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SELF-CONCEPT, INTERPERSONAL RELATIONS, AND GROUP LEADERSHIP
CHARACTERISTICS IN A LEADERSHIP TRAINING SITUATION

by

JAMES EDWARD HANDLEY

A professional paper submitted to the Graduate Faculty
in partial fulfillment of the requirements for the degree

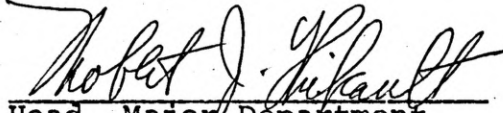
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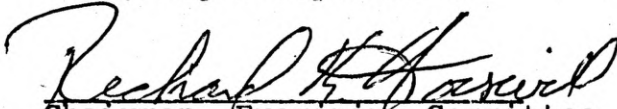
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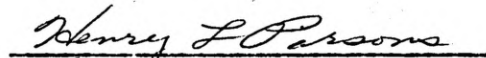
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ABSTRACT

The current study, entitled "Self-Concept, Interpersonal Relations and Group Leadership Characteristics in a Leadership Training Situation," investigated small group processes on several fronts: first, the self-concept of the group members; second, the interpersonal relations orientation of the group members; and finally, a peer-rating measure of the leadership characteristics of the group members. Measures of the relationship between the self-concept and interpersonal relations orientation on the one hand, and leadership characteristics on the other were sought, together with measures of change over the period of the group experience. The study was conducted during a ten-week class in group leadership at Montana State University.

The Tennessee Self-Concept Scale, counseling form, was used to investigate self-concept; the Fundamental Interpersonal Relations Orientation scales (forms B and F) were used to investigate interpersonal relations orientations. A peer-rating scale, developed within the process of the group experience was used to investigate leadership characteristics. The scales were administered on a pre-, mid-, and post-test basis. Correlation studies, together with multiple regression models and a t-test of variance were used to analyse the data obtained.

The data indicated that prediction of leadership characteristics was not possible, within the context of the current study, from knowledge of either self-concept scores or interpersonal relations orientation scores. Change of a significant magnitude occurred along almost all dimensions in the study. The study group appeared normal on all measurements.

There did not appear to be a significant relationship between self-concept and interpersonal relations orientation on the one hand and leadership characteristics on the other. While change along those lines was evident throughout the study, and while the group appeared to be normal in almost all respects, the data indicated no functional relationship. The investigator recommends further research with special emphasis on the development of an effective and accurate measurement of leadership characteristics.

Chapter 1

INTRODUCTION

Research into the phenomena of group experience, whether experimental or investigative, is one of the most necessary endeavors in the behavioral sciences today. Mankind lives, work, relaxes, and goes to school in groups. He is healthy or unhealthy, sad or happy in groups. While not denying the viability of solitary existence, either physical or psychological, man is a gregarious animal. In order to understand the nature of man, we must understand the way in which he functions in groups.

The intensive small group experience, variously referred to as sensitivity groups, encounter groups, T-groups, human relations training, etc. has been demonstrated to be an effective milieu in which to study group behavior as well as an effective place for individuals to learn to participate more effectively in their everyday lives.

The current study is of one small group experience, participated in by twenty-four members of Montana State University. The purpose of the group was to learn about small group leadership; the method of learning was to participate in a small group--to learn by doing.

The investigation centers around three factors: self-concept; interpersonal relations orientation; and

effectiveness of the members as group leaders as described by peer-ratings of group leader characteristics.

STATEMENT OF THE PURPOSE

The purpose of the current study was to investigate the relationship of self-concept and interpersonal relations orientation to group leadership effectiveness within the context of a small group whose objective was to give basic training in group leadership.

NEED FOR THE STUDY

The study of group phenomena is a relatively new endeavor; that is not to say that little research has been done, nor that we know very little about the nature of group behavior. There is, however, a need for more research data as well as a need for different approaches to the study of groups. Dr. Jack R. Gibb states in a review of groups literature,

What we seem to have are some promising theories, some meager data, and some methodological innovations. We do not as yet have adequate tests of the theories of group processes (3:850).

The intent of the current study is to make an exploratory investigation toward the resolution of those deficiencies.

QUESTIONS TO BE INVESTIGATED

In order to better define the scope of the present study, several questions have been generated in three major areas: first, questions seeking descriptive data; second, a question probing into relationships; and finally, questions asking about change. These questions will form the basis for the investigational procedure.

1. What was the self-concept of the group members?
2. What were the interpersonal relations orientations of the group members?
3. How did the members of the group rate as group leaders?
4. What was the relationship between self-concept and interpersonal relations orientation on the one hand and group leadership effectiveness on the other?
5. Was there a change in the self-concept of the group members over the period of the group experience?
6. Was there a change in the interpersonal relations orientation of the group members over the period of the group experience?
7. Was there a change in the peer-ratings of group leadership characteristics of the group members over the period of the group experience?

GENERAL PROCEDURES

In order to answer the above questions, four instruments were used: the Tennessee Self-Concept Scale (TSCS); the Fundamental Interpersonal Relations Orientation scales, forms B and F (FIRO B and FIRO F); and a scale to measure group leadership effectiveness in terms of peer-ratings on a set of leadership characteristics. The last scale was devised by the investigator in conjunction with the group and others.

The TSCS and the FIRO's were administered on a pre-middle-, and post-test basis; the peer-rating forms were administered in the middle and at the end of the group experience. The group met in ten weekly sessions of from three to four hours each. Data collection before, during, and after the experience was dictated by a desire to tap process phenomena as well as outcome phenomena.

LIMITATIONS AND DELIMITATIONS

The most obvious limitation of the current study is the lack of a control group. Since indices of change and relationship were sought, a control group would have assisted in the interpretation of the results. A further limitation of the study is the small size of the study

group (only 18 of the 24 group members participated in the study). Furthermore, the nature of the group experience is very difficult to define operationally or absolutely. The peer-rating form used has not been subjected to tests of validity or reliability; hence, results should be judged cautiously. Finally, due to the exploratory nature of the study, all results should be viewed tentatively.

DEFINITION OF TERMS

In order to facilitate communication, the following definitions are offered:

1. An encounter group is a pre-arranged, intensive meeting of a group of individuals.
2. Interpersonal relations orientation is a term coined by William C. Schutz to denote the manner in which an individual characteristically relates to others (12:58).
3. Self-concept is, literally, an individual's conceptualization of himself--actual, ideal, and in process.
4. A group leader is the person on whom the responsibility for the group and its members rests for the period of the group experience. He may be an active leader or a facilitator or just another member of the group.

There are many names for group experiences, encounter

groups, T-groups, human relations training, sensitivity groups, etc. For the limited purposes of the current study, they may be conceived of as synonymous. Since only one group leader was involved, the matter of title is unimportant.

SUMMARY

This study investigated the relationship of self-concept and interpersonal relations orientation to group leadership effectiveness, within the context of a small group. Four instruments were used to obtain the data in order to answer the questions posed. The following chapters will consider the literature in the field, the procedures used in the current study, the findings, and a summary with conclusions and recommendations.

Chapter 2

REVIEW OF SELECTED LITERATURE

Not too many years ago this chapter would have started with the complaint that there was not enough pertinent literature in the field. Not so today; there are at least three volumes reviewing group research and many hundreds of articles both popular and professional. Additionally, there are several texts available ranging in subject matter depending upon the author's persuasion and professional orientation.

Two authors, Roger Harrison and Jack R. Gibb, have reviewed respectively the problems involved in groups research and the literature in the field (4:10-23) (3:839-862). Both reviews are excellent and complete, presenting conclusions drawn not only from the usual public sources, but from unpublished manuscripts and dissertations as well. This investigator has chosen to rely heavily on their reviews for several reasons in addition to the above: first, both men are experts in their fields; second, many of the public sources utilized by the two reviewers were not available to this investigator, to say nothing of the unpublished studies; third, even in the case of available works, this investigator was handicapped by the lack of complete

comparative material from which to interpret. Nevertheless, the bibliography contains several references which while not cited, have assisted this investigator in his general understanding of the field. In short, this investigator can do no better than to follow Carl Rogers' recommendation to rely on reviews already published (9:117).

