher-level (love, esteem, and self-actualization). Maslow indicated that as one level of needs are relatively gratified there then emerges a new set of needs. However, he did not meam to propose a degree of finity or an absolute degree of relative satisfaction. He also realized that many needs are unconscious and may have cultural specificity. Moreover, he believed that human behavior can be explained many times by multiple motivators and determinants (52, pp. 51-55). Thus, Maslow sees the healty person as constantly seeking something in an attempt to gratify his needs. Maslow believes:

> A healthy man is primarily motivated by his needs to develop and actualize his fullest potentialities and capacities. If a man has any other

basic needs in any active, chronic sense, he is simply an unhealthy man. He is as surely sick as if he had suddenly developed a strong salt hunger or calcium hunger (52, pp. 57-58).

Maslow goes on to develop the primary difference between higher and lower needs. He maintained that the organism itself dictates a hierarchy of values:

1. The higher need is a later phyletic or evolutionary development . . . .

2. Higher needs are later ontogenetic developments . . . .

3. The higher the need the less imperative it is for sheer survival, the longer gratification can be postponed, and the easier it is for the need to disappear permanently . . . .

4. Living at the higher need level means greater biological efficiency, greater longevity, less disease, better sleep, appetite, etc., ...

5. Higher needs are less urgent subjectively . . . .

6. Higher need gratifications produce more desirable subjective results, i.e., more profound happiness, serenity, and richness of the inner life . . . .

7. Pursuit and gratification of higher needs represent a general healthward trend, a trend away from psychopathology . . . .

8. The higher need has more preconditions . . . .

9. Higher needs require better outside conditions to make them possible . . . .

10. A greater value is usually placed upon the higher need than upon the lower by those who have been gratified in both . . . .

11. The higher the need level, the wider is the circle of love identification, i.e., the greater is the number of people love-identified

with, and the greater is the average degree
of love-identification . . . .

12. The pursuit and the gratification of the
higher needs have desirable civic and
social concsequences . . . .

13. Satisfaction of higher needs is closer to
self-actualization than is lower-need
satisfaction . . . .

14. The pursuit and gratification of the higher
needs leads to greater, stronger, and truer
individualism . . . .

15. The higher the need level the easier and more
effective psychotherapy can be; at the lowest
need levels it is of hardly any avail . . . .

16. The lower needs are far more localized, more
tangible, and more limited than are the higher
needs (52, pp. 98-100) . . . .

Facinated by this concept of healthy and growing humans,
Maslow set out to describe them as expertly and accurately
as he possibly could. Using his own subjective but criti-
cal evaluations, Maslow set forth those characteristics which
he considered most indicative of self-actualizing humans
(52, pp. 153-180).

Self-actualizing people

1. Are better able to differentiate the abstract from
the concrete. They live more in a world of reality than a
world of man-made abstractions. They can perceive what is
there as opposed to what their own hopes or fears would
dictate.

2. Are better able to accept themselves and others in
spite of their inherent weaknesses. Moreover, they are not

tied up in their own defenses and dislike such artificialties in others.

3. Are relatively spontaneous in their behavior, thousht, and impulses. They feel free to express themselves when appropriate, or to behave in the conventional manner when appropriate.

4. Are in general focused on problems outside themselves rather than being ego centered. Being dedicated to some task, duty, etc., they are concerned with the good of mankind in general. Thus, they live within a wide frame of reference.

5. Have a quality of detachment about them. That is, it is possible for them to remain undisturbed by that which causes chaos in others. They have the ability to reside on their inner interpretation of the world rather than being dependent upon others. In other words, they are more autonomous and independent of the culture and environment.

6. Have the capacity to appreciate the basic goodness of life. They never take for granted or undervalue the true blessings in life.

7. Have for other human beings a deep feeling of identification and affection. Maslow calls it "Gemeinschaftsgefühl."

8. Have the ability to develop especially deep interpersonal ties with a few individuals. They give their all to a few close friends but demand much in return.

9. Are democratic in nature. That is, they are accepting of other people regardless of the class, education, race, etc. Just as important is their ability to learn from anyone willing to teach them.

10. Are more concerned with the end rather than the means. They oftentimes however make a situation more interesting by regarding as ends many activities that other people regard simply as means.

11. Have a philosophical, unhostile sense of humor.

12. Have a special kind of creativeness. They have a fresh and naive way of looking at life as if from the standpoint of an unspoiled child.

13. Can get along with their culture but in many ways have a certain inner detachment from it. They adapt to affairs they consider unimportant but can be quite hostile when defeating behavior is present.

14. Are more synergistic in nature. They have no trouble in integrating the polarities or dichotomies in life--such as self-society, good-bad, serious-humorous, mystic-realistic, masculine-feminine, etc.

During the summer of 1962 Maslow took the opportunity to be a Visiting Fellow at the Non-Linear Systems, Inc., plant at Del Mar, California. There a whole new body of thought was opened to him and he eventually developed what he called a kind of normative or ideal social psychology. Coining the word "eupsychian management," he defined it as

a moving toward psychological health or rather ". . . the mental or social conditions which make health more likely" (50, p. xi).

Discouraged with psychotherapy and education as a way of exposing the human species to his new psychology, Maslow turned to the world of work. He dreamed of presenting to the world of industrial psychology a new way of thinking about life in general and work in specific. Developing the individual manager was important in and of itself. But just as important Maslow saw how creative management could go even further by developing the group, the team, the organization, and eventually the community (50, p. 3).

He explains his philosophy:

> We can learn from self-actualizing people what the ideal attitude toward work might be under the most favorable circumstances. These highly evolved individuals assimilate their work into the identity, into the self, i.e., work actually becomes part of the self, part of the individual's definition of himself. Work can be psychotherapeutic, psychogogic (making well people grow toward self-actualization). This of course is a circular relationship to some extent, i.e., given fairly o.k. people to begin with, in a fairly good organization, then work tends to improve the people. This tends to improve the industry, which in turn tends to improve the people involved, as so it goes. This is the simplest way of saying that proper management of the work lives of human beings, of the way in which they earn their living, can improve them and improve the world and in this sense be a utopian or revolutionary technique (50, p. 1).

This first person to apply Maslow's concepts to the world of work was Douglas McGregor (54). In his classic

text, The Human Side of Enterprise, McGregor set forth two
important suppostions regarding human behavior at work:
Theory X--assumptions upon which traditional organizations
are based, and Theory Y--assumptions about human values which
could lead to higher individual motivation and consequently
more effective accomplishment of organizational goals.

In a later text McGregor reaffirmed his belief in self-
actualization as a primary motivating force. He believed
that the ingegration of self-actualization as the central
strategy of the organization would lead to ". . . a way of
tapping latent resources of creativity, skill, and knowledge
that are otherwise unavailable to the organization" (55,
p. 77). He outlines his strategy:

> Such a strategy is not permissive management,
> or soft or indulgent management. It includes
> clear demands for high performance, clear limits
> consistently enforced. The latter are, in fact,
> necessary for the individual's psychological
> security, for him to be able to predict what is
> possible and what is not. It involves clear, open
> communications about the pressures and limits
> imposed by reality. It does involve the creation
> of a climate of genuine mutual trust, mutual
> support, respect for the individual and for indi-
> vidual differences. Only in such a climate can
> latent tendencies toward self-actualization find
> expression (55, p. 78).

Thus, Maslow sees human behavior more than just man
reacting to his environment. He sees the truly healthy man
as living, proacting, and becoming. Maslow was able to
define in nature those individuals that approach this new
kind of human behavior--self-actualizing behavior. And he

also, along with others, sees the opportunity for self-
actualization to take place in the world of work. That is,
the satisfaction of the self-actualizing need can provide
for more positive interaction in the industrial organi-
zation than a mere concentration on the lower-level needs.

Empirical Evidence of Self-Actualization

Everett Shostrom (66) was one of the first psycholo-
gists to use Maslow's model of the self-actualized person in
the psychotherapeutic process. Defining ". . . self-
defeating behavior as manipulative behavior and creative
behavior as actualizing behavior," Shostrom developed a model
of psychological concepts on which to pattern effective
living and effective psychotherapy (66, p. 33). His model
envisioned the goals of actualization to be contact vs.
manipulation, honesty in feelings, trusting oneself in the
here and now, freedom and awareness, and personal control.

In consultation with Maslow (52) and Perls (61),
Shostrom developed the first and only instrument for the
measurement of self-actualization--the Personal Orientation
Inventory (POI). The test has taken the subjective evalu-
ations of Maslow's self-actualized person plus Perls'
concept of time orientation and turned them into an empiri-
cal verification (67). In fact, Maslow himself said of the
POI:

In studying healthy people, self-actualizing people
etc., there has been a steady move from the openly
normative and the frankly personal, step, toward
more and more descriptive, objective words, to the
point where there is today a standardized test of
self-actualization. Self-actualization can now be
defined quite operationally, as intelligence used
to be defined, i.e., self-actualization is what
that test tests. It correlates well with external
variables of various kinds, and keeps on accumu-
lating additional correlational meanings. As a
result, I feel heuristically justified in starting
with my "determined naivëte." Most of what I was
able to see intuitively, directly, personally, is
being confirmed now with numbers and tables and
curves (51, p. 28).

The POI measures self-actualization through 150 two-

choice comparative-value-judgment items considered to be

important to a self-actualizing person. Briefly, it des-

cribes, people high in self-actualizing values as those who

live in the present, are feeling, have a high self-regard

and synergistic awareness, and are interpersonally sensitive

(42, pp. 2-3). The resulting scaler scores for each value

are relatively independent of each other.*

Of critical importance to this dissertation is the use

of the POI in empirically sound research. One of the first

areas of interest was the field of counseling. McClain (53)

offers some research evidence that the POI does differen-

tiate degrees of self-actualizing among a "normal adult"

sample of guidance counselors. Foulds (22, 23, 24) found

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*A more detailed description of the POI, its validity
and reliability, can be found in the methodology section of
this study.

that the actualizing counselor brings several therapeutic
conditions to the counseling situation. Several scales of
the POI were positively related to the empathic understand-
ing, respect, and facilitative genuiness of the counselor.
Also Graff and Bradshaw (28) discovered the POI is highly
related on several scales to dormitory-assistant effective-
ness as measured by evaluations of students and personnel
deans.

Several studies have been conducted relating self-
actualization, as measured by the POI, to several demo-
graphic characteristics. Knapp (42, p. 19) after a review
of several studies on student grade point concludes: "In
general, correlations computed between POI scales and the
grade point average criterion, when ability is not partialed
out, have been positive and of comparative low magnitude
. . ." Knapp also reviewed some normative evidence in regard
to how self-actualization may be influenced by one's age.
He states:

> In conclusion, the trend of increasing actuali-
> zation up to the early or middle adult years seems
> fairly well established. As yet this overall trend
> beyond ages thirty to forty is less clear-cut and
> more research is needed to clarify the interaction
> of age and actualizing tendencies with, perhaps,
> other moderating variables (42, p. 86).

Shostrom (67, p. 7) has presented some normative data
in regard to sex differences. After reviewing freshmen at
a large Midwestern college and a liberal arts college in

Southern California, he concluded there was a significant difference (females scoring higher) between the sexes on several scales of the POI.

Of particular importance is the extensive use of the POI in the area of encounter groups. Since self-actualizing behavior is the acknowledged goal of group therapy (65), it follows that the POI could be empirically useful in evaluating any change in behavior and/or values. Knapp exhaustively evaluated fourteen studies (nine with a control group, five without a control group) reported over the years 1968 to 1974. Using both student and adults in various sample sizes, all of the studies reviewed showed a definite statistical increase in self-actualization to the participants involved on at least four scales of the POI. In fact, many were at the .01 level of significance. With reservations, Knapp makes this conclusion:

> A consistent pattern of increased self-actualizing scores following group training programs emerges from examination of studies on this topic. Although most of the studies to date have employed very small samples, significant differences have been obtained in most instances between pre- and post-treatment administrations of the POI and, in aggregate, present a very uniform picture of increased self-actualizing as measured by the POI (42, p. 30).

The POI has also found application in a wide cross section of homogeneous groupings. For example, in the field of education Damm (10) found a significant relationship between the POI and a student intelligence/creativity

grouping. Likewise, Dandes (11) demonstrated a positive relationship between the POI and teaching effectiveness. The field of religion has also found use for the POI. The test was able to discriminate between two groups of inter-denominational missionaries on the basis of exchange of affection (74). The field of medicine has also employed the POI through reliability testing via 64 nursing students at the University of Tennessee College of Nursing (40). The POI also seems to correlate rather well with attitudes of more liberal-minded people. For example, Freeman and Brubaker (25) found that campus demonstrators scored significantly higher on the POI than did their non-demon-strator counterparts. Similarly, Hjelle and Butterfield (38) found females with a profeminist attitude to score significantly higher on the POI than those females express-ing a more conservative attitude.

Of critical importance to this inquiry is the appli-cation of the POI in industrial settings. Unfortunately, very little empirical data has been developed using the POI in organized industrial groups. It would appear that many researchers have grossly overlooked a viable area of application for the POI. If self-actualization is to be considered an important motive for working, then certainly one would expect more research activity in the field. However, a review of the literature uncovered only two

published studies, in addition to several unpublished

dissertations, using the POI in industry.

Margulies (49) presented evidence using the POI and

three evaluative instruments that a specific organizational

culture contributes or is associated with member self-

actualization. Three hypotheses were tested and accepted

that work value orientation, concern for task and social

need satisfaction, and certain behavioral norms resulted

in an organizational culture more conducive to psycholog-

ical growth as measured by the POI. In another published

study by Lessner and Knapp (46), the hypothesis was

supported that merchandising-oriented entrepreneurs are

more self-actualizing than craft-oriented entrepreneurs.

Lessner and Knapp defined a craft-oriented owner as one

who typically founded their business on technical exper-

tise, and a merchandising-oriented owner as one who is

more of a generalist and continues to seek business

expansion possibilities. A simple one-tailed t-test was

able to differentiate the two groups on the tests results

of the POI. Lessner and Knapp conclude that ". . . there

are predictable individual differences among entrepreneurs

and that the type of man may determine the types of

organization . . . ." (46, p. 459).

Ladenberger (45) collected POI profiles from 225 top

and middle managers from several different industries from

all sections of the United States. Her test analysis

indicated that top managers score significantly higher on several scales of the POI, thus indicating a higher degree of self-actualization. Using Herzberg's Motivation-Hygiene hypothesis (36) that one set of needs are motivators while another set of needs are only dissatisfiers, Post (63) tested the relationship between positive mental health and perceived deprivation of opportunity for gratification of motivator and/or hygiene needs. His results indicated that negative mental health as measured by the POI was associated with employees with high perceived deprivation of both motivators and hygiene needs. Finally, Whitsett's (76) dissertation presented some interesting data. His analysis of 115 clerical employees of a large heavy manufacturing firm indicated that those employees who were judged "better adjusted" to their job were less mentally healthy (as defined by the POI) than those judged "less well-adjusted." It appears, on the basis of this study, that self-actualized people may be "out-of-place" in some industrial organizations.

In retrospect, the POI has been a very useful instrument for measuring self-actualization. Its use in education, counseling, religion, and industry testifies to its application in a number of situations. It seems to differentiate self-actualization on the basis of several criteria, and therefore, may be the most appropriate instrument needed to more fully understand human behavior.

Leadership Behavior in Organizations

One factor of organizational life that might be effected by a manager's level of self-actualization is his or her leadership style. That is, the self-actualization motive might influence the way a supervisor interacts with the work group in question. Several leadership theories exist as well as a great amount of empirical data.

Theories of Leader Behavior

Most management authorities accept the hypothesis that effective leadership is a strong causal factor in the eventual success of any organization. This "truth" has caused leadership to undergo possibly closer scrutiny than any other facet of the organizational mix. In fact, more than 3,000 books and articles have been written directly or indirectly concerning leadership. It is indeed understandable that no single behavioral theory of leadership is universally accepted.

Since the research findings concerning the trait theory of leadership were inconsistent (71), many authorities have turned their attention to a behavioral theory of leadership. Many definitions and theories concerning leader behavior abound in the literature; however, only the ones most frequently mentioned are discussed here. Obviously some seem more feasible than others but each has

found its place (depending upon the criteria used) in a
framework of leadership style.

Based upon the classic research findings of White
and Lippit (75) concerning the behavior of authoritarian,
democratic, and laissez faire groups, Tannenbaum and
Schmidt (73) developed a continuum of leadership behavior.
Designed to be used by any organization or suborganization
emphasizing authority relationships, a manager could be
described as either "boss-centered" or "subordinate-
centered." A "boss-centered" manager maintains a high
degree of control and makes almost all the decisions in
the work group. A "subordinate-centered" style however
emphasizes various amounts of freedom to the subordinate
in making decisions. Naturally, the continuum encompasses
an infinite number of conditions between these two extremes.

Another view, based upon his work as a consulting
psychologist, is that presented by McMurry (36). He
believes the ideal leader is that of a "benevolent auto-
crat." Taking a combination view of the autocrat and
democrat, he postulates that the benevolent autocrat cares
about the needs and attitudes of his subordinates but at
the same time is also the "chief" in executing decisions.
Based upon his exposure to large organizations, McMurry
says that most executives operate in a climate where rapid
and difficult decisions and the bureaucratic structure of
the firm does not encourage democratic leadership. This

climate, plus the dependency needs of the organization

members for structure, suggests a benevolent autocrat

could satisfy both the needs of the subordinate and the

needs of the organization.

Likert (48, p. 170) and his associates at the

University of Michigan conducted several investigations

to develop a theory of "employee-centered" leadership.

The behavior patterns of the leaders of the high-produc-

tivity groups under study led Likert to hypothesize

several characteristics of highly effective groups. First,

although the leader has full responsibility as a "linking

pin" with the rest of the organization, he does not try

to make all the decisions. Second, the effective leader

maintains at all times a thoroughly supportive atmosphere

in the group. Third, he maintains cohesion by dealing

with all problems within the group. Fourth, the effective

leader has adequate technical competency to fulfill his

position. Fifth, he helps members become aware of group

goals, and more important values. And sixth, the effec-

tive leader tries to deemphasize his own organizational

status in the organization by

> --Listening well and patiently
> --Not being impatient with the progress being made
>   by the group, particularly on difficult problems
> --Accepting more blame than may be warranted for
>   any failure or mistake
> --Giving the group members ample opportunity to
>   express their thoughts without being constrained
>   by the leader pressing his own views

> --Being careful never to impose a decision upon
>   the group
> --Putting his contributions often in the form of
>   questions or stating them speculatively
> --Arranging for others to help perform leadership
>   functions which enhance their status (48, p. 171).

Likert later developed the employee-centered approach into a model called "Systems 4" Management (47). That is, Likert designed a model on which four different management systems could be compared on the operating characteristics of motivation, communication, interaction, decision making, goal setting, control, and performance.

One of the first theories indicating that a manager can change his basic style of leadership was that postulated by Blake and Mouton (5). They constructed a two-dimensional plot of leadership style. One dimension was "concern for production" and the other was "concern for people." Developing a program of attitudinal change through grid training, Blake and Mouton hypothesized that an ineffective manager could move to the more desirable position of 9,9 management. That is, an effective leader would provide an atmosphere where the followers had a "common stake" in the organization purpose which would lead to interpersonal relationships of "trust and respect."

While recognizing the two basic dimensions of leader behavior discussed above, Fiedler (14) developed a theory that the most "effective" leadership style depends upon the situation in question. Using basically three

situational components to describe the situation--leader-member relations, task-structure, position-power--Fiedler constructed a "contingency" approach to leadership. That is, the task oriented leader is more effective under conditions that are either extremely favorable or unfavorable, while the relation-oriented leader is more effective under conditions of intermediate favorableness. Fiedler has also coined the term "organizational engineering" to infer that organizations can take an active role in changing the group situation. This new concept goes beyond the typical principles of selection and placement and ". . . focuses on the more fruitful possibility of organizational engineering for the more effective utilization of available leadership and managerial manpower" (13, p. 379).

The latest theory of leadership behavior seems to be a normative model by Vroom and Yetton (74). These authors envision a continuum of employee participation over five basic levels. This resultant decision tree represents a series of sequential questions concerning the attributes of the decision problem. Basically the crucial attributes are immediate availability of information, acceptance of decision to subordinates, the importance of group acceptance, and the possibility of conflict among subordinates. All in all there are 14 different approaches to employee participation depending upon the path taken by the leader.

One of the few theories developed _after_ the gathering
of the empirical data was that generated by the Personnel
Research Board at Ohio State University. Rather than "dis-
cover" the secrets of the successful leader, Fleishman (15),
and others, wanted to find a method of describing leader-
ship behavior applicable to several different situations.
Using a questionnaire containing 150 items describing how
people in a leadership position operate, the team of
researchers collected data on 300 Air Force crew members
and 100 International Harvester foremen. The data generated
was then factor analyzed by the Wherry-Gaylord Iterative
Factor Analysis and then rotated orthogonality and then to
a more simple structure. The quantitative procedure
generated two major factors of leadership behavior--
"Consideration" and "Initiating Structure." The Consider-
ation scale measured the extent to which the supervisor
was considerate of his workers' feelings. Initiating
Structure measured the extent the supervisor structured
the group toward goal accomplishment. Called the Super-
visory Behavior Description Questionnaire, the test had
the ability to quantity leadership behavior on these two
independent dimensions. Thus, the theory of the Ohio State
researchers was that leadership could be described on two
continuums rather than just one. A supervisor's score on
consideration was "independent" of his score on structure.

Finally, in summary, it appears that most theorists see leadership containing at least two dimensions of supervisory behavior, That is, almost all of the leader's behavior is directed toward either the task itself or the members' feelings and needs. The type of behavior exhibited by the leader will in some part be influenced by the type of leader involved, the personalities and values of the group members, and the situation itself.

Consideration and Structure in the Research Literature

The Ohio State studies are probably the most empirically valid and thoroughly researched of any leadership theory (72). Interested more on the description of leader behavior (which is observable and measurable) rather than some "ideal" leadership style, the first researchers developed, through factor analysis, two dimensions identified as consideration and initiation of structure. The first form developed at Ohio State was called the Leader Behavior Description Questionnaire--a subordinate description of the leader's behavior in terms of how frequently his boss engaged in the activity described in the questionnaire. The second form developed was called the Ideal Leader Behavior Description Questionnaire--a self description of what a leader believes he ought to do. Leaders may be scored high on both dimensions, low on both,

or high on one and low on the other. Together these two instruments provided the tools for a heretofore neglected area of behavioral research.

Most of the early research with the LBDQ was conducted in the military. Christner and Hemphill (8) studied changes in the attitudes of crew members toward each other and their crew commander over a period of time. There was a relationship between the friendship and confidence of the group as related to the consideration and structure behavior of the crew commander. Halpin (29) found a negative correlation between the rating of a commander's superior and consideration, and a positive correlation with structure. Crew member satisfaction however was positively related to consideration and negatively related to structure. In a later study, Halpin (31) found no significant relationship between leadership behavior and the commander's assessment of how they should behave. And finally, Newport (58) studied the leader behavior of 48 cadet flight leaders at the University of Illinois. He found that those equally high on both consideration and structure as measured by the LBDQ could be differentiated from others by a high desire of individual freedom of expression, little resistance to social pressure, strong desire for power, cooperative, and strongly aggressive.

Several studies have been conducted in the field of education administration. First, there is the classic

study by Hemphill (35) concerning the effectiveness of department heads at a large mid-western university. Data from 22 departments indicated that those department chairmen with the best reputation for "good" administration were also described as above the average on both consideration and structure. He also found that larger departments tend to have "better" reputations than smaller departments. Halpin (30) found in a sample of 64 education administrators and 132 aircraft commanders that educators (on the basis of chi-square analysis) were significantly higher on the consideration and structure scores than aircraft commanders. Also, since there was a low relationship between "ideal" behavior and described behavior for both groups, Halpin concluded that leaders will conform more to the mores of the institution than their attitude suggests. Hills (37) was concerned not only with internal leadership but also how the leader represents his group to outsiders. Obtaining 872 teacher descriptions of 53 school principals, Hills found that both structure and consideration were related to the representation of the teachers' interests to higher administrative levels and school clientele. Finally, Carson and Schultz (7) studied the leader behavior of junior college deans as described by college presidents, department heads, and student leaders. The authors concluded, on the basis of the evidence, that the biggest source of role conflict for

the college dean was between the president's expectations
and those of the student leaders.

Fleishman (15) modified the LBDQ, as developed by
Ohio State, for use in industrial situations. The Super-
visory Behavior Description Questionnaire (SBDQ)--like
its predecessor (LBDQ)--was empirically constructed to
measure supervisors in industry on the same two dimensions--
Consideration and Structure. Its continual use through
the years has judged it as a very reliable and valid indi-
cator of supervisory behavior.* In fact, Fleishman himself
regarded the initial development of the SBDQ as only the
beginning in opening new areas of heretofore untapped
knowledge. He saw the SBDQ as playing a vital role in this
new inquiry. In his first published work on the SBDQ
Fleishman concluded his article:

> The questionnaire at present is regarded
> only as a research instrument for the study of
> leadership behavior. More research applying
> the scales to other industrial situations needs
> to be done before they can be more confidently
> assessed (15, p. 6).

Several studies have been conducted utilizing the
SBDQ in regard to aptitude and personality measures. Scores
on both scales of the SBDQ seem to be unrelated to scholas-
tic achievement (as measured by college grade point or ACE
score) and personality measures of the Gestalt Completion

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*A more detailed description of the SBDQ, its validity
and reliability can be found in the methodology section of
this study.

test. However, researchers have found a negative corre-
lation between the F scale (a measure of authoritarianism)
and the structure dimension of the SBDQ (17, p. 5).

In a series of studies, Fleishman studied human rela-
tions training and the stability of leadership patterns
among foremen in a motor truck plant. In the first study
Fleishman (16) concluded that the kind of supervisor under
which the foreman worked was more indicative of the behavior
of the foreman than whether or not he had been enrolled in
the "human relations" training program.* In a later study,
Harris and Fleishman (33) further supported the earlier
findings and made additional comparisons. For those fore-
men who had not been sent to the training course it was
found that relatively constant patterns of leadership
behavior existed for periods up to a year. Later, Fleishman
was to reflect back on these and other findings in that the
organizational "climate" is most significant in defining
leadership style. Where "pressure for production" was the
highest, top management was more likely to see their most
efficient foremen as those lowest in consideration and
structure. Reflecting upon the use of human relations
training to increase leadership effectiveness, Fleishman
observes, "How could one have expected a training program

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*A similar conclusion was reached in regard to personal
ethics and supervisory communication. Raymond Baumhart, An
Honest Profit (New York, 1968), p. 46.

aimed at increased consideration to compete with day-to-day reinforcement on the job?" (18, p. 21).

One of the classic studies using the SBDQ dimensions was that conducted by Fleishman and Harris (19) investigating the relationship between foremen behavior and grievances/turnover. The researchers found a high positive correlation between structure and the number of grievances and turnover rate. Likewise, they found a high negative correlation between consideration and grievances/turnover. Of more importance is the interaction of the two scores. The authors discovered that the foremen who were low in consideration had high turnover and grievance rates regardless of their score on structure. On the other hand, a foreman high in consideration could increase his structure score with no adverse affect on grievances/turnover. These findings were later confirmed by Skinner (69) in a northern textile firm.

In another study, Fleishman and Salter (20) looked at the influence of leadership behavior on the concept of "empathy." The authors defined empathy as the discrepancy between 1) the responses of the subordinates to an empathy questionnaire, and 2) the leader's predictions of how the subordinates would respond to the questionnaire. The results indicated a r value of .40 between the supervisor's score on consideration and the measure of empathy as

described above. The correlation between the supervisor's score on structure and the empathy score was not significant.

In a more recent study, Fleishman and Simmons (21) were able to extend their findings to a foreign country. They found that the most effective leader was described in terms of organizational goal attainment. After translating the SBDQ into Hebrew it was administered to the managers of 318 foremen from 100 factories in Israel. Based upon a proficiency rating by the managers, the most proficient foremen were those who had a combination of "high consideration/high structure" leadership style.

Nealey and Blood (57) studied the relationship between subordinate satisfaction and leader behavior at two organizational levels. Using a Veterans Administration Hospital as the research setting, the authors found the subordinates' level of satisfaction (as measured by the Job Description Index) to be related to the consideration behavior of the nursing supervisor at both first and second levels of the organization. However, initiating structure contributed only to high subordinate satisfaction at the first level, not the second. As a matter of fact, high initiating structure contributed negatively to employee satisfaction at the second level. The authors explained:

> The subordinates of second level supervisors
> were RN's and shared the same professional
> qualifications as their leader. They liked
> her to be considerate but they did not want

her to structure their jobs for them. On the
other hand, the subordinates of the first-level
supervisors looked to them for both consideration
and structure because they did not have the pro-
fessional qualifications to handle psychiatric
patients alone. Their leader was professionally
qualified and they looked to her for structure.
This suggests that the amount of initiating
Structure behavior a subordinate welcomes from
a superior is partly a function of the difference
between them in the degree of task expertise they
possess (57, pp. 420-421).

Evans (12) examined the impact of a supervisor's
behavior upon the behavior and satisfaction of the sub-
ordinate in an attempt to support House's path-goal
hypothesis of human motivation. Using a utility company
and a hospital as the setting for the research, Evans found
that two sets of conditions must be met if the leader's
behavior is to influence the subordinate's performance
and satisfaction: 1) supervisory behavior must be related
to path instrumentalities, and 2) path instrumentalities
must be related to satisfaction and performance. In the
utility company both conditions were met and supervisory
behavior (in terms of consideration and structure) was
related to employee satisfaction but not performance. In
the hospital only the second condition was met.

