

ABSTRACT

THE EFFECTS OF SMALL SELF-UNDERSTANDING GROUPS ON THE SELF-CONCEPT AND ANXIETY LEVEL WHEN GROUP COMPOSITION HAS BEEN VARIED

By

Patrick W. McCary

The purpose of this study was to investigate the human environment of students as represented by small self-understanding groups. The study focused upon the impact of three different group compositions (homogeneous, heterogeneous and complimentary) upon the self-concept and anxiety level of undergraduate students. The composition of groups was judged to be a crucial area to examine because of the known impact of peer groups upon their constituents and the importance of understanding how groups might be used to optimize anxiety and enhance self-concept in the collegiate environment.

The literature in the area of small groups indicated that groups do influence their constituents and that the composition of groups was indeed a crucial variable in this impact. It was also shown that groups

could be formed so that the behavior of the group members could be predicted.

The research design included the use of nine, small self-understanding groups (six to eight people) composed of undergraduate volunteers from the east campus residence hall complex of Michigan State University. These students were assigned to either a homogeneous group (all members identical in personality type), a heterogeneous group (members have a wide range of personality characteristics), or complimentary group (members are alike on some personality variables and different on others). The Myers-Briggs Type Indicator was used as the vehicle to vary the group compositions.

Each group was led by a trained group leader who was a graduate student in student personnel work, with previous small group experience. The group leaders were instructed to behave in a non-directive fashion because of the focus of the study upon the interaction of students with students. The groups met for a total of 13 sessions. The first and last sessions were occupied with pretesting and posttesting. A total of 11 treatment sessions were held, with the groups meeting twice a week for six weeks.

The results of the study indicated no significant differences at the .05 level of significance from pretest to posttest on the Tennessee Self-Concept Scale or

Trait Anxiety Inventory for the three types of groups (homogeneous, complimentary or heterogeneous). The results from the Barrett-Lennard Relationship Inventory (Respect, Empathy and Congruence Scale) also showed no significant differences at the .05 level of significance for the three different group compositions.

A significant quadratic anxiety trend was found in the heterogeneous group at the .05 level of significance. No significant trend was indicated for the complimentary or homogeneous groups. These results supported the hypothesis that the heterogeneous groups would experience more state anxiety than either the homogeneous or complimentary groups.

The complimentary group reported that they would be more willing to volunteer again for a self-understanding group, understood themselves better after the group experience and had their expectations fulfilled to a greater extent than the homogeneous group members at the .05 level of significance. No significant differences were found between the heterogeneous group and complimentary or homogeneous groups on the same questions. Another discriminating question showed that both complimentary and heterogeneous groups indicated a significantly greater desire to continue their group experience than the homogeneous group.

The interactive effects of personality type and group composition were also explored. The results of the interactions were computed to explore areas for future research. The area of interactions was considered a fruitful area for further investigation.

The analysis of the Rokeach Value Inventory suggested that students who differed in personality type also held different values. The analysis of pretest trait anxiety comparing feeling types with thinking types did not support the hypothesis that the different types would significantly differ in their trait anxiety level.

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TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	ii
LIST OF TABLLS	vi
LIST OF GRAPHS	ix
LIST OF APPENDICES	x
 Chapter	
I. INTRODUCTION.	1
Statement of Purpose	1
Statement of Problem	1
Need for the Study	6
Definitions	7
Assumptions	9
Limitations	9
Hypotheses Tested	10
Self-Concept	10
Anxiety	11
Respect, Empathy and Congruence	11
Friendships.	11
Feeling vs. Thinking--Trait Anxiety.	12
Overview of the Study	12
II. REVIEW OF THE LITERATURE.	13
Self-Concept	13
Anxiety.	15
Relationship to Self-Concept	16
Trait and State Anxiety.	17
Group Composition	18
Homogeneous Groups	20
Heterogeneous Groups.	26
Complimentary Groups.	30
III. METHODOLOGY AND PROCEDURE	35
Selection and Description of the Population and Sample	35

Chapter	Page
Formation of Groups	36
Homogeneous Groups.	37
Complimentary Groups	37
Heterogeneous Groups	38
Selection and Background of Group Leaders	39
Organizational and Testing Procedure	41
Instrumentation of the Study	44
Myers-Briggs Type Indicator.	44
Tennessee Self-Concept Scale	50
Factor Analysis of Tennessee Self-Concept Scale.	53
State-Trait Anxiety Inventory	55
Rokeach Value Scale	58
Barrett-Lennard Relationship Inventory (Respect, Empathy, Congruence Scales)	60
Factor Analysis of the Barrett-Lennard Relationship Inventory (Respect, Empathy, Congruence Scales)	63
Analysis of the Data.	63
IV. RESULTS OF THE STUDY	68
Self-Concept	68
Anxiety	71
Trait Anxiety	71
State Anxiety	75
Respect, Empathy and Congruence	84
Questionnaire	87
Interactive Effects of Group Composition and Personality Types	91
Rokeach Value Inventory.	102
Pretest Trait Anxiety Comparison Between Feeling Types and Thinking Types.	104
Results of the Research Hypotheses	106
Self-Concept.	106
Anxiety	106
Respect, Empathy and Congruence	107
Friendships	107
Feeling Types vs. Thinking Types--Trait Anxiety	108
V. SUMMARY, DISCUSSION AND CONCLUSION.	109
Summary of the Study.	109
Discussion of the Study.	115
Conclusion	136
BIBLIOGRAPHY	139
APPENDICES	147

LIST OF TABLES

Table	Page
1. Pearson Correlations between Pretest and Posttest Scores for the Four Factors of the Tennessee Self-Concept Scale	69
2. Multivariate Analysis of Variance Using Change Scores for the Tennessee Self-Concept Scale	70
3. Analysis of Covariance for the Tennessee Self-Concept Scale	70
4. Tennessee Self-Concept Scale Mean Values and Standard Deviations	72
5. Tennessee Self-Concept Scale Mean Values and Standard Deviations	73
6. Pearson Correlation Between Pretest and Posttest Scores for the Trait Anxiety Inventory	74
7. Analysis of Variance Using Change Scores for the Trait Anxiety Inventory	74
8. Analysis of Covariance for the Trait Anxiety Inventory	74
9. Means and Standard Deviations for the Composite Groups on the Trait Anxiety Inventory	75
10. Trait Anxiety Inventory Mean Values and Standard Deviations	76
11. Multivariate Analysis of Variance Using Change Scores for the State Anxiety Inventory	77
12. Multivariate Analysis of Covariance for the State Anxiety Inventory	78
13. Means and Standard Deviations State Anxiety Inventory	79

Table	Page
14. State Anxiety Inventory Mean Values and Standard Deviations	81
15. Planned Comparison for the Homogeneous Composite Group on the State Anxiety Inventory	83
16. Planned Comparisons for the Complimen- tary Composite Group on the State Anxiety Inventory	83
17. Planned Comparisons for the Hetero- geneous Composite Group on the State Anxiety Inventory	84
18. Analysis of Variance of the Respect, Empathy and Congruence Scale	85
19. Means and Standard Deviations for the Composite Groups on the Respect, Empathy and Congruence Scale	85
20. Respect-Empathy-Congruence Mean Values and Standard Deviations	86
21. Question 1, Analysis of Variance	89
22. Question 2, Analysis of Variance	89
23. Question 3, Analysis of Variance	90
24. Question 4, Analysis of Variance	90
25. Question 7, Analysis of Variance	92
26. Question 10, Analysis of Variance	92
27. Means and Standard Deviations for the Composite Groups for the Questions.	93
28. Means and Standard Deviations for the Questions	94
29. Kendall's Coefficients of Concordance for the Three Composite Groups on the Rokeach Value Inventory	104
30. Analysis of Variance for Feeling and Thinking Types on the Trait Anxiety Inventory	105