The present chapter will attempt to summarize the pertinent research in two major areas: first, the many problems adherent to research design and interpretation in the field; and second, a brief summary of findings.

PROBLEMS

Roger Harrison, Lewis E. Durham, Jack R. Gibb, and Eric S. Knowles, in a small book entitled I. Problems in the Design and Interpretation of Research on Human Relations Training II. A Bibliography of Research, have provided an excellent summary of the problems and research. The most obvious problem, as in any of the behavioral sciences, is the provision of adequate control groups, a loaded problem at best. Harrison enumerates several essential obstacles to research in this area: first, the fact of being in a training or a control group biases the individual, the former in terms of self-concept and the perception of him by

others, the latter in terms of increased expectation by him and others for change (Harrison, 4:10-12).

Investigators are further hampered by the voluntary nature of human relations training. In order to randomly assign individuals to equivalent training or control groups, the investigator must compromise voluntarism. Such compromise inevitably leads to increased resistance and mistrust in both segments of the population. Massarik, according to Harrison, has suggested delaying the training of one half of a voluntary group in order to use that group as control. This too has problems, in that some of those delayed become reluctant to participate, or insist on being in the training group, or participate in the control group out of reluctance to be in the training group (4:11).

Harrison suggests two possible alternatives to the problem: (both involve studying the process of group interaction rather than just input-outcome): first, give comparable groups training that differs systematically along some important dimension. This approach enables the investigator to identify important variables in the training process. Second, introduce control through the prediction of important outcomes from significantly different behaviors or processes. Measurement of behavior and process becomes at this point paramount (4:10-12). The next major

problem in research into groups in one of temporality, specifically the measurement of longitudinal change. This problem becomes more acute when viewed in the context of a theory of personal change proposed by Schein and Bennis (originally Lewin's Concept). They propose a three stage dynamic: first, a period of unfreezing, a shake-up generating a need for change (this stage often occurs during the group); second, a search and experiment stage, a trying-out of new information and behavior (this may occur during or after the group); and finally, a re-freezing--a new balance (this may occur during or after the group) (Schein and Bennis, 11:275, 314-17).

In a study by Harrison, 1966, two change measurements were obtained, one immediately after the group and the second six months later. The first measures showed positive but statistically insignificant changes; the second yielded statistically significant changes. The Harrison study should not be construed as empirical evidence in support of Schein's and Bennis' theory rather as another bit of evidence indicating the complexity of research in this area. Harrison concludes that,

. . . if this model is correct (Schein and Bennis) the phase a person is in makes a great deal of difference in the kinds of changes we should look for as training outcomes. What we usually mean when we talk

about outcomes in the 'refrozen' state, in which the individual has integrated and stabilized new patterns of cognition, perception and behavior.

What we may often measure is the process of change itself. During this phase we should expect rather different outcomes if the training has been successful (4:13).

Consequently, in any study, careful but often fruitless attention must be paid to the nature of the outcomes that are being measured. Behavior may be outcome or process; without statistically impossible attention to individual cases such knowledge is often unavailable. Measures purported to be, for example, self-concept measures might in fact be measures of higher activity levels, greater risk-taking, higher aspirations, greater anxiety etc. As of 1967, the date of the Harrison review, such ambiguities had not been satisfactorily resolved (4:10-23).

Another bugaboo in such studies (invariably measuring some sort of change) is the dimension and direction of such change. Harrison proposes that there are three essentially different ways of approaching this problem. The first is normative with respect to the outcome measurements, restrictive as to the dimension of change, and prescriptive with respect to the direction of change considered desirable by the investigator. Harrison and Oshry, 1967, have done studies involved in this approach (Harrison, 4:15).

The second way of looking at the problem is in terms of individual growth. Harrison characterizes this approach as one looking for rough edges being rounded off. Bunker, Miles, and Valiquet (Harrison 4:15) have been involved in this approach. Finally, there is an approach characterized by attention to general improvement in adaptability. Harrison considers this approach to be a high priority approach but regrets to inform us that very little significant research had been done by 1967. Summarizing this problem, Harrison asks if one change is as important as another; is one direction as significant as any other? Careful delineation of the philosophical and theoretical foundations of each study are a prerequisite to the effective definition of design and interpretation of results (Harrison, 4:14-17).

Still another area of vast ambiguity and importance is that of specifying the type of training or encounter experience that the members of a group undergo. Subsumed under this category are three major variables: first, the cult of inventiveness and creativity that appropriately surrounds the field. This, combined with largely inadequate theory, finds almost every facilitator doing something slightly different from his colleagues, even though the

title of the group experience may be identical. A variation of this problem is that each facilitator has his own individual style which may or may not be directly related to theory. Finally, there are vast variations in the compositions of the groups, ranging from expectations, through behaviors, to situational and demographic variables. Attempts at controlled composition have given birth to differences in learning situations and outcomes (Harrison, 4:19).

Given the importance of process in group situations, and the vast variability among individuals as to their rate of change, for example which phase they are in according to Schein and Bennis, the timing of the data collection becomes a significant variable in itself. Arguments in favor of almost any procedure may be found, each with its advantages and disadvantages. For example, with regard to pre-group measure, a truly pre- measure could be obtained by mailing the instruments to the participants to be taken a day or two before the group meeting. This situation, however introduces a variable of increased, largely irrelevant anxiety. A measure taken on or after the first meeting of the group resolves that problem but is not truly a pre-test.

Harrison suggests doing what seems to be most effective or practicable (4:18-19).

The Hawthorne effect is widely publicized and almost universally accepted. The literature indicates that the effect on the study group of the experimenter's presence is even more pronounced in human relations training than elsewhere. There is a high value placed by the members on a trust relationship; consequently any secrecy of intent, motive or procedure is frowned upon and has resulted in many forms of false measurements and conclusions. Some groups have refused to complete measuring instruments; other studies have yielded false negative results. (There is a vast amount of data in the positive but statistically insignificant direction.) Harrison concludes that the variability and unreliability therein caused is random instead of systematically biased. The lesson is to make procedures and measures accessible to the group members, and short of that, to follow up with reasonable explanations and interpretations (4:19-20).

It should be obvious from the above discussion that the procedural and philosophical difficulties arising in any study of group phenomena are of a wide range and of considerable depth. To design the perfect study model is probably

impossible. The essential aspects of any new study should be careful definition of limitations and delimitations, of areas of possible ambiguity, as well as a complete as possible description of the group, the situation and as many other variables as are visible.

RESEARCH FINDINGS

There are, nonetheless, several general conclusions that can be justifiably drawn with regard to group phenomena. The next portion of this chapter will direct itself to those generalities. Dr. Carl R. Rogers, in his book, Carl Rogers on Encounter Groups, recommends a review of literature by Dr. Jack R. Gibb as being both objective and complete. Dr. Gibb, writing in 1970, has examined over 250 articles, dissertations and other reviews in order to arrive at what can be considered the best summary of what groups are, what they accomplish, and the variables involved in them (Rogers, 9:117-19).

Perhaps the most significant of Gibb's conclusions is that,

. . . changes do occur in sensitivity, feeling management, directionality of motivation, attitudes toward self, attitudes toward others, and interdependence (3:855).

All of these areas have relevance to the present study, especially the category, attitudes toward self. A brief discussion of each category follows:

Sensitivity Training was one of the original names given to human relations training in a group. The study of this area has therefore received much attention. Gibb reports seventeen major studies of the area, with only three reporting decreases in sensitivity. The remaining fourteen do not, however, constitute massive evidence in favor of increases in sensitivity since not all had control groups and not all were free from significant methodological ambiguities.

Sensitivity is seen by Gibbs as two-dimensional: first, an input process involving awareness of feeling and perception of others; and second, an output component involving availability of self, transparency, openness and spontaneity (3:841).