In a very complicated study by House, Filley, and
Gujarati (39), the hierarchial influence of the leader
was studied as related to leadership style. Using a
multiple regression model to predict a scaled value of
satisfaction, the authors collected data from 368

respondents randomly selected from two large businesses. Partial support was received for the hypothesis that when a supervisor is perceived as having a high hierarchical influence, the relationship between employee satisfaction and leader consideration will be positive. Also supported was the hypothesis that high leader consideration is associated with high employee satisfaction. In addition, the authors found a significant positive relationship between employee satisfaction and leader decisiveness, thus indicating its impact upon employee role expectations. And finally, contrary to previous findings, the authors found no support for the hypothesis that initiating structure would be negatively related to the satisfaction of employee role expectations. The researchers explain the last discrepancy by indicating that their sample (highly trained technical personnel) was radically different in composition from those cited in previous studies.

Just as a leader's consideration dimension has been seen to be a moderator of the structure/satisfaction relationship, so has structuring behavior been found to be a moderator of the consideration/performance relationship. Graen, Dansereau, and Minami (27) collected data from 660 subjects in six operations of a large international organization. Using several instruments to measure job satisfaction, performance, organizational settings, perceived influence structure of the unit, and performance expectation,

the authors developed 510 correlational coefficients on managers (exempt) and office staff (non-exempt). The researchers concluded:

> For those groups who saw their leader as either high or low in structuring, the relationship between their leader's consideration behavior and their performance evaluation was positive and reliable. In sharp contrast, for those groups who saw their leader as intermediate in structuring, the relationship between their leader's consideration and their performance was close to zero. Surprisingly, this effect held for both managers and office staff samples. In addition, this moderator effect did not hold for other referent measures such as overall job satisfaction, role orientation, influence, or expectancies (27, pp. 231-232).

Several dissertations have been written in the area of leadership behavior as related to several criteria of organizational and/or individual effectiveness. Cunningham (9) studied county agricultural agents and 4-H club agents. He reported that the agricultural agents' consideration dimension was significantly related to a measure of effectiveness, but structure was not. The reverse was true for 4-H club agents. However, those agents scoring above the median in both dimensions were the "most effective." Boyles (6) found that subjects who were low in independence received greater satisfaction from working for supervisors they described high in structure. However, subjects who were independent in nature were neither satisfied nor dissatisfied working for supervisors with high consideration. High authoritarians were more satisfied with their jobs than low

authoritarians regardless of supervisory style. Pacinelli (60) found that rehabilitation counselors who rated their supervisor high in both consideration and structure also expressed greater job satisfaction in eight key areas. However, the dimension of leader consideration contributed more to the counselor's satisfaction than did structure. Also the factors of age, sex, education, and length of service contributed less to total job satisfaction than the two dimensions of leadership style.

In summary, it seems fitting to close this section of the study with a more recent and refined viewpoint of the Ohio State studies. Since most of the criticism of the consideration/structure definition comes from its lack of situational variables (43), researchers at Ohio State University have recently put together a contingency theory of leadership based upon the consideration and initiating structure studies to date (41). Realizing that empirical studies on consideration and structure have reported some-what inconsistent findings when related to various "criteria" of effectiveness, Kerr, Schriesheim, Murphy, and Stogdill (41, p. 63) admit that it was never the original intention in the 1940's and 50's ". . . to develop a full blown situational theory of leadership . . ." Nevertheless, after 25 years of research from several cultures, organizations, and fields it is now possible to make some generalizations concerning the most effective leadership style in several

situations. Reviewing the voluminous literature relating

to consideration and structure (both published and unpub-

lished) the authors presented 10 propositions which,

according to the evidence, present a workable theory of

situational leadership:

1. The greater the amount of pressure, the greater
   will be subordinate tolerance of leader Initia-
   ting Structure, and the greater will be the
   (positive) relationships between Structure and
   satisfaction and performance criteria. Pressure
   may stem from the nature of the task (degree
   of time urgency, uncertainty, permissible error
   rate) or from some threatening source external
   to the task.

2. The greater the intrinsic satisfaction provided
   by the task, the less positive will be relation-
   ships between Consideration and satisfaction and
   performance criteria. Intrinsic satisfaction
   may be derived from high job autonomy, broad job
   scope, or the opportunity to do interesting and
   meaninfgul work.

3. The greater the intrinsic satisfaction provided
   by the task, the less negative will be relation-
   ships between Structure and subordinate satis-
   faction.

4. The greater the intrinsic satisfaction provided
   by the task, the less positive will be relation-
   ships between Structure and performance.

5. The smaller the informational needs of subordinates,
   the lower will be their tolerance for Initiating
   Structure, and the less positive will be relation-
   ships between Structure and satisfaction criteria.
   Need for information may stem from characteris-
   tics of the individual (caused by personality
   factors, or lack of expertise, competence,
   general experience, or specific job knowledge)
   or of the task (caused by high task or role
   ambiguity).

6. The greater the amount of task certainty, the
   greater will be the (positive) relationships
   between leader Consideration and subordinate
   satisfaction.

7. The less the agreement between subordinate expectations of leader Consideration and Structure and their observations of these behaviors, the lower will be the levels of satisfaction and performance of subordinates. Such expectations typically result from a host of cultural, experiential, and informational sources.

8. The less higher management is perceived to exhibit Consideration, the lower will be the (positive) relationships between lower-level supervisors' Consideration and subordinate satisfaction.

9. The greater the perceived organizational independence of subordinates, the greater will be the (positive) relationships between leader behavior variables and satisfaction and performance criteria. Particularly when perceived independence is low, Consideration-satisfaction and Structure-satisfaction relationships will be relatively insignificant. The pattern may be very different, however, for employees whose supervisors are believed to have high upward influence.

10. The greater the preceived upward influence of the supervisor, the greater will be the (positive) relationships between Consideration and subordinate satisfaction. This will be especially true for subordinates who are highly dependent on their boss for such things as recognition, freedom, and physical and financial resources (41, pp. 73-74).

The Ohio State researchers, and others, have indeed put together a viable description of leader behavior in a number of organizational situations. Recognizing that all leaders are different, all groups are different, and no situation is exactly the same, the scales of structure and consideration can generate a complete "host" of items predicting organizational/leader effectiveness. Recognizing that what is effective is to a large extent dependent upon

who or what is doing the perceiving, the SBDQ is content in describing leader behavior as it actually is (at least from the subordinate viewpoint).

Interpersonal Communicative Skills

Virtually every major textbook in the field of management and organizational behavior recognizes the importance of interpersonal skills in leadership and group behavior. Indeed, one expert in the field (68, p. 595) indicates that interpersonal skills (sometimes called human relations skills) pose many more ". . . problems not present in the development of skills in the technical and administrative fields." Indeed, this observation may be one of the reasons so much emphasis is placed upon interpersonal leader skills in the accomplishment of group goals. In fact, Stogdill (70, p. 93), after factor analyzing 52 studies on leadership over the last 30 years indicates that social, communication, and interpersonal skills are mentioned many more times in the literature than other leadership skills, such as technical and administrative.

Thus, although interpersonal skills are deemed paramount to leadership and organizational effectiveness, the field of organizational behavior and communication still seems to be somewhat lacking in an accurate definition of these capabilities. Surely this is entirely understandable when dealing with such an ambiguous concept as human

communication. However, one set of authors has developed
the concept to the point where some sort of definition can
be attempted. Porter, Lawler, and Hackman (62, p. 64) see
interpersonal skills as basically a human response capa-
bility in two dimensions. They define a person's inter-
personal competence as reflecting not only how a person
wants to respond to a particular situation but also by the
person's capability. Interpersonal behavior then is a
function of both a person's response capability and his
behavior disposition. They view interpersonal skills as
malleable by the environment and thus changeable over time.
They conclude, "Interpersonal competence, then, can be
likened to calculus, in that many people can be taught it
but few people can discover it for themselves (62, p. 64).

The field of communication theory and general semantics
seems to provide a comprehensive framework for viewing the
behavior disposition of interpersonal competence. The works
of Korzybski (44), Hayakawa (34), Berlo (4), Ogden and
Richards (59), and Haney (32) have all been highly signi-
ficant in their pursuit of communication knowledge and
understanding. Such concepts as time-binding, extensional
orientation, the process nature of communication, the
triangle of meaning, and inference-observation have all
contributed to an understanding of the relationship between
a person's thought processes and his resultant behavior.
The field has been especially keen in developing the

concepts of "perception" and "reality." That is, general semantics emphasizes the behavioral disposition of all humans toward reality and its resulting stimuli. Thus, individuals react not to reality itself but to the communication symbols foremost in the environment. In short, much of the work points out the frailties of human nature and the ambiguities of human communicative behavior.

Even though communication theory is not lacking, both researchers and practitioners alike have had a difficult time in identifying and measuring those personal characteristics of interpersonal communicative competence. Most management theorists certainly see the importance of organizational structure, job specialization, power, and control. And to be sure, these concepts are important. But just as important (maybe more) is the recognition that employees are not completely rational; they are not just a regulated specialized machine. This emphasis on organizational structure and human control has caused one distinguished professor and organizational consultant, Chris Argyris (3), to hypothesize that formal management controls and directive leadership are in basic conflict to the needs and goals of the individual. The emphasis on job specialization and formal relationships creates dependency and thus inhibits potential of the employee, both as a person and as a contributor to the organization.

Argyris believes that the interaction of organizational members contributes greatly to the eventual success of any organization.

Using the theories of such noted psychologists as Allport, May, Lewin, Mead, Rogers, Fromm, Buber, Maslow, and Sullivan, Argyris (1, pp. 17-27) outlines several propositions essential in understanding the nature of interpersonal relationships:

1. Individuals are integrated into a self, or an organized whole that is meaningful to the individual.

2. Man develops into a human personality largely through interpersonal relationships.

3. The most important relationships in developing the complete person are the initial interpersonal relationships with parents and siblings.

4. As the self-concept becomes strengthened through reinforcement, a "filter mechanism" develops through which man processes the environment. He will distort that communication and reject that behavior which is counter productive to his self-concept.

5. The individual will accept his and others' behavior that is non-threatening in nature.

6. If a person fails in the achievement of self-acceptance, he becomes defensive which further leads to greater failure and hurting behavior.

7. This defensiveness/filter mechanism creates a double bind. Unless the individual can be taught to create conditions of acceptance of others, the probability is more that he will give distorted feedback to others and consequently increase his own defensiveness.

8. Thus, it is impossible to increase one's acceptance of his self without simultaneously creating effective conditions for his fellow man to do the same. Interpersonal relationships are thus _imperative_ for psychological growth.

9. Good interpersonal relationships will in turn lead to increasing genuineness, which will in turn lead to better interpersonal relationships.

10. The "authenticity" of human relationships will depend upon the capacity of others as well as one's self.

11. As authentic interpersonal relationships grow, they create several new possibilities for growth.

    a) The greater the sense of self-acceptance, the greater the probability that one will be one's self and will "own" one's ideas, values, and feelings and permit others to do the same should they wish to do so.

    b) As the conditions in (a) above increase, the probability increases that the individual will be open to considering new ideas, values, and feelings.

    c) As the conditions in (a) and (b) increase, the probability increases that the individual will tend to experiment and take risks with new ideas, values, and feelings, and permit others to do so.

d) As the conditions in (a) and (b) and (c) increase, the probability decreases that the opposite conditions will tend to occur (1, p. 25).

12. Given then that the basic need for authenticity has not been frustrated, Argyris indicates that human psychological growth will tend to increase as the following increase:

a) Giving and receiving nonevaluative descriptive feedback.

b) Owning and helping others to own to their values, attitudes, ideas, and feelings.

c) Openness to new values, attitudes, and feelings as well as helping others to develop their degree of openness.

d) Experimenting (and helping others to do the same) with new values, attitudes, ideas, and feelings.

e) Taking risks with new values, attitudes, ideas, and feelings (1, p. 26).

Argyris goes on to develop a model (1, pp. 43-50) of interpersonal competence and organizational effectiveness. He believes that the inputs to interpersonal competence-- his "authentic relationships"--will actually decrease as the organization emphasizes 1) achieving the organization's objective, 2) rational logical behavior, and 3) a set of rewards and penalties through control and coercion. Thus, employees will suppress the emotional aspect of their job and emphasize the technical and administrative aspects. They will tend to hide their feelings and learn to limit themselves to those values that do not violate organizational

norms. These new values thus in turn tend to decrease
interpersonal authenticity, which in turn, decreases the
interpersonal competence of the organization's employees.

A decrease in individual interpersonal competence has
in turn a drastic affect upon the organization he serves.
A decrease in interpersonal competence leads directly to
organizational consequences of interpersonal conformity,
mistrust, and a dependence upon external commitments.
Employees learn that others in the organization cannot be
trusted which has an effect upon their authenticity in
their day-by-day affairs. Group conformity results. Thus,
the only method open to management for increased output is
through a system of more power, more reward, and more
penalties. The employee will only be committed to organi-
zational goals through external methods (as opposed to
the internal commitment from a felt need). The leader then
becomes (as well as other members in the organization)
valuable only from the standpoint of reward or penalty
power--a form of conditional acceptance.

Argyris also hypothesized that conformity, mistrust,
and dependence upon external commitment then leads to a
decrease in effective decision making on the part of the
managers. Managers tend to deemphasize the human factor
in their decisions thus generally leading to the non-
acceptance of any solution. Also the organizational
members tend to become defensive. Argyris explains that

as things start to go wrong (as a result of decreasing interpersonal competence) there is an even further emphasis on control, rewards, and penalties. Managing through detailed questioning and close supervision is the norm of the floundering organization. "Management by crisis" is the inevitable result. And finally, Argyris argues that the final result is total resistance to change--a syndrome most authorities consider completely destructive to organizational survival.

Thus, Argyris sees interpersonal competence thoroughly involved in an endless chain of dysfunctional values/ decreased interpersonal competence/decreased organizational effectiveness. That is, as organizations become more and more ineffective, they feed back the same set of values that triggered the situation in the first place. Argyris believes that one must break the chain at the beginning in order to increase organizational effectiveness. The basic organizational values must be changed to be sure. But, he believes that organizational members can be taught the more functional skills of authentic relationships: giving and receiving non-evaluative feedback, owning and helping others to own their attitudes, values, and feelings, openness to new ideas, feelings, and values, and finally, the experimentation and risk-taking with new ideas and values.

Using basically a training laboratory as the change instrument, Argyris (3) is of the firm conviction (and has

some evidence to support it), that organizations do not
have to be content with an existing dysfunctional style of
management. There is a better, more effective, and there-
fore, a more intrinsically rewarding way to accomplish
organizational goals.

Thus, although interpersonal competence (skills) has
been loosely defined by Argyris there still seems to be
some confusion as to how much is needed and how to accu-
rately measure it. This confusion has prompted three
researchers to investigate the concept further. Based
upon the analysis by Porter, Lawler, and Hackman (62), it
appears that the biggest problem is one of measurement.
In fact, they conclude:

> There are few, if any, well-validated
> scales presently available for measuring inter-
> personal capabilities, nor are there any well-
> developed and widely accepted classification
> systems for these capabilities (62, p. 65).

Although the field of communication theory and general
semantics has developed a theoretical framework for viewing
communication, values, and behavior, there needs to be more
emphasis on applying these theories to organizations. Inter-
personal skills are important for organizational survival
and growth. The gap seems to be in finding a way to accu-
rately measure the capabilities, and in turn, determining
their impact upon other managerial/organizational variables.

Summary

The concept of self-actualization has been explored as a viable higher need seen necessary for the continual growth of human beings. Self-actualizing humans were shown to be largely differentiated from their non-self-actualized counterparts on several dimensions: they are accepting of themselves and others; they feel free to express themselves behaviorally; they have a healthy view of themselves and see mankind as essentially good; they are basically self-supportive and do not depend upon the support of others; they are flexible in their application of values and tend to see the opposites of life as related; they are creative in nature and concerned with the ends rather than the means; and finally, they have a philosophical sense of humor combined with a special regard for people regardless of race, education, etc. In short, they are mature people looking for ways to further express their values in a constructive, growing manner. If the conditions are appropriate, the self-actualized person can function humanistically in life, in general, and more specifically, in education, home, and especially at work.

The test to measure self-actualization, the POI, was also presented and discussed. Basically measuring self-actualization along several dimensions of human values and behavior, the POI was shown to be important in differentiating self-actualizing humans from their counterparts.

Many studies utilizing the POI were cited in several fields such as education, counseling, religion, and industry. Several studies showed self-actualization to be important in encounter groups, and the individual counseling process. Age and sex were also related to the POI, as well as more liberal oriented attitudes. And finally, a test of self-actualization was shown to be instrumental in describing more successful entrepreneurs and organizational groups. Employees judged to be more self-actualized were also judged more satisfied in their jobs but somewhat less well-adjusted.

Several leadership theories were presented concerning the behavior of a supervisor in an organized setting. Some theorists saw employee-centered behavior as the most appropriate, while others saw job-centered more appropriate. Still others considered a combination of the two necessary for organizational effectiveness. One set of authors hypothesized that a supervisor can change his leadership style to fit the situation, while another expert believed that one should restructure the organization to fit the leader's style of behavior. However, almost all theories indicated that leader behavior could be described on two dimensions--a concern for the members of the group and a concern for the task or goal of the group. Thus, even though appropriate leader behavior is a function of the leader's characteristics, the group's characteristics, and

the task itself, leader behavior, as perceived from several sources, could still be classified as partially people-oriented and partially task-oriented.

A review of the leadership literature indicated that one of the most accepted and well established "theories" of leader behavior was that of the Ohio State University. The scales of Consideration and Initiating Structure have been used in a number of educational, military, and industrial situations. Consideration for group members and the structure of the leader's behavior have been shown to be related to a number of organizational criteria of effectiveness, such as grievances, turnover rate, empathy, superior ratings, group friendship, subordinate satisfaction outside influence, role conflict, human relations training, supervisor's hierarchical influence, informational needs of subordinates, leader expectations, and subordinate organizational independence. In short, what was considered "effective" leader behavior to a large extent depends upon who or what is making the evaluation. There are just too many variables in the leadership process to state emphatically that there is one "best" leadership style. Nevertheless, a description of leader behavior in terms of consideration and structure provides at least an accurate evaluation of the kind of behavior being exhibited as perceived by the subordinates of the work group in question.

A component of leadership behavior (interpersonal skills) was also carefully scrutinized. Interpersonal communicative skills (sometimes called human relations skills) was evaluated from the standpoint of its role in leadership and organizational effectiveness. Defining interpersonal competence as basically a malleable trait subject to the environment and time, it provided a framework for viewing the individual and his interaction with others in the organization. Recognizing that the emphasis on human needs is just as important (maybe more) as the organization's emphasis on structure, power, role, job specialization, etc., then a new awakening should occur. One author's ideas were presented as to the best approach to enhance interpersonal competence and thus increase the organization's effectiveness. Interpersonal competence was hypothesized to increase when an organizational member could increase his authenticity through giving or receiving non-evaluative feedback, owning and helping others to own their own attitudes, values, and feelings, openness to new ideas, feelings, and values, and finally, the experimentation and risk-taking with new values.

Although interpersonal competence has been hypothesized (and somewhat supported) to be of importance in achieving both individual goals and organizational goals, there still seems to be a great deal of difficulty in accurately measuring it. Thus, the next chapter of the

dissertation will attempt to bridge this gap between theory and practice by discussing the instrument developed to objectively measure these interpersonal capabilities.

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CHAPTER III

INTERPERSONAL COMMUNICATIVE COMPETENCE

The examination of the literature in Chapter II revealed that a fair amount of data has been generated in the last 25 years about the concepts of self-actualization and leader behavior. However, very little effort has been made to relate the two concepts; nor has there been any effort to evaluate their relationship to interpersonal skills in organizations. Of equal importance, the area of interpersonal skills seems to be lacking in empirical support of several ideas. Thus, it appears necessary at this stage of the study to try and develop an objective measure of these skills as they may or may not exist in industrial organizations.

In order to establish a general theoretical framework the field of communication theory and general semantics is discussed first. One area for an application of these theories seems to be the counseling and psychotherapeutic process. Therefore, the process of counseling for individual change is discussed second. A model of Interpersonal Communicative Competence is then constructed based upon these two areas of thought--communication theory and counseling theory. And finally, the methodology behind a

a test to measure these interpersonal skills is presented--
the Index of Interpersonal Communicative Competence.

Communication Theory and General Semantics

The complex and broad field of communication theory
has contributed greatly to the academician's knowledge and
understanding of human behavior and communication. The
writers, philosophers, and academicians in the area have
greatly enhanced the individual's and organization's per-
ception of how humans can influence and be influenced by
this strange phenomenon called "communication." It is
virtually impossible to consider all of the contributors
to this highly sophisticated school of thought. Thus, a
concentration of ideas and salient concepts is made in the
more celebrated area of general semantics.

Alfred Korzybski is the most recognized author and
expert in the field of general semantics. With the publi-
cation of his classic work, Science and Sanity, in 1933,
Korzybski released upon the world a new type of thinking
process he called "non-aristotelian" (12). His hypothesis
was that scientific methods could be used to test empir-
ically the notion of non-aristotelian logic and thinking.
Through a complex treatment of calculus, philosophy, logic,
psychology, and other scientific fields, Korzybski gener-
ated a complete new system of human communication and
behavior heretofore unexplored.

One of Korzybski's contributions to the area was what he called "semantic reactions" (12, pp. 19-34). He believed that language acted as a barrier to a complete understanding of reality. Humans reacted to labels and symbols as if they were reality itself. Introducing the concept of "undefined terms," he indicated that some parts of reality cannot be defined by words alone; thus, the individual is caught in the trap of defining words with other words. Going further, because of the elementalistic nature of language, the human organism has been trained in the separation of non-separable entities. Korzybski explains:

> The physiological mechanism is extremely simple and necessitates a breaking away from the older elementalism. But it is usually very difficult for any given individual to break away from this older elementalism, as it involves the established s.r., and to be effective is, by necessity, a little laborious. The working tool of psychophysiology is found in the semantic reaction. This can be described as the psycho-logical reaction of a given individual to words and language and other symbols and events in connection with their meanings, and the psycho-logical reactions, which become meanings and relational configurations the moment the given individual begins to analyse them or somebody else does that for him. It is of great importance to realize that the term 'semantic' is non-elementalistic, as it involved conjointly the 'emotional' and well as the 'intellectual' factors (12, p. 24).

Korzybski developed the use of the "organism-as-a-whole" concept. That is, individuals function as a whole within their environment. It is impossible at the static level of language to differentiate the unique perceptions

of each individual. Calling multidimensional order as the
process of unique abstractions, Korzybski developed a new
system of abstracting from one level to another. For
this new structure of thinking and perception, Korzybski
constructed a device known as the Structural Differential.
He explains:

> As the organism works as-a-whole, and as
> the training is psychophysiological in terms of
> order, reversing the reversed pathological order.,
> organism-as-a-whole means must be employed. For
> this purpose, the Structural Differential has been
> developed. The reader will later understand that
> it is practically impossible to achieve, without
> its help, the maximum beneficial semantic results
> (12, p. 26).

By constructing the Structural Differential (12,
pp. 386-411), Korzybski identified several components of
reality and abstracting from it for communicative language.
By defining reality as a constantly changing process, then
man must develop some structure of language by which he can
attempt to communicate about that reality. Korzybski indi-
cates that man lives in three different worlds: 1) the
world of events, 2) the world of objects, and 3) the world
of symbols. The process of abstracting through these three
worlds allows man to communicate similarities about nature
while leaving out the differences. This process of abstrac-
ing in itself can often lead to problems of identification
as Korzybski explains:

> As any organism represents an abstracting
> in different orders process, which, again, the
> animal, the primitive man, and the infant cannot

know, they, by necessity, identify different
orders of abstractions. Thus, names are iden-
tified with the un-speakable objects, names for
action with the un-speakable actions itself,
names for a feeling with the un-speakable feel-
ings themselves. By confusing descriptions
with inferences and descriptive words with
inferential words, the 'judgements', 'opinions',
'beliefs', and similar s.r, which represent
mostly, if not exclusively, inferential seman-
tic end-products, are projected with varying
pathological intensity on the outside world
(12, pp. 402-403).

Korzybski went on to explain (via the Structural Dif-

ferential) three principles of this new system of logic--

the principle of non-allness, the principle of non-identity,

and the principle of self-reflexiveness (12, pp. 323,

412-451). The principle of non-allness indicates that words

cannot and do not depict the "all" of an object. Something

is always left out. The non-identity principle states that

a word is not the entity it is representing. No matter how

explicit the communication, it can never convey the precise

meaning as perceived by the sender. And finally, the

principle of self-reflexiveness means that man places him-

self into the abstraction process by projecting his experi-

ences into the language structure. Thus, the further away

from reality one becomes, in terms of abstraction, the more

the individual has modified or "distorted" reality.

One of Korzybski's followers, S. I. Hayakawa, was able

to synthesize much of Korzybski's work and thus apply it

on a more elemental plane. In fact, Hayakawa believed that

human communication is the vehicle of ultimate human sur-

vival. He explains:

> This book is devoted, then, to the study
> of the relationships between language, thought,
> and behavior. We shall examine language and
> people's linguistic habits as they reveal them-
> selves in thinking (at least nine-tenths of
> which is talking to oneself), speaking, listen-
> ing, reading, and writing. It will be the
> basic assumption of this book that widespread
> intraspecific co-operation through the use of
> language is the fundamental mechanism of human
> survival (11, p. 22).

Expanding upon such themes as "one word, one meaning,"

"abstraction ladder," "map-territory," "the blocked mind,"

"truth," "two-valued orientation," "intentional orientation,"

and "symptoms of disorder," Hayakawa was able to express a

feeling for the field of general semantics that encompassed

a whole arena of ideas. Throughout his classic text, the

problems in culture, politics, education, business, litera-

ture, and human behavior, were evaluated in light of the

concepts of general semantics.

William Haney was one of the first writers to apply the

concepts of general semantics to the field of organizational

behavior (10). Haney was able to utilize many of the ideas

of Korzybski and Hayakawa by interrelating the psychology of

work with the psychology of communication. Depicting the

process of communication as underlying the basic tenets of

organizational effectiveness, Haney explained the use of

general semantics in such areas as individual motivation,

perception, and integration of goals. In addition, he

constructed several "patterns of miscommunication" which
all organizations sooner or later find themselves following.
Thus, he was able to identify for the astute supervisor
several categories and consequences of miscommunication
patterns. As any writer in the field of management should,
he also suggests some techniques for correcting these mis-
communications.

In conclusion, the field of communication theory, and
especially general semantics, seems to provide a workable
taxonomy for viewing human communication and its relation-
ship to thought and behavior. In addition, it seems to be
applicable to the organizational environment, and more
pointedly, to the field of supervisory behavior.

The Counseling and Psychotherapeutic Process

One of the areas of psychological thought directly or
indirectly applying the concepts of communication theory is
that of counseling and psychotherapy. Recognizing that
man can and does become "trapped" in a world of words and
symbols, counselors and psychotherapists have become skilled
in the "art and science" of language construction.

The field of counseling and psychotherapy has grown to
be of paramount importance in today's society. In a world
so full of change, conflict, and confusion, the practicing
counselor seems to be one of the few people with the explicit
goal of making the world a better place in which to live.

Indeed, the stated goal of the the counseling/therapeutic process is client self-actualization (14, p. 18). Consequently, the field itself, like any professional endeavor, has its share of theories and research findings to supplement its methodology and objectives. Recognized as it apparently is, it is certainly not without its ambiguities and somewhat faulty assumptions. These amibquities are surely expected in an area dealing with human behavior and confused human behavior at that. Yet as imperfect as the counseling process surely is, the theories and findings associated with that process seem to offer the most viable hope for understanding human behavior and stress. Indeed, the consequences of psychological stress are certainly not feasible alternatives.* Thus, it follows that the ideas of practicing counselors and psychotherapists are the most appropriate for building a body of knowledge covering interpersonal skills in a multitude of situations. In fact, as Patterson (14) has pointed out, psychotherapy is nothing more than a good human relationship. Life itself can function as a replacement for psychotherapy:

> Many psychologists and psychotherapists will
> be horrified at the conclusion that psychotherapy
> is not a profession but something that can be

---

*One researcher has established a relationship between psychological stress and high blood pressure, diseases of the heart, diseases of the kidney, inflammatory diseases of the skin and eyes, digestive diseases, etc. Hans Selye, The Stress of Life (New York, 1956), pp. 128-209.

taught to many persons, persons who lack a college
education or a background in psychology. Yet this
is the logical extension of the recognition that
the essence of psychotherapy is that it is a good
human relationship. Rather than responding with
horror, we should respond with hope, since it is
obvious that the practice of psychotherapy, re-
stricted to those with long professional training
built upon four years of undergraduate education,
will never be able to reach all those who need help.
Nor is a remedial approach through psychotherapy
likely to solve the basic problem. It is only when
we succeed in teaching the principles of psycho-
therapy, or the elements of facilitative interper-
sonal relationships, to everyone that we will resolve
the problem and eliminate the need for psychotherapy
(14, pp. xi-xii).