Table	Page
31. Mean Values for Feeling and Thinking Types for the Trait Anxiety Inventory. . .	105

LIST OF GRAPHS

Graph	Page
1. State Anxiety Inventory 2; Heterogeneous- Composite Quadratic Relationship	82
2. TSCS 1; Interaction with Intraversion- Extraversion.	96
3. Question 4; Interaction with Intraversion- Extraversion.	96
4. Question 10; Interaction with Intraversion- Extraversion.	96
5. Respect, Empathy, Congruence; Interaction with Feeling-Thinking.	98
6. Question 4; Interaction with Feeling- Thinking	98
7. Question 7; Interaction with Feeling- Thinking	98
8. Question 10; Interaction with Feeling- Thinking	98
9. Question 2; Interaction with Intuition- Sensing	101
10. Question 3; Interaction with Intuition- Sensing	101
11. Question 4; Interaction with Intuition- Sensing	101
12. Question 7; Interaction with Intuition- Sensing	101
13. Question 4; Interaction for Judging- Perceiving	103
14. Question 7; Interaction for Judging- Perceiving	103

LIST OF APPENDICES

Appendix	Page
A. State and Trait Anxiety Inventory	148
B. Rokeach Value Survey	151
C. Respect, Empathy and Congruence Scales . .	154
D. Questionnaire to All Group Members. . . .	158
E. Comments Recorded on the Questionnaire . .	162
F. Distribution of Personality Types Among Volunteers.	183
G. Group Attendance.	185
H. Instructions to Group Leaders	187
I. Letters to the Students	193

CHAPTER I

INTRODUCTION

Statement of Purpose

The purpose of this study is to investigate the impact of different group compositions upon the self-concept and anxiety level of undergraduate students. This purpose then is related to how peer groups influence their constituents and how small groups might be used to facilitate movement towards the goal of self-understanding in an atmosphere which is conducive to the enhancement of self-concept and proper handling of anxiety. The importance of such a study will be shown through the following research studies which have examined stress on the college campus.

Statement of Problem

In the past decade a number of researchers have examined the collegiate environment with the purpose of trying to understand the effects of this environment upon the student. A number of these assessments seriously question the assumption that collegiate environments support the development of a majority of students. A recent and extensive study was done by Katz (1968) in

which he followed entering freshmen at Stanford in 1961, through their college days until 1965. Using intensive individual interviews along with other psychometric data, Katz (1968, p. 3) concluded, "The collegiate environment is a highly controlling one, and it creates stress in many students." Katz (1968, p. 4) continues to say that in between the students who are able to use such an environment to their advantage for development and those who passively accept the environment as part of their life styles are:

the bulk of students, whose lives never reach an adequate expression of their potential because they are handicapped by inadequate self-awareness and inadequate self-assertion, as well as by the environment, whose demands and constraints discourage their spontaneity.

Similarly disturbing data was collected by Trent and Medsker (1968, p. 78). Their research indicated that only 28% of the 4,000 students studied graduated with their original entering classes after four years of college. Summerskill (1962), in his review of the literature, found that 40% graduated with their original classes. Such information leads one to speculate as to where the energy of many students is directed. Some evidence would indicate that they are occupied with developmental tasks which are not easily accomplished because of the constraints of the collegiate environment. (Katz, 1968).

Offering support to this idea is the research of Bratten (1965) and Bryun and Seiden (1965) who found that the suicide rate among college students was significantly higher than the general population of the same age. Werdell (1966, p. 75) projects:

There will be 1,000 students who take their lives this year, 9,000 others who will attempt to do so and 90,000 more who will threaten suicide. Other students will react to stress less violently. Ten to fifteen percent, without proper treatment, will have emotional problems serious enough to jeopardize their happiness and effectiveness in college and later. Countless more students will experience the most severe psychological problems of their lives.

Although these studies do not prove that a causal relationship exists between the collegiate environment and suicides, it does offer support to the notion that college is not an ideal environment for all people and perhaps, as Katz has suggested, not for a majority of students. Others have also recognized that the experiences of college can be quite stressful. Sherburne (1966), Snyder (1966), Farnsworth (1957), Sanford (1967), and Blaine (1967) have discussed at length the possible stresses of being an adolescent involved in the transition period between youth and adulthood and attempting to cope with the tasks as structured by the college.

Perhaps a key to some of the stress experienced by students can be found in the lack of attention which most collegiate institutions give to the pressing needs of adolescent human beings who are groping for both

relevance and intimacy from their collegiate world. Heath (1968) in his study of Haverford students found that many of them had pressing maturational needs which had to be met before they could continue at maximum efficiency in their intellectual pursuits. Sanford (1967), Katz (1968), Fransworth (1957), and others have also recognized the inextricability of the social-personal and intellectual needs of the college student. Werdell (1966, p. 78) argues:

The administrations of a large number of colleges . . . do not officially admit that student psychological problems exist. It is clear, according to John Schell, that educators at a good many American colleges and universities need some educating themselves.

In contrast to the very real need for professional guidance in the area of social and personality development of students, Katz (1968, p. 256) concludes:

that the university as an institution showed relatively little interest in facilitating their social development. The challenge of aiding youth in developing academic, intellectual, and vocational skills was its area of competence, and the problem of supplying housing, social facilities and personal guidance was seen as a peripheral task. The students related to each other in ways that were both constructive and destructive, by trial and error, they developed varying degrees of social skills and responsibility, in spite of egocentric involvement with their own pressing developmental tasks, they offered various kinds of guidance to each other.

In spite of the lack of social and personal guidance in many colleges, the development of the total person is often espoused as a goal for higher education. In fact,

anyone who has read statements of purpose set forth by educational institutions cannot help but be struck by their commitment to the accomplishment of something greater than the acquisition of knowledge. Yet, this something is often so ethereal that its accomplishment is left to the initiative of the student and faith that the student's presence in the college environment will lead to a positive experience, and that this in turn will lead to the unfolding of the human potential of that student.

Grant (1969, p. 27) has asserted that the collegiate experience takes on relevance for many students only when it is integrated with their becoming a person. He views the narrowly defined curricular tasks as being a potential hindrance to the broader view of college as a place where students can come and develop the necessary behaviors needed to find greater fulfillment in life. Other educators would even go so far as to say that human understanding should not be a tangential concern of education but should be the primary focus. Edgar Friedenberg (1967, p. 221) puts individual awareness of a personal nature at the head of educational priorities when he says:

The highest function of education I would maintain, is for people to understand the meaning of their lives, and become more sensitive to the meaning of other people's lives and to relate to them more fully.

The examination of the necessary conditions for such understanding to take place represents the primary focus of the present study.

Need for the Study

Before students can proceed in direct and purposeful ways in acquiring new behaviors they must have the opportunity to understand what behaviors they already have well developed and what behaviors they need to learn. The conditions for this self-exploration are of vital importance. Research will be presented in Chapter II which will show that groups develop certain "climates" which can either facilitate or impede the willingness of individuals to explore their personalities. The climate is greatly influenced by the behavior and personality styles of the other group members. Different personality styles require different group climates to optimize the anxiety level necessary for creative exploration.

Integrally related to the group conditions necessary for self-understanding and self-exploration are the concepts of self-concept and anxiety level. These two personality components may be affected by the group climate, and if this climate is too threatening it may cause some students to withdraw and inhibit further communication with the group. It will also be shown in Chapter II that anxiety and self-concept are related to a number of

behaviors which are of crucial importance to the goals of the student and institution.