Several areas within sensitivity have been investigated. In terms of member ability to predict others' responses to test items, slight increases or no increase has been the rule. Sensitivity to the group process, has however, produced more significant results. Oshry and Harrison, in a 1966 study cited by Gibb (3:844), found that

trainees "saw 'clearer connections between how well interpersonal needs are met and how well the work gets done.'" Miles, Cohen and Widman found that trainees systematically improved in terms of sensitivity to feelings. Other areas of sensitivity also produced significant improvement, for example, the increased use of interpersonal concepts in the description of other people (Gibb, 3:843-44).

Evidence from Bunker (1965), cited by Gibb (3:844) indicates that all aspects of sensitivity, i.e. input and output appear to be the precursors of change if change is in fact to be a product of the group experience. Gibb notes that with all the interest in input/output variables of sensitivity, very little effort has been directed toward understanding the personal effectiveness side of the matter. In other words, no conclusions have as yet been drawn as to the relationship of increased sensitivity to a person's effectiveness in situ (Gibb, 3:844).

Managing feelings, another area of prime concern in the literature, is described by Gibb as a consonance of feelings and behavior, a clarity of expression, and an integration of emotionality into life (3:841). While there is little doubt that group experiences are emotional experiences the question before researchers is: Are these feelings

integral and consonant in both the group and in everyday life? Several studies report that if changes are to occur, they will occur in the context of feelings, that feelings, "are the most salient stimuli in group situations" (Gibb, 3:845). There is little doubt that feelings are central within the group. Carl Rogers reports on a followup study of more than 500 group members, stating,

The overwhelming majority felt it (the group) had been constructive in its results, or had been a deeply moving positive experience which made a continuing positive difference in their behavior.

This, given the affective orientation of Carl Rogers, indicates that consonance of feelings and behavior is a factor outside as well as within the group (9:126).

Managing motivations is described by Gibb as awareness of one's motivations, clear communication of them, self-determination and becoming (3:841). Primary interest in this factor has been expressed by the business management community, who have found that employees undergoing training become more highly motivated in their work, and that top level management people become more accepting of idea initiation from below them in the business structure.

Boyd and Ellis (1962), cited by Gibb (3:846), found that people in work situations made more realistic assessments of their roles after training. In a more general sphere,

findings include increases in the assuming of greater responsibility, greater risk-taking, and more self-determining attitudes (Gibb, 3:845-46).

Gibb describes functional attitudes toward self as including self-esteem, real and ideal self, acceptance of self and confidence in self (3:841). Again with tentative interpretation as a guideline, the majority of studies have found positive changes in self concept as a result of group training. According to Gibb, the most adequate studies have found a significant convergence of the ideal and actual self. Observer ratings of self confidence have shown increases whose magnitude have depended upon the length of training. Other studies mentioned by Gibb have shown tentative evidence that a members self-concept is dependent upon his subjectively held version of the other members' concept of him which is in turn dependent upon his objective public identity. One conclusion that can be drawn from the literature is that self concept plays an integral role in the process of the group not only for the individual but also for the group. Self-concept is apparently the major mediator of change within the individual and the group. Gibb summarizes the importance of self-concept

change as follows: "It is possible that such change must proceed other changes" (3:847).

Other changes found to occur in groups include changes in attitudes toward others, or interpersonal relations orientations. In general, members tend to place less emphasis on structure; to move toward an acceptance of the attitude of the group leader; and to move toward acceptance of others. People tend to move toward interdependence--an interdependence that promotes effective working together.

A study by Jacobson and Smith, 1972, in which the FIRO B was utilized, found significant changes in several aspects of interpersonal relations orientations. Low scorers on both wanted and expressed affection and inclusion tended to increase their scores after the group experience, while high scorers remained high. There was some indication that improved or continued high scores remained high after a two month period. Mixed results were obtained on the control scales. Wanted control generally remained the same, while high scores on expressed control tended to decline (Jacobson and Smith, 6:409-10).

The initial research into the FIRO B, conducted by William C. Schutz, (13:3-8) found that teachers and psychology students, two groups well represented in the

current study, scored as follows:

	Teachers	Psychology Students
Expressed Inclusion	5.2	5.4
Wanted Inclusion	3.4	4.0
Expressed Control	3.1	3.4
Wanted Control	5.1	5.0
Expressed Affection	3.7	3.6
Wanted Affection	4.3	4.9

The range of possible scores on the FIRO B is from zero to nine, inclusive--the higher the score, the more a given category is descriptive of the subject. Hence, teachers scored very near the middle of the range on wanted affection (4.3), and psychology students scored relatively high (5.4) on expressed inclusion.

SUMMARY

The literature indicates that first, groups research is a complex, often contradictory field, full of ambiguities and assumptions, and second that research into groups has nevertheless arrived at some well tested findings. Changes do occur in the group in terms of the individual members as well as the group as a whole. Business management and

other facets of society have found that the changes effected in groups have definite implications in day to day life. Most significantly for the current study, the literature indicates that changes in self-concept and interpersonal relations orientation not only occur but are as well prime determinants of change in other areas of behavior and affect.

Chapter 3

PROCEDURES

The present chapter will deal with the procedures involved in this study. For purposes of clarity the following organizational scheme is presented: first, a description of the population; second a description of the categories that have been investigated; third, a description of the instruments used to collect the data; fourth, the methods of organizing the data; fifth, the statistical hypotheses of the study; sixth, a description of the analytic techniques used; and finally a summary. As mentioned in the literature review, these descriptions are of primary importance in the field of group research, because accurate interpretation depends upon concise understanding of the variables involved as well as the data themselves.

The population of this investigation consisted of 18 members of a class in group leadership conducted by Dr. George E. Rice. The name of the class was "Group Leadership, Psychology 580," given Spring term 1972 at Montana State University. There were 24 members of the class; because, however, an enrollment of about 15 was expected, the investigator had only procured twenty sets of data-collecting instruments. These were distributed to those desiring to be a part of the study. Eighteen were

returned completed. Because no attempt will be made to infer to the general population of those involved in group experiences, those eighteen individuals will be considered the population for this study.

The group was evenly divided along male/female lines. Twelve were counseling majors--one at the doctoral level, the rest at the masters level. The remaining six were graduate students or members of the administrative branch of the University. The age range was from the early twenties to the fifties, with a preponderance in the twenties. Less than half of the group had had previous experience with groups other than an academic exposure. Most of the group had at one time been members of the teaching profession.

The group met for from three to four hours once per week for ten weeks, beginning March 29, 1972 and ending May 31, 1972. Two major learning procedures were incorporated into the class: first, the experience of being in a small group encounter situation; and second, outside readings. The small group situation consisted of a wide variety of practical situations, including role-playing, fantasy, non-verbal communication, and various exercises as well as others. The assigned readings were: Malamud and Machover's Toward Self Understanding, Group Techniques in Self Confrontation; Jane Howard's Please Touch, Carl R. Rogers' Carl

Rogers on Encounter Groups; and Abraham Luchin's, Group Therapy: A Guide.

INVESTIGATIVE CATEGORIES

Seven major questions were raised in Chapter One; the investigative categories that follow will deal with each question in turn. The categories are, of course, interrelated.

1. The self-concept of the group members.
2. The interpersonal relations orientation of the group members.
3. The peer-ratings of group leader characteristics of the members of the group.
4. The relationship of self-concept and interpersonal relations orientation to peer-ratings of group leader characteristics.
5. The change of self-concept of the group members over the period of the group experience.
6. The change in interpersonal relations orientation of the members of the group over the period of the group experience.
7. The change in peer-ratings of group leader characteristics of the group members over the period of the group experience.

These broad categories have been further defined by the nature of the instruments used to collect data on them. the following section will describe the instruments, their sub-tests, and derivation.

METHOD OF COLLECTING DATA

Four instruments were used to obtain the data necessary to investigate the above categories. The Tennessee Self-Concept Scale, Counseling form (TSCS), with fourteen sub-scales was used to measure self-concept. A description of the sub-scales follows:

1. Self-criticism (S.C.)--This scale is composed of ten mildly derogatory statements that most people will admit as being true of them. High scores indicate a healthy capacity for self-criticism. Very low scores indicate a deliberate effort to present an overly favorable impression or extreme defensiveness.