The counselor is dedicated to the belief that the solu-

tion to a person's problems (as well as society as a whole)

is in the fostering of "good" human interpersonal relation-

ships. Psychotherapists and counselors cannot solve the

client's problems; only man can. The process of counseling

itself provides the help, not the counselor. The individual

must be able to carry these solutions out of the counselor's

office and back into the street, the home, and the job. He

must be able to change his behavior toward his fellow man.

As Patterson concludes:

Man's problems do not stem from some indepen-
dent, abstract, bad social environment, but from
specific bad personal treatment by other men. And
it is these problems that create the bad social
environment, not vice versa. The remedy, then, is
not to change an abstract social environment, but
to change the way man relates to man--man's inhu-
manity to man. The restrictive, repressive,
controlling social environment will then be unneces-
sary. It will wither away.

The solution to our problems, then, lies in the
fostering of good interpersonal relationships, the
principles of which we now know (14, p. xi).

Three primary schools of psychotherapy exist (Freudian, Humanistic, Behavioristic) which attempt to explain and predict human attitudes and behavior. All have their inherent strengths and weaknesses. However, the "humanistic" school, because of its emphasis on the "healthy" person as opposed to the "sick" and oftentimes "beyond help" personality, seems to be the most appropriate vehicle to achieving a full functioning life in general and more specifically, on the job. The humanists (14, pp. 31-39) believe that man is not determined by his environment but is an active being searching for growth. He organizes his environment in terms of his single basic need--self-actualization. He is, and is in the process of becoming, a more self-actualizing individual. The humanists believe that man is inherently good* and any threat to that belief produces in the individual an emotional disturbance, which usually takes the form of aggression.

And one of the most improtant tenets of the school of humanistic psychology is this: self-actualizing behavior can only occur through the supportive interaction with others. The school teaches that self-actualization cannot occur except in interpersonal situations or society. Man is a social being, and as such, seeks out other persons to

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*This is one of the primary differences between the humanistic school and Freudian psychoanalytical thought. Carl Rogers, On Becoming A Person (Boston, 1961), p. 91.

experience a relationship as only another individual can provide. Thus, a primary condition for healthy people, according to the humanists, is a healthy environment.

Carkhuff, Truax, and Berenson (1, 2, 23) were some of the first humanistic psychologists to postulate (and have some data to support it) that there exists certain conditions necessary in the therapeutic process. That is, they have some documented evidence to supplement the conclusion that in order for the therapeutic process to be effective in bringing about client personality change the counselor must be able to function in two dimensions.

The first dimension is one of response. It is characterized by the responsiveness of the counselor to the client. It is composed of the ability of the counselor to exhibit the therapeutic conditions of empathy, respect, and genuineness during the counseling process (1, 2, 23). The other dimension is called the action dimension (not entirely independent from response) and is based upon the understanding developed in the first dimension. The action dimension indicates that the counselor should assume more initiative in helping the client make more functional decisions. The action dimension is characterized by the concepts of confrontation, self-disclosure, and immediacy (1, 2, 23).

These conditions can stimulate client insight in solving his own everyday problems. Together the two dimensions of responsiveness and action can provide the core conditions

essential to the successfulness of the therapeutic process

independent of the techniques or methods used by the

counselors. As Carkhuff points out,

> We seek, then, to develop a comprehensive
> model that accounts for growth and deterioration
> in human functioning. This objective must be
> further extended and refined in appropriate
> theory-building processes. The inductive func-
> tion of theory building allows us to generalize
> to the level of laws from the stable body of
> phenomena (facts) concerning what facilitative
> and action oriented conditions relate specifi-
> cally to differential changes in different
> populations: (1) high levels of facilitative
> and action-oriented conditions lead to physical,
> emotional, and mental growth; (2) low levels of
> facilitative and action-oriented conditions lead
> to physical, emotional, and mental deterioration
> (1, p. 29).

Thus, there are levels, or various degrees of facilitative

elements, in the entire counseling process. More effective

counselors tend to function at the higher levels of

competence.

Although the concepts of empathy, respect, genuineness,

confrontation, self-disclosure, and immediacy can be con-

sidered separate for discussion purposes here, this treatise

in no way implies that they are entirely separable. They

all are interrelated and to some extent depend upon the

counselor's perceptions and predispositions (1, p. 33). Also,

the counseling process is not entirely one-sided. The client

brings certain principles and perceptions to the counseling

process. The degree to which the counselor offers facili-

tative and action dimensions is related to the degree to

which the client seeking help will engage in more healthful

processes. The response expressions are those given in

response to the client, while the action expressions are

initiated by the counselor. Of course, the precise order

and structure of the communication will to some extent depend

upon the situation, counselor, and client. As Carkhuff indi-

cates,

> In regard to both a more responsive understanding
> and an active confrontation of life, the helpee
> may benefit from each or all of the following
> sources when present at high levels: (1) in the
> physical world in particular, modeling or imita-
> tive processes will serve to increase the helpee's
> behavioral response repertoire; (2) in the emo-
> tional world the helpee's experiential base of
> both understanding and action will free him to
> further experience and experiment with himself;
> (3) in the intellectual world direct teaching or
> shaping may enable the trainee to develop a func-
> tional and fulfilling cosmology of life (1, p. 35).

In 1973, Carkhuff, Pierce, Cannon, and Berenson (3, 4)

developed a program for teaching interpersonal counseling

skills to the lay person. Recognizing that interpersonal

skills are important in all walks of life, a scale of

communicative responsiveness was developed to enable the

untrained person to learn to function more effectively in

everyday life. That is, most people have learned to respond

at a very low level of communication to most situations,

thus experiencing a very frustrating interpersonal relation-

ship. Carkhuff, et al., believes that most people can be

trained to function at a high level of competence and thus experience a very rewarding interpersonal relationship.

A Model of Interpersonal
Communicative Competence

Recognizing that interpersonal skills are surrounded and emersed in a communicative context, helpers must be able to relate to the helpee through their communicative response. Being responsible means understanding how someone else feels. Also important is initiative or giving guidance or direction to the helpee.* Together they provide the condition necessary for a more meaningful interpersonal relationship and psychological growth.

Using the action and responsiveness definition--as discussed above--as the "core" of facilitative functioning, a model of interpersonal communicative competence can be constructed. Recognizing that various authors envision the counseling process from somewhat different (but similar) perspectives, several theories are used to supplement the entire model. Specifically, the concepts related to Client-Centered Therapy, Rational-Emotive Therapy, Gestalt Therapy, and Reality Therapy seem to be the most celebrated and therefore, the most appropriate--at least from the humanistic standpoint.

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*The terms helpee, client, and patient may be considered interchangeable for discussion purposes here.

As can be seen from Figure 1 on the following page, the model of interpersonal communicative competence encompasses five levels of effectiveness. Level one is very low in communicative effectiveness while level five is very high--with varying degrees in between. To a certain extent, one level subsumes the other. This scale of communicative effectiveness, along with its characteristics, is discussed in detail below.

Level One: Judgmental

A level one response is labeled "Judgmental." It corresponds to Carkhuff's level one which is no expression or an expression unrelated to the helpee (3, p. 192). This type of response is low on responsiveness and low on initiative. It is usually highly defensive or judgmental in nature. The helper will not accept any blame and/or responds to the helpee by being highly evaluative of his/her behavior and attitudes. There is no exploring, or understanding as to where the helpee is or wants to be (3).

A level one response is also typically "I-oriented." A helper with "I-orientation" can only communicate about himself. He has no regard for the attitudes, behavior, or feelings of the helpee. The response is usually "past-oriented" in that the helper is quick to look to the past for some discrepancy or mistake causing the current predicament. In short, it is the lowest level of response possible

```
LEVEL FIVE          ┬──      PROBLEM-SOLVING
                    │            Responsiveness       :  High
                    │            Action               :  High
                    │            Time Orientation     :  Present
                    │            Person Orientation   :  You
                    │            Effectiveness        :  Very High
                    │
                    │
LEVEL FOUR          ┼──      CONFRONTATION
                    │            Responsiveness       :  High
                    │            Action               :  Moderate
                    │            Time Orientation     :  Present
                    │            Person Orientation   :  You
                    │            Effectiveness        :  High
                    │
                    │
LEVEL THREE         ┼──      EMPHATHIC UNDERSTANDING
                    │            Responsiveness       :  High
                    │            Action               :  Low
                    │            Time Orientation     :  Present
                    │            Person Orientation   :  You
                    │            Effectiveness        :  Moderate
                    │
                    │
LEVEL TWO           ┼──      ADVISORY
                    │            Responsiveness       :  Low
                    │            Action               :  High
                    │            Time Orientation     :  Future
                    │            Person Orientation   :  I
                    │            Effectiveness        :  Low
                    │
                    │
LEVEL ONE           ┴──      JUDGMENTAL
                                 Responsiveness       :  Low
                                 Action               :  Past
                                 Time Orientation     :  Past
                                 Person Orientation   :  I
                                 Effectiveness        :  Very Low
```
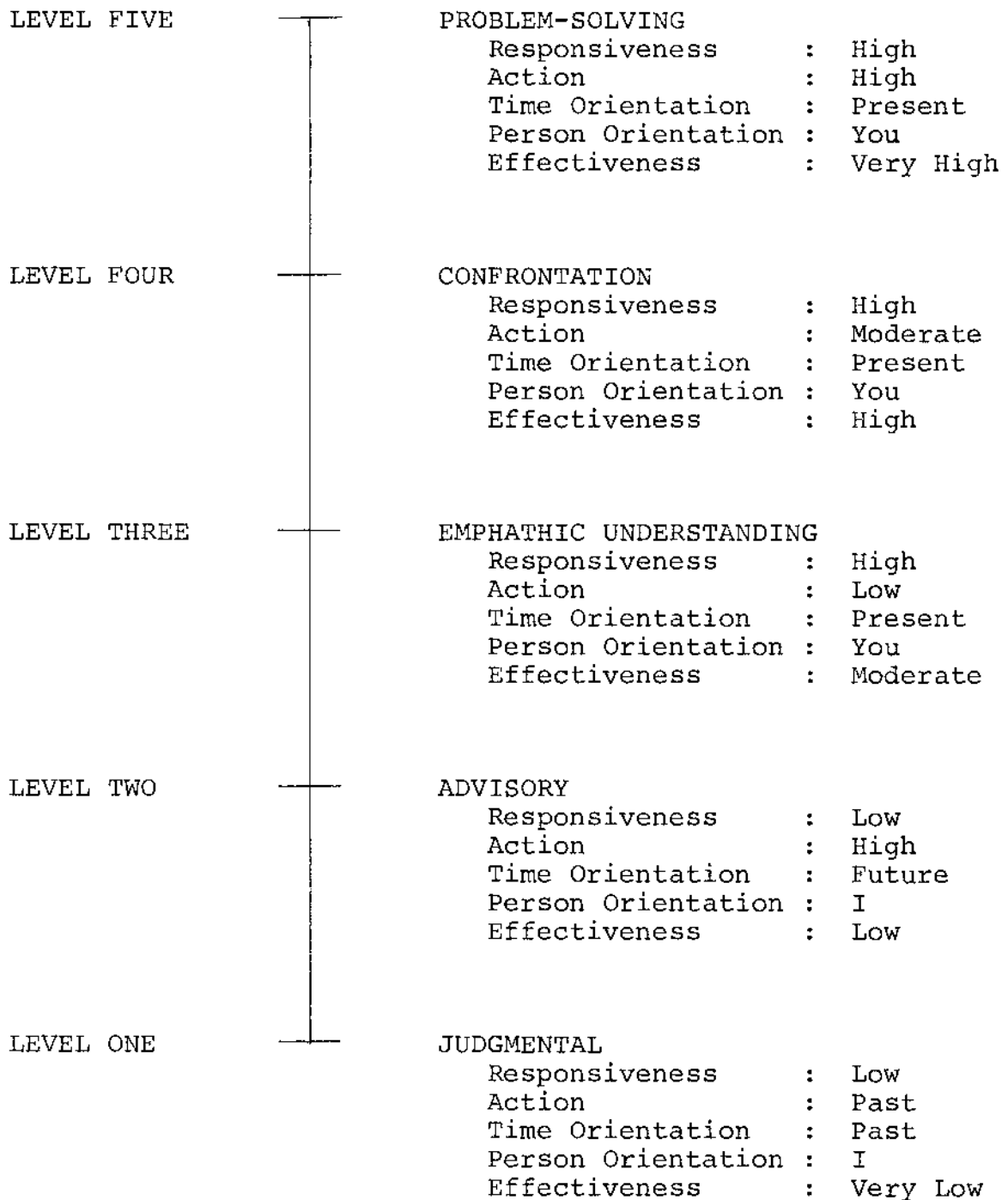
Figure 1--A five dimensional model of Interpersonal Communicative Competence based upon the literature of humanistic psychotherapy.

(based upon Figure 1) and thus, is completely ineffective in

helping the other person understand his feelings. The helper

using this response has almost no recognition of the helpee
as a person at all.

Level Two: Advisory

People generally like to give advice. However, the
advice offered typically follows the pattern of advice from
the helper's standpoint. Advice from the sender's stand-
point very seldom recognizes the attitudes and feelings
of the helpee. In other words, it essentially is advice
from the helper for the helper. A level two response is
called "Advisory." It corresponds to Carkhuff's level two
response of being low on responsiveness but high on ini-
tiative (3, p. 192). It exhibits very little, if any,
feeling or meaning expressed by the helpee and thus does
very little in helping him discover where he is at the
present time. Thus, although the response does give advice
or direction, the helpee is less likely to accept it because
of the low level of responsiveness (3).

To be sure the helper is sympathetic; as a contrast from
a level one response, he wants to be of some help but just
does not know how. The response is in the form of advice
and looking to the future in an effort to get the helpee to
change his behavior or attitudes. Although a level two
response is quasi-judgmental and quasi-feeling, it is still
somewhat more effective than a level one response (based
upon Figure 1). However, since it is still "I-oriented,"

the helper only has the capability to see the problem from
hiw own individual viewpoint.

Level Three: Empathic Understanding

A level of high responsiveness is the first condition
of understanding the helpee's problem. A level three
response, according to Figure 1, is called "Empathic Under-
standing" and contains all the ingredients of empathy,
respect, and genuineness. It corresponds to Carkhuff's
level three response in that it is high on responsiveness
but low on initiative. That is, it accurately captures
the feeling and meaning of the helpee's communication, but
does not give any direction (3, p. 192). The response
makes it possible for the helpee to explore where he/she
is at the present time. Thus, it certainly is present
oriented as opposed to the past and future orientation of
level one and two.

One of the most accepted and used therapies in the
field (Client-Centered Therapy) employs the basic tenets
of empathy, respect, and genuineness to foster therapeutic
change. Carl Rogers (19), who initiated this approach,
indicates that as the name implies the emphasis of the
entire counseling process is on the client or helpee. The
purpose of the counselor is merely to provide the conditions
necessary for therapeutic change on the part of the client.
Rogers (19, pp. 71-88) explains that the client must

discover that she/he is responsible for her/himself in the relationship and must experience her/his own feelings through self-exploration. This verbal explanation of problems eventually leads to the discovery of denied attitudes and the experience of reorganizing the self. Once progress is made, the client becomes aware of greater self-importance and confidence which in turn, helps to discover even further the inner self.

Rogers discusses the conditions of therapy necessary in bringing about insight and self-understanding. Rogers describes his approach as placing more emphasis on individual growth activities and the feeling aspects of the situation. The client-centered approach also places more emphasis on the individual's present behavior rather than concentrating on his past. It also allows for release of feelings, a primary aim of any type of constructive therapy (20, pp. 28-30).

Only the verbatim words of Carl Rogers can accurately capture the true aspects of the client-centered relationship. He believes there are at least four definite qualities which describe the helping process:

> First is a warmth and responsiveness on the part of the counselor which makes rapport possible, and which gradually develops into a deeper emotional relationship. From the counselor's point of view, however, this is a definitely controlled relationship, an affectional bond with defined limits. It expresses itself in a genuine interest in the client and an acceptance of him as a person. The counselor

frankly recognizes that he becomes to some extent
emotionally involved in this relationship.

. . . .

The second quality of the counseling relation-
ship is its permissiveness in regard to expression
of feeling. By the counselor's acceptance of his
statements, by the complete lack of any moral-
istic or judgmental attitude, by the understanding
attitude which pervades the counseling interview,
the client comes to recognize that all feelings
and attitudes may be expressed. No attitude is too
aggressive, no feeling too guilty or shameful, to
bring into the relationship.

. . . .

While there is this complete freedom to express
feelings, there are deinite limits to action in the
therapeutic interview, helping to give it a struc-
ture which the client can use in gaining insight
into himself. These therapeutic limits are a third
and an important aspect of the counseling situation.

. . . .

A fourth characteristic of the counseling
relationship is its freedom from any type of pres-
sure or coercion. The skillful counselor refrains
from intruding his own wishes, his own reactions or
biases, into the therapeutic situations. The hour
is the client's hour, not the counselor's. Advice,
suggestion, pressure to follow one course of action
rather than another--these are out of place in
therapy (20, pp. 87-89).

Carkhuff indicates that the helper must respond to the

content of the helpee's problem. That is, to empathize is to

respond to a complete understanding of the helpee's experience.

"Empathy involves experiencing another person's world as if

you were she" (4, p. 65). Moreover, the helper can be of

further service by suspending his own attitudes and sharing

the helpee's frame of reference, thus communicating respect.

"In this way, the helpee has the feeling that she is free to explore herself without fear of retaliation. No matter what she does or says, no harm will come to her" (4, p. 67). Suspending temporarily the helper's own frame of reference also means communicating in a genuine manner. That is, the helper does not dominate the helping process but at the same time does not appear insincere (4, p. 68).

Responding to content alone is not enough in a level three response; the helper must also respond to feelings. Carkhuff describes:

> We can ensure that we respond to the helpee's feelings when we make a response that is interchangeable with the feelings expressed by the helpee. It certainly is not too much to expect that we at least be able to communicate to helpees what they have communicated to us. Understanding what the helpees have expressed--at the level they have expressed it--constitutes the only basis for helping (4, p. 76).

Going further, Carkhuff indicates that the helper must practice in accurately evaluating the helpee's predicament and responding appropriately. This portion of the helping process could mean responding to sad feelings, happy feelings, angry feelings, etc. (4, p. 86).

Once the helper has mastered the "arts" of empathy, respect, and genuineness, he must be able to put the two dimensions (feelings and content) together to make the counseling process meaningful. The content provides an intellectual meaning to the helpee's expression and the feeling gives the emotional meaning. The response takes

the expression, "You feel _____ because _____."
The first part captures the feelings and the second part
captures the content (4, p. 91).

Thus, both Rogers and Carkhuff see the importance of
responsiveness, thereby allowing the client to be himself,
to explore, and to construct new attitudes and more effec-
tive behavior. The counselor can provide the conditions to
enable this change to take place.

Level Four: Confrontation

Many therapies of human behavior believe that the
counselor must go beyond the core ingredients of empathy,
respect, and genuineness. They believe that confrontation,
applied skillfully by the counselor, will enable the client
to see his ineffective behavior and thus make the necessary
adjustments. A level four response (again, referring to
Figure 1) is called "confrontation" and does contain the core
ingredients of empathy, respect, and genuineness but is also
moderate in the active dimensions. It differs from Carkhuff's
(3, p. 192) level 3.5 which is personalizing the meaning of
the helpee. Thus, this communicative response is high on
responsiveness and moderate on initiative. It is more effec-
tive than a level three response because it personalizes the
meaning of the problem by confronting the helpee with the
idea that the problem originates with the helpee and not
with some external force in his environment. The subsuming

effect of level four over level three is therapeutically necessary since the responsive dimensions in level three are an important part of the confrontation process.

One of the most confrontative therapies in the field is that developed by Albert Ellis (7). Called Rational-Emotive Therapy (RET), it purports that man is uniquely rational as well as irrational and that any emotional disturbance is the result of irrational thinking. Ellis believes that patients produce irrational beliefs about some happening. That is, there are many irrational beliefs in the world that a person "should" or "ought" to behave in a certain way. Calling (A) the Activating Event, and (B) the Irrational Belief, then (C) becomes a feeling of anxiety, worthlessness, or depression. At this point it is up to the counselor to confront the client at point (D) with his irrational beliefs rather than placing the blame on the Activating Event, (A). It is the Belief (B) that is causing the problem, not (A). Ellis explains:

> This, therefore, remains my main goal as a psychotherapist: to induce the client, as often as the results of his underlying disturbance (that is, his negative emotions and the dysfunctional behavior to which they lead) arise, to examine fearlessly his fundamental philosophic premises, to think about them consciously and concertedly, to understand that they are based on illogical and inconsistent assumptions or deductions, and to attack them, by consistent verbal and motor activity, until they truly disappear or at least or reduced to minimal proportions (6, pp. 161-162).

Another action-oriented therapy is that called Reality Therapy. Developed by William Glasser (8), its basic axiom is that patients deny the reality of the world around them. Glasser believes that it is his role as a therapist to help the client face reality and teach him a better way to fulfill his needs. Responsibility is a basic concept of Reality Therapy. That is, it is important in that one must learn to fulfill his needs ". . . in a way that does not deprive others of the ability to fulfill their needs" (8, p. 15). Glasser sees his task as teaching his clients responsibility in order that they may live more productive, useful lives. Recognizing that the therapist must also be a responsive person--sensitive, human, genuine--he must go beyond this traditional "warm" approach to counseling and teach the client greater responsibility in life. He discusses the process of reality therapy:

> Developing a therapeutic involvement may take anywhere from one interview to several months, depending upon the skill of the therapist, his control over the patient, and the resistance of the patient. Once it occurs, the therapist begins to insist that the patient face the reality of his behavior. He is no longer allowed to evade recognizing what he is doing or his responsibility for it. When the therapist takes this step--and he should start as soon as involvement begins--the relationship deepens because now someone cares enough about the patient to make him face a truth that he has spent his life trying to avoid: he is responsible for his behavior. Now, continually confronted with reality by the therapist, he is not allowed to excuse or condone any of his behavior. No reason is acceptable to the therapist for any irresponsible behavior. He confronts the patient with his behavior and asks him to decide whether or not he is taking the responsible course (8, p. 33).

Frederick Perls (16) is commonly called the "Father of Gestalt Therapy." Perls believes that one of the biggest problems with humans is their lack of awareness toward what he calls the ego boundary. Perls calls this confusion over the ego boundary identification and alienation (16, p. 8). That is, patients in gestalt therapy must go through a process of recovering certain parts of their personality. Once a situation is closed then another unfinished "gestalt" takes its place. So life then is a constant awareness of one's self in relation to the environment--a kind of foreground/background perception. Of course, what Perls is trying to accomplish through his type of therapy is maturation, or a shifting from "external control to internal control," a concept very similar to that expressed by Glasser and Ellis. He does this in various ways such as concentrating on the "here-and now," the "how" of a situation, establishing a continuum of awareness, and by concentrating on the "means-whereby" rather than the "end-gain" (16, pp. 15-58). Utilizing the principle of "frustration" and "awareness," Perls explains the use of gestalt therapy in patient understanding:

> So, we come now to the most important, interesting phenomenon in all pathology: self-regulation versus external regulation. The anarchy which is usually feared by the controllers is not an anarchy which is without meaning. On the contrary, it means the organism is left alone to take care of itself, without being meddled with from outside. And I believe that this is the great thing to understand: that awareness per

se--by and of itself--can be curative. Because
with full awareness you become aware of this
organismic self-regulation, you can let the
organism take over without interfering, without
interrupting; we can rely on the wisdom of the
organism. And the contrast to this is the whole
pathology of self-manipulation, environmental
control, and so, that interferes with this subtle
organismic self-control (16, pp. 17-18).

Likewise, Carkhuff believes that once an understanding

occurs between the helper and helpee through interchangeable

response, then it is necessary to move to a more personalized

area of understanding. The first step is to personalize the

meaning. The helper must guide the helpee to understand why

the experience is important. Carkhuff explains:

When we go beyond the helpee and understand
the meaning of the situation and the helpee's
personal deficits, we say that we are personal-
izing. We are personalizing the helpee's experi-
encing of herself by facilitating her self-
exploration, self-understanding and eventual action.
When we personalize, the helpee will come to ex-
perience herself more accurately in the area of
her concern (4, p. 110).

He also feels that it is important to personalize the

problem. That is, the helper has an obligation to look at

the surrounding information and personalize how the helpee

cannot function in an appropriate manner. In other words,

the helper is ". . . asking the helpee to take responsibility

for her own life and look at how she herself is contributing

to the problem" (4, p. 115). The response takes the format,

"You feel _____ because you cannot _____" (4, p. 116).

The first part personalizes the feelings and the second part

personalizes the meaning and problem.

In conclusion, Ellis, Perls, Glasser, and Carkhuff see the necessity for confrontation in the counseling process. The helpee may never be aware of his own inadequate and irresponsible behavior without the counselor's help. It is the counselor's responsibility (as seen by the humanists) to provide that help through the skillful application of awareness and confrontation.

Level Five: Problem-Solving

As can be seen from Figure 1, a level five response is the highest level of communicative capability in this continuum of interpersonal competence. It is labeled "Problem-Solving" and although it contains the traditional ingredients of a level three and four response, it goes beyond by concentrating on the methods, ways, and means of problem solving. A subsuming effect is still in operation here. That is, the helper has developed a communicative rapport with the helpee through empathy, respect, and genuineness. He has at the same time been able to confront the helpee with inconsistencies in attitudes and behavior. It is now time to go even further to guide the helpee to the point that he can gain enough insight to solve his own problems. A level five response here corresponds to Carkhuff's level four, personalizing the helpee's goal (3, p. 192). Thus, these responses are high on both responsiveness and initiative. It is the

Process of understanding the helpee's verbal and non-verbal behavior and using responses interchangeably.

Ellis (6, 7) believes that it is not just enough to confront the client with his irrational beliefs but must also work further toward more constructive mental attitudes and behavior. At point (E) in Ellis' theory of cognitive therapy, the client is encouraged to adopt new philosophies of living bringing with them new, more heathful emotions. Through the concepts of cognitive insight, reality-testing, emotional release, risk-taking, role-playing, and others, Ellis continuously disputes those self-defeating irrational beliefs of the client and replaces them instead with more rational beliefs (6, 7). Once the client gains enough insight through the RET process, Ellis proceeds to instruct him in more appropriate kinds of attitudes and behavior. Recognizing that the client is the center of his universe, then it follows that only he can make the adjustments neces- sary for healthful self-preservation and thus change his beliefs accordingly. Ellis explains his role as a counselor:

> Rational-emotive therapy, by solidly teaching the individual to avoid any kind of self-rating (and only, instead, to measure his characteristics and performances, so that he may help correct them and increase his enjoyment), gets to the deepest levels of personality change. It offers no panacea for the termination of human unhappiness, sorrow, frustration, and annoyance. But it importantly reveals, attacks, and radically uproots the major sources of needless self-defeating and socially destructive bahavior (6, p. 66).

Like RET, Reality Therapy also teaches the client more responsible and appropriate ways of behavior. But unlike RET, Glasser (8, pp. 34-40) points out the unrealistic aspects of the behavior rather than the attitudes. Glasser believes that it is the patient's responsibility to decide whether or not his behavior is irresponsible, not the therapist. The therapist cannot accept excuses, or allow the client to blame his present unhappiness on some short-term emotional disturbance. Using several techniques of reality therapy, Glasser is able to strengthen the individual's self-worth and teach him to act more responsibly. Rather than concentrating on the client's irresponsible past, Glasser insists that change can only take place by becoming a facilitator with the client. The reality of the "present" is the primary tool of reality therapy. Glasser explains this releasing process:

> When the patient admits that his behavior is irresponsible, the last phase of therapy--relearning--begins. Actually no definite change in therapy occurs; relearning is merged into the whole treatment. The patient must rely on the therapist's experience to help him learn better ways of behavior. When he can do so, when the young delinquent learns the value of working and experiences the good feelings that accompany responsible action, therapy is approaching an end. It is only a matter of time until the patient, with his newly acquired responsible behavior, begins to fulfill his needs. He finds new relationships, more satisfying involvements, and needs the therapist less (8, pp. 40-41).

Like Glasser's reality of the present, one of the fundamental tools of Gestalt Therapy is the emphasis on the "here

and now" (15, pp. 62-72). That is, Perls does not want

his clients to talk about their problems in the past or

memory. Rather he prefers to confront them with their

unfinished gestalts in the present--in the "here and now."

By forcing the client into a deeper awareness of his speech,

body motion, and other activities, Perls enables the client

to re-live interrupted feelings and emotional events. Perls

gives them a chance to find themselves, to experience them-

selves, and see the relationship of one's self to her/his

environment. A deep contact with the self eventually means,

for Perls' clients, a shifting from environmental support

of the past to a self support in the future. Perls forces

the client, through the here and now approach, to find her/

his own new direction rather than relying upon the therapist.

Perls calls this new dimension psychological "balance" and

"integration"--a new relationship between the client and the

world heretofore lacking in the individual's life. The

therapist can help in this process of self-discovery by

acting as a mirror for the client. Perls explains his

approach:

> Through making our patients aware, in the
> here and now, by concentration, of that these
> interruptions are, of how these interruptions
> affect them, we can bring them to real integra-
> tions. We can dissolve the endless clinch in
> which they find themselves. We can give them a
> chance to be themselves, because they will begin
> to experience themselves; this will give them a
> true appreciation both of themselves and others,
> and will enable them to make good contact with the
> world, because they will know where the world is.