Many of the implications for self-understanding groups can also be applied to a student peer group. Often students live in residence halls or similar places of residence where people around them may affect their self-concept and anxiety level. A number of studies have shown that the peer group has a powerful effect on students. Some studies indicate that this influence is the most powerful in the entire university community including the influence of faculty. Since this impact does exist and since some students need a very supportive human environment to assist them in overcoming stress related to the developmental problems of adolescence, the understanding of how student groups can be used to accomplish these purposes is a fruitful area for examination.

Definitions

1. Homogeneous group - A group whose members are similar on each of the four dicotomous scales of the Myers-Briggs Type Indicator.

2. Complimentary group - A group whose members share at least one of the four primary orientations (Intuition, Sensing, Feeling, Thinking) on the Myers-Briggs Type Indicator, but does not possess any members scoring identically.

3. Heterogeneous group - A group whose members represent a wide range of personality characteristics as determined by the Myers-Briggs Type Indicator and which does not have any two members scoring identically.

4. Self-understanding group - A small group (six to eight members) whose purpose is to explore thoughts and feelings which help them to better understand themselves. The task, once stated is left unstructured to allow each group to develop in a manner consonant with the needs of the group members.

5. Trait Anxiety - Operationally defined as the score on the Trait Anxiety Inventory. It may be analogized to potential energy. "It indicates a latent disposition for a reaction of a certain type to occur if it is triggered by appropriate (sufficiently stressful) stimuli." Spielberger (1968, p. 22) Different individuals are predisposed to react in different ways to a wide range of stimuli with a sympathetic nervous system reaction.

6. State Anxiety - Operationally defined as the score on the State Anxiety Inventory. It may be analogized to kinetic energy and "refers to an empirical process which is taking place now at a given level of intensity." Spielberger (1968, p. 22) It is the actual experiencing of anxiety due to a "threatening" stimulus situation.

7. Self-Concept - Operationally defined as the score on the Tennessee Self-Concept Scale.

Assumptions

The research hypotheses rest upon the assumption that similarity of personality type leads to more common ways of perceiving and responding to the world. The commonality then should lead to greater acceptance and understanding between participants. The experience of being accepted and understood should lead to a less stressful group experience and one which enhances the self-concept. The assumption that greater understanding will lead to less stress is consistent with the findings of Grinker (1958, p. 136) who found that the best method of producing anxiety in subjects was to impede communication in a dyadic relationship--to feign misunderstanding behavior.

Limitations

Perhaps the most outstanding limitation imposed on the present study was the use of volunteer undergraduate students. This method of drawing a sample limited the ability to generalize the study's findings to those students who would volunteer to participate in a small self-understanding group.

Another limitation arose due to the frequency of use of the State Anxiety Inventory. The instrument was

administered at the end of four of the group sessions in order to assess any anxiety trends present in the different types of groups. Some degree of resistance to filling out the inventory was expected. It is entirely possible that this resistance may have taken the form of careless completion of the form.

The final limitation was a result of the lack of complete standardization of physical facilities and meeting times for the groups. Because there were nine groups involved in the study, the meeting rooms for the groups were not identical. It was also impossible to schedule each group to meet at the same time on the same days. However, given the differences in rooms and time schedules, all groups sat in a circular formation without any obstruction between group members.

Hypotheses Tested

Self-Concept

1. Homogeneous groups will experience a greater enhancement of self-concept than complimentary groups.
2. Homogeneous groups will experience a greater enhancement of self-concept than heterogeneous groups.
3. Complimentary groups will experience a greater enhancement of self-concept than heterogeneous groups.

Anxiety

4. Homogeneous groups will experience less state anxiety than complimentary groups.
5. Homogeneous groups will experience less state anxiety than heterogeneous groups.
6. Complimentary groups will experience less state anxiety than heterogeneous groups.
7. Homogeneous groups will experience a greater decrease in trait anxiety than complimentary groups.
8. Homogeneous groups will experience a greater decrease in trait anxiety than heterogeneous groups.
9. Complimentary groups will experience a greater decrease in trait anxiety than heterogeneous groups.

Respect, Empathy, and Congruence

10. Homogeneous groups will experience greater respect, empathy and congruence than complimentary groups.
11. Homogeneous groups will experience greater respect, empathy and congruence than heterogeneous groups.
12. Complimentary groups will experience greater respect, empathy and congruence than heterogeneous groups.

Friendships

13. Homogeneous group members will establish more friendships outside the group than complimentary group members.
14. Homogeneous group members will establish more friendships outside the group than heterogeneous group members.
15. Complimentary group members will establish more friendships outside the group than heterogeneous group members.

Feeling vs. Thinking--Trait Anxiety

16. Feeling type individuals will experience greater pre-test trait anxiety than thinking type individuals.

Overview of the Study

Chapter I deals with the statement of the purpose, identification of the problem and need for the study. The limitations, definitions, and assumptions of the study and research hypotheses are also presented in this chapter. Chapter II reviews the literature on self-concept, anxiety and group composition. Chapter III discusses the research design, procedure, instrumentation and the analysis of the data. Chapter IV presents the results of the study. Chapter V summarizes and discusses the results of the study and their implications.

CHAPTER II

REVIEW OF THE LITERATURE

Since the present study will focus on the effects of variously composed self-understanding groups and how they affect the self-concept and anxiety level of their members, the literature in these latter two areas will be examined. Literature on group composition will also be reviewed and, where possible, related to the research on self-concept and anxiety. Finally, implications will be drawn from the literature in these three areas and related to how educators might form groups or utilize existing groups in helping students to better accomplish the task of self-understanding in an atmosphere conducive to the enhancement of self-concept and the proper handling of anxiety.

Self-Concept

An examination of relevant literature in the area of self-concept reveals how certain experiences and associates in an individual's life can lead to an enhancement or diminuation of his self-concept. Ashcraft and Fitts (1964) found that individuals undergoing psychotherapy experienced an enhancement of self-esteem on 18 of 22

variables measured by the Tennessee Self-Concept Scale. This was compared to a control group composed of subjects who were waiting for psychotherapeutic treatment and who experienced significant increases on only two of the 22 variables. Conversely, using the same instrument, Givens (1959) found that paratroopers who were exposed to severe physical training, where the threat of failure and embarrassment were constantly eminent, experienced a diminution in self-esteem as a result of their experiences. The troops who experienced failure were found to have a significantly greater loss of self-esteem than those in the passing group although all troops studied experienced a significant loss of self-esteem.

Studies reviewed by Feldman and Newcomb (1969, p. 237-239) lend support to the idea that the self-concept is susceptible to influence through associations with others. The work of Davis (1966) showed that a student's concept of his academic abilities and chances for success in future occupations was influenced more significantly by his peers than by the general ability level of students entering his chosen field from all colleges and universities. Studies conducted by Skager, Holland and Braskamp (1966) and Astin (1963) also indicated that high ability students who attended college with other high ability students were more likely to

have a lower opinion of their abilities than students of high ability who attended schools with students of lesser ability.

An interesting study by Asch (1956) has relevance for the view that the behavior of others in a small group can influence the perceptions and reactions of some individuals. Asch formed groups of seven or eight individuals where all members but one were confederates of the experimenter. He then proceeded to have the confederates purposefully give incorrect responses to simple judgments concerning the length of lines. The results indicated that about one-third of the experimental subjects were deflected to give an erroneous answer in the face of group unanimity of incorrect responses.