2. Positive Scores (P)--There are eight positive scores that can be seen as forming a grid of self-concept measures. The first three (one dimension) are 'what I am,' (R1), 'how I feel about myself or self-satisfaction,' (R2), and 'how I behave' (R3). The other five (the second dimension of the grid) are physical self (C1), moral-ethical

self (C2), personal self (C3), family self (C4), and social self (C5). In all cases, the higher the score, the more positively the subject views himself. The ninth and last positive score is total positive (TP), the numerical sum of the other eight positive scores. This is most valuable single score on the scale since it reflects the overall level of self-esteem.

3. Variability Scores (V)--These scores are a numerical measure of the amount of inconsistency from one positive measure to another. Very high total V (TV) indicates little integration or unity of self-concept while very low scores indicate rigidity. A score slightly below the mean indicates healthy flexibility. There are two V scores in addition to TV: column V and row V, which are breakdowns of TV according to the dimension of the grid referred to.

4. The Distribution Score (D)--The response format of the TSCS is a five point Likert scale with a response of 'five' indicating that the statement applies greatly to the individual, a response of 'one' indicating that the statement does not apply. The distribution score is a measure of the overall certainty of a subject's responses, based on the frequency of responses in each

response category. A high score indicates a subject who is very sure about his self-perception; low scores indicate the opposite. Low scores may also indicate defensiveness.

The TSCS was validated by the following procedure. In order for an item to be retained in the scale it needed to receive unanimous support from seven trained judges (Clinical Psychologists). Various norming procedures have further enhanced and proven the usefulness of the scale.

The Fundamental Interpersonal Relations Orientation Scales (FIRO) are scales with a long history of use in many clinical and investigative settings. The B and F forms are parallel scales investigating respectively the behavior and the feeling aspect of interpersonal relations orientation. Six measures are obtained for each scale--an 'expressed' and 'wanted' measure for each of Inclusion, Control and Affection (e^i , e^c , e^a ; and w^i , w^c , w^a). The meanings for the various scales follow:

FIRO B--Inclusion, Control and Affection at the behavior level.

Expressed Inclusion--A high score indicates that the subject makes efforts to include others in his activities and to get others to include him in theirs.

Expressed Control--A high score indicates that the

subject tries to exert control or influence over things, activities, and people.

Expressed Affection--A high score indicates that the subject makes efforts to become close to people and that he tries to be friendly and personal.

Wanted Inclusion--A high score indicates that the subject wants to be included in other people's activities even if he doesn't make an effort in that direction.

Wanted Control--A high score indicates that the subject wants others to control and influence him.

Wanted Affection--A high score indicates that the subject wants others to be friendly and affectionate toward him and to try to become close to him.

FIRO F--The FIRO F is in every way identical to the FIRO B except that it measures inclusion, control, and affection at the feeling level instead of at the behavior level.

Expressed Inclusion (significance)--A high score indicates that people are important to the subject--they are significant and he is interested in them.

Expressed Control (competence)--High scores indicate that the subject sees people as competent and capable, he trusts and relies on people.

Expressed Affection (loveability)--High scores indicate that the subject feels people are likeable and loveable--they are basically good and warm.

Wanted Inclusion (significance)--High scores indicate that the subject wants others to regard him as important and interesting.

Wanted Control (competence)--High scores indicate that the subject wants others to feel that he is a competent individual.

Wanted Affection (loveability)--High scores indicate that the subject wants others to consider him likeable and loveable, warm and affectionate.

Reliability measures on the FIRO B are a coefficient of Internal Consistency of .94 (where .90 is considered sufficient) and a coefficient of Stability of .76 on a test-retest basis.

Content validity of a high order is an underlying trait of the FIRO scales based on the Guttman method of scale derivation. Concurrent validity has been well established through a analysis of FIRO scores for groups of well-known attitudes.

The fourth instrument used in the current study was devised during the course of the group experience with

the assistance of the group and others on the Montana State University campus. The group members who were participating in the study were asked to list ten important characteristics of a good group leader according to their perception. A list of over sixty characteristics (derived from the member responses) was given to seven members of the Montana State University faculty who had had extensive training in small groups. They were asked to list in order the ten most important characteristics that appeared on the larger list. A ranking of 'one' was credited with ten points, a ranking of 'two' with nine and so on. Computations from that data lead to the selection of the following ten group leader characteristics:

1. openness to self and others
2. sensitivity to the feelings of others
3. awareness and acceptance of self and others
4. confidence in the human potential of the group members
5. knowledge of group processes
6. congruent
7. honest
8. trust in self and others
9. non-judgmental
10. empathetic

These characteristics, then, were the basis for the peer-ratings of the members of the group. No special training was required to complete any of the instruments.

The chronology of administration of those instruments follows: On March 29, 1972 (the first meeting of the group) the TSCS and the FIRO's were handed out to those who wished to participate. They were asked to return the instruments by the next group meeting. At the same meeting, the purpose and nature of the study were explained to the members, with guarantees of confidentiality carefully described. Any questions that would have jeopardized the study had they been answered at that time were postponed until after the study had been completed.

On April 26, 1972 (the fifth meeting of the group) the TSCS, the FIRO's and the newly devised peer-rating form was administered as before. Any new questions were answered.

On May 24, 1972 (the ninth meeting of the group) the TSCS, the FIRO's, and the peer-rating forms were again administered on the same format. The group facilitator, Dr. George E. Rice wanted to save the tenth and last meeting of the group for concluding exercises without the encumbrance of psychometric proceedings. As a result, the last test is not truly a post-test.

From each participating member, then, eight measures were obtained, three TSCS' and three FIRO's (pre-, middle-, and post-) and two peer-rating forms (middle- and post-).

HYPOTHESES

According to the questions to be answered and the categories of investigation, the many hypotheses of this study will be divided into three major categories: those dealing with simple correlation; those dealing with multiple regression and those dealing with variance. Subsumed under each category will be several headings based on the instruments involved. Before each set of hypotheses will be a description of the variables involved. The following symbols will apply in all cases: " H_0 " will mean null hypothesis; " H_1 " will mean the alternative hypothesis; " r " will mean the correlation coefficient of the measure cited; " R^2 " will mean the multiple regression measure of the measure cited; and " $\bar{X}$ " will designate the mean of the measure cited. In the case of correlation and variance, the level of significance was .05; in the case of multiple regression, an F-test of significance was used.

- I. Simple correlation (Pearson Product-moment Correlation Coefficient).

A. Tennessee Self-Concept Scale--These hypotheses concern the correlation of the various subscales of the TSCS to the Peer-rating measures.

1. Self-Criticism

$$H_0: r = 0$$

$$H_1: r > 0$$

2. Total Positive

$$H_0: r = 0$$

$$H_1: r > 0$$

3. Row One

$$H_0: r = 0$$

$$H_1: r > 0$$

4. Row Two

$$H_0: r = 0$$

$$H_1: r > 0$$

5. Row Three

$$H_0: r = 0$$

$$H_1: r > 0$$

6. Column A

$$H_0: r = 0$$

$$H_1: r > 0$$

7. Column B
 - $H_0: r = 0$
 - $H_1: r > 0$
8. Column C
 - $H_0: r = 0$
 - $H_1: r > 0$
9. Column D
 - $H_0: r = 0$
 - $H_1: r > 0$
10. Column E
 - $H_0: r = 0$
 - $H_1: r > 0$
11. Total Variability
 - $H_0: r = 0$
 - $H_1: r < 0$
12. Column Variability
 - $H_0: r = 0$
 - $H_1: r < 0$
13. Row Variability
 - $H_0: r = 0$
 - $H_1: r < 0$
14. D
 - $H_0: r = 0$
 - $H_1: r > 0$

B. Fundamental Interpersonal Relations Orientation scales (forms B and F)--These hypotheses concern the correlation of the various sub-scales of the FIRO's to the Peer-rating measures.