> Understanding means, basically, seeing a part in
> its relation to the whole. For our patients, it
> means seeing themselves as part of the total field
> and thus becoming related both to themselves and
> to the world. This is good contact (15, p. 72).

Likewise, Carkhuff recognizes the counselor's influence in shaping problem solving behavior. He indicates the best way to determine corrective behavior is to concentrate on the opposite of the personalized problem in the preceding level. In other words, not only is it important to personalize the feelings, meaning, and the problem it is just as essential to personalize the goal in the present. The helpee then knows where she/he wants to be. This utilizes the format, "You feel _____ because you cannot _____ and you want to _____." The first part, as in a level three and four response, personalizes the feelings, the second part personalizes the problem, and the third part personalizes the goal of the helpee (4, p. 122).

Here again it is apparent that Ellis, Carkhuff, Perls, and Glasser virtually agree on that essential element in counseling called insight or problem solving. Although the words used seem to be somewhat different, the end result is essentially the same. It is the counselor's responsibility to effectively evaluate the situation through the surrounding communicative stimuli and produce the impetus necessary for client problem solving. Without this guidance the client may know that she/he is behaving ineffectively but not know how to correct that behavior.

A Test to Measure Interpersonal

Communicative Competence

As shown in Chapter II, interpersonal skills have been seen to be of importance in organizational effectiveness. And it has been defined rather definitively in the form of a response hierarchy as depicted in Figure 1. Using this counseling model of interpersonal competence as a guide, this section of the study looks at the construction of an instrument to measure interpersonal communicative competence as defined by this five-level scale.

The Process of Supervision

A knowledgeable supervisor should know that human behavior is a phenomenon almost beyond comprehension. But he also should know that this same human behavior will be the instrumentality for accomplishing organizational goals. Thus, effective supervision is one that successfully evaluates the needs of the subordinates in the work group in light of departmental and total organizational goals. In short, individual skills and energies must be adequate to meet organizational expectations, and organizational resources must be adequate to fulfill individual needs and goals (17, pp. 109-115). In fact, the entire field of organizational development (OD) has dedicated itself to the task of fostering the supportive climate necessary in accomplishing these goals (17, pp. 482-509).

Certainly, the administrative and technical aspects of supervision are important. But the very term "supervision" implies that an effective supervisor accomplishes goals through the work behavior of others. Goal commitment through interpersonal influence would seem to be the single most important task of supervision.* Thus, a high work commitment from the group's members comes partially, if not fully, from an atmosphere where personal needs are considered important. Good supervision must know how to evaluate these personal needs and goals and incorporate them into the goals of the department and organization.

The job of a supervisor encompasses many duties, responsibilities, and much job knowledge. Specifically, she/he should possess a broad knowledge of planning and control techniques such as PERT, Gantt, budgets, break-even analysis, etc. (21). She/he should be thoroughly grounded in the selection and placement policies of the organization in which she/he is a member. The application of training programs is especially important (21). Moreover, she/he should possess a thorough knowledge and understanding of the performance evaluation program and be capable of implementing it in her/his work group. And there is always the outside specialists to contend with such as the NLRB, OSHA, and

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*This point is emphasized over and over in the writings of such notables as McGregor, Likert, Drucker, Bennis, Bernard, Porter, Lawler, Tannenbaum, and others.

EEOC (21). And finally, there is the all important concept of human behavior within the work group itself. The effective supervisor must be very knowledgeable of the psychological implications of attitudes and behavior and thus be able to respond to them when appropriate (21). The "why" of employee job behavior may be just as important as the "how" of job behavior. The astute supervisor knows to assess both.

A Simulation of Interpersonal Incidents

One way to determine a supervisor's interpersonal competence would be to measure her/his capacity to evaluate and respond to an employee problem (17, p. 64). That is, interpersonal competence could be defined as the capability of a supervisor to effectively solve a series of employee-related problems seen as important to both the subordinate and the organization. How successful the supervisor is in dealing with these incidents to the mutual satisfaction of both parties should be a measure of her/his interpersonal communicative competence.

With this definition in mind, five leading supervisory texts were carefully scrutinized to determine the most appropriate incidents or problem related areas in the field. Specifically, the cases in Reber and Terry (18), Haimann and Hilgert (9), Eckles, Carmichael, and Sarchet (5), Newport (13), and Terry (22) were evaluated in terms of the problem-area involved and the recurrence of the problem

from one text to the next. After eliminating those incidents that were fairly specific in nature--such as interviewing, affirmative action problems, safety, etc.--and those involving an organized labor union, a group of problem areas emerged as representing a "typical" supervisory job. That is, this set of problems should be "common" to all supervisory situations in the long run.

This group of supervisory problems was then carefully scrutinized to determine the needed elements of each incident in determining interpersonal competence. Recognizing that the supervisor must function essentially as a "counselor," the following criteria were used to determine the final incidents to be used in attempting to assess interpersonal communicative competence (as defined previously): 1) The supervisor of the work group is not responsible for the problem involved. 2) The incident is primarily interpersonal in nature; it does not require any technical or administrative skills of the supervisor. 3) The incident itself is emotionally charged; it is seen to be of importance to the employee. 4) The supervisor has very little, if any, control over the outcome of the situation.

With these four criteria in mind, the following eight incidents were identified as being "typical" of a supervisor's interpersonal problems with a work group:

1. A subordinate who feels that the work group is presuring him into compliance with the group's norms;

2. A subordinate who is habitually late for work because of outside commitments;

3. A subordinate who feels that the supervisor is biased to other members of the work group;

4. A subordinate who believes the company has been unfair in not granting a merit pay increase;

5. A subordinate whose work performance has decreased because of a personal problem;

6. A subordinate who feels the company has been unfair in not granting a promotion;

7. A subordinate whose work performance has decreased because of his superior qualifications; and

8. A subordinate whose work performance is not acceptable because of inferior qualifications.

Using these "common" supervisory incidents as a guide, eight 6-7 sentence paragraphs were written depicting the subordinate problem in question (Gunning-Fog Index = 10). Using an equal number of fictitious males and females, a simulated written situation for each incident was constructed to which the supervisor is asked to immediately respond. For example, one of the situations describes a female subordinate who has been habitually tardy for work each morning. The situation is described thus:

For the past few days you have noticed one of your employees, Jane Ross, continually arriving late for work. Knowing this will eventually cause trouble among the rest of the employees (the company requires everyone to be at work on time), you decide to call her into your office to determine what the

problem is. Reluctantly Jane explains that her six-year-old daughter must catch the school bus at 8:00 every morning. Since Jane does not want to leave her alone at the bus stop, it is causing Jane to be 30 minutes late for work. Jane then asks the question, "I can't just leave her all alone, can I?"

The subject then has the opportunity to respond to this hypothetical situation as if she/he were actually the supervisor.

IICC: Index of Interpersonal Communicative Competence

After the eight supervisory situations described above had been written, they were then used to develop an instrument called the IICC-2.* Its purpose was to determine the supervisor's response to the eight simulated situations in an open-ended format. This is, given that the final form of the IICC would be in the order of five alternatives (corresponding to Figure 1), it was necessary to determine the most appropriate word choice across those five levels.

First, each of the eight situations was assigned a number from one to eight. Using a random numbers table to determine the order of placement on the form, the eight paragraphs were typed on three sheets of paper with an intervening space between each for the respondent's written reply. A cover sheet was then designed to provide the respondent with a set of instructions for taking the test.

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*See Appendix A for a complete copy of the IICC-2.

Called the IICC-2, the test first asked for the respondent's

sex, age, years of education, present job/most recent job

title, number of subordinates supervised, and the total

number of years employed as a supervisor. The instructions

on the first page read thus:

This questionnaire has been designed to describe your
particular style of interpersonal communication in a super-
visory capacity. There are no right or wrong answers since
all people are different and have their own preferences for
interpersonal communicative methods.

On the following pages you will find several "typical"
supervisory situations in which you are asked to respond
as the supervisor. After reading each problem situation,
please write your initial response (one to two short sen-
tences) in the space provided. In other words, what would
you say in order to handle the situation? Remember, if this
particular situation occurred in real-life, and you were the
supervisor, how do you imagine you would respond?

For the purpose of completing this questionnaire, please
assume you are an office manager for Southwest Corporation
having the supervisory responsibility for eight employees.
Naturally, you have the necessary authority and responsi-
bility to effectively and efficiently plan, organize, direct,
and control the activities of your department and work group.

After the IICC-2 had been checked for accuracy and

printed into a four-page format, it was used in the gathering

of input data for the IICC. During the fall semester of 1977,

the IICC-2 was given to three sections of upper level and

graduate business classes at North Texas State University.

Specifically, the courses of PAIR 588 (Industrial Relations

and Organizational Behavior)*, PAIR 587 (Development of Human

Resources) and PAIR 486 (Supervisory Management) were chosen

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*PAIR 588 is restricted to MBA level practicing executives.

because of their high incidence of students with supervisory experience. In fact, of the 57 respondents taking the test, 36 had previous and/or present supervisory jobs in industy. In addition, the average age and education of the 43 males and 14 females taking the test was 28.9 years and 17.1 years respectively. The range for age was 21 years to 47 years; for education, 15 to 18 years.

After the tests had been completed and returned by the 57 respondents, the results were classified according to the model of interpersonal communicative competence described in the first part of this chapter. That is, each written response on the IICC-2 (after eliminating those responses that either offered help or asked for further information) was classified according to its characteristics in describing a level one, two, three, four, or five response—as depicted by Figure 1. Specifically, each response to each situation was classified a level one, if it was primarily judgmental, a level two if it was primarily advisory or attempted to explain the situation, a level three if it was primarily empathic, a level four if is was empathic and confrontative, and a level five it was empathic, confrontative, and provided guidance for problem solving. Naturally, there was some overlapping from level to level but an attempt was made to capture the feeling and intent of the response in question.

This classification scheme was then used as a partial input for the construction of the Index of Interpersonal

Communicative Competence (IICC).* That is, five 16-20 word responses were written for each of the eight supervisory situations in question. An attempt was made to describe the feeling and content of the expression at each level of competence. A level one response was primarily judgmental and past-oriented. A level two was an attempt to explain the situation or advisory in nature; consequently, it was future-oriented. A level three response contained an empathic understanding of the subordinate's problem in terms of feelings and content. A level four response contained an empathic understanding but also confronted the subordinate with the problem involved. A level five response likewise, was empathic and confrontative but also provided specific guidance to the problem solving process by personalizing the subordinate's goal.

With the aid of a random numbers table, the five responses were then assigned a position immediately after each of the eight incidents. After reading each incident, the respondent is then asked to make his preference for one of the alternatives. That is, if he were the supervisor and this particular situation occurred in real-life, what would be his response? For example, in the situation in which a subordinate has had some difficulties in "fitting-in"

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*Additional input was obtained from a practicing, certified psychologist.

with the work group, the following description and responses

were written:

> One afternoon your newest employee, John Doe, walks
> into your office with a problem. It seems that after
> two months on the job he is having some difficulty
> in "fitting-in" with the work group. He complains of
> petty jealousies and group pressure. Knowing that
> John has remained somewhat aloof with the rest of the
> employees, you can certainly understand the situation.
> After some stumbling around, John finally blurts out,
> "They don't like me because I am here to work, not
> socialize."

Your response would be one of the following:

1. "Part of doing a good job is getting along with
   your fellow workers; try to be more friendly."

2. "That's no way to act. What's the matter, can't
   you learn to get along with other people?"

3. "Looks like you don't know how to handle this
   social situation and you are letting it upset you."

4. "You feel angry because you can't relate to people
   but you want to be accepted as part of the group."

5. "Sounds like you are angry because the other
   people won't accept you."

Reply number one above (as randomly determined earlier)

is a level two response and is primarily advisory in nature.

Reply number two is a level one response and is primarily

judgmental in content. Reply number three is a level four

response in that it is empathic and confronts the subordinate

with his own responsibility. Reply number four is a level

five response in that it contains empathy, confrontation,

and some guidance. Reply number five is a level three

response in that it basically contains only empathy but no

confrontation.

The IICC can then be scored to determine the respondent's level of interpersonal communicative competence as defined by the test.* A score on the IICC of 8 to 12 indicates that the subject is basically a level one respondent (Judgmental). Likewise, a score of 13 to 20 indicates a level two respondent (Advisory); a score of 21 to 28 a level three respondent (Empathic Understanding); and a score of 29 to 36 a level four respondent (Confrontation); and a score of 37 to 40 a level five respondent (Problem Solving). Naturally, since the IICC utilizes a simulated approach to interpersonal competence, the score is one of communication discrimination rather than true communicative ability. Nevertheless, it does provide a "good" picture of one important element in the communication mix.

A Pre-Test and Final Version
of the IICC

The final step in the construction of a test to measure interpersonal communicative competence (IICC), was the pre-test. The entire test (eight situational descriptions with five responses each) was then used in a pre-test to determine

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*Harold Stone and Floyd Ruch, "Selection, Interviewing, and Testing," Staffing Policies and Strategies, edited by Dale Yoder and Herbert Heneman, Jr. (Washington, D.C., 1974), p. 135: "To be reliable, a measuring device must be set up in such a way that two or more persons can score the responses and get the same results."

the clarity, accuracy, and appropriateness of the entire

questionnaire. In addition to asking for the respondent's

age, sex, education, and years of supervisory experience,

the cover page of the IICC has the following explanations

and directions:

This questionnaire has been designed to describe your particular style of interpersonal communication in a supervisory capacity. There are no right or wrong answers since all people are different and have their own preferences for interpersonal communicative methods.

DIRECTIONS

On the following pages you will find several "typical" supervisory situations in which you are asked to respond as the supervisor. After reading each problem situation, please choose the one alternative (1, 2, 3, 4, or 5) that best describes your communicative reaction. In other words, what would you say in order to handle the situation? Remember, if this particular situation occurred in real-life, and you were the supervisor, how do you imagine you would respond?

Please read each alternative carefully. Although you may not agree with any of the alternatives completely, please choose the one that best describes your opinion. You are to mark your choice on the answer sheet you have. Be sure that the number of the response agrees with the number on the answer sheet. Make your marks heavy and black. Erase completely any answer you wish to change. Do not make any marks in this booklet.

Before you begin the questionnaire, be sure you put your sex, your age, and any other information called for in the space provided on the answer sheet. Do not put your name anywhere on the answer sheet.

For the purpose of completing this questionnaire, please assume you are an office manager of Southwest Corporation having the supervisory responsibility for eight employees. Naturally, you have the authority and responsibility to effectively and efficiently plan, organize, direct, and control the activities of your department and work group.

The subjects chosen to participate in the pre-test were

students in one graduate level and two upper level business

courses at North Texas State University. During the fall
semester of 1977, students in BCOM 333-14 (Communicating
in Business), PAIR 486-03 (Supervisory Management), and
PAIR 521-02 (Personnel Problems Seminar) were asked to
complete the IICC per the instructions. These courses were
chosen specifically because of the low level of supervising
experience among the students. It was thought that if these
students could read and understand the directions, situations,
and responses, then certainly a more experienced supervisor
would be able to do the same. In fact, out of the 31
respondents completing the questionnaire, only 9 had any
previous supervisory experience in industry. The average
age and education level of the respondents were 24.4 years
and 15.1 years, respectively.

After the subjects had completed the questionnaire,
they were then asked for their input in regard to possible
errors, misleading remarks, and general criticism. As a
result, several sentences were modified somewhat to provide
for greater accuracy and clarity in meaning.

The final copy of the IICC* was then printed into a
10 point light face universal type format with a 12 point
leading. The test was then available for use in the second

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*See Appendix B for a complete copy of the final version
of the IICC.

state of the dissertation study--testing the 10 research
hypotheses.

Summary

The first part of this chapter introduced communica-
tion theory and its relevancy in shaping human behavior.
Specifically discussed were the ideas of Korzybski,
Hayakawa, and Haney. That is, these authors have developed
what they believe to be a new type of logic applicable to
understanding human behavior. And more specifically, this
new type of non-aristotelian logic may hold an answer to
heretofore patterns of miscommunication in organizations.

Also, the counseling and psychotherapeutic process
was introduced as a possible vehicle for developing self-
actualization and a more fulfilling life. Although cer-
tainly not a perfect model for understanding human behavior,
it does provide a frame of reference for teaching people in
general, and more specifically supervisors, appropriate
methods for developing "good" human relationships. In fact,
most counselors believe that the psychotherapeutic process
is only the beginning; the client must carry his new knowl-
edge back into his everyday life.

The school of humanistic psychotherapy seemed to offer
the most viable approach in helping individuals develop a
more healthy perception of life. Based upon the responsive-
ness dimension (empathy, respect, and genuineness) and the

action dimension (confrontation, self-disclosure, and immediacy) of the counseling process, the humanists believe that the skillful counselor can help in fostering more constructive attitudes and behavior. Consequently, the scheme of Carkhuff, Pierce, Berenson and Cannon for the teaching of interpersonal skills to the lay person was discussed in connection with the humanistic school of thought.

A scale of interpersonal communicative responsiveness was introduced as a framework for discussion purposes. When necessary in the discussion, the principles of RET, Gestalt Therapy, Client-Centered Therapy, and Reality Therapy were introduced to supplement and underpin the scale of interpersonal competence. Specifically, the scale measures interpersonal communicative competence from a low level one to a high level five in a helper/helpee situation.

Level one was called Judgmental and was described as being the lowest on interpersonal communicative competence. Level two was called Advisory and indicated a sympathetic advisory relationship with the helpee. Level three was called Empathic Understanding and was the first level in the hierarchy to contain the response ingredients of empathy, respect, and genuineness. Level four was called Confrontation in that it went beyond mere responsiveness to the point of confronting the helpee with his irrational and irresponsible attitudes and behavior. Level five was called

Problem-Solving and was an attempt on the part of the helper to provide some guidance in the solving of the helpee's problems.

The process of supervision in organizations was next discussed with its emphasis on the interpersonal aspect of work behavior. Defining interpersonal communicative competence as the capability of a supervisor to effectively solve a series of employee-related problems, a series of eight supervisory situations were constructed. Using four relevant criteria of usefulness, the situations were written to cover a wise range of supervisor/employee problem situations. These critical incidents were then used in an open-ended test of interpersonal communicative competence.

The IICC-2 was used to collect data across the five levels of competence. The data was then classified according to its measure of judgment, advice, empathy, etc. The pre-test version of the Index of Interpersonal Communicative Competence (IICC) was basically constructed from this open-ended classification scheme.

The IICC was then pre-tested to determine its clarity and accuracy in describing the situations and individual responses. As a result, several sentences were modified somewhat to reflect a more accurate description. The final copy of the IICC was then printed for actual use in testing the research hypotheses as presented in Chapter 1. The

next chapter of the dissertation explains the methodology
behind the empirical testing of these ten hypotheses.

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CHAPTER IV

METHODOLOGY OF THE STUDY

Once the IICC had been constructed and pre-tested, it was used in a study to test the hypotheses set forth in the introduction of the dissertation. A study was conducted which would allow a systematic evaluation of the research variables--interpersonal communication competence, self-actualization, leader behavior, and the personal characteristics of the supervisor--in order to determine the relationships among them. This section of the dissertation looks at the methodology or procedure involved in collecting and analyzing the data for retention or rejection of the research hypotheses.

Sample Selection

In order to assure the validity of the study it was decided to utilize a field approach to the sample design. Even with its "built-in" limitations* the field correlational approach provides a more natural environment for the collection of data than does the experimental approach

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*The possibility of several intervening variables within the organization itself may cause erroneous cause-and-effect conclusions. Carl Anderson and Allan Nash, "Statistical Methods for PAIR," _Planning and Auditing_ PAIR, edited by Dale Yoder and Herbert Heneman, Jr. (Washington, D.C., 1976), p. 147

in the controlled laboratory. This research design of course meant the utilization of actual organizations in the process of carrying out their day-to-day activities. Naturally, time pressures, appointment conflicts, etc, would be a problem, but it was considered well worth the extra time and effort involved.

Rather than concentrate on one large organization it was decided to utilize a sample from several small to medium sized organizations. Since one large organization could certainly bias the sample in terms of climate, policies, rules, etc., the development of a diversified sample utilizing several organizations was in order. Although the sample of respondents finally selected is certainly not random, it does involve a large cross-section of organizations in regard to size, type of business, public versus private, etc. It is felt that this diverse stratification enhances the findings of the study.

Specifically, the sample finally selected to partici-pate in the study was composed of seven separate organiza-tions, both public and private, in the Dallas-Fort Worth area. Both first level supervisors as well as the managerial staff were utilized in order to further diversify the sample. Altogether a total of 309 respondents of varying age, edu-cation, length of experience, and sex were used in compiling data for the research hypotheses. The personnel involved were selected from the nursing and housekeeping staff of a

medium sized private hospital, the office staff of a light-metal manufacturing firm, the office and factory personnel of a unionized clothing manufacturer, the resident assistants of the housing department of a large state university, the library staff of a public library, the office and engineering staff of a public utility, the maintenance department of a public utility, the office staff of a small bank, and the personnel from a small retail establishment.

The first step was to ask each testing organization concerned--Educational and Industrial Testing Service in San Diego, California for the POI, and the Management Research Institute in Washington, D.C. for the SBDQ--for their permission to use their copyrighted instruments in a dissertation study. Several copies of the tests, answer sheets, and manuals were also requested. Naturally, both permission to use the materials, as well as an adequate supply of the materials, were received.

The next step was to secure permission from each organization in question in order to utilize their employees in the research. Naturally, each organization was assured of anonymity and confidentiality of all data collected. Since testing time per employee was approximately one and one-half hours, several organizations that were contacted were very reluctant to contribute. This certainly acted as a constraint in collecting an adequate amount of research data.

Next, appointments were made as to the most convenient
and appropriate time to administer the questionnaires. All
seven organizations agreed that the employees and managers
could complete the questionnaires on the premises during
working hours.* Starting in February, 1978, a series of
appointments were made with each organization in turn to
administer the tests. The testing began and continued until
July, 1978, when the last test was administered and returned.**

Instruments Used

Three instruments were used in collecting the data:
The Index of Interpersonal Communicative Competence (IICC),
the Personal Orientation Inventory (POI), and the Super-
visory Behavior Description Questionnaire (SBDQ). The IICC
was used to collect information pertaining to the communi-
cative competence level of each supervisor under observation.
The SBDQ was used to collect data concerning the leader
behavior, in two dimensions, of each subject as perceived
by a sample of his subordinates. And the POI was employed to
obtain self-actualizing information on each supervisor par-
ticipating in the study. Since the IICC was described fully
in Chapter III, it is not discussed further here. However,

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*The contributed labor cost to the entire study was cal-
culated to be $1880, or $20 per supervisor taking the tests.

**Several organizations were later presented with summary
statistics concerning the research results on their personnel.

a further explanation of the POI and the SBDQ--their purpose, validity, and reliability--is important and therefore explained in greater detail at this time.

The Personal Orientation Inventory

The Personal Orientation Inventory* was developed by Everett Shostrom (15, p. 4) from the ". . . need for a comprehensive measure of values and behavior seen to be of importance in the development of the self-actualizing person." The POI is a questionnaire consisting of 150 two-choice comparative value and behavior judgments. The subject is asked to read each statement and then decide which statement is "true" or "mostly true" as applied to him. For example, statements one through three on the test read:

1. a. I am bound by the principle of fairness.
    b. I am not absolutely bound by the principle of fairness.

2. a. When a friend does me a favor, I feel that I must return it.
    b. When a friend does me a favor, I do not feel that I must return it.

3. a. I feel I must always tell the truth.
    b. I do not always tell the truth.

After each of the 150 two-choice statements have been answered, the test can then be hand or machine scored to to give an appropriate profile of a self-actualizing or

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*The Personal Orientation Inventory may be obtained from the Educational and Industrial Testing Service, Post Office Box 7234, San Diego, California 92107.

non-self-actualizing person. Test completion time is approximately 30-45 minutes. Shostrom (15, pp. 7-12) also has available several normative tables for comparison purposes such as supervisors, student nurses, college freshmen, hospitalized psychiatric patients, and alcoholic males. The mean and standard deviation for each reference group is presented in a 12 scale format.

The POI quantitatively measures self-actualization on 12 dimensions--2 major and 10 minor scales. All 150 items are scored twice, once for the two basic scales--time competence (127 items) and inner support (23 items)--and once for the 10 subscales. The researcher may, if necessary, convert the raw scores into standard scores for plotting an individual or group profile. The mean standard score for each scale is 50 with a standard deviation of 10. Any respondent that scores above the standard score of 50 for a majority of the 12 scales may be considered self-actualized. Of course, the two major scales of time competence and inner support are considered the most relevant in any evaluation (15, p. 7).

The time orientation scale (TC) of the POI measures the degree to which individuals live in the present as opposed to the past or future. Since the POI measures values rather than verbal skills, this dimension is less specific than the IICC. The time competent person has aspirations that are interrelated with present working goals. He is able to see both the past and future as related to the present and appears

to be less burdened by guilts and resentments out of the
past. On the contrary, a person scoring low on the time
orientation scale does not discriminate between the behavior
of the past, present, and future. He has idealistic goals
and seems determined to be perfect in everything attempted.
Likewise, memories and hurts of the past continue to have
an unhealthy effect upon his actions in the present (15,
p. 13).

The other major scale of the POI, the support dimension
(I), is divided between inner support and outer support. A
self-actualizing person would score "high" on the inner
support scale thereby assessing his ability to be less
influenced by his environment. He is essentially inner-
directed by being sensitive to other people's approval but
his main source of energy is inner-oriented. Internal
motivation is more important than external influences. On
the other hand, a person scoring "low" on the support scale
is basically other-directed. His behavior attitudes are
primarily determined by the people around him. Manipulation
by pleasing others causes the outer-directed to become
overly sensitive which eventually leads to fear, anxiety,
and doubt (15, pp. 14-15).

The ten subscales are also of importance and describe
in more detail some essential characteristics of the self-
actualizing individual. Knapp summarizes these as follows:

Self-Actualizing Value (SAV) measures the affirmation of primary values of self-actualizing people. A high score indicates that the individual holds and lives by values characteristic of self-actualizing people, while a low score suggests the rejection of such values. Items in this scale cut across many characteristics.

Existentiality (Ex) measures the ability to situationally or existentially react without rigit adherence to principles. Existentiality measure one's flexibility in applying values or principles to one's life. It is a measure of one's ability to use good judgment in applying these general principles. Higher scores reflect flexibility in application of values, while low scores may suggest a tendency to hold to values so rigidly that they become compulsive or dogmatic.

Feeling Reactivity (Fr) measures sensitivity or responsiveness to one's own needs and feelings. A high score indicates the presence of such sensitivity, while a low score suggests insensitivity to these needs and feelings.

Spontaneity (S) measures freedom to react spontaneously, or to be oneself. A high score measures the ability to express feelings in spontaneous actions. A low score suggests that one is fearful of expressing feeling behaviorally.

Self-Regard (Sr) measures affirmation of self because of worth or strength. A high score measures the ability to like oneself because of one's strength as a person. A low score suggests feelings of low self-worth.

Self-Acceptance (Sa) measures the affirmation or acceptance of oneself in spite of one's weaknesses or deficiencies. A high score suggests acceptance of self and weaknesses, and a low score suggests inability to accept one's weakness. It is more difficult to achieve self-acceptance than self-regard, but self-actualizing requires both.

Nature of Man--Constructive (Nc) measures the degree of one's constructive view of the nature of man. A high score suggests that one sees man as essentially good and can resolve the good-evil, masculine-feminine, selfish-unselfish, and spiritual-sensual dichotomies in the nature of man. A high score, therefore, measures the self-actualizing ability to be synergic in one's understanding of human nature. A low score suggests that one sees man as essentially bad or evil.

Synergy (Sy) measures the ability to be synergistic-- to transcend dichotomies. A high score is a measure

of the ability to see opposites of life as meaning-
fully related. A low score suggests that one sees
opposites of life as antagonistic. When one is
synergistic one sees that work and play are not
different, that lust and love, selfishness and self-
lessness, and other dichotomies are not really
opposites at all.

Acceptance of Aggression (A) measures the ability to
accept one's natural aggressiveness--as opposed to
defensiveness, denial, and repression of aggression.
A high score indicates the ability to accept anger
or aggression within oneself as natural. A low score
suggests the denial of such feelings.

Capacity for Intimate Contact (C) measures the
ability to develop contactful intimate relationships
with other human beings, unencumbered by expectations
and obligations. A high score indicates the ability
to develop meaningful, contactful, relationships
with other human beings, while a low score suggests
that one has difficulty with warm interpersonal
relationships (12, pp. 6-7).

The POI has proven to be a valid instrument in measuring

self-actualization as determined by some external criterion.

In a study (14) to determine the accuracy of the POI discrim-

inating between "self-actualizing" adults and "Non-self-

actualizing" adults, eighteen prominent, certified clinical

psychologists provided the external evaluation of self-

actualization. The two major scales and nine of the ten

sub-scales were statistically significant between the two

groups. In another study, Fox, Knapp, and Michael (7) found

a sample of 100 hospitalized psychiatric patients to differ

significantly on the POI scales from the normal adult

samples. Shostrom and Knapp (16) also found that the POI

scales could discriminate significantly between a sample of

outpatients just beginning therapy from those just finishing.

The POI has also been used with success in identifying confirmed alcoholics (19) and drug addicts (10).