Also recognizing the influence of others on self-image are Borel (1964) and Sherwood (1965) who assert that the self-image is molded by the most significant others in one's environment. Wylie (1961, p. 121) in her review of the literature on self-concept concurs:

(a) The self-concept is a learned constellation of perceptions, cognitions and values. (b) An important part of this learning comes from observing the reactions one gets from other persons. (c) The parents are the persons who are present earliest and most consistently.

Anxiety

Research studies reviewed in the area of anxiety reveal its close relationship to self-concept. These

studies offer substantial support to the idea that individuals who are high in anxiety tend to have lower estimates of their own self-worth. These studies will be discussed, along with the work of Spielberger (1968), in which he dicotomizes anxiety into two major components--trait and state anxiety.

Relationship to Self-Concept

Fitts (1964) reports a correlation of $-.70$ between the total positive score of the Tennessee Self-Concept Scale and anxiety scores obtained from the Taylor Manifest Anxiety Scale. This correlation lends powerful support to the statement which Fitts makes regarding the importance of overall self-esteem as reflected by the total positive score on the Tennessee Self-Concept Scale and anxiety related feelings. Fitts (1964, p. 2) states:

Persons with high scores tend to like themselves, feel that they are persons of value and worth, have confidence in themselves, and act accordingly. People with low scores are doubtful about their own worth; see themselves as undesirable; often feel anxious, depressed, and unhappy; and have little faith and confidence in themselves.

Levitt (1967) points out that an individual high in anxiety is more easily threatened by others than low anxiety individuals. This leads to a lower estimate of himself because he is so easily threatened. Rosenberg (1962) and Suinn and Hill (1964) also found an inverse

relationship between self-concept and anxiety. Rosenberg found a correlation of $-.68$ between self-esteem and anxiety using the Taylor Manifest Anxiety Scale with junior and senior high school students. Suinn and Hill, working with college students, found a correlation of $-.58$ between self-esteem and anxiety using the Test Anxiety Questionnaire.

These findings help make clear the relationship between anxiety and self-concept. In the same way in which self-concept is affected by the significant others in one's environment, anxiety may be viewed as being influenced. Grinker, et. al. (1968) found that the single most effective way to produce anxiety in experimental subjects was to have an experimenter feign misunderstanding behavior in a dyadic relationship. This method was superior to the threat of electrical shock and a number of other methods tested in an attempt to induce anxiety and was judged to be the single most effective way of producing an anxiety response across all types of experimental subjects.

Trait and State Anxiety

An interesting finding in the research of Spielberger (1968) indicates that anxiety can be viewed as having two characteristically distinct components. He labels these as the trait of anxiety and the state of anxiety. The concept of trait anxiety encompasses the

general amount of physiological arousal which is characteristic of the individual. This arousal is mediated by an extremely complex interaction of cognitive and chemical factors. Spielberger finds that individuals differ in their feelings of experiencing this general physiological arousal level. The other distinct component of anxiety is state anxiety which is characterized as an elevation in the general physiological arousal level due to a stimulus constellation which excites the individual. He notes that individuals who characteristically report a higher amount of trait anxiety also experience a greater elevation in their state of anxiety when threatened by some particular stimulus.

Group Composition

It has been shown that self-concept and anxiety are highly related to each other and are capable of being influenced by the significant others in the environment of the student. The present section has as its primary purpose the examination of research on how small groups composed in different ways affect certain outcomes. The possible impact on self-concept and anxiety will be of special interest in this review, although few studies on group composition dealt directly with these two areas.

After reviewing a number of research studies, a major conclusion which this author reached was that support for almost any type of group composition can be

found depending upon the purpose of the group under consideration. Because of the tremendous variance in research designs, number of participants in a group, and utilization of different independent and dependent variables, it was considered helpful to draw upon the work of Harrison (1965), Stock (1964) and Haythorn (1968) who have presented excellent reviews of the literature on group composition and have reached some conclusions which are very relevant for the present study. These three reviews will act as a framework for relating the other studies which offer a great diversity in conclusions.

Perhaps the most obvious conclusion which Harrison (1965), Stock (1964) and Haythorn (1968) reached was that group composition does have a definite effect upon a wide variety of outcomes associated with human behavior. In reaching this conclusion they review research studies whose most common method of forming groups or dyads was the homogeneity-heterogeneity method. This method of formation consists of taking high scorers and low scorers on some variable (attitudes, values, personality variables, symptoms, etc.) and then forming the groups or dyads with either all high scorers, all low scorers, or a combination of high scorers and low scorers. The homogeneity-heterogeneity dicotomy will be found in most of the following research studies presented.

Homogeneous Groups

A number of studies were found which lend support to the concept that individuals who are similar on certain variables are more attracted to each other than they are to those who are less similar. Izard (1960) found that people who are attracted to each other were more similar on personality profiles as measured by the Edwards Personal Preference Schedule than randomly matched pairs. Izard (1960, p. 50) concluded that, "personality similarity or similarity of affect needs and ways of expressing affect is a significant factor in interpersonal attraction." Jackson (1959) studied friendship choices of 36 female employees of a utility company and found that friends were more similar than non-friends on scores for security, sociability, and ascendance. He found greater attraction for similar profiles than for complimentary and opposite profiles. Precker (1952) states that college students chose to associate more with faculty members and peers who are similar to them in values. The study was conducted using sociometric ratings to assess friendship formations and an open ended questionnaire to rate 39 value criteria. Eigenbrod (1969) found that the more similar college roommates were on the Myers-Briggs Type Personality Indicator, the more satisfied they were with each other.

Kelley (1955) did a longitudinal study from 1935 to 1954 to determine the impact of marriage upon a number of dependent variables of marriage partners. He studied mental ability, values (Allport V-L), Bernreuter PI, Bell Adjustment Inventory, and Remmer's Generalized Attitude Scale. He states that he initially found correlations among couples in the range of $-.02$ to $.58$ on these scales. This lack of negative correlation for the 300 couples studied lead Kelley (1955, p. 680) to conclude: "We found no evidence to support the opinion that opposites attract." After the follow-up study was completed he did not find any significant differences on these scales. In other words he did not find a homogenizing effect on any of his outcome measures.

Of special interest in the present study are ways in which homogeneous groups might be used to help students explore similar characteristics together, therefore enhancing the self-understanding process. Haythorn (1968), Harrison (1965), and Stock (1964) all concluded that groups which were homogeneously formed reflected the modal characteristics of the individuals in the group. This means that groups composed homogeneously along any particular dimension will evidence a pattern of behavior consonant with the pattern evidenced by the individual constituents.

Harrison (1965) cites the following examples of this general tendency in homogeneous groups. Glidewell (1958) found that groups with a preference for dependency (present themselves as weak and appeal for help from others) and flight (members tending to withdraw) show less activity than groups characterized by fight (major way of interacting with others involves the expression of hostility and aggression) and counter-dependency (persons present themselves as strong and actively resist accepting help.) Stock and Luft (1960) formed experimental groups on the basis of trainer rating of individuals as high and low on need for structure. High structure groups were found to be more active and expressed less emotion than the low structure groups. Harrison and Lubin (1965) found that by forming groups of work-oriented members and person-oriented members, differences in the expression of affect was readily discernible. Schutz (1961) found that a homogeneous group of "counterpersonals" were judged to be unable to deal with feelings. Bass and Duntzman (1963), Lieberman (1958), Hill (1955), Hill and Stock (1958) are other studies which demonstrated the ability of researchers to compose and predict the behavior of participants.