1. Inclusion

a. wanted

$$H_0: r = 0$$

$$H_1: r \neq 0$$

b. expressed

$$H_0: r = 0$$

$$H_1: r > 0$$

2. Control

a. wanted

$$H_0: r = 0$$

$$H_1: r \neq 0$$

b. expressed

$$H_0: r = 0$$

$$H_1: r \neq 0$$

3. Affection

a. wanted

$$H_0: r = 0$$

$$H_1: r > 0$$

b. expressed

$$H_0: r = 0$$

$$H_1: r > 0$$

II. Multiple Regression

A. Tennessee Self-Concept Scale--These hypotheses concern the relationship of the following variables (in a multiple regression) to the Peer-rating measures: Self-criticism; Total Positive; Total Variability; and D.

$$H_0: R^2 = 0$$

$$H_1: R^2 > 0$$

B. Fundamental Interpersonal Relations Orientation scales (forms B and F)--These hypotheses concern the relationship of the following variables (in a multiple regression) to the Peer-rating measures: wanted and expressed inclusion; wanted and expressed control; and wanted and expressed affection.

$$H_0: R^2 = 0$$

$$H_1: R^2 \neq 0$$

III. T-test of variance for correlated samples.

A. Tennessee Self-Concept Scale--These hypotheses concern the change in the measures of the TSCS,

all scales included except Total Variability, Column Variability, and Row Variability.

1. $H_0: \bar{X}_{pre} = \bar{X}_{mid}$
 $H_1: \bar{X}_{pre} < \bar{X}_{mid}$
2. $H_0: \bar{X}_{pre} = \bar{X}_{post}$
 $H_1: \bar{X}_{pre} < \bar{X}_{post}$
3. $H_0: \bar{X}_{mid} = \bar{X}_{post}$
 $H_1: \bar{X}_{mid} < \bar{X}_{post}$

B. Tennessee Self-Concept Scale--These hypotheses concern the change in the measures Total Variability, Column Variability, and Row Variability.

1. $H_0: \bar{X}_{pre} = \bar{X}_{mid}$
 $H_0: \bar{X}_{pre} > \bar{X}_{mid}$
2. $H_0: \bar{X}_{pre} = \bar{X}_{post}$
 $H_0: \bar{X}_{pre} > \bar{X}_{post}$
3. $H_0: \bar{X}_{mid} = \bar{X}_{post}$
 $H_0: \bar{X}_{mid} > \bar{X}_{post}$

C. Fundamental Interpersonal Relations Orientation scales (forms B and F)--These hypotheses concern the change in the measures of the FIRO's.

1. $H_0: \bar{X}_{pre} = \bar{X}_{mid}$
 $H_1: \bar{X}_{pre} \neq \bar{X}_{mid}$

2. $H_0: \bar{X}_{pre} = \bar{X}_{post}$
 $H_1: \bar{X}_{pre} \neq \bar{X}_{post}$
3. $H_0: \bar{X}_{mid} = \bar{X}_{post}$
 $H : \bar{X}_{mid} \neq \bar{X}_{post}$

D. Peer-rating scale--This hypothesis concerns the change in the peer-rating scale.

- $$H_0: \bar{X}_{mid} = \bar{X}_{post}$$
- $$H_1: \bar{X}_{mid} < \bar{X}_{post}$$

The above hypotheses apply in the following cases:

1. the relationship of the first administration of the TSCS and the FIRO's to the first administration of the peer-rating scale
2. the relationship of the second administration of the TSCS and the FIRO's to the first administration of the peer-rating scale
3. the relationship of the second administration of the TSCS and the FIRO's to the second administration of the peer-rating scale
4. the relationship of the third administration of the TSCS and the FIRO's to the second administration of the peer-rating scale

ANALYSIS OF DATA

As indicated under the preceding heading, three basic statistical procedures have been used: the Pearson Product-Moment Correlation Coefficient; the Multiple Regression; and the t-test of variance for correlated samples.

The mean, as a measure of central tendency has been utilized, of course, in the t-test of variance and has been used descriptively in reply to questions one through three in Chapter 1.

This investigator has been concerned equally over type I and type II errors; since this is an exploratory investigation, the level of significance selected was .05. An F-test of Significance was used for the Multiple Regression.

PRECAUTIONS TAKEN FOR ACCURACY

The original scoring of all instruments was done by hand. Several checking procedures are incorporated into the TSCS, while the FIRO's are exceptionally easy to hand score. The Peer-rating scale is, as well, very direct in regard to scoring. Subsequent calculations were done either by electrical desk calculator or computer. Dr. Albert Suvak,

head of the Montana State University Testing and Counseling Center, did the computer programming in conjunction with Mrs. Hazel Zeier.

SUMMARY

Four instruments, the TSCS, the FIRO's B and F, and a peer-rating scale of group leader characteristics, were administered to 18 members of Psychology 580 (Group Leadership) during Spring Quarter, 1972 at Montana State University. The data thereby gathered was treated statistically in three basic ways, the Pearson Product-moment Correlation Coefficient, a Multiple Regression and a t-test of variance. The several hypotheses generated will be tested according to that data at the .05 level of significance, using an F-test for the Multiple Regression. Sufficient measures have been taken to ensure accuracy of computation.

Chapter 4

RESULTS

This chapter will present the results of the study following the format established by the questions posed in Chapter 1. Some general results include the following: The study group was basically an ordinary group, conforming largely to the norms of the TSCS and to the data for comparable groups established for the FIRO scales. Very little in the way of significant results was obtained in the areas of correlation and multiple regression--it seems unwarranted to account for the variability of peer-rating scores by a knowledge of scores on the TSCS and/or FIRO scales. Significant change, on the other hand was apparent in many measures.

DESCRIPTION

The first question posed in Chapter 1 dealt with a description of the group according to the TSCS. The results of all three administrations of that scale can be found in Table 1 (page 43). Comparing the mean scores on all three administrations in that table to the test profile supplied by the designer of the test leads to the following conclusions: All but six of the fourteen sub-scales yielded

Table 1. Group Scores on the Tennessee Self-Concept Scale

sub-scales	Administrations					
	first		second		third	
	$\bar{X}$	St. Dev.	$\bar{X}$	St. Dev.	$\bar{X}$	St. Dev.
S.C.	38.33	4.42	38.39	4.80	37.72	5.24
T.P.	349.67	30.10	352.94	30.70	356.11	32.31
R 1	125.56	9.63	125.00	10.28	125.33	9.86
R 2	114.06	12.28	115.50	11.33	117.11	12.32
R 3	110.33	10.92	112.50	12.14	114.22	13.06
C.A.	71.06	6.22	72.72	7.77	71.56	8.96
C.B.	71.78	4.60	72.94	6.46	73.78	5.67
C.C.	65.28	9.41	66.33	10.07	66.72	8.48
C.D.	71.67	7.44	71.83	8.56	72.61	8.73
C.E.	69.89	9.52	69.61	6.19	71.44	7.41
T.V.	37.67	10.80	37.67	13.92	36.39	11.66
C.V.	21.39	6.67	20.39	7.69	20.11	5.98
R.V.	16.28	6.11	17.28	7.79	16.28	6.70
D	108.00	18.37	112.94	23.75	110.06	27.47

scores so close to the mean as to be considered perfectly normal. Those eight scales included the most important measure in the instrument, Total Positive. The indication is that the group looked at itself as being normally healthy in overall self-concept.

Row 2 positive, however, a measure of self-satisfaction, yielded three scores at approximately the seventy-fifth percentile. This is indicative of a relatively high level of satisfaction with the overall self-concept. In other words, the group seems normal in most respects and was quite satisfied with its self-appraisal.

Row 3 positive, on the other hand, a measure of self-appraised behavior, yielded scores on all three administrations at about the thirtieth percentile. Those scores indicate a level of behavior for the group that was somewhat below its level of self-esteem and self-satisfaction.

The three Variability scores, the most significant of which is the Total Variability, were very low on all three administrations. Total variability, measure of integration of self-concept, centered around the fifteenth percentile; this indicates a healthy integration and unity of self-concept (most healthy individuals score well below the mean but above the first percentile), (Fitts, 2:3).