A unique characteristic of the POI is its resistance to "faking" and "social desirability." That is, because of the way the POI is constructed and its psychometric characteristics, the test has a built-in resistance to respondent faking. For example, Foulds and Warehime (6) found that deliberate attempts by respondents to "fake good" does not produce scores characteristic of self-actualizing individuals. In another study, Warehime and Foulds (17) found that the POI scales did not correlate significantly with the scores from a social desirability scale. And finally, Braun and LaFaro (1), after a similar test of fakeability, concluded that two prerequisites are necessary for respondents to distort their POI scores appreciably: 1) a motivation to make a "good" impression, and 2) the knowledge of the characteristics of a self-actualized person.

Although several studies have been reported attesting to the POI's reliability coefficients, Knapp (12, p. 76) warns that the POI's sensitivity to individual experiences may make traditional concepts of reliability inappropriate. Nevertheless, Klavetter and Mogar (11) found the test-retest reliability coefficients for the POI in a one-week interval to range from .52 to .82. Wise and Davis (18) reported similar results in a test-retest involving a

sample of 172 university students. And finally, Ilardi and May (9) evaluated the test-retest results on 46 student nurses over a one year period. The authors compared the results of their study (r = .32 to .74) to the product moment correlation of the Edwards Personal Preference Schedule and the Minnesota Multiphasic Personality Inventory and finally concluded: "The findings reported in the POI are well within these ranges of somewhat comparable MMPI and EPPS test-retest reliability studies" (9, p. 71).

Supervisory Behavior Description
Questionnaire

Developed by the Personnel Research Board of the Ohio State University, the Supervisory Behavior Description Questionnaire* is intended to describe how people in super-visory positions operate in their leadership role. Using the data generated from over 1800 original items, Fleishman (2) subjected the results to an intensive factor analysis designed to measure the items of highest loadings for a more precise measurement of leader behavior. These three cri-teria for item inclusion in the final 48 item questionnaire were used: 1) a high loading on the factor under consid-eration, 2) a close to zero loading on the other factor,

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*The Supervisory Behavior Description Questionnaire may be obtained from the Management Research Institute, 4330 East West Highway, Washington, D.C. 20014.

and 3) ability to discriminate among different supervisors. The final two scales of the factor analysis procedure were called "consideration" and "structure" (2). Unlike the POI which measures <u>what</u> a person is in terms of behavioral dispositions, the SBDQ measures <u>how</u> a person actually behaves.

The final version of the SBDQ contains 48 statements concerning the behavior of the supervisor as perceived by the subordinates in an industrial setting. Twenty-eight items are used to measure the extent one's supervisor is considerate of the member's needs. Twenty items are used to measure the extent one's supervisor structures the task of the work group. Thus, the researcher will be able to compile two rather independent scores on the supervisor under observation. Two scores are generated by the SBDQ:

> <u>Consideration</u> (C). Reflects the extent to which one's supervisor exhibits behavior indicative of friendship, mutual trust and respect, and good "human relations" toward the members of his group. A high score on this dimension indicates a climate of good rapport and two-way communication; a low score indicates that the supervisor is seen to be more impersonal in his relations with group members. <u>Structure</u> (S). Reflects the extent to which one's supervisor exhibits the behavior of a leader in organizing and defining the relationships between himself and the group, defining interactions among group members, establishing ways of getting the job done, scheduling, criticizing, etc. A high score on this dimension describes the supervisor who plays a very active role in directing group activities through planning, supplying information, trying out new ideas, criticizing, and so forth. A low score characterizes supervisors who are likely to be relatively inactive in giving direction in these ways (3, p. 1).

The SBDQ is self-administering and the respondent (sub-
ordinate of the supervisor under observation) is asked
merely to describe the behavior of his supervisor. He is
assured that the items on the questionnaire do not judge
whether his supervisor's behavior is desirable or undesir-
able. Everyone's supervisor is different so the subordinate
can expect differences in what different supervisors do.
He is assured there are no "right" or "wrong" answers to the
questionnaire.

The subordinate is then asked to choose the alternative
which best describes how often his supervisor performs that
statement. For example, statements one through three from
the SBDQ are presented as follows:

    1. HE IS EASY TO UNDERSTAND.
        a. always b. often c. occasionally
        d. comparatively little e. not at all

    2. HE ENCOURAGES OVERTIME WORK.
        a. often b. fairly much c. to some degree
        d. comparatively little e. not at all

    3. HE TRIES OUT HIS NEW IDEAS.
        a. often b. fairly much c. occasionally
        d. once in a while e. very seldom

Completion time is approximately 20 minutes. The five alter-
natives for each item can then be scored 0, 1, 2, 3, or 4.
The highest possible score for consideration is 112 and for
structure the highest possible score is 80.

Since the SBDQ is completed by several different sub-
ordinates of the supervisor, some measure of "inter-rater
agreement" is important. Fleishman (3, pp. 3-4), using the

unbiased correlation ratio and the Horst coefficient to indicate individual variances, concludes that the SBDQ is reliable when based upon descriptions by several different people of the same supervisor. The coefficients from .47 to .90 over six samples indicate that ". . . significant agreement amount respondents using the Supervisory Behavior Description questionnaire has been achieved for both the Consideration and Structure scales in all samples" (3, p. 4).

One important aspect of the SBDQ is the relative independence of the two scales. A supervisor may receive a high score on one scale and a low on another. Or he may be high on both or low on both. This is partially a result of the factor-analysis background of the questionnaire (2). It is also because of careful item analysis and selection. Using the data generated from six samples, Fleishman calculated the Pearson coefficient between the two scales to range from a low of -.02 to a high of -.33 thus indicating the relative independence of the two dimensions (3, p. 4).

The Supervisory Behavior Description Questionnaire was designed to maximize construct validity. That is, the two dimensions were developed using the Wherry-Gaylord Iterative Factor Analysis Procedure and then rotated orthogonality to a simple structure (2). As far as empirical validity is concerned, the SBDQ has been shown related to a variety of different criteria in several diverse situations. Although the definition of effectiveness varies from situation to

situation, there appears to be a pattern of high structure/ high consideration that optimizes most external measures of validity. For example, Harris and Fleishman (8) related the SBDQ to human relations training and later (4) to turn-over rates and grievance rates--positive for structure and negative for consideration. Fleishman and Simmons (5) also found the questionnaire to be significantly related (positive) to proficiency ratings of the supervisor's superior.

The SBDQ has been shown to be a reliable test of supervisory behavior. Reliability coefficients have been obtained on the SBDQ by two different methods. First, internal consistency reliabilities have been calculated using the split-half method (corrected for full length of each scale by the Spearman-Brown Formula) for both scales. Fleishman (3, p. 3) reports calculated coefficients over five samples from .89 to .98 for consideration, and from .68 to .87 for the structure scale. Second, test-retest reliabilities for three samples over an eleven month interval showed coefficients from .56 to .87 for consideration, and from .46 to .75 for structure.

Collection of the Research Data

The first step in the collection of the data was the construction of an organization chart for each organization participating in the study. That is, it was necessary to

construct the formal lines of authority and responsibility throughout the entire organization, or at least in those departments participating in the study. Since several of the organizations did not have an existing organization chart (or if they did it was usually outdated), this dia-gramming exercise proved to be somewhat of an unanticipated laborious task.

After the superior/subordinate relationships had been depicted on the chart, it was necessary to assign a number to each supervisor who would possibly be taking part in the research study. The number 001 was assigned to the first respondent and consecutively thereafter to every supervisor. This number code was important for two reasons: 1) to deter-mine identity in case a follow-up was necessary, and 2) to be used as an identification code to key the subordinates to his particular supervisor. In order to assure complete anonymity to all respondents the organization charts and numbering system were later destroyed.

Once lines of authority and responsibility had been established in each organization, the next step was the preparation of the test packages. For those supervisors who would be participating in the study as a subject only, a brown 9 x 12 unmarked envelope with the identifying code number on the outside was prepared with two test instruments--IICC and the POI. However, for those super-visors who would also be evaluating the behavior of their

superior, a similar envelope was prepared with three test instruments--IICC, POI, and the SBDQ. The POI and the IICC were coded with the subject's assigned number; however, the SBDQ was coded with the number of the subject's supervisor. This numbering scheme enabled the scores of the IICC and the POI to be later matched to the scores compiled by the SBDQ completed by the subordinates.

The next step was the administration of the tests to the supervisors only (Group A). The supervisors were asked, in groups of approximately 6-12 members each, to participate in an independent study of communication and human behavior.* The respondents were assured that the study was not connected in any way with their organization and the data received would remain completely confidential and anonymous. However, it was mentioned that in some cases the organization might ask for and receive summary data only. Their only reason for taking part in the study would be to add to the existing knowledge of communication and human behavior.**

The supervisors were then asked to complete the test entitled IICC*** in their test package using the accompanying

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*See Appendix C for a copy of the instructions.

**Of the 117 supervisors asked to participate in the study, 19 refused for personal reasons and/or lack of available time. As a result, 98 subjects (84%) actually took part in the test completion.

***The IICC was completed first in order to limit any possible response or fatigue bias.

IBM 1230 computer form to record their answers. The instructions on the first page of the IICC were read aloud to the group. The subjects were also asked if they had any questions concerning the proper completion of the form. Because of extensive pre-testing, the only questions asked were those regarding proper marking of the IBM answer sheet. The subjects were then asked to fill in the following information on the heading of the IBM 1230 answer sheet: Job title, date, age, sex, total number years of supervisory experience, total number of years of formal education, and the highest diploma/degree held. After completion of the IICC the supervisors were asked to complete the test entitled POI in their test package using the accompanying IBM 1230 computer form to record their answers. In similar fashion the instructions on the POI were read aloud to the group. After completion of the POI, those subjects not having a copy of the SBDQ in their test package were excused from the meeting.

The remaining subjects were then asked to complete the last questionnaire in the test package, the Supervisory Behavior Description Questionnaire, using the IBM 1230 computer form to record their answers. The instructions on the SBDQ were read aloud to the group. They were also asked if they had any questions concerning the proper completion of the form. Once again, the only questions asked were those regarding proper marking of the answer sheet. The subjects were then asked to fill in the following information on the

heading of the IBM 1230 answer sheet: Job title, date, age,
sex, number of years working for the supervisor under obser-
vation, total number of years of formal education, and the
highest diploma/degree held. After completion of the SBDQ
the subjects were thanked for their cooperation in the
research project.*

Administration of the questionnaire to the subordinates
(Group B) of the first level supervisors presented somewhat
of a problem. Since these employees were engaged in either
clerical or production duties, it was necessary to administer
the questionnaires at the individual work stations. Thus,
as with the supervisors, the subordinates were asked in
groups of 2-4 (at random) to participate in an independent
study of human behavior. The subjects were assured that the
study was not connected in any way with their organization
and the data received would remain completely confidential
and anonymous. However, the respondents were told that in
some cases the organization might ask for and receive summary
data only. Their only reason for taking part in the study
would be to add to the existing knowledge of human behavior
in organizations.**

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*Of the 98 supervisors actually completing the question-
naire, 4 had to be deleted because of missing data. As a
result, the data from 94 supervisors (96%) were actually
used in the analysis portion of the study.

**Of the 312 subordinates asked to participate in the
study, 28 refused for personal reasons and/or lack of
available time. As a result, 284 (91%) subjects actually
took part in the test completion.

The subordinates were then asked to complete the Supervisory Behavior Description Questionnaire using the accompanying IBM 1230 computer form to record their answers. The instructions on the SBDQ were read aloud to the group. They were also asked if they had any questions concerning the proper completion of the form. As with the supervisors in Group B, the only questions asked were those concerned with marking the answers on the computer form. The subjects were then asked to fill in the following information on the heading of the IBM 1230 answer sheet: Job title, date, age, sex, number of years working for the supervisor under observation, total number of years of formal education, and the highest diploma/degree held. After completion of the SBDQ the subjects were thanked for their cooperation in the research project.*

Data Classification and Analysis

After test completion it was necessary to classify and code the data for computer analysis. Each 1230 answer sheet was read on an IBM 1230 optical scoring reader and the data transferred to IBM 80 column computer cards. The resulting data deck contained 94 cases with five cards per case. Card one contained the supervisor's identification number and

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*Of the 284 subordinates completing the SBDQ, 14 had to be deleted because of missing data. As a result, 270 (95%) SBDQ's were used in the analysis portion of the study.

her/his score on the IICC. Card two contained the supervisor's identification number, his position in the organization, the organization code, his age in grouped form, sex, years of supervisory experience, and education in grouped form. Card three contained the supervisor's identification number and her/his scores on the 12 scales of the POI. Card four contained the supervisor's identification number and the mean score on the two scales of the SBDQ. Card five contained the supervisor's identification number, her/his actual age in years, and the total number of years of formal education.

After construction of the data cards the appropriate data definition cards were key punched in regard to the procedure for generating and processing an SPSS file (13). Specifically, file name and run name were created along with a variable list and input format definition. The next step was to select those testing programs with the capabilities of describing the collected data as well as evaluating the relationships among all test variables. Using all 94 cases of the research study, the following SPSS subprograms and appropriate options were instigated: Descriptive Statistics--Subprogram Frequencies; Bivariate Correlation Analysis--Subprogram Pearson Correlation and Subprogram Scattergram; and Multiple Regression Analysis-- Subprogram Regression.

Summary

The field approach to sample design was employed in the research methodology in that seven separate organizations were used in completing data for the research hypotheses. In addition, both first level supervisors as well as the managerial staff were used to further stratify the sample. After permission from each organization involved in the study was secured, a series of appointments were made to administer the three research instruments over the six month time period from February, 1978, to July, 1978.

Two of the three tests used in collecting the data-- the Personal Orientation Inventory and the Supervisory Behavior Description Questionnaire--were discussed in detail in regard to purpose, validity, and reliability. The POI measures self-actualization via 150 two-choice comparative value and behavior judgments. Two major scales and ten minor scales are used to quantify self-actualization in the areas seen to be of importance in personal self-development. The scores can be standardized with a mean of 50 and a standard deviation of 10 if necessary for data examination and/or manipulation. The POI has been shown to be valid in measuring self-actualization by several external criteria. Also, a unique characteristic of the POI is its resistance to "faking" and "social desirability." And finally, several studies, ranging from a test-retest period of one week to

one year, found the POI to be a very reliable test of self-actualization.

The Supervisory Behavior Description Questionnaire was also discussed in detail. The SBDQ reports the extent to which one's supervisor engages in behavior designated as "Consideration" and "Structure." Completed by the subordinates of the supervisor under observation, the SBDQ purports to quantify via 48 statements the extent one's supervisor is considerate of the member's needs and the amount of structure employed in the accomplishment of the group task. Basically, the two scores received on the SBDQ are independent of each other and relatively free of interrater bias. The SBDQ was constructed to maximize construct validity; however, several studies were cited indicating its empirical validity as well. Finally, both internal consistency reliabilities as well as test-retest coefficients were presented attesting to the reliability factor of the SBDQ.

Next discussed was the data collection procedure. Specifically, after the construction of an organizational chart for each organization participating in the study, each supervisor was assigned a code number. The test packages were then prepared and distributed to the appropriate supervisors in Group A (6-12 members each) agreeing to complete the questionnaires. The appropriate instructions from each test were read aloud and the subjects assured of the

confidentiality and anonymity of the completed data. An IBM 1230 computer form was used to record their answers.

The subordinates in Group B (2-4 members each) were also asked to participate in a study of human behavior. Confidentiality and anonymity were also assured. Like Group A, the IBM 1230 computer form was used to record their answers. The vast majority of the subjects asked to participate in the study (in both groups) agreed to cooperate in completing the questionnaires. Moreover, only a few questionnaires in both groups were deleted because of missing data.

The completed data was then compiled on IBM 80 column computer cards for statistical analysis. An SPSS program was generated to process the data according to the following subprograms: Frequencies, Pearson Correlation, Scattergram, and Multiple Regression. The next two chapters of the dissertation report the results of this statistical analysis.

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CHAPTER V

ANALYSIS OF THE DATA: DESCRIPTIVE STATISTICS

AND PEARSON CORRELATION

The next step of the research study is to evaluate
the statistical computer results in light of the ten
dissertation hypotheses. Because of the statistical
techniques used, the findings regarding the first six
hypotheses are presented here. Inasmuch as a more complex
yet descript statistical technique is employed in testing
the remaining four hypotheses, they are tested in the
following chapter. First, however, several descriptive
statistics are presented to provide a clearer picture of
the sample characteristics.

Descriptive Statistics

To determine the applicability of any research finding
one must be aware of the sample characteristics. Specifi-
cally, several key descriptive statistics are presented
here to evaluate the characteristics and normalcy of this
study. In addition, the test results of the POI and the
SBDQ are also compared to the normative data from several
earlier studies.

Personal Characteristics of the Supervisor

The SPSS subprogram Frequencies reveals that a total of 94 supervisors participated in the research study. Of this 94, 71 (76%) were classified as first level (sometimes referred to as first-line*) supervisors, indicating management's lowest level in the organizational hierarchy. Correspondingly, there were 17 (18%) second level, and 6 (6%) third level supervisors. Thus, on the whole, the sample seems to be represented by a broad range of supervisory levels--as typically defined by traditional managerial concepts of organizational structure.

Of the 94 subjects completing the test instruments, 55 (59%) were male and 39 (41%) were female. Although this breakdown certainly represents an approximation of the total labor force, in terms of male/female mix, it by no means approximates the management team of most organizations. The preponderance of females is accounted for in the study by the female nursing staff employed by the hospital.

As can be seen from Table I, some key statistics are presented in regard to the personal characteristics of the subjects under observation. As Table I indicates, the average age of the supervisor taking part in the study was approximately 41 years, ranging from a low of 23 years to a high of 70 years. Also, 68% of the respondents (one

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*As defined by the Fair Labor Standards Act of 1938.

standard deviation) were between the ages 29 and 53, fairly

representative of a management team.

TABLE I

SELECTED DESCRIPTIVE STATISTICS OF THE
SAMPLE: PERSONAL CHARACTERISTICS
OF THE SUPERVISOR

Characteristic	Mean	SD	Min	Max	Skewness	Kurtosis
Age	40.9	11.5	23.0	70.0	.41	-.79
Education	14.2	3.6	5.0	22.0	-.25	-.42
Experience	9.2	9.0	.5	39.0	1.42	1.37

Again, referring to Table I, the average supervisor

participating in this study had approximately 14 years of

formal education (12 years of high school plus two years

of college). The least educated subject had a 5th grade

education, while the highest had 22 years of formal education

or a college conferred doctorate degree. Thus, the char-

acteristic of formal education seems to be widely represented

in the study's sample of respondents.

And finally, a glance at Table I reveals that the aver-

age subject had approximately nine years of supervisory

experience. That is, he had a total of nine years experience

in a supervisory capacity directing the activities of others.

The least number of years reported was .5 and the highest was

39 with a standard deviation of 6.2 years. Thus, 68% of the respondents in the study had between 3 and 15.4 years of experience in directing the activities of others in an organized setting, a fairly representative range of values-- at least at the first three levels of an organization.

Skewness and kurtosis measure the degree to which the cases under observation approach a normal curve. In regard to skewness, a value of zero indicates a completely bell-shaped distribution. As indicated in Table I, education is slightly skewed to the left (negative value) indicating a clustering of values to the right of the mean. However, in regard to age and experience the cases are somewhat skewed to the right, especially experience. Thus, age and education seem to be fairly normal in terms of distribution, while experience is influenced by several low values.

Kurtosis is a measure of the relative peakness or flat-ness of the distribution. A zero value indicates complete normalcy. Again, a glance at Table I shows that age and education are relatively flat in relation to a normal curve (negative values of kurtosis). However, the cases in experience are somewhat more peaked.

Test Results of the IICC

Scores on the Index of Interpersonal Communicative Competence can be grouped into one of the five levels of competence as measured by the test. A combined aggregated

score on the IICC of 8 to 12 indicates that the subject is basically a level one respondent (Judgmental). Likewise, a score of 13 to 20 indicates a level two respondent (Advisory); a score of 21 to 28 a level three respondent (Empathic Understanding); a score of 29 to 36 a level four respondent (Confrontation); and a score of 37 to 40 a level five respondent (Problem Solving).

A breakdown of these five levels of competence with the corresponding number of respondents scoring in each category can be seen in Table II. For example, only one subject out of the 94 scored between 8 and 12, the judgmental level of competence. Since level one is the lowest level of competence as measured by the IICC and thus indicates a complete disregard for the subordinate, such a preliminary finding would seem to be apparent.

Forty-one (44%) supervisors scored between 13 and 20, the advisory category of interpersonal communicative competence. The lowest score in the category was 14, while the highest was 20. Here again, since it is fundamental to supervisory practice to give advice to subordinates, this finding is also apparent.

A near majority of the respondents taking the IICC (48%) scored in the category of empathic understanding—level three. This rather high percentage is somewhat surprising taken at face value. However, given the rather large number of self-actualized subjects participating in the study (to be

presented later), the 45 respondents scoring in the level

three category is somewhat understandable.

TABLE II

SELECTED DESCRIPTIVE STATISTICS OF THE
SAMPLE: INDEX OF INTERPERSONAL
COMMUNICATIVE COMPETENCE

Title of Level	Number of Respondents		Mean	Median	SD	Min	Max
	n	%					
Judgmental (8-12)	1	1	12.0	12	0.0	12	12
Advisory (13-20)	41	44	17.5	18	1.8	14	20
Empathic Under-standing (21-28)	45	48	24.4	25	2.4	21	28
Confrontation (29-36)	7	7	30.1	29	1.6	29	33
Problem Solving (37-40)	0	0	.0	0	.0	0	0
Total	94	100	21.7	21	4.7	12	33

Lastly, only seven respondents scored in the upper

levels of the IICC, with all of these scoring in level four--

confrontation. No respondents scored in the highest level

attainable on the IICC--problem solving. Here again, this

finding is somewhat understandable since the IICC is basi-

cally a skills test requiring the knowledge necessary to

to discriminate between the more appropriate communicative responses. Such a finding is also consistent with the pre-test.

In total, the 94 subjects received an average score of 21.7 or 2.7 for each critical incident on the IICC. The standard deviation was 4.7 indicating that 68 percent of the respondents scored between 17.0 and 26.4, a rather narrow range considering the total potential range of the instrument. However, since this inquiry was the first time the IICC was used in any type of research study, no mormative values are available for comparison purposes. Thus, any generalizations formulated on the basis of this study must remain within the characteristics of the sample.

Test Results of the POI

As was previously discussed, the POI generates a total of 12 dimensions of self-actualization. There are two major scales--Time Competent and Inner Directed--and 10 minor scales. Thus, one can construct a "profile" of an individual, or individuals, in quantitative terms representing the extent to which the individual is or is not self-actualized.

The 94 respondents participating in the study scored on the POI as indicated in Table III. As can be seen, a wide range of scores were obtained both in the self-actualizing and nonself-actualizing category. Each scale is reported in Table III by its mean, median, standard deviation, and two measures of normalcy--skewness and kurtosis.

TABLE III

SELECTED DESCRIPTIVE STATISTICS OF THE
SAMPLE: SCORES ON THE PERSONAL
ORIENTATION INVENTORY

Title Scale	Mean	Median	SD	Skewness	Kurtosis
Time Competent (Tc)	16.3	16.5	3.0	-.19	-.42
Inner Directed (I)	82.0	80.5	10.5	.08	-.50
Self-Actualizing Value (SAV)	20.6	20.7	2.6	-.47	-.03
Existentiality (Ex)	17.7	18.5	5.1	-.20	-.90
Feeling Reactivity (Fr)	14.8	14.7	2.8	-.28	-.01
Spontaneity (S)	12.3	12.1	2.1	.05	.07
Self-Regard (Sr)	13.1	13.4	2.0	-.61	-.54
Self-Acceptance (Sa)	15.0	14.8	3.6	-.13	-.19
Nature of Man (Nc)	11.8	12.0	1.8	-.48	-.33
Synergy (Sy)	6.7	6.7	1.3	-.07	-.71
Acceptance of Aggression (A)	16.1	16.6	3.0	-.48	.08
Capacity for Intimate Contact (C)	17.6	17.9	3.5	-.70	.23

Once again, skewness and kurtosis measure the degree to
which the cases approximate a normal curve.   In regard to
shewness, a value of zero indicates a completely bell-shaped
curve.   As can be seen from Table III, 10 of the 12 scales
on the POI are only slightly skewed to the left (negative

values) indicating a clustering of values to the right of the mean. Only two scales of the POI (I, S) are skewed to the right of the mean, and these are negligible.

Kurtosis ia a measure of the relative peakness or flatness of the distribution. A zero value indicates complete normalcy. Again a glance at Table III shows that 9 of the 12 scales are relatively flat (negative values) in relation to a normal curve. Also, all but one of the positive values of kurtosis (C) are negligible. Thus, on the basis of these two statistics the distribution of scores on the POI can be considered only slightly skewed to the left and relatively flat, indicating an approximation of a bell-shaped or normal distribution.

Of somewhat more importance than normalcy is a normative analysis of the POI scores. In other words, how does this profile compare with the normative values of other supervisors? Or, how does this study's values compare with those of self-actualized or normal adults? The self-actualizing characteristics of this study in relation to three previous studies are presented in Table IV.

The first area of comparison is that with other supervisors. Columns three and four of Table IV present the findings of a study reported by Shostrom involving a large electronics company. A total of 66 male supervisors took part in the study. A comparison with the present study shows that the means of the two samples are almost identical.

TABLE IV

A COMPARATIVE ANALYSIS OF THE POI SCORES
WITH THOSE OF THREE PREVIOUS STUDIES

Title of Scale	Present Study (n=94)		Supervisors (n=66)*		SA Adults (n=29)*		Normal Adult (n=158)*	
	M	SD	M	SD	M	SD	M	SD
Time Competent (Tc)	16.3	3.0	17.2	2.9	18.9	2.5	17.7	2.8
Inner Directed (I)	82.0	10.5	81.1	9.9	92.9	11.5	87.2	13.6
Self-Actualising Value (SAV)	20.6	2.6	20.2	2.7	20.7	3.6	20.2	3.0
Existentiality (EX)	17.7	5.1	18.6	4.3	24.8	3.5	21.8	5.1
Feeling Reactivity (Fr)	14.8	2.8	14.8	3.0	16.3	2.8	15.7	3.3
Spontaneity (S)	12.3	2.1	10.9	2.4	12.7	2.9	11.6	3.0
Self-Regard (Sr)	13.1	2.0	12.3	1.8	12.9	1.9	12.0	2.7
Self-Acceptance (Sa)	15.0	3.6	15.4	3.3	18.9	3.5	17.1	4.0
Nature of Man (Nc)	11.8	1.8	11.9	2.0	12.3	2.2	12.4	1.9
Synergy (Sy)	6.7	1.3	7.4	1.3	7.6	1.2	7.3	1.2
Acceptance of Aggression (A)	16.1	3.0	16.0	3.0	17.6	3.1	16.6	3.7
Capacity for Intimate Contact (C)	17.6	3.5	16.9	3.3	30.2	3.4	18.8	4.6

*Source: Everett Shostrom, Manual for the Personal Orientation Inventory, San Diego, California, Educational and Industrial Testing Service, 1974, pp. 9, 24.

In fact, one scale (Fr) is identical while 10 scales only differ by as much as one point. Only one scale (S) appears to be drastically different from one study to the next. The standard deviation of all scales also appear similar. Thus, the POI scores obtained in this study compare very favorably with the previously derived norms of supervisors in industry-- at least on 11 scales.

Referring again to Table IV, the next area of comparison is that with self-actualizing adults. Shostrom reports that SA adults exhibit means and standard deviations of the POI similar to those shown in columns five and six. The scores of self-actualized adults are clearly of greater magnitude than those of the present study on nine of the 12 scales reported. Only the scales of SAV, S, and Sr show the respondents of this study scoring in the self-actualizing range.

The last comparison sheds even more light on the analysis. The last two columns of Table IV report the normative values of a normal adult sample, according to Shostrom. A comparison between the two sample means shows that the scores on the present study approximate the norms of a normal adult on eight scales--Tc, I, Fr, Sa, Nc, Sy, A, and C. Only the scale of Ex is clearly in the range of a nonself-actualized adult.

On the basis of the above comparisons it appears that the respondents participating in the present study are neither predominately self-actualized nor predominately

nonself-actualized. To be sure there were some respondents
whose scores are outside of Shostrom's acceptable range
of self-actualization. But on the whole, the calculated
means indicate that the respondents could be considered
somewhat "normal" on the scales of Time Competent, Inner
Directed, Feeling Reactivity, Self-Acceptance, Nature of Man,
Synergy, Acceptance of Aggression, and Capacity for Intimate
Contact. However, the respondents could be considered self-
actualized on the scales of Self-Actualizing Value, Sponta-
neity, and Self-Regard, while nonself-actualized on the
scale of Existentiality.

Questionnaire Results of the SBDQ

As was previously explained, the Supervisory Behavior
Description Questionnaire describes the behavior of a
supervisor as perceived by his subordinates. The two scales
reported by the SBDQ represent the extent to which one's
supervisor exhibits "consideration" and/or "structure" or
neither one. For this study two to four subordinates of
each of the 94 supervisors were chosen at random from the
work group to complete the SBDQ. A total of 270 subordinates
participated in the study or an average of 2.88 subordinates
per supervisor. The results of their perceptions are shown
in Table V.