Closely related to the idea that homogeneous groups are a direct reflection of the homogeneous variable used

in their formation is an important concept which Harrison (1965, p. 426) refers to as "The Multiplier Effect". He states:

"There seem to exist processes in the homogeneous group which tend to influence individuals to behave in much more predictable ways than they normally do. It is as though there were a kind of "Multiplier Effect" which operates when people who are selected to have some interpersonal characteristic in common are placed in a relatively unstructured group setting."

He continues to say that members who are similar on a particular characteristic tend to place similar demands upon the group. The similarity of demands may be either reciprocal or antagonistic. The concepts of Haythorn (1968) become helpful at this point in understanding this reciprocity or antagonism. Haythorn categorizes relationships as (a) congruent or incongruent (b) complimentary or not, and (c) competitive or not, depending upon the variable under consideration. An example of a competitive homogeneous group would be all individuals high in need to control. A homogeneous group formed this way would be antagonistic in Harrison's model. The constituents would place a similar demand upon the group, but obviously all group members cannot fulfill their need to control. The result of their situation would exemplify Harrison's "Multiplier Effect". If, however, all members were high in need for affection and were willing to both give and receive affection, the group would operate to reciprocally meet the needs of these individuals.

This latter example illustrates Harrison's "reciprocity principle" and Haythorn's "congruence relationship". Haythorn's conception of incongruence and complementarity are not applicable to homogeneous groups, but will be discussed in the heterogeneous and complimentary group sections.

The important conclusion to be drawn from these examples is that homogeneous groups can be experienced as either highly distressing or very pleasurable depending upon the independent variable used in their formation. However, in the present study it is hypothesized that the task of self-understanding operates to modify conflict and that the "Multiplier Effect" helps to highlight similarities among group members. This then allows a clearer view of how each individual operates and generally provides an experience which is satisfying (increases the self-concept and diminishes anxiety due to a focusing on the common characteristics of the members and the realization that others are like you). It is, of course, the purpose of this study to test such a hypothesis.

Another characteristic of homogeneous groups deserving attention is highlighted by a study conducted by Steele (1968) using the Sensing and Intuition Scale of the Myers-Briggs Type Indicator. He found that the very process of meeting in a small unstructured group

atmosphere is an experience more adapted to the intuitive type of individual. The important principle to be understood is that certain characteristics are facilitative of group functioning and others depressive. Consequently, groups formed with all intuitive types are more likely to approach the traditional T-group "laboratory style." Steele describes this style as being very closely related to the behaviors of intuitive types which he defines as "high activity, individuality, collaboration: a preference for helping, experimenting, dealing with feelings, becoming involved, understanding processes and relating them to other situations." He found that the six laboratory staff members were all extreme intuitive types. Conversely these findings seem to point to the fact that some personality types may find the T-group experience to be counter to their personal behavioral orientation.

Harrison (1965) supports the above view with research indicating that homogeneous groups concerned with authority, power and control will tend to interact in a hostile and aggressive manner and express negative emotionality (Glidewell [1958]). Schutz [1961]. He also states that task-oriented and self-oriented group members tend to express negative attitudes toward their groups when homogeneously composed (Bass and Duntzman [1963]). These findings indicate that although groups

may be useful to all individuals in understanding common characteristics, there may not be an intrinsic enjoyment of a low-structure experience for all personality types. The findings also imply that self-understanding may be considerably easier for some personality styles than for others because of a disinclination among some individuals for introspection, self-revelation or other behaviors which are usually associated with T-grouping.

Heterogeneous Groups

Conflicting conclusions about the effectiveness of heterogeneous groups were found throughout the literature. There appear to be two schools of thought held by researchers who have evaluated heterogeneous groups. The first has been well stated by Stock (1964, p. 406). She concluded that heterogeneous groups "are likely to be less efficient at problem solving, to display more frustration and anger and a higher level of affect and to display less perceptual accuracy." Stock goes on to suggest that the reason might be that these groups "devote much futile effort in an attempt to resolve their interpersonal differences."

Supporting data was presented by Altman and McGinnis (1960) who studied the effects of varying group compositions using the California Ethnocentrism Scale. They formed two homogeneous groups, one high and one low on ethnocentrism, and three groups which they termed

heterogeneous but which were not identically formed. Two of the heterogeneous groups contained either high or low ethnocentric majorities, the third heterogeneous group contained equal numbers of high and low scorers. The groups were evaluated on discussion behavior (spontaneity, rate of response, spread of participation, direction of response), attitude change, attraction to the group, sociometric preference, importance of discussion topic and accuracy of interpersonal perception. The findings indicated that groups composed of equal numbers of individuals scoring high and low on the California E Scale:

manifested less spontaneity, a lower rate of response, and fewer number of opposition directed communications, were least accurate in their perceptions of the opinions held by other members, and were least likely to choose sociometrically others in the group holding views congruent to their own.

Another researcher reaching a similar conclusion was Schutz (1958) who found that groups composed of equal numbers of personal and counterpersonal compatibles were less productive in accomplishing a number of group tasks than groups homogeneously composed of all personal compatibles and all counterpersonal compatibles. Furst (1951) in discussing work done with homogeneous and heterogeneous therapy groups asserts that heterogeneous group members identify with the group more slowly, insight takes longer, therapy is longer, attendance is

less regular, members show more resistance and destructive behavior and less rapid symptom removal than homogeneously formed groups.

Opposing opinions are held by researchers who found heterogeneous groups to be superior in the performance of certain tasks. Hoffman (1955) (1966) used the Guilford Zimmerman Temperment Survey to match students from psychology classes on certain personality characteristics. He conducted the original study in 1955 using 70 homogeneous groups and 128 heterogeneous groups and replicated the study in 1966 using 15 homogeneous and 18 heterogeneous groups. His findings indicated that the heterogeneous groups consistently gave higher quality solutions to the tasks they were performing (role playing and case studies). Tuckman (1964) also found that heterogeneously composed groups performed better in stock market simulations than homogeneously composed groups. Haythorn (1968) cites Hoffman and Smith (1960), Hoffman and Maier (1961), Triandis, Ewen and Hall (1965) and Hoffman (1959) as also finding heterogeneously composed groups to be superior on certain tasks. He also cites Pelz (1956) who studies the productivity of scientists and engineers. He found that daily contact with colleagues possessing training dissimilar from their own resulted in higher productivity than daily contact with similar colleagues. These results imply that the

stimulation provided by others with dissimilar training contributed to higher productivity.

The disparate nature of these two groups of findings (heterogeneity superiority and inferiority) might be reconciled by some of the findings of Haythorn and Altman (1966) who studied dyads of servicemen in isolated conditions. They found that dyads formed incompatibly on the variables of need achievement, need dominance, and need affiliation performed better than homogeneously composed dyads. However, they also experienced greater interpersonal stress. Haythorn and Altman concluded that stress can be functional to a certain point and then it becomes dysfunctional. The research of Lonsetta (1955) and Berkman, et al. (1962) supports this thesis of the curvilinear nature of stress. Harrison (1965) also supports the view that too much stress is possible in a group, and that it can threaten and confuse some individuals who find themselves in a situation where their personality style cannot find expression. This may occur if the behavior of the other group members is not readily comprehensible because it is so different.

The relevance of these findings is that in some heterogeneous groups the increased stress from encountering others different from you can be channeled into constructive and purposeful activity. However, in groups where interpersonal interaction is highlighted and

release for interpersonal stress is blocked or unable to be channeled into meaningful activity, the experience can lead to dissatisfaction and lack of understanding. Hoffman (1966, p. 306) states that "the data suggests that there may be some point beyond which differences among group members are so great as to lead to destructive interpersonal relationships in a group." Whitaker and Lieberman (1964) propose that therapy groups be formed homogeneously on "Vulnerability" because stress, which some members can tolerate and may indeed thrive upon, can produce defensive and disintegrative reactions in others.