The final score that deviated from the mean was the D score, a measure of decisiveness in responding to the instrument. All three administrations yielded scores around the twenty-fifth to thirtieth percentile, indicating that the group was not exceptionally certain about the way it saw itself. The scores were not, however, low enough to arouse suspicion. Extremely high or low scores are not considered healthy, (Fitts, 2:3).

Summarizing the descriptive scores of the TSCS, the group saw itself positively; was generally satisfied with its appraisal; but saw its own behavior as being somewhat less than expected. The group had a very highly integrated self-concept and was reasonably certain of its self-appraisal.

The results of the FIRO's B and F were not so simply interpreted. The highest score on all three administrations was from the FIRO F--expressed inclusion at 6.17, 6.83, and 6.44 consecutively. Please refer to Table 2 (page 46) for a complete listing of scores. Those scores indicate a relatively strong feeling among the group that people are significant, interesting, and important. Three other scales yielded consistently high scores: on the FIRO F, wanted inclusion and wanted affection; and on the FIRO B, wanted affection. The first indicates that the group wanted

Table 2. Group Scores on the FIRO's B and F

sub- scales	Administrations					
	first		second		third	
	$\bar{X}$	St. Dev.	$\bar{X}$	St. Dev.	$\bar{X}$	St. Dev.
B						
e ⁱ	4.28	1.93	4.50	2.36	4.11	1.78
e ^c	2.69	2.25	2.17	2.20	2.50	2.09
e ^a	4.39	2.28	4.50	2.87	4.72	2.80
w ⁱ	3.17	3.31	3.00	3.55	3.11	3.43
w ^c	4.17	2.09	4.17	2.52	3.94	2.10
w ^a	5.61	2.23	5.06	2.90	5.00	2.30
F						
e ⁱ	6.17	1.62	6.83	1.47	6.44	1.46
e ^c	4.72	2.37	4.33	2.22	4.44	2.53
e ^a	4.11	2.08	4.28	1.87	4.44	1.46
w ⁱ	5.56	2.23	5.72	2.05	5.11	2.51
w ^c	4.61	3.03	4.61	2.83	3.56	2.25
w ^a	5.67	2.00	5.28	2.59	4.78	2.41

on a feeling level to be regarded as significant, interesting and important. The other two scores indicate a strong desire on both a feeling and behavior level to be liked by others.

The above results taken together describe the group as one interested in people, one that considered itself interesting and significant. The group saw itself as feeling and behaving in a manner indicative of high wanted affection.

The corollary of wanted affection is expressed affection, measures of which were also consistently high, although certainly not the highest. The group did not, according to the FIRO's see itself expressing affection as strongly as it wanted affection. The significance of the difference has not been established statistically.

The remainder of the results can best be described in comparison to other groups from which data on the FIRO B have already been obtained as noted in Chapter 2. The group compared very favorably with both teachers and psychology students--both groups were well represented in the study group. While not a surprising finding, it is at least indicative of a certain normalcy--an indication supported by the results of the TSCS.

The final major point to be drawn from the FIRO's concerns expressed control, a measure on the FIRO B of the group's behavioral desire to exert control and influence over other people. The group scored consistently very low on that scale, indicating very little desire to control the actions of others.

In conclusion, the group considered itself interesting and interested in others; it wanted affection on both a feeling and a behavior level, while expressing a relatively high degree of affection for others. The group scored quite normally when compared to psychology students and teachers, and did not express a desire to control others.

The peer-rating scale (see Table 3, page 49) yielded two scores, the first taken mid-way through the group experience, the second at the end. A brief explanation of the derivation of the score will be helpful at this point. Each individual was rated on the ten characteristics listed in Chapter 3 on a five point Likert scale. A rating of '5' indicated that a given characteristic applied very strongly to the individual; a rating of '1' indicated that a given characteristic did not apply to the individual. The ten scores for each individual were then combined with the scores for the other individuals, yielding mean scores for

Table 3. Group Scores on the Peer-Rating Scale

	$\bar{X}$	St. Dev.
First Administration	3.38	.35
Second Administration	3.34	.39

the group on each characteristic. These scores were then computed to find a group mean based on all characteristics.

The results indicate that the ten characteristics of a group leader applied, but not strongly to the group. Given the standard deviations as shown in Table 3 (page 49), some group members obviously were seen to embody the ten characteristics strongly.

CORRELATION

With regard to the hypotheses stated in Chapter 3, all null hypotheses concerning the TSCS must be retained. Nine correlation coefficients exceeded the critical value of r but were in the opposite direction from that expected. The most important sub-scale of the TSCS, the Total Positive, yielded the lowest correlation coefficient.

Correlation Between the First Administration of the TSCS and the First Administration of the Peer-Rating Scale

The correlation between the Self-Criticism sub-scale of the TSCS and the peer-rating scale indicates that approximately 32% of the variability in the peer-rating scores can be accounted for from a knowledge of the Self-Criticism scores, (see Table 4, page 51). The negative

Table 4. Correlation of the First Administration of the TSCS to the First Administration of the Peer-Rating Scale
 $\alpha = .05$

sub-scale of TSCS	peer-rating scale
S.C.	-.57
T.P.	-.0009
R 1	.03
R 2	-.11
R 3	.12
C.A.	-.22
C.B.	-.13
C.C.	.06
C.D.	.10
C.E.	.11
T.V.	-.14
C.V.	-.09
R.V.	-.15
D	-.25

correlation indicated a tendency toward the following generalization: as scores on the Self-Criticism sub-scale increased, scores on the peer-rating scale decreased.

Because the Total Positive sub-scale of the TSCS is the most important single sub-scale in the instrument, the correlation coefficient of $r = .0009$ between the Total Positive sub-scale and the peer-rating scale is worthy of note. There appeared to be, in effect, no relationship between the group's overall self-concept and the peer-rating scale.

The correlation between the first measures of variability and the peer-rating scale were not significant, although in the expected negative direction. The correlation between the D scores and the peer-rating scale were not only not significant but in the opposite direction from that expected as well.

Correlation Between the
Second Administration
of the TSCS and the
First Administration of
the Peer-Rating Scale

Three correlation coefficients within this category were significant, but negative instead of the expected positive (see Table 5, page 53). According to the correlations, the Self-Criticism, Column A (Physical Self), and D sub-scales accounted respectively for approximately 29%, 21%,

Table 5. Correlation of the Second Administration of the TSCS to the First Administration of the Peer-Rating Scale.
 $\alpha = .05$

sub-scale of TSCS	peer-rating scale
S.C.	-.54
T.P.	-.19
R 1	-.26
R 2	-.11
R 3	-.20
C.A.	-.46
C.B.	-.21
C.C.	.03
C.D.	-.07
C.E.	-.05
T.V.	-.28
C.V.	-.26
R.V.	-.23
D	-.47

and 22% of the variability in the peer-rating scale scores. In other words, as those measures of the TSCS increased, the peer-rating scores tended to decrease.

The correlations between the Variability sub-scales and the peer-rating scale yielded higher, but still not significant r 's in this comparison. Again they were in the expected direction. A word of caution at this point: since significance is based on probability theory, r 's that are not significant are likely to have occurred by chance; the direction of the correlation, therefore, is specious and is mentioned only to give a more complete reportage of the data.

Correlation Between the
Second Administration
of the TSCS and the
Second Administration
of the Peer-Rating
Scale

Only two correlations yielded significant results in this comparison--again in a negative direction, opposite that expected. They were (see Table 6, page 55) the correlations between the Self-Criticism and Physical Self sub-scales and the peer-rating scale, accounting respectively for approximately 22% and 21% of the variability in the peer-rating scores.