As Table V points out, the average consideration score
obtained for the 94 supervisors was 79.2 with a standard

deviation of 13.1. The coefficient of skewness is -1.08, indicating a clustering of values to the right of the mean. The kurtosis value of 1.21 indicates a more narrow (peaked) distribution. Certainly the dimension of consideration as reported by the SBDQ does not completely approximate a normal distribution.

TABLE V

SELECTED DESCRIPTIVE STATISTICS OF THE SAMPLE:
SCORES ON THE SUPERVISORY BEHAVIOR
DESCRIPTION QUESTIONNAIRE

Title of Scale	Mean	Median	SD	Skewness	Kurtosis
Consideration (C)	79.2	82.8	13.1	-1.08	1.21
Structure (S)	42.5	43.3	8.3	- .47	.06

Another glance at Table V shows that the scale of structure reports a mean of 42.5 and a standard deviation of 8.3. The two normalcy statistics, skewness and kurtosis, indicate a normal bell-shaped curve, somewhat skewed to the left.

How do the means and standard deviations of the present study compare with those of previous studies? Part of the answer may be found by a quick glance at Table VI. The mean and standard deviation of the present study are com- to three important groupings of respondents--foremen, middle managers, and top managers. For the scale of consideration,

the 94 supervisors in the present study scored higher on the average than the participants of the three previous studies reported by Fleishman. The standard deviation of the present study is approximately the same compared to the foremen and middle manager samples. However, it was somewhat lower than that reported by the sample of top managers.

TABLE VI

A COMPARATIVE ANALYSIS OF SBDQ
SCORES WITH THOSE OF THREE
PREVIOUS STUDIES

Title of Scale	Present Study (n=94)		Foremen* (n=184)		Middle Mgrs* (n=90)		Top Mgrs* (n=53)	
	M	SD	M	SD	M	SD	M	SD
Consideration (C)	79.2	13.1	75.3	13.0	72.2	13.0	73.2	16.1
Structure (S)	42.5	8.3	40.8	7.0	45.2	8.1	43.0	7.6

*Source: Edwin Fleishman, Manual for the Supervisory Behavior Description Questionnaire, Washington, D.C., American Institutes for Research, 1972, p. 9.

For the scale of structure a quick comparison indicates a close approximation to the previous three studies. The 94 supervisors in the present study scored on the average slightly higher than the sample of foremen but slightly lower than the samples of middle and top managers. A visual inspection of the standard deviation among the four studies shows no appreciable difference.

On the basis of the above comparative analysis the
94 supervisors participating in the study are somewhat more
considerate than those reported by Fleishman, but exhibit a
similar initiating structure score. This conclusion is not
too surprising considering the makeup of the sample in terms
of organizations and the male/female mix.

Hypothesis Testing via the Pearson
Correlation Coefficient

Although descriptive statistics are meaningful and
important in their own right, they indicate little about
the relationship among the research variables. For this
type of analysis, one must turn to inferential statistics.
A most popular inferential statistic available to define
the relationship between various test variables is the
Pearson product moment coefficient. This valuable, yet
simple statistic, is used here as the criterion to either
retain or reject null hypotheses one through five.

The Pearson Product Moment
Correlation Coefficient

The Pearson product moment coefficient basically answers
two important questions in empirical research: 1) What kind
of relationship exists between two test variables?, and 2)
How good is the relationship (2, p. 226)? Specifically, if
one variable changes in the same direction as the other,
then there is a positive relationship between the two. Con-
versely, if one variable changes in the opposite direction

from the other, then a negative relationship exists between the two test variables. The strength of the relationship is determined by the amount of relative influence one variable has on another but not necessarily causality.

The Pearson coefficient (r) can take on an infinite number of values from -1 to +1. A value of +1 indicates a perfect relationship between the two test variables--the two variables increase (or decrease) together. A value of -1 indicates a perfect inverse relationship; one variable is increasing while the other is decreasing. A value of zero denotes the absence of any linear relationship between the two variables.

Thus the r statistic can be used to measure the direction and strength of relationships between two interval-level variables. Mathematically (where x and y symbolize two variables) r can be defined as the ratio of covariation to the square root of the product variation in x and y (4, p. 280:

$$r = \frac{\sum_{i=1}^{N} (X_i - \overline{X})(Y_i - \overline{Y})}{\sqrt{\left[\sum_{i=1}^{N} (X_i - \overline{X})^2\right]\left[\sum_{i=1}^{N} (Y_i - \overline{Y})^2\right]}}$$

where X_i = ith observation of variable
Y_i = ith observation of variable Y
N = number of observations

The square of r yields a more easily interpreted measure of association called the coefficient of determination (1, p. 358). Given that the total variation between two test variables equals chance variation plus explained variation, then the coefficient of determination is a ratio of the amount of variation in one variable explained by the other variable to the total variation. In other words, if the variation of one variable (x) is associated with the variation of another variable (y) then r^2 will indicate the relative amount of variation explained by one or the other as a portion of the total variation. It is sometimes written:

$$r^2 = \frac{\text{Explained Variation}}{\text{Total Variation}}$$

It can be calculated simply by squaring r in the preceding discussion. By squaring r, r^2 loses its sign and thus can only take on values from 0 to 1.

Since the value of r and r^2 is calculated from sample data, there is some chance involved in calculating an r different from the population correlation coefficient p (rho). Thus, one must calculate the possibility of obtaining a correlation coefficient by chance alone. This is accomplished via the t statistic with n-2 degrees of freedom (1, pp. 359-360). Using some acceptable level of confidence limits, usually p = .05 or p = .01 (3, pp. 154-155), the t statistic indicates the probability that the

calculated r is statistically significant. The t test is written (1, p. 360):

$$t = r \sqrt{\frac{N - 2}{1 - r^2}}$$

Thus, these three statistical measures of association (r, r^2, and t) can provide a significant amount of useful information as to the possible relationship of one variable to another. Although they say nothing about cause-and-effect between two variables, they can indicate the relative relationship, strength, and probability of chance occurrence between two test variables. Any more potent information will have to await the statistical analysis via multiple correlation/regression in the following chapter.

Hypotheses One Through Four: The Personal Characteristics of the Interpersonal Competent Supervisor

For testing hypotheses one through four the appropriate data was subjected to the SPSS subprograms Pearson Correlation (4, pp. 281-288) and Scattergram (4, pp. 293-299). After a visual inspection of each bivariate analysis for non-curvilinearity between test variables, the data was analyzed for statistical significance. The appropriate Pearson product moment coefficients (r) and coefficients of determination (r^2) were selected for testing the research hypotheses, as stated in the null format. These coefficients with the calculated levels of statistical significance

(one-tailed test) can be seen in Table VII. The testing

of each null hypothesis and results follow below.

>Null Hypothesis One: No relationship exists between
a supervisor's interpersonal communicative compe-
tence and the age of the supervisor.

The data analysis indicates, referring to Table VII, a

Pearson correlation coefficient (r) of -.31 between the

IICC and the age of the supervisor which is statistically

significant at the .001 level. Thus, there is an inverse

relationship between age and interpersonal communicative

competence. Based upon the data, as the supervisor becomes

older he becomes less capable of responding at a high level

of problem-solving. Therefore, null hypothesis one is

rejected.

>Null Hypothesis Two: No relationship exists
between a supervisor's interpersonal communi-
cative competence and formal education.

The Pearson coefficient of .54 indicates a strong rela-

tionship between the IICC and years of formal education. In

fact, it is significant at the .001 level. That is, as a

supervisor acquires more education he becomes better able to

discriminate between high and low levels of interpersonal

communication. Therefore, null hypothesis two is rejected.

>Null Hypothesis Three: No relationship exists
between a supervisor's interpersonal communi-
cative competence and years of supervisory
experience.

The data analysis indicates a Pearson r, again refer-

ring to Table VII, of -.05 between the IICC and years of

supervisory experience, which is not statistically significant. That is, years of practical experience in supervising others does not seem to correlate at all with a measure of interpersonal competence. Therefore, null hypothesis three is <u>retained</u>.

> Null Hypothesis Four: No relationship exists between a supervisor's interpersonal communicative competence and sex of the supervisor.

The Pearson r statistic reports a relationship of .23 between the IICC and the sex of the supervisor. Since the data was presented in coded form, the statistic indicates that females in the sample scored significantly higher than their male counterparts. Thus, on the basis of this analysis, females appear to be higher in problem-solving skills and communicative capability then males. Therefore, null hypothesis four is <u>rejected</u>.

In retrospect, the data indicate that the scores on the Index of Interpersonal Communicative Competence can be correlated significantly with at least three of the personal characteristics of the supervisor taking the test. Since the computed r's were significant to at least the .01 level, there is a very high probability of these correlations existing in the population. The interpersonal competent supervisor is thus somewhat younger, more educated, and probably female in gender. There seems to be no relationship between interpersonal communicative competence and years of supervisory experience.

TABLE VII

CORRELATIONAL RELATIONSHIPS BETWEEN THE PERSONAL
CHARACTERISTICS OF THE SUPERVISOR
AND THE INDEX OF INTERPERSONAL
COMMUNICATIVE COMPETENCE

Characteristic	Correlated With The IICC		
	r	r^2	p
Age of the Supervisor	-.31	.10	.001
Years of Formal Education	.54	.29	.001
Years of Supervisory Experience	-.05	.003	NS
Sex of the Supervisor	.23	.05	.01

Hypothesis Five: Self-Actualization of the Interpersonal Competent Supervisor

Once again the data (IICC and POI) was subjected to the SPSS subprograms Pearson correlation and Scattergram. After a visual inspection for non-curvilinearity between the test variables, the appropriate Pearson correlation coefficients (r) and the determination coefficients (r^2) were selected for testing hypothesis five as stated in the null form. These coefficients with the computed levels of statistical significance are summarized in Table VIII.

Null Hypothesis Five: No relationship exists between a supervisor's interpersonal communicative competence and the supervisor's level of self-actualization.

The data analysis indicates nine Pearson coefficients (from a low of .17 to a high of .42) between the IICC and nine scales of the POI, which are statistically significant

to at least the .05 level. Specifically, the scores on the Index of Communicative Competence are correlated at the .001 level of significance with the POI scales of I, Ex, Fr, S, A, and C. Thus, the supervisor's level of communicative competence is positively associated with his support orientation (I), flexibility in applying values to life (Ex), sensitivity to his own needs and feelings (Fr), ability to express feelings spontaneously (S), ability to accept his own anger or aggression (A), and the capacity to develop meaningful relationships with other human beings (C).

The scores of the IICC are somewhat less correlated (at the .01 or .05 level of significance) with the POI scales of TC, Sa, and Sy. Thus, the supervisor's level of interpersonal communicative competence is moderately related to his ability to live in the present as opposed to the past or future (Tc), his ability to accept himself in spite of weaknesses (Sa), and his ability to see the opposites of life as meaningfully related (Sy). The scales of SAV, Sr, and Nc are judged not significant when correlated with the IICC. Therefore, null hypothesis five is <u>rejected</u>.

Thus, the supervisor's level of self-actualization as measured by the Personal Orientation Inventory, seems to be positively related to his skill level in dealing with employee-related communicative problems, as measured by the IICC.

TABLE VIII

CORRELATIONAL RELATIONSHIPS BETWEEN THE
PERSONAL ORIENTATION INVENTORY AND
THE INDEX OF INTERPERSONAL
COMMUNICATIVE COMPETENCE

Title of Scale	Correlated With The IICC		
	r	r^2	p
Time Competent (TC)	.20	.04	.05
Inner Directed (I)	.39	.15	.001
Self-Actualizing Value (SAV)	.14	.02	NS
Existentiality (Ex)	.36	.13	.001
Feeling Reactivity (Fr)	.42	.18	.001
Spontaneity (S)	.36	.13	.001
Self-Regard (Sr)	.02	.01	NS
Self-Acceptance (Sa)	.17	.03	.05
Nature of Man (Nc)	.15	.02	NS
Synergy (Sy)	.23	.05	.01
Acceptance of Aggression (A)	.34	.12	.001
Capacity for Intimate Contact (C)	.36	.13	.001

Hypothesis Six: Leader Behavior of the
Interpersonal Competent Supervisor

The raw scores of the IICC were again subjected to the

SPSS subprograms Pearson Correlation and Scattergram, but

this time they were correlated with the scores from the

Supervisory Behavior Description Questionnaire. Again, after

a visual inspection for non-curvilinearity between the bivariate test variables, the appropriate Pearson correlation coefficients (r) and the determination coefficients (r^2) were selected for testing hypothesis six as stated in the null form. These coefficients with the computed levels of statistical significance are summarized in Table IX.

> Null Hypothesis Six: No relationship exists between a supervisor's interpersonal communicative competence and the supervisor's leadership behavior.

The data analysis indicates a Pearson correlation coefficient of .14 between the IICC and the consideration scale of the SBDQ, and -.08 between the IICC and the structure scale, neither being significant at the .05 level. Although the correlation between a supervisor's interpersonal competence and his consideration for employee attitudes and feelings is low, it is only significant at the .10 level. In addition, the communicative skill a supervisor might possess in a problem situation does not seem to be associated with the actual behavior (Structure) exhibited in the leadership role. Thus, although a supervisor in this sample may possess the interpersonal leader skills necessary for effective supervision, he does not seem to be using those skills (very little) in terms of leader behavior. Therefore, null hypothesis six is <u>retained</u>.

TABLE IX

CORRELATIONAL RELATIONSHIPS BETWEEN THE SUPERVISORY
BEHAVIOR DESCRIPTION QUESTIONNAIRE AND THE INDEX
OF INTERPERSONAL COMMUNICATIVE COMPETENCE

Title of Scale	Correlated With The IICC		
	r	r^2	p
Consideration (C)	.14	.02	.10
Structure (S)	-.08	.006	NS

Summary

Several key descriptive statistics were presented in an effort to evaluate the representativeness of this study to the population. The study's demographics were broken down into the following categories: hierarchical level, sex, age, education, and years of supervisory experience. The results presented a good representation of hierarchical level, age, experience, and education. Only the category of sex was considered nonrepresentative.

The respondents were also categorized according to their scores on the IICC. Several descriptive statistics were presented for each level of the IICC, the majority of respondents scoring in Level Two (Advisory) and Level Three (Empathic Understanding). The average score obtained was 2.8 per critical incident on the IICC.

The test results of the POI indicated a wide range
of scores across both the self-actualizing category and
nonself-actualizing category. A comparative analysis
indicated scores closely approximating a similar study
with an electronics company. When compared to a "normal"
adult study, the subjects reported means approximating
normalcy on the scales of Tc, I, Fr, Sa, Nc, Sy, A, and C.
Two descriptive statistics reported the scores to approxi-
mate a bell-shaped curve, slightly skewed to the left and
relatively flat.

The scores on the SBDQ, when compared to three pre-
vious studies, indicated a close approximation for the
structure dimension. However, the scale of consideration
showed the mean of the present study to be slightly higher
than those reported for other supervisors and managers in
industry. Also the statistics describing normalcy indi-
cated a bell-shaped distribution for structure but not
completely for consideration.

The theoretical and mathematical background for the
Pearson product moment correlation coefficient was discussed
along with its application to the present study. Also dis-
cussed was the more meaningful coefficient of determination
and the t statistic for testing statistical significance of
the sample data. The data was then subjected to the SPSS
subprogram Pearson Correlation for rejection or retention

of the first four dissertation hypotheses. The following

null hypotheses were rejected:

Null Hypothesis One: No relationship exists
between a supervisor's interpersonal communi-
cative competence and the age of the supervisor.

Null Hypothesis Two: No relationship exists
between a supervisor's interpersonal communica-
tive competence and formal education.

Null Hypothesis Four: No relationship exists
between a supervisor's interpersonal communica-
tive competence and sex of the supervisor.

Null Hypothesis Five: No relationship exists
between a supervisor's interpersonal communi-
cative competence and the supervisor's level of
self-actualization.

The following null hypotheses were retained:

Null Hypothesis Six: No relationship exists
between a supervisor's interpersonal communi-
cative competence and the supervisor's leader-
ship behavior.

Null Hypothesis Three: No relationship exists
between a supervisor's interpersonal communi-
cative competence and years of supervisory
experience.

Thus, it appeared, on the basis of the data analysis,

that a supervisor's level of interpersonal communicative

competence is positively related to his education and sex,

but negatively related to age. Likewise, the data indicated

that an interpersonal competent supervisor is also a self-

actualized one--at least on nine scales of the POI. And

finally, the correlation analysis reported no association

between consideration, as one definition of leader behavior,

and interpersonal communicative competence. Structure was

also not related.

The next chapter of the dissertation, evaluates the same data (personal characteristics, POI, IICC, and SBDQ), but from a somewhat different perspective. Realizing that multiple relationships (rather than simple bivariate ones) can exist between research variables, a more powerful statistical tool is necessary for testing these variable relationships. Thus, the remaining four hypotheses, because of their multivariate implications, are evaluated by the statistical technique of multiple regression/correlation analysis.

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CHAPTER VI

ANALYSIS OF THE DATA: MULTIPLE

REGRESSION AND CORRELATION

ANALYSIS

Although the Pearson r statistic provides a goodly

amount of analytical information concerning associative

relationships, it is by its very nature limited to two and

only two variables. A common criticism aimed at simple

correlation statistics is that a relationship between A

and B may be associated (or caused by) with a third variable

C, or fourth variable D, etc. A more powerful statistical

technique overcomes this criticism by evaluating a set of

independent variables, their relationship to each other,

and the dependent variable. This section of the disserta-

tion utilizes this statistical technique called multiple

regression/correlation analysis to evaluate the remaining

four hypotheses of the study.

Multiple Regression and Correlation Analysis

Although the terms "regression" and "correlation" are

two related concepts, they are oftentimes treated separately.

Multiple regression/correlation (MRC) is a statistical tool

that incorporates both whenever a quantitative variable

(dependent) is to be evaluated as a function of a set of

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independent variables. In addition, MRC is able to measure the unique relationship of each independent variable to the total set of variance provided by the predictor variables (1, p. 3).

One of the unique properties of MRC making it a valuable research tool for the behavioral sciences is that of orthogonality of factors. That is, given that observed variables in their natural environment are somewhat related, then it is somewhat difficult for the researcher to arrive at any meaningful conclusions regarding total variance. The variance accounted for by one variable overlaps to some extent the variance accounted for by other variables. Thus, the total variance associated with a given variable by a set of independent variables is impossible to determine by the usual statistical technques in a natural or field experiment. This ability of MRC to separate these relationships is probably its most important characteristic. In fact, Cohen and Cohen argue:

> MRC's capability for assessing unique variance, and the closely related measures of partial correlation and regression coefficients it provides, is perhaps its most important feature, particularly for observational (nonexperimental) studies. Even a small number of research factors define many alternative possible causal systems or theories. Selection among them is greatly facilitated by the ability, using MRC, of partialling from the effects of any research factor those of any desired set of other factors. It is a copybook maxim that no correlational method can establish causal relations, but a given causal theory may be invalidated by the skillful use of this feature of MRC (1, p. 9).

The regression equation used to calculate the relationship between some dependent variable (Y) and a set of independent variables (X_1, X_2, ..., X_i) takes the standard format of the "least squares" criterion. However, unlike the regression equation with only two variables, the B weights must be calculated in such a manner that they take into account the fact that other variables are also in the linear equation. The full equation for two independent variables is typically presented thus (1, pp. 74-75):

$$\widehat{Y} = B_{Y1 \cdot 2} \, X_1 + B_{Y2 \cdot 1} \, X_2 + A_{Y \cdot 12}$$

where: $\widehat{Y}$ = estimated dependent variable

$X_1 X_2$ = independent variables

$B_{Y1 \cdot 2}$ = weight given to X_1 when X_2 is also present in the equation

$B_{Y2 \cdot 1}$ = weight given to X_2 when X_1 is also present in the equation

$A_{Y \cdot 12}$ = regression constant when both X_1 and X_2 are both present in the equation

Typically the regression coefficients (B's) are standardized to eliminate the effects of noncomparable raw units. The equation then becomes (1, p. 76):

$$\hat{z}_Y = \beta_{Y1 \cdot 2} z_1 = \beta_{Y2 \cdot 1} z_2$$

where $\beta_{Y1 \cdot 2}$ and $\beta_{Y2 \cdot 1}$ are standardized partial regression coefficients for estimating $\hat{z}_Y$. They can be calculated directly from the Pearson coefficient r's between the test variables by the following formula (1, p. 77):

$$\beta_{Y1 \cdot 2} = \frac{r_{Y1} - r_{Y2}r_{12}}{1 - r_{12}^2}$$

$$\beta_{Y2 \cdot 1} = \frac{r_{Y2} - r_{Y1}\ r_{12}}{1 - r_{12}^2}$$

where: r_{Y1}, r_{Y2} = correlations between each independent variable and Y

r_{12} = correlation between independent variables

Thus, $\beta_{Y1 \cdot 2}$ stands for the expected change in Y with a one unit change in X_1 while holding X_2 constant. Likewise, $\beta_{Y2 \cdot 1}$ equals the expected change in Y with a one unit change in X_2 while controlling for X_1. Thus, each standardized coefficient explains its unique contribution to the total variance in Y, the predicted variable. Although the computations are more complex for more than two independent variables, the model can be expanded to contain k (exact number depends upon sample size) independent variables.

Like the Pearson r between two variables, R is a measure of association between a dependent variable and two or more independent variables. Similarly, R^2 equals the proportion of the dependent variable's variance linked to the set of independent variables in the equation. R can take on a value of 0 to +1. Zero indicates no relationship; +1 indicates a perfect relationship between the dependent variable and k independent variables. R and R^2 can be calculated from the following formula for two independent variables (1, p. 78):

$$R_{Y \cdot 12} = \sqrt{\beta_{Y1 \cdot 2} r_{Y1} + \beta_{Y2 \cdot 1} r_{Y2}}$$

The multiple R tells nothing about the contribution of each independent variable to the total variance. For this information one must turn to the semipartial correlation coefficient (sr) and its square (sr^2). The semipartial correlation (sr_1) measures the relationship between Y and X_1 from which the effects X_2 have been partialled. Likewise, sr_2 reports the extent Y is associated with X_2 from which X_1 has been partialled. Once again, semipartial coefficients may be calculated for two variables from Pearson r's (1, p. 81):

$$sr_1 = \frac{r_{Y1} - r_{Y2} r_{12}}{\sqrt{1 - r_{12}^2}}$$

$$sr_2 = \frac{r_{Y2} - r_{Y1} r_{12}}{\sqrt{1 - r_{12}^2}}$$

A more direct method calculating semipartials is to determine the increase in multiple R when the variable is added to the other independent variables (1, p. 81). Thus

$$sr_1^2 = R_{Y \cdot 12}^2 - r_{Y2}^2$$

$$sr_2^2 = R_{Y \cdot 12}^2 - r_{Y1}^2$$

Once the appropriate data definition and procedure cards have been key-punched, the SPSS (2, pp. 358-367) computer program routinely provides many of the values needed for regression/correlation analysis. After specification of the dependent variable and k independent variables, the subprogram Regression calculates R, R^2, R^2 change, simple r, standard error, and the F statistic for the total regression equation. In addition, it calculates the unstandardized B and Y intercept, standardized Beta, standard error of B, and the F statistic for each independent variable entered into the equation. And finally, the program (if authorized) will enter the variables in steps (stepwise inclusion) from best to the worst provided. That is, the variable that explains the greatest variance in conjunction with the dependent variable enters the equation first, the variable that explains the second largest variance enters second, and so on. If however, the researcher assumes causality between the test variables, he may specify the order of inclusion. Called the hierarchical method of regression analysis, the calculation of the semipartial coefficient for each independent variable is that increment in R^2 at each step in the procedure. Naturally, multiple R remains the same with both procedures.

If one desires to generalize to the population from the sample of data, the SPSS subprogram Regression routinely provides the F statistic. The test uses statistical inference

procedures to test a null hypothesis that no multiple corre-
lation exists in the population from which the sample is
taken. That is, the observed multiple R is not due to
sampling error. SPSS uses this formula for the overall
model (2, p. 335):

$$F = \frac{R^2/k}{(1-R^2)/(N-k-1)}$$

where: k = number of independent variables
N = sample size

The F statistic can also be used for the unique contri-
bution to R^2 by each independent variable. It is determined
somewhat differently depending upon the choice of decomposi-
tion. For the standard stepwise procedure where the computer
enters the most significant variable first, the second most
significant next, and so forth, the F statistic is calculated
thus (2, p. 336):

$$F = \frac{r^2_{Y\ (i.12,\ldots,\ k)}}{(1 - R^2_{Y\cdot12,\ldots\ k})/(N - k - 1)}$$

However, if one specifies an ordering of variables, thus
assuming each independent variable enters after any preced-
ing variables, but before any remaining variables, Cohen and
Cohen suggest the following formula (1, p. 107):

$$F = \frac{sr^2_i\ (N - k - 1)}{1 - R^2}$$

When several independent variables are added as a set, the resulting F statistic by the above formula must be divided by the number of variables (k_B) in the set (1, p. 142).

Thus regression/correlation analysis is a powerful statistical technique providing a multiple of services. It can be a descriptive tool to decompose and/or summarize several independent variables and their association with a dependent variable. It can also be used as an inferential tool to extend sample data statistics to the population. Together it appears to be the best available procedure for identifying complex multivariate relationships. Therefore, the employment of MRC is dictated in analyzing the multivariate relationships in hypotheses seven through ten.

Hypothesis Seven: The Role of Demographics in Self-Actualization

One of the focal points of multiple regression/correlation analysis is that it can be used to predict a change in the dependent variable by an associative change in the independent variables. The resulting strength and direction of change does not necessarily infer causality; it just means the researcher can observe the effect on one variable (dependent) by changing one of the independent variables (while holding all other independent variables constant).

This being the assumption of predictive relationships, the following diagram is presented for statistical evaluation by multiple regression/correlation analysis:

Personal _____→ Self-Actualization
Characteristics

For hypothesis testing purposes, it is asserted that selec-
ted personal characteristics of the supervisor (demographics)
can be used to predict his level of self-actualization. The
personal characteristics of the supervisor are defined for
the regression/correlation analysis as age in years, formal
education in years, years of supervisory experience, and sex
in coded form.

The SPSS computer package was requested to complete the
subprogram Regression. A separate regression equation was
generated for each of the 12 scales of the Personal Orienta-
tion Inventory (dependent variable) with age, education, ex-
perience, and sex acting as the set of independent variables.
Since no rationale existed for ordering the independent
variables, the program was allowed to perform a stepwise
analysis. That is, the independent variable explaining the
most variance in the dependent variable was entered first,
while the variable explaining the least variance in the
dependent variable was entered last. The resulting analysis
of this multiple regression/correlation procedure is depicted
in Table X. Several key statistics, as shown in the table,
are used as the final criteria for retention or rejection
(at the .10 level of significance) of null hypotheses seven,
7-A, 7-B, 7-C, and 7-D as follows.

Null Hypothesis Seven: No multiple relationship exists between a supervisor's level of self-actualization and the independent demographic variables of age, eeucation, years of experience, and sex.

The data analysis indicate that demographics indeed play a strong role in predicting self-actualization. Specifically, as shown in Table X, multiple R's of .613 (Inner Directed), .609 (Existentially), and .529 (Spontaneity) are reported at the .001 level of statistical significance. Likewise, multiple R's of .423 (Time Competent), .533 (Feeling Sensitivity), .413 (Self Acceptance), .351 (Synergy), .439 (Acceptance of Aggression), and .492 (Capacity for Intimate Contact) are reported at the .01 level of statistical significance. Of somewhat lesser magnitude, the scales of Self Actualizing Values, Self Regard, and Nature of Man report multiple R's of .336, .318, and .351, respectively, at the .05 level of statistical significance. Taken together, the four selected demographics explain from a low of 10.1% of the variation in the scale of Self Regard to a high of 37.6% of the variation in the scale of Inner Direcred. Therefore, null hypothesis seven is rejected.