Complimentary Groups

It is helpful to think of complementarity in terms of reciprocal interaction leading to the satisfaction of the needs of two individuals. Thibaut and Kelley (1959) describe human interaction as being a sequence of payoff matrices. They conclude:

Individuals develop a complex set of needs, the satisfaction of which requires particular kinds of relations with other individuals. This fact presumably leads men to seek other men with whom satisfactory relations can be established.

Newcomb (1956, p. 5) concurs, saying that we acquire our attitudes and feelings about others through the "reciprocal reward principle" which he defines as the rewards and punishments we receive in our interaction with others. Haythorn (1968) defines complementarity as a

relationship between two individuals with different but mutually supporting need structures. He gives the example of the individual high in need to give nurturance being matched with an individual with strong dependency needs.

According to the above definitions then, a complementary relationship or group is one where the needs of the individual members are met through reciprocal interaction. This is contrasted to the homogeneous type of group which may or may not be experienced as "reciprocally rewarding" depending on the independent variable used in its formation, and the heterogeneous group which, as the previously cited literature has indicated, may be quite stressful. Harrison (1965) contends that the ideal training group is one where each member is confronted with meaningful alternatives to his personality style while at the same time receiving support for the values and orientations with which he enters the group. This allows for a stimulating but not totally confronting experience. Two basic needs are implicitly recognized in such a statement. These needs are stimulation and security. The work of Schultz (1965) on sensory deprivation and the writings of Ardrey (1966) support the notion that every human being has these two basic needs in varying degrees. The important point to be drawn from this line of reasoning is that the complimentary

group by definition provides for the satisfaction of these two needs by providing what Stock (1964, p. 406) calls "bridging" members. These members are able to act as semi-interpreters for those in a group with opposing personality styles. This provides each group member with others who are able, on some level, to understand his personality orientation.

It would appear from the above description that the complimentary group is the best under any circumstances. But, as Harrison (1965) points out, it is not difficult to envision times when the homogeneously composed group could offer an atmosphere of support to an individual who for one reason or another is not able to tolerate the stress of the heterogeneously formed group or the more moderately formed complimentary group. Grant (1969) has employed the advantages of both the homogeneous groups and the heterogeneous groups. He first uses homogeneous groups briefly (three to four sessions) to help each personality type understand his personality orientation by talking about and experiencing the same characteristics in others and to map out strong and weak personality areas. These groups are then dissolved and heterogeneous groups are formed where confrontation with others with different personality styles helps the student to understand other personality orientations. The student then attempts new behaviors

which have been assessed as weaknesses in the more supportive homogeneous groups and which are modeled for him by his new group members. Such a procedure highlights the very important principle of determining the purpose of a group and then composing it along the lines appropriate to the accomplishment of that purpose.

The present study has conceptualized a complimentary group in a way which was not found in the literature on groups. The complimentary groups were formed using the multi-dimensional personality theory of Carl Jung and composed so that each of the group members shared at least one of Jung's four basic functions (sensing, intuition, thinking and feeling). This allowed for a "common language", as Haythorn (1968, p. 103) terms it, which means that each group member shared a characteristic which was also shared by every other member in his group. The other dimensions of personality were then varied to allow for meaningful confrontation with others while at the same time having a common language necessary for some degree of interpersonal understanding.

The literature on group composition, self-concept and anxiety suggests a number of questions to which the present study is addressed. Do different group compositions have an effect on the self-concept and anxiety level of undergraduate students? Are different personality types more anxious than others? Is it possible to

discern differences in the atmospheres created within small self-understanding groups of differing compositions? The answers to these questions seem crucial in helping college administrators understand in specific ways the impact of students upon other students and how this impact might then be optimized.

CHAPTER III

METHODOLOGY AND PROCEDURE

The present chapter will examine the selection and description of the population and sample, how the groups were formed, selection and background of the group leaders, procedure in setting up the study, design of the study, how the data was analyzed, and a description of instruments used.

Selection and Description of the Population and Sample

The sample was selected from among students who volunteered to participate. A letter asking for volunteers for the study was sent to all students in Holmes, Hubbard, Akers, and Fee Halls. These halls were selected because of their geographic location. They were all in the same residential complex and it was thought that by drawing the sample from one region it would make attendance at the group meetings considerably more convenient for the students participating. The total number of volunteers was 178 students from four co-ed residence halls on the East campus of Michigan State University.

The students were almost evenly divided as to sex with 88 men and 87 women volunteering. The sample was predominately freshmen and sophomores. The distribution of volunteers by residence hall was as follows: Holmes Hall 91, Akers Hall 21, Hubbard Hall 37, and Fee Hall 29.

Formation of Groups

The nine groups were selected by the method of stratified random sampling without replacement. This meant that each individual's name was placed in a "hat." The groups were then formed by drawing the personality types from the 16 different types as needed to fill the groups.

The groups were originally designed to each have eight members--four men and four women. However, some personality types were not available in the original sample of 178 (see Appendix F for the exact distribution of personality types) so that the groups requiring those types met with less than eight members. Also, after being selected, a few students indicated they were not interested in participating. In cases where this occurred before the first group session (no new members were added after the groups began) an attempt was made to replace them. However, some of the types that dropped out could not be replaced due to a lack of individuals of the suitable personality type in the remaining sample. Hence, these groups met with less than eight members.

After all changes had been made, the groups ranged from six to eight in number and had a total of 69 participants. The exact composition of the groups will be represented in the following discussions of the homogeneous, complimentary, and heterogeneous groups.

Homogeneous Groups

These three groups consisted of students who scored identically in personality type. The types with the largest number of volunteers were INFP, ENFP, and INTP. Out of the 178 volunteers, 98 were of these three types. These types were selected for homogeneous groups because the other types with eight or more volunteers did not have enough in excess to fulfill the requirements of the complimentary and heterogeneous groups.

The homogeneous groups were composed as follows:

<u>Homogeneous Group 1</u>	<u>Homogeneous Group 2</u>	<u>Homogeneous Group 3</u>
Type - INTP	Type - ENFP	Type - INFP
Sex - 4 Females 4 Males	Sex - 4 Females 4 Males	Sex - 4 Females 4 Males
Group leader - INTP female	Group leader - ENFP male	Group leader - INFP female

Complimentary Groups

The complimentary groups were originally formed on the basis of three criteria: (1) No two people were identical in personality. (2) At least one function of the four primary orientations (thinking, feeling, sensing

intuition) was common to each member of the group. (3)
 The remaining three functions were evenly distributed
 among the eight people. The complimentary groups were
 composed as follows:

Complimentary Group 1
(intuition)

<u>Type</u>	<u>Sex</u>
INFJ	male
ENFJ	female
ENFP	female
INTJ	male
ENTP	female
INTP	male
INFP	female
ENTJ	male

Group leader - INFJ
 male

Complimentary Group 2
(feeling)

<u>Type</u>	<u>Sex</u>
ENFJ	male
ISFJ	female
ENFP	female
INFJ	male
ESFP	male
INFP	female

Group leader - ENFJ
 female

Complimentary Group 3
(thinking)

<u>Type</u>	<u>Sex</u>
ENTJ	male
INTJ	female
ENTP	male
ISTP	female
INTP	male
ISTJ	female

Group leader - ENTJ
 male

The functions of feeling, thinking, and intuition were
 selected for complimentary groups because of the avail-
 ability of personality types in those areas.