Table 6. Correlation of the Second Administration of the TSCS to the Second Administration of the Peer-Rating Scale
 $\alpha = .05$

sub-scale of TSCS	peer-rating scale
S.C.	-.47
T.P.	-.24
R 1	-.23
R 2	-.19
R 3	-.23
C.A.	-.46
C.B.	-.19
C.C.	-.05
C.D.	-.09
C.E.	-.11
T.V.	-.19
C.V.	-.25
R.V.	-.10
D	-.37

Correlation Between the
Third Administration
of the TSCS and the
Second Administration
of the Peer-Rating
Scale

Three correlations yielded significant results in this comparison, again in the opposite direction from that expected (see Table 7, page 57). They were the correlations between Row 1 Positive, Column B Positive (Moral-Ethical Self) and D, on one hand, and the peer-rating scale on the other, accounting respectively for approximately 17%, 22%, and 20% of the variability in peer-rating scores. As those scores increased, the peer-rating scores tended to decrease.

In general, the TSCS does not seem to be related to the peer-rating scale except in scattered, negatively oriented correlations. The null hypotheses must be retained in all cases with the preceding comments applying in the case of significant correlations in a direction opposite from that expected.

Correlation Between the
First Administration of
the FIRO's and the First
Administration of the
Peer-Rating Scale

Two sub-scales of the FIRO B correlated significantly with the peer-rating scale (see Table 8, page 58). They

Table 7. Correlation of the Third Administration of the TSCS to the Second Administration of the Peer-Rating Scale
 $\alpha = .05$

sub-scale of TSCS	peer-rating scale
S.C.	-.37
T.P.	-.37
R 1	-.42
R 2	-.35
R 3	-.33
C.A.	-.53
C.B.	-.47
C.C.	-.25
C.D.	-.18
C.E.	-.09
T.V.	-.01
C.V.	-.13
R.V.	-.09
D	-.45

Table 8. Correlation of the First Administration of the FIRO's B and F to the First Administration of the Peer-Rating Scale $\alpha = .05$

sub-scale of FIRO	peer-rating scale
B	
ei	.20
ec	.08
ea	.12
wi	.48
wc	-.08
wa	.47
F	
ei	-.12
ec	-.36
ea	-.11
wi	.32
wc	.26
wa	.09

were wanted inclusion and wanted affection, both positive correlations. The null hypotheses were in both cases rejected in favor of the alternative hypotheses. All other nulls were accepted. It appears that the higher the score on either wanted inclusion or wanted affection, the higher the score on the peer-rating scale tended to be. The two FIRO sub-scales accounted for respectively approximately 23% and 22% of the variability in peer-rating scores. There appears to be virtually no relationship between expressed control or wanted control and the peer-rating scores.

The FIRO F yielded no significant correlations, expressed and wanted affection seemingly not related to the peer-rating scale. With the exception of wanted inclusion and affection, all null hypotheses were retained.

Correlation Between the
Second Administration
of the FIRO's and the
First Administration of
the Peer-Rating Scale

This comparison yielded no significant correlations (see Table 9, page 60). In all cases, the null hypotheses were retained. There seems to be no significant relationship between the second administration of the FIRO's and the first administration of the peer-rating scale.

Table 9. Correlation of the Second Administration of the FIRO's B and F to the First Administration of the Peer-Rating Scale $\alpha = .05$

sub-scale of FIRO	peer-rating scale
B	
e^i	.15
e^c	-.01
e^a	-.12
w^i	.41
w^c	.08
w^a	.37
F	
e^i	-.08
e^c	-.13
e^a	-.11
w^i	.42
w^c	.24
w^a	.25

Correlation Between the
Second Administration
of the FIRO's and the
Second Administration
of the Peer-Rating
Scale

This comparison yielded four significant correlations (see Table 10, page 62). On the FIRO B, wanted inclusion and affection correlated significantly with the peer-rating scale and accounted for respectively 30% and 24% of the variability in the peer-rating score. On the FIRO F, the same two scales accounted for respectively 27% and 22% of the variability in the peer-rating score. In all four cases the correlations between the FIRO sub-scales and the peer-rating scale were positive and the null hypotheses were retained.

Correlation Between the
Third Administration of
the FIRO's and the Sec-
ond Administration of
the Peer-Rating Scale

This comparison yielded two significant correlations, one each in the B and F forms of the instrument (see Table 11, page 63). Expressed affection (FIRO B) and expressed inclusion (FIRO F) correlated significantly with the peer-rating scale and accounted respectively for approximately 17% and 18% of the variability in the peer-rating scores.

Table 10. Correlation of the Second Administration of the FIRO's B and F to the Second Administration of the Peer-Rating Scale $\alpha = .05$

sub-scale of FIRO	peer-rating scale
B	
ei	.28
ec	-.06
ea	-.11
wi	.55
wc	.38
wa	.49
F	
ei	-.07
ec	-.07
ea	-.35
wi	.52
wc	.43
wa	.47

Table 11. Correlation of the Third Administration of the FIRO's B and F to the Second Administration of the Peer-Rating Scale $\alpha = .05$

sub-scale of FIRO	peer-rating scale
B	
ei	.29
ec	.03
ea	.41
wi	.42
w ^c	.32
w ^a	.31
F	
ei	.42
ec	-.23
ea	-.10
wi	.27
w ^c	.38
w ^a	.21

In both cases the null hypotheses were rejected in favor of the alternative hypotheses. In both cases, the correlations were positive. The remaining ten sub-scales of the FIRO's yielded no significant correlations; accordingly the null hypotheses were retained.

MULTIPLE REGRESSION

The multiple regressions were run on the same format of comparison as the correlations. Tables 12-14 (pages 65, 67, and 68) show the results of the regressions. No significant results were obtained; accordingly, all null hypotheses were retained.

Multiple Regression of the TSCS and the Peer- Rating Scale

Four scales from the TSCS were included in the multiple regression model as predictor variables, Self-criticism, Total Positive, Total Variability, and D. The peer-rating scale scores were the criterion variables (see Table 12, page 65). According to the regression model, variability in the criterion cannot be accounted for by a knowledge of the above combination of TSCS sub-scores. No other combinations were run because all other sub-scales of the TSCS combine to yield either T.P. or T.V.

Table 12. Results of Multiple Regression with the Four Major Sub-Scales of the TSCS as Predictor Variables and the Peer-Rating Scale as Criterion. "CV" Designates the Critical Value of F

predictor variables	Criteria	
	first administration peer-rating scale	second administration peer-rating scale
TSCS: S.C.; T.P.; T.V.; and D	first adminis- tration	$R^2 = .3747$ $F = 1.95$ $CV = 2.43$
	second adminis- tration	$R^2 = .4060$ $F = 2.22$ $CV = 2.43$
	third adminis- tration	$R^2 = .3700$ $F = 1.91$ $CV = 2.43$
		$R^2 = .3112$ $F = 1.47$ $CV = 2.43$

Multiple Regression of
the FIRO's B and F and
the Peer-Rating Scale

The six sub-scales of each of the FIRO's B and F were in turn included as predictor variables in the regression model with the peer-rating scale score as criterion in each case (see Tables 13 and 14 on pages 67 and 68). No significant R^2 's were obtained; accordingly, variability in the peer-rating scores cannot be accounted for by a knowledge of either combination of FIRO scores, and the null hypotheses were retained in all cases.

T-TEST OF VARIANCE FOR CORRELATED SAMPLES

Several significant changes were indicated by the results--in all areas of comparison, except the peer-rating scale. In addition, one change of significant proportions but in a direction opposite from that expected was obtained. These findings seem to bear out the literature in that changes are likely to occur in groups.