Although multiple R and its associate R^2 does provide a good indication of the predictive value of a set of independent variables, it says nothing about the unique contribution of each. It also does not report the statistical significance of each independent variable nor its direction (plus or minus) in the final regression equation. For this information one

TABLE X

MULTIPLE REGRESSION/CORRELATION BETWEEN THE PERSONAL
CHARACTERISTICS OF THE SUPERVISOR (INDEPENDENT
VARIABLES) AND SELF-ACTUALIZATION
(DEPENDENT VARIABLE)

Dependent Variable/ Independent Variable	R	R^2	ΔR^2	Beta	F	p
Time Competent/						
Education	.420	.176	.176	.42	17.9^a	.001
Experience	.421	.178	.002	.04	$.2^a$	NS
Sex	.423	.179	.001	.03	$.1^a$	NS
Total	.423	.179	....	...	6.5^b	.01
Inner Directed/						
Education	.580	.337	.337	.48	23.2^c	.001
Sex	.592	.350	.013	.16	3.4^c	.10
Experience	.599	.358	.008	.21	3.5^c	.10
Age	.613	.376	.018	-.20	2.5^c	.10
Total	.613	.376	....	...	13.4^d	.001
Self Actualizing Values/						
Education	.310	.096	.096	.31	9.4^a	.001
Experience	.335	.112	.016	.13	1.7^a	NS
Sex	.336	.113	.001	.03	$.1^a$	NS
Total	.336	.113	....	...	3.8^b	.05
Existentiality/						
Education	.561	.315	.315	.42	17.7^c	.001
Age	.598	.358	.043	-.34	7.4^c	.01
Experience	.607	.368	.010	.16	1.8^c	NS
Total	.609	.371	....	...	13.1^c	.001

TABLE X--Continued

Dependent Variable/ Independent Variable	R	R^2	ΔR^2	Beta	F	p
Feeling Sensitivity/						
Education	.482	.233	.233	.34	10.3[c]	.01
Age	.511	.261	.028	-.29	4.5[c]	.05
Sex	.524	.275	.014	.15	2.4[c]	NS
Experience	.533	.284	.009	.13	1.1[c]	NS
Total	.533	.284	....	...	8.8[c]	.01
Spontaneity/						
Education	.501	.251	.251	.41	14.6[c]	.001
Sex	.514	.265	.014	.13	1.9[c]	NS
Age	.528	.279	.014	-.16	1.4[c]	NS
Experience	.529	.280	.001	.04	.1[c]	NS
Total	.529	.280	....	...	8.6[d]	.001
Self Regard/						
Education	.214	.046	.046	.25	5.8[a]	.05
Experience	.308	.095	.049	.21	4.2[a]	.05
Sex	.318	.101	.006	-.08	.6[a]	NS
Total	.318	.101	....	...	3.4[b]	.05
Self Acceptance/						
Education	.331	.109	.109	.33	8.4[c]	.01
Age	.374	.140	.031	.07	.2[c]	NS
Sex	.397	.158	.018	.17	2.8[c]	.10
Experience	.413	.171	.013	.16	1.4[c]	NS
Total	.413	.171	....	...	4.6[d]	.01

TABLE X--_Continued_

Dependent Variable/ Independent Variable	R	R^2	ΔR^2	Beta	F	p
Nature of Man/						
Education	.320	.103	.103	.41	12.1[c]	.001
Age	.330	.109	.006	.20	1.8[c]	NS
Experience	.343	.118	.009	-.15	1.2[c]	NS
Sex	.351	.123	.005	-.08	.6[c]	NS
Total	.351	.123	....	...	3.1[d]	.05
Synergy/						
Education	.363	.132	.132	.32	7.4[c]	.01
Sex	.371	.138	.006	-.05	.3[c]	NS
Age	.378	.143	.005	-.16	1.3[c]	NS
Experience	.388	.150	.007	.12	.8[c]	NS
Total	.388	.150	....	...	3.9[d]	.01
Acceptance of Aggression/						
Education	.403	.162	.162	.30	7.0[c]	.01
Age	.408	.167	.005	-.23	2.5[c]	NS
Experience	.427	.182	.015	.20	2.4[c]	NS
Sex	.439	.193	.011	.11	1.2[c]	NS
Total	.439	.193	....	...	5.3[d]	.01
Capacity for Intimate Contact/						
Education	.446	.199	.199	.32	8.6[c]	.01
Age	.455	.207	.008	-.28	4.1[c]	.05
Experience	.479	.230	.023	.24	3.6[c]	.10
Sex	.492	.242	.012	.12	1.5[c]	NS
Total	.492	.242	....	...	7.1[d]	.01

[a]Degrees of Freedom = 1 and 90
[b]Degrees of Freedom = 3 and 90
[c]Degrees of Freedom = 1 and 89
[d]Degrees of Freedom = 4 and 89

must turn to the standardized Beta coefficients for each
independent variable in the final equation. Again, a sum-
mary of these Beta coefficients and their associated F
value for each independent variable in each regression
equation with one of the 12 scales of the POI as the depen-
dent variable is reported in Table X. It should be noted
in the cases of Tc, SAV, and Sr, the contribution of the
independent variable age was so insignificant it never
entered the final regression equation.

> Null Hypothesis 7-A: The independent variable
> of age makes no unique contribution to a relation-
> ship with the dependent variable self-actualization
> already containing the other independent variables.

A glance at Table X indicates Beta values for age on
nine scales of the POI from a low of .07 (Self Acceptance)
to a high of -.34 (Existentiality). However, only the
scales of Inner Directed, Existentiality, Feeling Sensi-
tivity, and Capacity for Intimate Contact are statistically
significant to at least the .10 level. That is, holding
the other three variables constant, as one becomes older
he becomes more outer directed, less existential, less
feeling, and less able to develop meaningful human contacts.
Therefore, null hypothesis 7-A is _partially_ _rejected_.

> Null Hypothesis 7-B: The independent variable of
> education makes no unique contribution to the
> relationship with the dependent variable of self-
> actualization already containing the other indepen-
> dent variables.

The multivariate statistical procedure indicates Beta
values for education on all 12 scales of the POI from a low

of .25 (Self-Regard) to a high of .48 (Inner Directed), all

being statistically significant to at least the .05 level.

Specifically as the supervisor acquires more education

(holding other variables constant), he increases his

capability to live in the present, to be inner directed,

to hold self-actualizing values; to possess a capacity

for existentiality, feeling, spontaneity, has a high self

regard and self acceptance; has a constructive view of

mankind, can see the opposites of life as related, can

accept aggression, and has a capacity for intimate contact.

Therefore, null hypothesis 7-B is <u>rejected</u>.

> Null Hypothesis 7-C: The independent variable of
> experience makes no unique contribution to the
> relationship with the dependent variable of self-
> actualization already containing the other inde-
> pendent variables.

The MRC procedure, again referring to Table X, indicates

Beta values for experience on all 12 scales of the POI from

a low of .04 (Time Competent) to a high of .24 (Capacity for

Intimate Contact). However, only the scales of Inner Direc-

ted, Self Regard, and Capacity for Intimate Contact are

statistically significant to at least the .10 level. Thus,

while holding other variables constant, the independent

demographic of experience is related to a positive change in

the supervisor's capacity for inner direction, self regard,

and intimate contact. Therefore, null hypothesis 7-C is

<u>partially</u> <u>rejected</u>.

Null Hypothesis 7-D: The independent variable of
sex makes no unique contribution to the relation-
ship with the dependent variable of self-actuali-
zation already containing the other independent
variables.

The data analysis reports Beta values for sex on all

12 scales of the POI from a low of .03 (Self-Actualizing

Values and Time Competent) to a high of .17 (Self Acceptance).

However, only the scales of Inner Directed and Self Accep-

tance are statistically significant at the .10 level. Thus,

females typically tend to possess more inner direction and

a higher self regard than their male counterparts. Therefore,

null hypothesis 7-D is <u>partically</u> <u>rejected</u>.

In retrospect, the personal characteristics taken as a

whole does predict to a certain extent the self-actualization

of a supervisor. However, a decomposition of the variables

age, education, experience, and sex indicates that education

by far plays the dominate role. That is, holding the other

three variables constant, education by itself is highly asso-

ciated with self-actualization. By similar partialling (or

holding constant) the next most significant variable appears

to be the age of the supervisor (especially since many author-

ities regard Inner Directed as the most important scale on

the POI). However, the negative Beta weight indicates an

inverse relationship with self-actualization; that is, the

older the supervisor the less self-actualized he probably is

(other variables being constant). The next most significant

independent variable appears to be years of supervisory

experience. Three scales of the POI were significantly related to years of experience as a supervisor; that is, as one acquires more experience in the leadership role (other things held constant), he becomes somewhat more self-actualized. And, lastly, sex appears to play a small role in self-actualization. Only two scales of the POI were significantly related to sex (females scoring higher) after partialling out the effects of age, experience, and education.

Hypothesis Eight: The Role of Demographics and Self-Actualization in Interpersonal Communicative Competence

The next predictive relationship to be tested by multiple regression/correlation analysis is that pertaining to interpersonal communicative competence. More specifically, it is asserted that the personal characteristics of the supervisor in conjunction with his level of self-actualization will predict the degree of interpersonal communicative competence possessed by the supervisor. Thus, the following diagram is presented for statistical evaluation via multiple regression/correlation analysis:

Personal   Self-   Interpersonal
Characteristics   Actualization   Communicative
                                         Competence
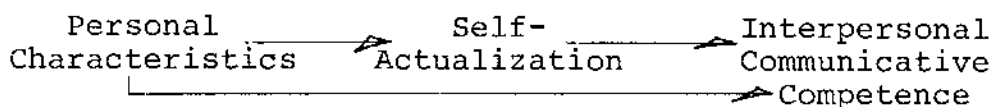
It is hypothesized that personal characteristics and self-actualization have a <u>direct</u> influence on interpersonal communicative competence but, in addition, the personal

characteristics also have an _indirect_ influence through self-actualization. This type of procedure where a set of variables have a preference over another set of variables is referred to as hierarchical analysis.

The SPSS computer package was ordered to complete the subprogram Regression. A regression equation was requested utilizing the Index of Interpersonal Communicative Competence as the dependent variable and the personal characteristics of the supervisor (age, education, experience, and sex) and the 12 scales of the Personal Irientation Inventory as the independent variables. The hierarchical procedure was used to order the personal characteristics to be entered as a set first and then the self-actualization scales as a set second. Within each set of variables the program was allowed to use a stepwise procedure selecting the most significant variable first, and continuing until all variables had been entered. The results of this procedure are reported in Table XI. Several key statistics of the MRC procedure are used to either retain or reject null hypotheses (at the .10 level) eight, 8-A, and 8-B as follows:

> Null Hypothesis Eight: No multiple relationship
> exists between a supervisor's interpersonal com-
> municative competence and the independent vari-
> ables of age, education, years of supervisory
> experience, sex, and self-actualization.

The data analysis, from Table XI, indicates a multiple R of .614 between demographics/self-actualiation and interpersonal communicative competence which is statistically

significant at the .001 level. As a whole, then, selected demographics of the supervisor, along with his capacity to be self-actualized, can predict, or be associated with, his interpersonal communicative competence. In fact, the two sets of variables predict 37.7% of the variance in interpersonal communicative competence. Therefore, null hypothesis eight is <u>rejected</u>.

Once again, as in the previous discussion, the figure of .61 does not indicate anything about the significant contribution of each independent variable to interpersonal communicative competence. Since hierarchical analysis was used in the testing of this hypothesis, the appropriate statistic to use is ΔR^2, which is the semipartial correlation coefficient with the dependent variable. However, hierarchical analysis implies that each variable's contribution is made after partialling out the effects of all preceding variables before it, with the exception of the first one entered whose semi-partial coefficient is a simple Pearson r^2 with the dependent variable. Again Table XI reports a ΔR^2 and its associated F value for each independent variable and sets of independent variables (PC and SA) in predicting a change in the dependent variable interpersonal communicative competence. It should be observed that the independent variables of Nature of Man, Inner Directed, and Existentiality contributed so little to the R^2 explained by the preceding variables they never entered the final regression equation.

TABLE XI

MULTIPLE REGRESSION/CORRELATION BETWEEN THE PERSONAL
CHARACTERISTICS AND SELF-ACTUALIZATION OF THE
SUPERVISOR (INDEPENDENT VARIABLES) AND THE
INDEX OF INTERPERSONAL COMMUNICATIVE
COMPETENCE (DEPENDENT VARIABLE)

Independent Variable(s)	R	R^2	ΔR^2	F	p
Personal Characteristics:					
Education	.538	.290	.290	37.2^a	.001
Sex	.551	.303	.013	1.7^a	NS
Age	.560	.313	.010	1.3^a	NS
Experience	.570	.325	.012	1.5^a	NS
Total PC	.570	.325	.325	10.4^b	.001
Self-Actualization					
Feeling Sensitivity	.587	.345	.020	2.6^a	.10
Self Regard	.596	.355	.010	1.3^a	NS
Capacity for Intimate					
Contact	.599	.359	.004	$.5^a$	NS
Time Competent	.604	.365	.006	$.6^a$	NS
Self Actualizing Values	.606	.367	.002	$.4^a$	NS
Spontaneity	.608	.370	.003	$.5^a$	NS
Self Acceptance	.611	.373	.003	$.6^a$	NS
Synergy	.613	.376	.002	$.4^a$	NS
Acceptance of Aggression	.614	.377	.001	$.1^a$	NS
Total SA	....	....	.052	$.7^c$	NS
Total PC + SA	.614	.377	....	3.7^d	.001

[a]Degrees of Freedom = 1 and 80
[b]Degrees of Freedom = 4 and 80
[c]Degrees of Freedom = 9 and 80
[d]Degrees of Freedom = 13 and 80

Null Hypothesis 8-A: The independent variables of
self-actualization as a set make no unique contri-
bution to the relationship with the dependent vari-
able interpersonal communicative competence already

containing the independent variables of age, education, experience, and sex.

The generated regression equation, shown in Table XI, indicates a ΔR^2 of .052 which is not statistically significant. By partialling out the effects of demographics, the scales of self-actualization seem to have very little validity in predicting interpersonal communicative competence. Therefore, null hypothesis 8-A is <u>retained</u>.

> Null Hypothesis 8-B: The independent variables of age, education, experience, and sex as a set, make no unique contribution to the relationship with the dependent variable interpersonal communicative competence.

The MRC analysis reports of a ΔR^2 of .325 which is statistically significant at the .001 level. However, it should be noted that only the independent variable of education is statistically significant in this set of variables. Therefore, null hypothesis 8-B is <u>rejected</u>.

In retrospect, it appears that the total model of personal characteristics and self-actualization can predict interpersonal communicative competence ($R^2 = .377$). However, on decomposition of the independent variables and their contribution the relationship somewhat breaks down. It seems that much of the information contained in the self-actualizing variables also appear in the personal characteristic variables, and in particular education. Once again, as in the previous analysis, education both directly and indirectly seems to dominate, or contain the most information about, the

dependent variable. Specifically, education accounts for
29.0% of the variance in the dependent variable, interpersonal
communicative competence. Once education enters the regres-
sion eauation, the unique contribution of the other personal
characteristics and self-actualization appear nonsignificant.

Hypotheses Nine and Ten: The Role of Demographics, Interpersonal Communicative Competence and Self-Actualization in Leadership Behavior

The final predictive relationship to be tested by multi-
ple regression/correlation analysis is that pertaining to
leadership behavior. By a further extension of the previous
diagram, it is asserted that the personal characteristics
of the supervisor, self-actualization and interpersonal com-
municative competence can predict or be associated with his
leadership behavior. The relationship is depicted thus:

Personal ⟶ Self- ⟶ Interpersonal Leader
Characteristics Actualization Communicative Behavior
Competence
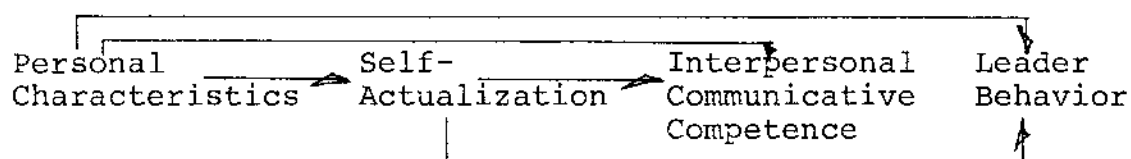
For this analysis and discussion, leader behavior is
defined as the scores received on the Supervisory Behavior
Description Questionnaire as completed by the subordinates.
Since the SBDQ generates two dimensions of leader behavior--
consideration and structure--it was necessary to generate
two regression equations. The first equation defines con-
sideration as the dependent variable in the relationship
with demographics, self-actualization, and interpersonal

communicative competence. The second equation defines structure as the dependent variable.

Consideration in Leader Behavior

Again, by using hierarchical analysis or an ordering of research variables, the technique of multiple regression/correlation analysis can determine the degree of relationship between the independent variables specified in the diagram and leader behavior. Specifically, it is hypothesized that all three independent variables have a direct effect upon leader behavior (consideration). In addition, the personal characteristics as a set of variables have an indirect effect through self-actualization and interpersonal communicative competence. Likewise, self-actualization has an indirect effect upon leader behavior (consideration) through the independent variable of interpersonal communicative competence.

As in the previous analysis the SPSS computer package was requested to complete the subprogram Regression. A regression equation was initiated utilizing the consideration scale of the Supervisory Behavior Description Questionnaire as the dependent variable and the personal characteristics of the supervisor, the 12 scales of the POI, and the IICC as the independent variables. Following the logic of the preceding diagram of leader behavior, the program was requested to enter the personal characteristics as a set of

variables first, the 12 scales of the POI as as set of
variables second, and the IICC last. Within each set of
variables the program was allowed to follow a stepwise
procedure selecting the most significant variable first,
and continuing throughout. Several key statistics from
this program are depicted in Table XII, by which hypotheses
nine, 9-A and 9-B are evaluated. It should be mentioned
that the independent variable of interpersonal communica-
tive competence contributed so insignificantly to the R^2
explained by the preceding variables it never entered the
final regression equation. Thus, the independent variable
of interpersonal communicative competence is not depicted
on the table.

> Null Hypothesis Nine: No multiple relationship
> exists between a supervisor's leader behavior
> (consideration) and the independent variables of
> age, education, years of supervisory experience,
> sex, self-actualization, and interpersonal com-
> municative competence.

As can be seen from Table XII, the statistical program
reports a multiple R of .429 between demographics/SA/IICC
and the consideration scale of the SBDQ. However, the
calculated F value is not significant at some acceptable
level of inference. Thus, on the basis of this sample,
there appears to be no relationship between supervisory
demographics/self-actualization/interpersonal communicative
competence and human oriented leader behavior. Therefore,
null hypothesis nine is <u>retained</u>.

TABLE XII

MULTIPLE REGRESSION/CORRELATION BETWEEN PERSONAL
CHARACTERISTICS, SELF-ACTUALIZATION AND LEVEL
OF INTERPERSONAL COMMUNICATIVE COMPETENCE
(INDEPENDENT VARIABLES) AND CONSIDERATION
ON THE SUPERVISORY BEHAVIOR DESCRIPTION
QUESTIONNAIRE (DEPENDENT
VARIABLE)

Independent Variable(s)	R	R^2	ΔR^2	F	p
Personal Characteristics:					
Education	.254	.064	.064	6.0^a	.05
Age	.276	.076	.012	1.1^a	NS
Experience	.289	.084	.008	$.8^a$	NS
Sex	.294	.087	.003	$.3^a$	NS
Total PC	.294	.087	.087	2.1^b	.10
Self-Actualization (12 Scales)	....	....	.097	$.8^c$	NS
Total PC + SA	.429	.184	....	1.1^d	NS

[a]Degrees of Freedom = 1 and 77
[b]Degrees of Freedom = 4 and 77
[c]Degrees of Freedom = 12 and 77
[d]Degrees of Freedom = 16 and 77

It becomes necessary once again to test the unique
contribution of each set of independent variables. In some
cases the ΔR^2 of any one independent set of variables may
be statistically significant even though the entire model
is not. This situation appears to be the case here. Again,
Table XII reports a ΔR^2 and its associated F value for each
independent variable and sets of independent variables in
predicting a change in the dependent variable consideration.

> Null Hypothesis 9-A: The independent variables of
> self-actualization as a set make no unique contri-
> bution to the relationship with the dependent vari-
> able consideration already containing the indepen-
> dent variables of age, education, experience, and
> sex.

The MRC program generates a ΔR^2 of .097 which is not

statistically significant. Once demographics have entered

the regression equation, all 12 scales of the POI are not

contributing anything significant to the variable considera-

tion. Therefore, null hypothesis 9-A is <u>retained</u>.

> Null Hypothesis 9-B: The independent variables of
> age, education, experience, and sex as a set make
> no unique contribution to the relationship with
> the dependent variable consideration.

The data analysis indicates a ΔR^2 of .087 which is

statistically significant at the .10 level. Thus, super-

visory demographics can contribute significantly to the

consideration dimension of leader behavior, however slight.

However, it should be noted that only the independent vari-

able of education is statistically significant in this set

of variables. Therefore, null hypothesis 9-B is <u>rejected</u>.

It appears from the preceding analysis that a diagram

predicting leader behavior from personal characteristics,

self-actualization, and communicative skills has no validity.

Specifically, there appears to be no relationship between

the variables mentioned (as a whole) and consideration as

a component of leader behavior. However, one independent

variable, education, does possess some relationship with

consideration but only a small amount (R^2=.064). That is,

education only accounts for 6.4% of the variance in consideration both directly and indirectly through the POI and IICC. Once education has entered the regression equation, the other variables add nothing significant to the relationship predicting consideration as a factor of leader behavior.

Structure in Leader Behavior

It was previously hypothesized, according to the diagram, that the personal characteristics of the supervisor, self-actualization, and interpersonal communicative competence can predict the type of leader behavior exhibited. More specifically, the diagram specifies the order or arrangement of prediction. That is, it is proposed that all three independent variables have a direct effect upon leader behavior (structure). In addition, the personal characteristics as a set of variables have an indirect effect through self-actualization and interpersonal communicative competence. Likewise, self-actualization has an indirect effect upon structure through the independent variable of interpersonal communicative competence.

As before, the SPSS computer package was programmed to generate a second regression equation with the structure scale of the SBDQ as the dependent variable and the personal characteristics of the supervisor, the 12 scales of the POI, and the IICC as the independent variables. Following the logic of the diagram of leader behavior the program was asked

to enter the personal characteristics as a set of variables first, the 12 scales of the POI as a set of variables second, and the IICC last. Within each set of variables the program was allowed to follow a stepwise procedure by selecting the most significant variable first, and continuing. As previously, several key statistics for this computer analysis are depicted in Table XIII by which hypotheses ten, 10-A, 10-A, and 10-C are tested.

> Null Hypothesis Ten: No multiple relationship exists between a supervisor's leader behavior (structure) and the independent variables of age, education, years of supervisory experience, sex, self-actualizaation, and interpersonal communicative competence.

The MRC analysis indicates a multiple R of .467 between demographics/self-actualization/interpersonal communicative competence and structuring leader behavior which is not statistically significant. There seems to be no computed relationship within this sample of respondents. Therefore, null hypothesis ten is <u>retained</u>.

As before, it is sometimes necessary to test the contribution of each variable to the relationship depicted by R^2 even though the multiple R for the entire model is not significant. Once again, as in the case of consideration, the scale of structure follows a similar pattern. Table XIII reports the ΔR^2 and its associated F value for each independent variable and sets of variables in predicting a change in the dependent variable structure.

TABLE XIII

MULTIPLE REGRESSION/CORRELATION BETWEEN PERSONAL
CHARACTERISTICS, SELF-ACTUALIZATION AND LEVEL
OF INTERPERSONAL COMMUNICATIVE COMPETENCE
(INDEPENDENT VARIABLES) AND STRUCTURE ON
THE SUPERVISOR BEHAVIOR DESCRIPTION
QUESTIONNAIRE (DEPENDENT VARIABLE)

Independent Variable(s)	R	R^2	ΔR^2	F	p
Personal Characteristics:					
Education	.267	.071	.071[a]	7.0[b]	.01
Sex	.307	.094	.023	2.3[b]	NS
Experience	.314	.098	.004	.4[b]	NS
Age	.315	.099	.001	.1[b]	NS
Total PC	.315	.099	.099	2.4[c]	.10
Self-Actualization (12 scales)	....	....	.109	.9[d]	NS
IICC	....	....	.010	1.0[e]	NS
Total PC, SA, IICC	.467	.218	....	1.3[f]	NS

[a] Beta = -.249
[b] Degrees of Freedom = 1 and 76
[c] Degrees of Freedom = 4 and 76
[d] Degrees of Freedom = 12 and 76
[e] Degrees of Freedom = 1 and 76
[f] Degrees of Freedom = 17 and 76

Null Hypothesis 10-A: The independent variable
interpersonal communicative competence makes no
unique contribution to the relationship with the
dependent variable structure already containing
the independent variables of age, education,
experience, sex, and self-actualization.

The data analysis indicates a ΔR^2 of .010 which is not

statistically significant. As was the case with consideration,

once the demographic and self-actualization variables enter

the equation, the IICC makes no significant contribution to

the variable structure. Therefore, null hypothesis 10-A is

retained.

> Null Hypothesis 10-B: The independent variables of
> self-actualization as a set make no unique contri-
> bution to the relationship with the dependent
> variable structure already containing the indepen-
> dent variables of age, education, experience, and
> sex.

A ΔR^2 of .109 is reported for this relationship which

is not statistically significant. It appears that all 12

scales of the POI contributed very little to the relationship

with structure, once the variation by demographics had been

partialled out. Therefore, null hypothesis 10-B is retained.

> Null Hypothesis 10-C: The independent variables of
> age, education, experience, and sex as a set make
> no unique contribution to the relationship with the
> dependent variable structure.

The data analysis indicates a ΔR^2 of .099 which is

statistically significant at the .10 level. Once again,

supervisory demographics appear to be somewhat influencing

the structure variable. However, it should be noted that

only the independent variable education is statistically

significant (and negative) in this set of variables. There-

fore, null hypothesis 10-C is rejected.

Thus, in summary, it seems that the model predicting

structure as one dimension of leader behavior also has no

validity. Specifically, the results indicate no relationship

as a whole between personal characteristics, self-actualization,

interpersonal communicative competence, and leader behavior
(structure).

However, the one independent variable emerging with
some influence over structure again is education. In this
case the Beta coefficient is negative, thus depicting an
inverse relationship with structure. That is, as the super-
visor becomes more educated he tends to become less structured
in leader behavior. Although the relationship is small
(R^2=.071), it is significant at the .01 level. Education
accounts for 7.1% of the variance (both directly and indir-
ectly through self-actualization, and the IICC) in the
dependent variable structure. Once education has been con-
trolled for, self-actualization values add nothing signifi-
cant to the variable structure. Going further, once the
personal characteristics and self-actualization of the super-
visor have been accounted for, the interpersonal communicative
skills add nothing significant to the relationship. Education
is clearly the dominant factor in the relationship.

Summary

The statistical tool of multiple regression and corre-
lation analysis (MRC) was presented as a more descript tech-
nique of data analysis. Specifically, it holds a promise
of depicting the relationship between a dependent variable
and two or more independent variables. That is, given a
model of predictive relationships, MRC has the unique

capability of measuring the relationship between two variables while holding constant (or partialling out) the effects of all other independent variables. In addition, MRC can evaluate the unique contribution of an independent variable(s) to a total set of variables in predicting a change in the dependent variable.

The mathematical background of MRC was discussed by presenting the formulas necessary for the calculation of several key statistics. Utilizing the "least square" criterion for best fit of the data, the regression equation for two independent variables was presented, along with the necessary B weights. Standardized weights (Betas) were also discussed. Multiple R and its associate R^2 was discussed as to their potential in defining the total relationship between k independent variables and a dependent variable. The semipartial coefficient (sr) and its associate (sr^2) were also discussed to explain the contribution of each independent variable toward a multiple R of a set of variables.

Hierarchical analysis and stepwise inclusion was discussed in relationship to the F statistic. That is, two formulas for calculating F were presented depending whether the researcher desires hierarchical or stepwise inclusion of each independent variable. Set inclusion (several variables as a set) required a further modification of the F statistic formula. The procedure for preparing the SPSS package for multiple regression correlation analysis (as well as the

routinely provided statistics) was then discussed. The statistical results of this program were then used to test dissertation hypotheses seven through ten. The following null hypotheses were rejected:

Null Hypothesis Seven: No multiple relationship exists between a supervisor's level of self-actualization and the independent demographic variables of age, education, years of experience, and sex.

Null Hypothesis Eight: No multiple relationship exists between a supervisor's interpersonal communicative competence and the independent variables of age, education, years of supervisory experience, sex, and self-actualization.

The following null hypotheses were retained:

Null Hypothesis Nine: No multiple relationship exists between a supervisor's leader behavior (consideration) and the independent variables of age, education, years of supervisory experience, sex, self-actualization, and interpersonal communicative competence.

Null Hypothesis Ten: No multiple relationship exists between a supervisor's leader behavior (structure) and the independent variables of age, education, years of supervisory experience, sex, self-actualization, and interpersonal communicative competence.

The analysis of the data by MRC indicated that selected personal characteristics of the supervisor could be used to predict self-actualization. Specifically, education was the strongest predictor; while holding all other characteristics constant, education explained the most variation in all scales of the POI. Next was age; it was related significantly to four scales of the POI (negative association). Experience was related significantly to three scales. And

lastly, sex was the least effective in predicting self-actualization, being significantly related to only two scales of the POI.

Both personal characteristics and self-actualization could also be used to significantly predict interpersonal communicative competence. However, upon further analysis, it was found that much of the information contained in the self-actualization variables was also present in the personal characteristic variables, particularly education. Thus, although the total role of personal characteristics and self-actualization accounts for a significant variation in interpersonal skills, education once again plays the dominant role.

The final relationship evaluated was that of predicting leader behavior. Using consideration as one dimension of leader behavior the data analysis reported a nonsignificant relationship between personal characteristics, self-actualization, interpersonal communicative skills and leader behavior. Based upon this sample, the relationship as constructed demonstrates no validity. The only variable in the total relationship that could be used somewhat to predict consideration was education. However, its role in the model was extremely small.

Similar results were obtained utilizing structure as the dependent variable. That is, a model of the three primary

independent variables (personal characteristics, self-actualization and interpersonal communicative skills) was not capable of predicting one's use of structure in the leadership position. Similarly, the only independent variable capable of predicting structure was once again education. Although its negative relationship with structure was small, it was significant.

The next and final chapter of the dissertation summarizes the entire study and draws several appropriate conclusions. In addition, several implications for future research are suggested.