Heterogeneous Groups

The heterogeneous groups were formed so that as
 much variation as possible was evidenced on the four

scales of the Myers-Briggs Type Indicator. That is:

- (1) No two people were identical in personality type.
- (2) One function was not common to all people in these groups as was true for the homogeneous and complimentary groups. The composition of the heterogeneous groups was as follows:

<u>Heterogeneous Group 1</u>		<u>Heterogeneous Group 2</u>	
<u>Type</u>	<u>Sex</u>	<u>Type</u>	<u>Sex</u>
ENTJ	male	ENTP	female
INFJ	female	ISFJ	female
ISFP	male	ENTJ	male
ENFP	female	INFJ	female
INTP	male	ISFP	female
ISTJ	male	INTP	male
		ENFJ	male
Group leader - INTJ		Group leader - ESFP	
	female		male

Heterogeneous Group 3

<u>Type</u>	<u>Sex</u>
ENFP	female
ESFJ	male
ISTJ	male
INFP	female
ESFP	female
ENTJ	female
INTJ	male

Group leader - ESFJ
male

Selection and Background of Group Leaders

The main thrust of the study was to evaluate the impact of students upon other students. Perhaps the ideal situation would have been to have had no group leaders. However, due to responsibilities of a

professional nature, group leaders were included in each group. The leaders were assigned to the groups by personality type as may be noted in each of the groups above. The homogeneous group leaders were similar in personality type to the members of their respective groups. The complimentary group leaders had the complimentary function in common just as did all the other members of their group. The remaining three leaders were randomly assigned to the three remaining heterogeneous groups.

The group leaders were told nothing about the nature of the study in which they were participating, other than that they were to be leaders of a self-understanding group. (Communications with the group leaders may be found in Appendix H) They were instructed to:

behave in an unobtrusively quiet manner. This simply means that you should not be conspicuous in resisting participation or act in a way that connotes to the group that you have taken responsibility for the success or failure of the group. You will participate when you feel it will help another understand himself while at the same time allowing others to play this role. If the group behaves in such a way that the anxiety level or self-concept of a particular individual is, in your opinion not being enhanced, then behave in a supportive manner.

The group leaders were all members of the student development seminar in the college of education at Michigan State University. They were in their third consecutive term of the seminar and had been members of small

groups as well as having been group leaders with students as part of their practicum experience. Each was at approximately the same level of professional development in terms of working with small self-understanding groups.

Organizational and Testing Procedure

1. Late in the winter quarter a letter was sent to all residents of Holmes Hall informing them that a number of small self-understanding groups would be formed during the spring quarter. They were asked to register at the Lyman Briggs College office if they were interested in participating. A response of 91 students was obtained.
2. At the beginning of the spring quarter a second request for volunteers was sent to the residents of Holmes, Akers, Fee, and Hubbard Halls. Interested students were asked to call the Lyman Briggs College Office. The second letter received a response of 87 students. The Myers-Briggs Type Indicator was then sent to each student who signed up either winter or spring quarter.
3. The Myers-Briggs Type Indicators were scored and the groups were then formed using those students who met the criterion for participation described in the section on group formation.
4. A meeting of all nine group leaders was called the second week of spring quarter to explain the

pretesting procedures to be used. (Directions may be found in Appendix H)

5. Each group leader was asked to meet with his group to administer the pretest and to arrange for a suitable meeting time and place. Some students were unable to attend the first pretest session, so make-up testing was held. The first group session was organizational in nature and was considered preliminary to the treatment sessions.
6. The group leaders were responsible for finding rooms for their groups in the East Complex of residence halls. Because of the total of nine groups, it was impossible to schedule each of them in the same room. Two of the groups (Complimentary 1--intuition and Complimentary 3--thinking) met in the group leaders' residence hall apartments. The other seven groups met in Holmes Hall in the coffee room, graduate advisor's apartment, and conference rooms.
7. Before the first official treatment group meeting each of the selected participants was sent a notice. The notice stated that if he did not feel at this time that he would be able to participate that he should contact the Lyman Briggs College Office so that an alternate could be selected for him before the first group meeting. A few students responded and were replaced before the first treatment session.

No replacements were made after this initial treatment session.

8. The groups met twice a week for six weeks. All groups met in the evening and each session was limited to one and one-half hours. Although they met in different rooms, all groups sat in a circular pattern without a table or other obstruction between them. Some groups met on consecutive days, while others met with two or three days in between.
9. Each participant was administered the Tennessee Self-Concept Scale, State--Trait Anxiety Inventory, Rokeach Value Inventory, and a brief biographical data sheet at the pretesting session.
10. The State Anxiety Inventory was administered again after the fourth, eighth, and eleventh treatment sessions of the groups. The inventory was administered at the end of these sessions with the directions that they were to answer the questions as they felt at that moment.
11. The posttesting was held at the last meeting of the groups and was not considered one of the 11 treatment sessions. The tests that were administered were the Tennessee Self-Concept Scale; Trait Anxiety Inventory; Respect, Empathy, and Congruence Scale and a brief questionnaire designed to survey the

participants attitudes toward the group experience and their friendships formed outside the group.

Instrumentation of the Study

Myers-Briggs Type Indicator

The Myers-Briggs Type Indicator is an instrument which has as its underlying theory the different personality types as conceived by Carl Jung. The selection of this instrument for composing groups was made because of the author's belief that Jung's theory offers a viable starting place in the experimentation with different types of human environments. One favorable aspect of the theory and test is the classification system which lends itself to examination. It is the accessibility to examination that makes the use of this particular theory of personality more conducive to defining different group compositions than some other schools of personality theory (i.e., Psychoanalytic, Rogerian). Another consideration is summarized by Julius Seeman (1954) who states:

Generally, the most powerful kinds of research studies are those based on a theoretical position and designed to test theory derived propositions. This is true because theory exerts an organizing force which brings together and explains discrete facts and which points out the places where additional knowledge is needed. Theory derived research thus contributes to a coherent body of knowledge.

The present research then, should contribute some insight into the effects of students upon each other in small

groups based on the Jungian model of personality. It should also allow for additional research to build upon the present findings.

The Myers-Briggs manual reports that "the purpose of the Indicator is to implement Jung's theory of types." The instrument has four scales: introversion--extraversion, sensing--intuition, thinking--feeling, judging--perceiving. Consistent with Jung's theory, the indicator is scored in a dicotomous fashion utilizing the forced choice method to determine preferences on each of the four scales. By using this method the test allows for 16 personality types. Each of these types is hypothesized to be different depending upon the responses chosen on each of the four scales. Characteristics of the individual preferences are as follows:

<u>Preference as between</u>	<u>Description of preference</u>
Extraversion or Introversion	Extraversion: Tends to be interested in his environment, is more outgoing, meets the world with his dominant function and is easier to get to know. Introversion: Prefers to deal more subjectively with the world and tends to be quieter and more difficult to get to know. Conceals his dominant function.
Sensing or Intuition	Sensing: Has a more concrete mode of perception. Prefers to deal with factual and observable stimuli.

	Intuition: Has a more abstract mode of perception and prefers theory. Tends to be more creative.
Thinking or Feeling	Thinking: Has a logical mode of responding, appreciation of systematizing and ordering versus the subjective and personal. Feeling: Has a subjective mode of responding, preference for subjective and personal expression versus logical and calculated expression.
Judgment or Perception	Judgment: Has a preference for order and decision making. Perception: Has a preference for adaptability and postponement of decision making and responding.