T-test of Variance for
the TSCS

Changes occurred in all areas of comparison (pre-mid, pre-post, and mid-post), with, as might be expected, the pre-post comparison yielding the greatest number of

Table 13. Results of the Multiple Regression with the Sub-Scales of the FIRO B as Predictor Variables and the Peer-Rating Scale as Criterion. "CV" Designates the Critical Value of F

predictor variables	Criteria	
	first administration peer-rating scale	second administration peer-rating scale
FIRO B e^i, e^c, e^a w^i, w^c, w^a	first adminis- tration $R^2 = .5390$ $F = 2.14$ $CV = 2.39$	
	second adminis- tration $R^2 = .3844$ $F = 1.14$ $CV = 2.39$	$R^2 = .4893$ $F = 1.76$ $CV = 2.39$
	third adminis- tration	$R^2 = .2914$ $F = .75$ $CV = 2.39$

Table 14. Results of the Multiple Regression with the Sub-Scales of the FIRO F as Predictor Variables and the Peer-Rating Scale as Criterion. "CV" Designates the Critical Value of F

predictor variables	Criteria	
	first administration peer-rating scale	second administration peer-rating scale
FIRO F e^i, e^c, e^a w^i, w^c, w^a	first adminis- tration $R^2 = .2314$ $F = .55$ $CV = 2.39$	
	second adminis- tration $R^2 = .2486$ $F = .61$ $CV = 2.39$	$R^2 = .4503$ $F = 1.50$ $CV = 2.39$
	third adminis- tration 	$R^2 = .4098$ $F = 1.27$ $CV = 2.39$

significant changes (see Table 15, page 70). With regard to the pre-mid comparison, Column A only (physical self) showed a significant positive change ($t=2.072$). With regard to the pre-post comparison, four sub-scales yielded significant positive changes: Total Positive, Row 2 (self-satisfaction), and Row 3 (behavior), and Column B (moral ethical self). The mid-post comparison yielded significant positive change on three variables: Row 3, Column D (family self) and Column E (social self). In addition, the mid-post comparison of Column A (physical self) yielded a significant but negative variance ($t= -1.420$). In the cases where significant positive variances were obtained, the null hypotheses were rejected in favor of the alternative hypotheses; in the case of Column A, the null was retained. All other null hypotheses were retained.

T-test of Variance for
the FIRO's B and F

Only three FIRO sub-scales yielded significant changes (all sub-scales were in the FIRO F): Wanted control diminished significantly in both the pre-post and mid-post comparison (see Table 16 on page 71). The null hypotheses concerning those three sub-scales were rejected in favor of the alternative hypotheses. All other nulls were retained.

Table 15. Results of the T-Test of Variance for Correlated Samples for the Tennessee Self-Concept Scale $\alpha = .05$

sub-scales	Pre-Mid	Pre-Post	Mid-Post
S.C.	.087	-.592	-.900
T.P.	.955	1.459	1.026
R 1	-.508	-.151	.266
R 2	.857	1.629	.996
R 3	1.295	2.255	1.342
C.A.	2.072	.447	-1.420
C.B.	1.295	2.091	.893
C.C.	1.086	1.235	.298
C.D.	.134	.704	1.353
C.E.	-.232	1.324	2.131
T.V.	.000	-.632	-.616
C.V.	-.685	-1.138	-.216
R.V.	.828	.000	-.900
D	1.282	.459	-.997

Table 16. Results of the T-Test of Variance for Correlated Samples for the FIRO's B and F $\alpha = .05$

sub-scales		Pre-Mid	Pre-Post	Mid-Post
B	e ⁱ	.747	-.458	-.891
	e ^c	-1.584	-.342	.860
	e ^a	.195	.729	.342
	w ⁱ	-.263	-.078	.166
	w ^c	.000	-.387	-.455
	w ^a	-1.097	-1.113	-.111
F	e ⁱ	1.481	.676	-1.327
	e ^c	-.862	-.629	.437
	e ^a	.342	.608	.321
	w ⁱ	.329	-.940	-1.479
	w ^c	.000	-2.886	-3.855
	w ^a	-.823	-2.675	-1.231

T-test of Variance for
the Peer-Rating Scale

As mentioned above, no significant change was observed with regard to the scores of the peer-rating scale. An insignificant variance of -1.006 was obtained. The null hypothesis was retained.

SUMMARY

The results of the current study may best be viewed in the context of an exploratory investigation as mentioned in Chapter 1. The significant results obtained were scattered and seemingly without major pattern. The data described a very normal group, without major differences from either the norms of the TSCS or the data from comparable groups on the FIRO's.

The data concerning the correlation of either the TSCS or the FIRO's to the peer-rating scale were indicative of very little relationship within the bounds of the current study. No pattern of significant correlation seemed to develop. While the data concerning change was somewhat more encouraging, change seemed to be neither widespread nor systematically based. The multiple regression models yielded no significant results.

Chapter 5 will present a discussion of the results with appropriate conclusions and recommendations.

Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter will present a summary discussion of the study, followed by conclusions based on the results, and finally several recommendations. As in previous chapters, the format established by the major questions posed in Chapter 1 will provide the basis for the discussion.

In response to the question, "What was the self-concept of the group?", the data indicated a basically normal group. The results of the present study, when compared to the profile sheet of the TSCS, showed little deviation from the mean except in four areas of self-concept: self-satisfaction, which was above the mean (approximately the 75th percentile on all three administrations); behavior, which was slightly below the mean on all three administrations at approximately the 30th percentile; the three variability scores, which were at approximately the 15th percentile; and the D scores, around the 20th percentile. In other words, the group was very satisfied with its normal self-concept, had a highly unified self-concept, but was slightly less sure of its self-concept than normal, although well within the bounds of acceptability.

In response to the question, "What were the inter-

personal relations orientations of the group?", the data again indicated a normal group both in terms of the lack of extreme scores and in terms of comparison to similar groups. Distinguishing the group were the high scores on all three administrations of the FIRO F, expressed inclusion, indicating a strong feeling among the group that people are significant and interesting. Wanted affection and inclusion were also high indicating a high desire for affection and inclusion. While these scores were the highest yielded by the group, they are still within normal bounds, adding to the impression given by the TSCS that the group was entirely normal both in terms of self-concept and interpersonal relation orientations.

In response to the question, "How did the group rate according to the peer-rating scale?", the data indicate normality again. While the ten characteristics embodied in the scale did not seem to apply strongly to the group, there was a consensus that all applied in some form. This, considering the training nature of the group was not surprising.

In summary, the descriptive portion of the study indicated a normal group with little in the way of extreme scores on any scales.

The data regarding the questions of relationship revealed however, few significant correlations. Correlations, when significant, were either scattered or in a direction opposite that expected. In terms of both the Pearson Product-Moment Correlation Coefficient and the multiple regression, it appears that neither the TSCS nor the FIRO's can effectively predict scores on the peer-rating scale. Since the peer-rating scale is an untested instrument, the interpretation at this point must remain guarded. The literature indicates a strong relationship between self-concept and group processes; perhaps the discrepancy lies in the peer-rating instrument.

In support of the literature, the data from this study indicated a strong tendency toward change along all dimensions except the peer-rating scale. Again, the peer-rating scale itself may be at fault. Since the group experience was an 'in process' situation, perhaps the post-measures did not measure the full scope of the change on that dimension. In either case, the literature would not be contradicted.

CONCLUSIONS

Several conclusions can be drawn from the preceding

comments: Change was, in this study as well as in those cited in the literature, a major characteristic of the group; the purpose of the group, be it leadership training or simply encounter, seems to make little difference. Personal change occurs in groups.

Since the TSCS and the FIRO's yielded normal descriptive data even though they did not correlate substantially with the peer-rating form, this investigator tends to conclude that the peer-rating form needs improvement. This conclusion seems to be born out by the t-test of variance for the peer-rating scale. If change is a factor in group processes; if training in group leadership skills was the purpose of the group, then the lack of change shown in the peer-rating scale tends to indicate a need for change and improvement in the scale.

Keeping the above comments in mind, prediction from the TSCS and/or the FIRO's does not seem practicable at this point. Apparently, group leadership characteristics are not related within the scope of this study to either measurement.

RECOMMENDATIONS

Based on the preceding comments and conclusions,

several recommendations can be made. The major recommendation is for further research in the areas described, with particular emphasis on the development of an instrument to effectively measure leadership characteristics. The present scale was untested since it was derived from within the process of the group experience.

The investigator further recommends the provision of a control group or groups in further research along these lines. A control group, together with measurements taken well after the group experience has concluded would provide more accurate description of the processes involved.

It would be interesting to see similar studies conducted with different types of groups, i.e., a week-end group or a marathon group. Comparison of data should provide interesting insights.

Finally, the general need for concentrated effort in the area of group behavior must be again recognized. The present exploratory study provided no answers in any absolute sense. Those answers must be sought.

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