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CHAPTER VII

SUMMARY AND CONCLUSIONS

The purpose of this study was basically twofold: 1)
to develop an evaluative instrument to accurately measure
interpersonal communicative competence in a supervisory
situation, and 2) to determine the relationship between
interpersonal communicative competence and three other
supervisory variables--demographic characteristics, self-
actualization, and leader behavior. Specifically, ten
hypotheses were stated to be tested via the research data
collected:

> Hypothesis One: A relationship exists between a
> supervisor's interpersonal communicative competence
> and the age of the supervisor.

> Hypothesis Two: A relationship exists between a
> supervisor's interpersonal communicative competence
> and formal education.

> Hypothesis Three: A relationship exists between
> a supervisor's interpersonal communicative com-
> petence and years of supervisory experience.

> Hypothesis Four: A relationship exists between a
> supervisor's interpersonal communicative competence
> and sex of the supervisor.

> Hypothesis Five: A relationship exists between a
> supervisor's interpersonal communicative competence
> and the supervisor's level of self-actualization.

> Hypothesis Six: A relationship exists between a
> supervisor's interpersonal communicative competence
> and the supervisor's leadership behavior.

Hypothesis Seven: A multiple relationship exists between a supervisor's level of self-actualization and the independent demographic variables of age, education, years of supervisory experience, and sex.

Hypothesis Eight: A multiple relationship exists between a supervisor's interpersonal communicative competence and the independent variables of age, education, years of supervisory experience, sex, and self-actualization.

Hypothesis Nine: A multiple relationship exists between a supervisor's leader behavior (consideration) and the independent variables of age, education, years of supervisory experience, sex, self-actualization, and interpersonal communicative competence.

Hypothesis Ten: A multiple relationship exists between a supervisor's leader behavior (structure) and the independent variables of age, education, years of supervisory experience, sex, self-actualization, and interpersonal communicative competence.

A review of the literature revealed much research in the area of self-actualization. Maslow's theories have been expounded upon time and time again, especially in the industrial and/or organizational setting. The Personal Orientation Inventory was introduced and shown to be a valuable instrument (the only one) for accurately describing the concept of self-actualization.

Several leadership theories and studies were presented indicating a multitude of activity surrounding the entire leadership concept. Most theories and findings indicated that leader behavior could be described on basically two dimensions--concern for group members, and concern for the task goal. Since this study was based upon this definition

of leader behavior, several studies were reported utilizing the Ohio State definition of these two dimensions. It was found the "ideal" leaders exhibited behavior characteristic of the high consideration/high structure style. Certain studies, however, expressed contingency viewpoints depending upon the criteria used to define "ideal" leader behavior.

A component of leader behavior (interpersonal skills) was also carefully reviewed. The ideas of Argyris were presented relating interpersonal skills to organizational effectiveness. He has suggested that interpersonal authenticity could be increased through non-evaluative feedback, owning one's feelings, openness to new ideas and feelings, and risk taking with new values. However, a close scrutiny of empirical data revealed few, if any, objective measures of interpersonal competence.

Construction and Use of the IICC

The field of communication theory, and more specifically general semantics, was suggested for use in any complex, psychological, diadic exchange of meanings. The ideas of Korzybski and Hayakawa were presented in an effort to highlight the importance of communication in thought and behavior. Specifically, it was concluded that humans react (and interact) not to the reality around them, but to some dominant symbol, word, or sign foremost in their environment. It was also concluded, through the work of Haney, that general

semantics can, and does, have immense applicability in an organizational setting. In short, general semantics can be one of the most "scientific" inquiries upon which to build a model of interpersonal communicative competence.

One of the most celebrated areas for the application of communication theory is that of counseling and psychotherapy. Specifically, the school of humanistic psychotherapy was introduced as a viable approach to understanding and improving human relationships. Two dimensions of the humanistic counseling process were presented--responsiveness and action-- and discussed in light of their appropriateness to the helper/helpee situation. Specifically, a model of interpersonal communicative competence was developed utilizing these two dimensions of the counseling process as a framework for discussion. The principles of RET, Gestalt Therapy, Client-Centered Therapy, Reality Therapy, and a modified version of Carkhuff's interpersonal functioning, were all used to supplement and underpin the model of interpersonal communicative competence.

Applying the above model to a supervisory/subordinate situation, a test was developed (IICC-2) to collect a series of data across five levels of supervisory competence. Using the guidelines of five prominent textbooks in the field of supervisory management, eight critical incidents were constructed seen as important to both management and the employee involved. Defining interpersonal communicative competence

as the capability of a supervisor to effectively solve these problem situations, the Index of Interpersonal Communicative Competence (IICC) was then constructed from the data collected by the IICC-2. That is, the respondent taking the test has the option of five alternatives over varying degrees of interpersonal competence. Depending upon the respondent's choice over all eight situations, the test can be scored from a low of 8 to a high of 40.

The final version of the IICC was then used along with the Personal Orientation Inventory and the Supervisory Behavior Description Questionnaire to collect the empirical data used to test the study's ten research hypotheses. Each step of the methodology was discussed in turn. First, the sample of organizations participating in the study were described and their applicability to the population. Second, the POI and SBDQ were discussed in detail--validity, reliability, and applicability to the present study. Third, the collection of the research data from February, 1978, to July, 1978, in the seven participating organizations was discussed in light of the many uniquenesses of the study. And finally, the statistical package for analyzing the data was presented--SPSS subprograms Frequencies, Pearson Correlation, Scattergram, and Regression.

Hypotheses One Through Six

After a presentation of several descriptive statistics (for age, sex, education, experience), the sores on the POI

and SBDQ were discussed in terms of normalcy. It was decided that of all 14 dimensions tested only the scale of consideration could be considered non-symmetrical. Going further, the scores on the POI were compared with three previous studies. For all practical purposes the 94 respondents in the present study could be considered "normal" on eight scales of the POI, self-actualized on three scales, and non-self-actualized on one scale. In addition, the supervisors in the present study compared very favorably with the POI scores obtained by Shostrom on supervisors in an electronics firm.

The scores on the SBDQ were also compared with three studies reported by Fleishman. Generally speaking, the respondents in this project scored approximately the same on the scale of structure as three groups of foremen, middle and top managers. However, for the scale of consideration, their scores were somewhat higher.

The theoretical and mathematical background of the Pearson correlation coefficient was presented next. Also discussed were the coefficient of determination and t statistic. The three statistics were then used to evaluate the validity of hypotheses one through six.

Hypotheses one through four were concerned with testing the relationship between the personal characteristics of the supervisor and his level of interpersonal communicative competence. The data analysis indicated a low but significant

relationship with sex (positive) and age (negative). There was a moderate relationship with education (positive). No relationship existed between interpersonal communicative competence and years of experience. In other words, the interpersonal competent communicator appeared to be more educated, younger, and probably female in gender.

If one assumes a broad definition of education as a "maturing process" then its relationship to interpersonal competence seems appropriate. That is, as one becomes more and more knowledgeable of life's ambiguities, his perceptions of reality broadens. This maturing process perhaps enables the interpersonal competent communicator to differentiate between effective and ineffective lines of communication. This finding certainly has implications for any organization desiring more effective interpersonal communication within its structure.

Of course, there is always the possibility of educated subjects being more astute in completing questionnaires. That is, highly educated respondents may want to "look good" on inventory type tests. The finding certainly invites speculation.

The finding that age has an inverse relationship with interpersonal communicative skills is likewise understandable. Given that the aging process tends to strengthen one's values and opinions, then it is unlikely that the older supervisor has the inclination to completely practice empathy and trust.

In other words, perhaps the older person has "found" the "correct" approach to problem-solving and thus is reluctant to allow the employee any participation in the problem-solving process. Certainly the "I-orientation" takes precedent over the "you-orientation."

The finding that females are somewhat more interpersonal competent than males certainly invites some interesting speculations. Perhaps this is because of environmental and/or parental influences. Or, perhaps it could be the role expected of females in this society. Whatever the reasons, the finding certainly challenges the male dominated structure of most organizations today. Given that the objectives of any organization is cooperation, trust, and problem-solving among its employees, then certainly the finding here strengthens the goals of female affirmative action.

Lastly, the finding that experience has no relationship with interpersonal skills is surprising since most organizations reward and advance their employees partially on the basis of experience. Part of the reason for the near zero correlation may be that experience teaches many of the dysfunctional as well as functional techniques of communication. Or, perhaps it is because experienced supervisors are more interested in the technical or administrative aspects of their job. Whatever the speculation, the finding here that "experience is not the best teacher" certainly

challenges many of the heretofore beliefs about practical
experience as it relates to interpersonal communication.

Hypothesis five was concerned with the relationship
between self-actualization and interpersonal communicative
competence. The Pearson coefficients indicated a moderate
positive relationship to six scales of the POI--I, Ex, Fr,
S, A, and C--and a low relationship to three scales of the
POI--Tc, Sa, and Sy. Three scales were judged not related--
SAV, Sr, and Nc. In other words, the interpersonal compe-
tent communicator is somewhat inner directed, flexible in
applying values to life, sensitive to his own needs and
feelings, can express those feelings spontaneously, can
accept his own aggression, has the capacity to develop
meaningful human relationships, lives in the present, accepts
his self in spite of weaknesses, and has the ability to see
the opposites of life as meaningfully related. In short,
the interpersonal communicative competent supervisor is
by and large self-actualized.

This finding certainly sheds some light on an ageless
argument of skills vs. values. Some argue that if one
possesses the "correct" psychological values and motivation,
then he automatically possesses the necessary skills for
implementing those values. Others point out that skills
must be taught and do not automatically accrue to the
psychologically secure person. Although the finding here
cannot completely settle the argument, it at least indicates

some associative relationships. That is, one who is self-actualized has a moderate tendency to possess the communicative skills necessary to exhibit that self-actualization. Going further, the motivation to communicate effectively is related to the necessary knowledge to pursue it. Any conclusions pertaining to the possible cause and effect between the two is highly questionable.

The last hypothesis to be tested via the Person coefficient was that concerning leader behavior. Specifically, if a supervisor possesses the skills necessary for effective communication, is it reflected in the type of leader behavior exhibited in the work group? The data indicated only a slight relationship between consideration as one dimension of leader behavior and interpersonal communicative competence. There was no relationship with structure.

This finding is surprising in one way but not surprising in another. Certainly, given an ideal situation, the interpersonal competent supervisor should be able to exhibit high degrees of consideration and structure with the immediate work group. If he possesses the knowledge and skill necessary to communicate empathically with confrontation and problem solving, then effective leader behavior should ensue.

However, very few, if any, "ideal" situations exist in today's organizations. Perhaps the organizational climate is not conducive for the interpersonal competent supervisor to exhibit his preferred behavior. Specifically, other

variables not accounted for in this study--such as time pressures, dysfunctional goals of the immediate authority or organization as a whole, strict organizational policies, and others--are interfering with the motives and skill of the interpersonal competent supervisor. In short, the interpersonal competent communicator may be <u>forced</u> to operate and fulfill his lower level needs in preference to the higher level need of self-actualization. Perhaps the self-actualization need is being met by "off the job" activities. In conclusion, it may be that the role of the "helping supervisor" is incongruent with the role expected in many of today's organizations. Whatever the reason, very little relationship exists between communication skills and leader behavior, at least in the sample of respondents reported in this study.

Hypotheses Seven Through Ten

After a brief explanation of multiple regression correlation analysis as a more descript procedure for evaluating relationships among test variables, several key statistical formulas were discussed. Specifically discussed were multiple R, R^2, Beta, semipartial coefficient, and the F test. The difference between hierarchical and stepwise analysis was also presented in an attempt to explain the rationale behind "ordering" independent variables and its effect upon the semi-partial coefficient.

The purpose of hypothesis seven was to test the ability of selected supervisory characteristics to predict self-actualization. The resulting data analysis confirmed the ability of education, age, experience, and sex to predict self-actualization. Specifically, education (other factors being equal) was the strongest predictor, being moderately related to all scales of the POI. Age, by similar partialling, was next, being inversely related to four scales of the POI. Experience was third, being related to only three dimensions of self-actualization. And finally, sex played a minor role by being related to only two scales.

The finding that education is highly associated with self-actualization certainly has many theoretical, as well as practical, implications. Other things being equal, the emphasis of today's society upon education as a prerequisite to life certainly underpins the goal of a self-actualizing society. From an organizational standpoint, the recruitment and/or development of educated supervisors perhaps can enhance self-actualization as a dominant theme within the organization.

The finding also supports the contention that management development programs, over the long-run, can influence the manager's perceptions of trust, empathy, and creative problem solving. On the other hand, one would not expect a less educated supervisor to respond to the self-actualization need. It might be inappropriate to use the principles of employee

participation and trust in an organization of less-educated nonself-actualized adults.

Other factors being equal, experience can have a moderate relationship with self-actualization. But then again experience on the job is a form of education, so this finding is certainly understandable. By similar analysis age by itself does not seem to play a large role in self-actualization. And finally, after other factors have been accounted for, sex is of little significance.

The purpose of hypothesis eight was to empirically test the role of supervisor demographics and self-actualization in interpersonal communicative competence. The data analysis did underscore the ability of personal characteristics and self-actualization to predict interpersonal skills. However, upon closer inspection, it was found that much of the information contained in education (as a component of personal characteristics) was also related to self-actualization. This relationship was not too surprising after the testing of null hypothesis seven. Empirically, in terms of MRC, once education entered the prediction equation, the other independent variables of sex, age, experience, and self-actualization added very little information to the relationship. In other words, the other independent variables were so related to education they seemed unable to influence the dependent variable any further.

These findings concerning interpersonal skills certainly have organizational ramifications. If organizations desire supervisors with the ability to function as interpersonal communicators, then the recruitment of educated, self-actualized adults may accomplish a portion of the objective. Likewise, it underscores a previous research finding that psychological values and higher education are closely associated with interpersonal skills. Thus, self-actualized, educated supervisors possess the interpersonal skills necessary to practice empathy, confrontation, and problem solving. This being the case, these findings open the door to new objectives, policies, and procedures for organizations desiring the employment of self-actualized, interpersonal competent communicators.

The last two hypotheses were useful in testing a model of leader behavior. Specifically, it was hypothesized that the personal characteristics, self-actualization, and interpersonal communicative competence of the supervisor could be used to predict leader behavior along two dimensions. The model as a whole was not validated by the research data. The only independent variable having a small predictive relationship with both consideration and structure was education.

The fact that education had an inverse relationship with structure and a positive relationship with consideration is in itself confusing. Perhaps, it is because less educated

supervisors do not possess the values or skills necessary to practice considerate leader behavior. Thus, they may be forced to revert to more structure in solving group related problems. On the other hand, educated supervisors seem to practice more consideration and less structure, a finding that does not lend itself to the criterion of high structure/ high consideration behavior so often proposed as the most effective. In any event, the relationships were so small they probably have little practical relevance.

The fact that personal characteristics, self-actualization, and interpersonal skills were not capable of predicting leader behavior is also confusing. Given that self-actualized educated adults possess the necessary communicative skills, then certainly leader behavior (especially consideration) should be affected. Perhaps the organizations in which this study was conducted do not provide the "climate" necessary for proper implementation. Perhaps there is no "on-the-job" reward for supervisors to practice supportive communication with the employees. It could be that the self-actualized adults in the sample are meeting their higher-order need elsewhere. Certainly one generally practices that which is rewarded--at least in the short-run. Or perhaps, the subordinates of the supervisor under consideration in the sample are more desirous of meeting lower level needs than higher, thus advocating a more nonself-actualizing, nonsupportive style of leader behavior. The explanations for this

non-predictive model of leader behavior seem to be endless.
Whatever the hypothesized reasons underlying this confusing
relationship, more research is definitely needed.

Implications for Future Research

The implications for expanding on the basic research
study are many. First, other personal characteristics such
as race or religion could be evaluated to determine their
relation to self-actualization and/or interpersonal communi-
cative competence. Another avenue of possibility could be
various organizational variables such as group size, organi-
zational structure, and/or hierarchical level. Or, could
education (because of its dominant role in the entire study)
be studied in more detail, such as type of degree, occupa-
tional training versus liberal arts, and so forth? All of
these factors might possibly have an influence upon self-
actualization and/or interpersonal communicative competence.

Further, the model of leader behavior could be expanded.
That is, what organizational variables are prohibiting self-
actualized, interpersonal competent supervisors from exhibit-
ing more effective and functional leader behavior? The
concept of organizational climate could be considered as
a potential variable. Or, the psychological values of the
supervisor's immediate superior could be a factor. Or finally,
what impact do the values/attitudes of the immediate work
group have upon the self-actualization/interpersonal skills/
leader behavior relationship?

In short, although the study has contributed to a specific area of organizational knowledge, much more remains to be accomplished. Empirical research can contribute a significant number of answers to the seemingly endless array of questions posed by the complex phenomena of organizational behavior.

APPENDIX A

IICC--2

This questionnaire has been designed to describe your particular style of interpersonal communication in a supervisory capacity. There are no right or wrong answers since all people are different and have their own preferences for interpersonal communicative methods.

On the following pages you will find several "typical" supervisory situations in which you are asked to respond as the supervisor. After reading each problem situation, please write your initial response (one to two short sentences) in the space provided. In other words, what would you say in order to handle the situation? Remember, if this particular situation occurred in real-life, and you were the supervisor, how do you imagine you would respond?

For the purpose of completing this questionnaire, please assume you are an office manager for Southwest Corporation having the supervisory responsibility for eight employees. Naturally, you have the necessary authority and responsibility to effectively and efficiently plan, organize, direct, and control the activities of your department and work group.

Before you begin the questionnaire, please answer the following questions. This information will be used for research purposes only. Do not put your name anywhere on this booklet.

Number _____ Sex _____ Age _____

Years of Education: (Circle one) 9 or less, 10, 11, 12, 13, 14, 15, 16, 17, 18, over 18

Are you now, or have you ever been employed as a supervisor?
_____

If so, please state your most recent and/or present job title.

Most Recent Job _____ Present Job _____

Total number of years you have been a supervisor _____

NOW OPEN THE BOOKLET AND START WITH SITUATION 1.

1. Four months ago, Hank Short was transferred into your department from one of the plants back east. However, since it was his choice to relocate in this area, he was forced to take a position for which he is obviously overqualified. Because of his education and experience he quickly learned the rather simple task assigned to him in your department. Recently, however, he does not seem to have the motivation to do the great job he is capable of doing. Upon discussing the particular situation with Hank he responds rather dishearteningly, "You know, I just don't seem to have the old drive I once had."

   Your response would be:

2. Two weeks ago you recommended one of your best employees, James Boyd, for promotion into a supervisory position at one of the company's other plants. James has indicated several times that he is ready to move up in the company. Unfortunately, top management has turned James down for the new position (due to so many qualified applicants). Naturally, James is disappointed at the bad news; in fact, he is downright mad. He shouts, "What's wrong, aren't I good enough for this company?"

   Your response would be:

3. For the past few days you have noticed one of your employees, Jane Ross, continually arriving late for work. Knowing this will eventually cause trouble among the rest of the employees (the company requires everyone to be at work on time), you decide to call her into your office to determine what the problem is. Reluctantly, Jane explains that her six year old daughter must catch the school bus at 8:00 every morning. Since Jane does not want to leave her alone at the bus stop, it is causing Jane to be 30 minutes late for work. Jane then asks the question, "I can't just leave her all alone, can I?"

   Your response would be:

4. One afternoon your newest employee, John Doe, walks into your office with a problem. It seems that after two months on the job he is having some difficulty in "fitting-in" with the work group. He complains of petty jealousies and group pressure. Knowing that John has remained somewhat aloof with the rest of the employees, you can certainly understand the situation. After some stumbling around, John finally blurts out, "They don't like me because I am here to work, not socialize."

Your response would be:

5. Two months ago, you hired Sharon Long from the production department to take over the newly created job of "billings clerk" in your department. Since you conducted the personal interview with Sharon yourself, you were confident she had the necessary skills to handle the increased responsibility of the position. In addition, her records as a production worker indicated that whe was dependable and a hard worker. Recently, however, you have begun to question the wisdom of your original decision. Although Sharon has proven to be dependable and a hard worker, she now continues to make mistake after mistake in her new job. In attempting to explain the situation Sharon remarks, "I'm doing the best I can--I just don't know what else I can do."

Your response would be:

6. Once again it is annual performance review time at Southwest Corporation. As in the past, you have followed the company policy of rewarding your most productive employees with the largest pay increase for the forthcoming year. However, due to financial problems, top management has had to cut back on all pay increases for next year. Your most productive and conscientious employee, Bill Jones, was hit unusually hard. Bill feels that he is twice as productive as the rest of the employees (which he is) and thus explains, "I've worked myself to death for this company, and what do I have so show for it--nothing."

Your response would be:

7. Linda Myers comes bursting into your office one morning with the implication that you are "playing favorites" among the employees. For some reason she feels that you don't like her and that you are giving the other workers preferential treatment. Although you honestly don't think the charges are true, you nevertheless want to clear up the situation. Almost in tears, Linda says, "I don't know what you have against me. I've always done a good job."

Your response would be:

8. Recently you have heard complaints from several of the employees concerning Joan Smith. It seems that as part of the work group Joan is not carrying her fair share of the work load. Also, it seems that several of Joan's key reports have been turned in late for the past two weeks thus causing problems throughout the rest of the company. Upon talking with Joan she indicates that she is scheduled for surgery next month. Finally Joan admits, "I'm so upset over this operation that I can't keep my mind on my work."

Your response would be:

APPENDIX B

IICC

This questionnaire has been designed to *describe* your particular style of interpersonal communication in a supervisory capacity. There are no right or wrong answers since all people are different and have their own preferences for interpersonal communicative methods.

DIRECTIONS

On the following pages you will find several "typical" supervisory situations in which you are asked to respond as the supervisor. After reading each problem situation, please choose the one alternative (1, 2, 3, 4, or 5) that best describes your communicative reaction. In other words, what would you say in order to handle the situation? Remember, if this particular situation occurred in real-life, and you were the supervisor, how do you imagine you would respond?

Please read each alternative *carefully*. Although you may not agree with any of the alternatives completely, please choose the one that best describes your opinion. You are to mark your choice on the answer sheet you have. Be sure that the number of the response agrees with the number on the answer sheet. Make your marks heavy and black. Erase completely any answer you wish to change. Do not make any marks in this booklet.

Before you begin the questionnaire, be sure you put your sex, your age, and any other information called for in the space provided on the answer sheet. *Do not* put your name anywhere on the answer sheet.

For the purpose of completing this questionnaire, please assume you are an office manager for Southwest Corporation having the supervisory responsibility for eight employees. Naturally, you have the necessary authority and responsibility to effectively and efficiently plan, organize, direct, and control the activities of your department and work group.

NOW OPEN THE BOOKLET AND START WITH SITUATION 1.

Bobby Vaught
College of Business Administration
North Texas State University

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1. Linda Myers comes bursting into your office one morning with the implication that you are "playing favorites" among the employees. For some reason she feels that you don't like her and that you are giving the other workers preferential treatment. Although you honestly don't think the charges are true, you nevertheless want to clear up the situation. Almost in tears, Linda says, "I don't know what you have against me. I've always done a good job."

Your response would be:

1. "I don't have anything against you; you're a good employee so don't worry about it."

2. "You feel bad because you can't figure out what you are doing to cause this problem."

3. "That's where you're wrong. I don't think I've been playing any favorites around here."

4. "You feel bad because you want me to like you but you just can't seem to find a way."

5. "It seems that you think I don't like you and you feel bad about that."

2. Two months ago you hired Sharon Long from the production department to take over the newly created job of "billings clerk" in your department. Since you conducted the personal interview with Sharon yourself, you were confident that she had the necessary skills to handle the increased responsibility of the position. In addition, her records as a production worker indicated that she was dependable and a hard worker. Recently, however, you have begun to question the wisdom of your original decision. Although Sharon has proven to be dependable and a hard worker, she has continued to make mistake after mistake in her new job. In attempting to explain the situation Sharon remarks, "I'm doing the best I can—I just don't know what else I can do."

Your response would be:

1. "You haven't been able to handle the new job and this is really frustrating you."

2. "You need to pay more attention to your work; try to be more careful from now on."

3. "It could be you're frustrated because you're afraid the job is too much for you."

4. "You're frustrated because you can't seem to catch on, and you really want to keep this job."

5. "You are making far too many mistakes in your job; you said you could handle it."

3. Two weeks ago you recommended one of your best employees, James Boyd, for promotion into a supervisory position at one of the company's other plants. James has indicated several times that he is ready to move up in the company. Unfortunately, top management has turned James down for the new position (due to so many qualified applicants). Naturally James is disappointed at the bad news; in fact, he is downright mad. He shouts, "What's wrong, aren't I good enough for this company?"

Your response would be:

1. "It was a competitive situation so don't give up; you'll get another chance for a promotion."

2. "Sounds like you're disappointed because you are not moving ahead as fast as you think you should."

3. "You have worked hard and now you're disappointed. You're thinking nobody appreciates what you've done."

4. "You're disappointed because you haven't moved up, but you really want to work hard and get promoted."

5. "I don't understand why you are so upset. We did all we could under the circumstances."

4. Once again it is annual performance review time at Southwest Corporation. As in the past, you have followed the company policy of rewarding your most productive employees with the largest pay increase for the forthcoming year. However, due to financial problems, top management has had to cut back on all pay increases for the next year. Your most productive and conscientious employee, Bill Jones, was hit unusually hard. Bill feels that he is twice as productive as the rest of the employees (which he is) and thus explains, "I've worked myself to death for this company, and what do I have to show for it—nothing."

Your response would be:

1. "The company just doesn't have the money this year; just be patient and keep up the good work."

2. "You just can't figure out what kind of effort the company expects and this really upsets you."

3. "That kind of attitude certainly won't get you a pay raise; you can't always get what you want."

4. "You've been a hard worker and now you're upset because you think the company has let you down."

5. "You're upset because you can't accept the company's decision yet you really want to feel good about the job you're doing."

5. Recently you have heard complaints from several of the employees concerning Joan Smith. It seems that as part of the work group Joan is not carrying her fair share of the work load. Also, it seems that several of Joan's key reports have been turned in late for the past two weeks thus causing problems throughout the rest of the company. Upon talking with Joan she indicates that she is scheduled for surgery next month. Finally Joan admits, "I'm so upset over this operation that I can't keep my mind on my work."

Your response would be:

1. "The uncertainty and the waiting around for this operation has really gotten you worried and upset."

2. "Sounds like you are worried because you don't know how to handle this conflict between your work and the operation."

3. "Your work hasn't been up to par lately. We expect you to get your reports in on time."

4. "It's pretty upsetting to you because you can't seem to get a hold of yourself, and you really want to do a good job."

5. "Just try to put this thing out of your mind for the time being; it will all work out."

6. For the past few days you have noticed one of your employees, Jane Ross, continually arriving late for work. Knowing this will eventually cause trouble among the rest of the employees (the company requires everyone to be at work on time), you decide to call her into your office to determine what the problem is. Reluctantly, Jane explains that her six-year-old daughter must catch the school bus at 8:00 every morning. Since Jane does not want to leave her alone at the bus stop, it is causing Jane to be 30 minutes late for work. Jane then asks the question, "I can't just leave her all alone, can I?"

Your response would be:

1. "Seems like you don't know how to solve the problem and it's causing you to feel bad."

2. "You feel bad because you can't work this thing out but you want to do what's right."

3. "Why don't you make some arrangements to have her taken care of in the mornings?"

4. "Sounds like you are torn between your daughter and your job, and this is causing you to feel bad."

5. "You know that company policy requires everyone to be at work promptly at 8:00."

7. Four months ago Hank Short was transferred into your department from one of the plants back east. However, since it was his choice to relocate in this area he was forced to take a position for which he is obviously overqualified. Because of his education and experience he quickly learned the rather simple task assigned to him in your department. Recently, however, he does not seem to have the motivation to do the great job he is capable of doing. Upon discussing the particular situation with Hank he responds rather dishearteningly, "You know, I just don't seem to have the old drive I once had."

Your response would be:

1. "Sounds like you're discouraged because you feel trapped in a dead end job."

2. "You knew the circumstances of the job when you decided to move to this area."

3. "You just can't seem to find any meaning to your work and this is discouraging you."

4. "You're discouraged because you think you can't solve this problem and you really want to enjoy your work again."

5. "Why don't you look at another transfer, or perhaps you could make this job more of a challenge."

8. One afternoon your newest employee, John Doe. walks into your office with a problem. It seems that after two months on the job he is having some difficulty in "fitting-in" with the work group. He complains of petty jealousies and group pressure. Knowing that John has remained somewhat aloof with the rest of the employees, you can certainly understand the situation. After some stumbling around, John finally blurts out, "They don't like me because I am here to work, not socialize."

Your response would be:

1. "Part of doing a good job is getting along with your fellow workers; try to be more friendly."

2. "That's no way to act. What's the matter, can't you learn to get along with other people?"

3. "Looks like you don't know how to handle this social situation and you are letting it upset you."

4. "You feel angry because you can't relate to people but you want to be accepted as part of the group."

5. "Sounds like you are angry because the other people won't accept you."

APPENDIX C

Instructions Read to All Subjects

I would like to ask for your cooperation in a study of communication and human behavior. I can assure you that the information received will remain completely confidential and anonymous. The study is entirely independent and is in no way connected with your organization. If, however, your organization requests any of the information obtained, it will be supplied as summary data only. Your only reason for taking part in the completion of the questionnaire(s) should be to add to the existing knowledge of communication and human behavior.

(The instructions on each test were then read to the subjects agreeing to remain and complete the test instruments.)

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