Reliability. The author states that reliability studies show the nature of the sample seems to make a difference in the reliability coefficients obtained. In reporting reliabilities of a number of samples using the Spearman-Brown Split Half Prophecy Formula it was found that age, intellectual ability, socio-economic status made a difference. The general range for all samples reported was from .60 to .94. National Merit Finalists and college students from Brown University and Pembroke College, along with gifted seventh through ninth graders evidenced the highest reliabilities (generally in the .85 area.) In the Brown University sample of 100 men, the reliabilities were as follows for the four scales: EI .74, SN .88, TF .90, JP .76. The sample of 100 Pembroke College

women had the following reliabilities: EI .81, SN .83, TF .84, JP .84.

Gerald Mendelsohn reviewing the Myers-Briggs in Buros Mental Measurement Yearbook (1964) stated that since the instrument has been in existence for more than 20 years an unusual amount of reliability and validity data is available. The manual summarizes a great deal of this data. He found little data, however, on the stability of scores. Test-re-test data over a 14 month period found reliabilities of about .70 for the EI, SN, and JP scales with a reliability of .48 for the FT dimension which appears to be the least stable of the scales. The authors of the manual say that the reliabilities of these dimensions are confounded in the test-re-test situation by the developmental nature of the theory as hypothesized by Jung. Two assertions are made by the theory as pointed out by Mendelsohn:

- (1) The scales are bipolar and discontinuous, the zero point representing a true dividing point of psychological significance, i.e., the dimensions are dicotomous.
- (2) The four scales interact in a complex manner in relating to behavior.

The basic limitation is that given the reliabilities of the scales "it seems risky to infer basic personality differences when the omission or change of a single item could alter a subject's classification."

Validity. The Myers-Briggs Manual presents data which indicates the preference for certain occupations

is correlated with certain patterns of scoring on the MBTI. MacKinnon and associates reported that in their creativity studies at the Institute for Personality Assessment and Research that 97 per cent of the creative men that were studied scored as intuitive types. The sample was 115 men who were architects, research scientists, writers, mathematicians. The same study also found 96 per cent of the creative women studied were of the intuitive type. The manual specifies that the number of intuitives in the general population is 25 per cent.

Other results presented in the manual show correlations significant at the .05 level and above for the different preferences with the Strong Vocational Interest Blank as follows: INP--with professional occupations such as psychologist, architect, physician and dentist; INT--with technical scientific occupations such as mathematician, physicist, engineer and chemist; ESTJ--with production management; ENF--with uplift occupations such as minister, social worker, personnel director; NFP--with musicians; T--with certified public accountants; SJ--with business detail and administration including accountant, office man, purchasing agent, banker, mortician and pharmacist; ES--with business contact such as sales manager, real estate salesman and life insurance salesman;

NP--with verbal and linguistic such as advertising, lawyer, author-journalist; STJ--with president of manufacturing concerns.

Additional data is presented which shows the following correlations between the type preferences and the Allport Vernon Lindzey Value Scale: E--.20 with political; S--.46 with economic; T--.37 with theoretical; J--.12 with economic; I--.20 with aesthetic; N--.34 with social; P--.16 with aesthetic.

Data is presented in the manual showing correlations between certain preferences on the Myers-Briggs Type Indicator and certain needs on the Edwards Personal Preference Schedule, faculty rating of students' performance, job turnover, IQ, academic achievement and a number of other measures. This data is far too extensive for review in the present study. However, readers interested in these studies are referred to the manual for details.

The manual also presents correlational data showing that the Myers-Briggs Type Indicator is highly related to an instrument constructed by two Jungian analysts called the Gray-Wheelwright Psychological Type Questionnaire. The instruments were constructed concurrently and independently. The correlation between IE, SN, and FT with the scales on the Gray-Wheelwright Questionnaire are .79, .58, and .60 respectively. The author

states that the two tests might be conceived as being parallel forms. It should be noted that the JP scale is not found on the Gray-Wheelwright Questionnaire, therefore explaining the absence of a correlation with the JP scale of the Myers-Briggs Type Indicator.

Tennessee Self-Concept Scale

The Tennessee Self-Concept Scale consists of 100 short statements which are responded to on a five point scale: completely false, mostly false, partly true and partly false, mostly true, completely true. The scale was designed to evaluate several aspects of the self-concept: identity, self satisfaction, behavior, physical self, moral-ethical self, personal self, family self, and social self. The TSCS also gives a score for the overall self-esteem which is considered the most important scale because of its inclusion of the other subscales. Persons scoring high on the total self-esteem scale are described by the author of the manual as those who tend to like themselves, feel that they are persons of worth and value, and they behave accordingly. People with low scores are doubtful about their worth and value, often feel anxious and have little self-confidence.

Reliability. The manual specifies that there is evidence that test-re-test reliabilities of from .80 to .90 have been found with repeated measures with the same individuals over long periods of time. Through various

types of profile analysis the author has demonstrated that distinctive features of individual profiles are present for most persons a year or more later.

Validity. Four types of validity procedures are cited in the manual: (1) content validity, (2) discrimination between groups, (3) correlation with other personality measures, (4) personality changes under particular conditions.

(1) Content validity: Assessment of the items included in the scale was performed so that final inclusion in the scale depended upon complete agreement as to the content by seven clinical psychologists. A larger pool of self-descriptive items were narrowed to 90 items which were classified by this method of complete rater agreement.

(2) Discrimination between groups: A group of 369 psychiatric patients was compared with 626 non-patients. Highly significant differences (at .001 level) were found for almost every score that is utilized in the scale. Additional data included in the manual indicates that individuals rated high in personality integration were also significantly different from the 626 non-patient norm group but in the opposite direction from the patient group. It was also found that different patient groups were discernible on their self-concept

profiles. Other studies were reviewed showing the ability of the scale to differentiate between various groups.

(3) Correlation with other personality measures: The reader is referred to the Tennessee Self-Concept Scale Manual for correlations with other instruments. Two complete tables of correlations are presented relating the Tennessee Self-Concept Scale to the MMPI and Edwards Personal Preference Schedule. The authors of the manual indicate that the MMPI scores correlate with the TSCS "in ways one would expect from the nature of the scores." Correlations were based on tests of 102 psychiatric patients. Of the correlations with the EPPS Fitts (1965, p. 24) says: "The very nature of the two scales is such as to contraindicate very many high linear correlations." The data presented indicates non-linear relationships between most scores on the TSCS and EPPS. Fitts suggests that extreme high and low scores on both measures would be correlated. The correlations are too extensive and complex to be summarized adequately in the present review.

(4) Personality changes under particular conditions: Two studies have already been mentioned in the review of the literature. One indicated that paratroopers experienced a significant decrease in self-esteem as a result of their experiences in military training

(Gividens [1959])). Also cited was a study by Ashcraft and Fitts (1964) which indicated that individuals undergoing psychotherapy experienced a significant increase on 18 of the 22 variables as compared with an increase on only two of the 22 variables for a non-treatment control group of individuals waiting for therapy.

Factor Analysis of Tennessee Self-Concept Scale

The results of the pre and posttesting for the Tennessee Self-Concept Scale were collated at the Vanderbilt University Computer Center. The results contained 29 different sub-scores. This large number of sub-scores was considered much too unwieldy for statistical analysis. Consequently, the results were factor analyzed and yielded four major factors. The procedure of factor analysis combines highly correlated scores into one factor. The assumption being that highly correlated sub-scores are measuring essentially the same thing. It is also assumed that by having such a large number of sub-scores the information gained through such specificity is not significant enough to warrant separate consideration.

A description of the four factors obtained is given below. The first three are considered to have theoretical relevance from the standpoint of self theory. Factor 18, although included in the analysis of the data, was

not considered significant from a theoretical perspective. As mentioned above, the 29 factors were condensed into these four factors to facilitate statistical analysis. Perhaps the most important factor is Factor 5, which indicates the overall level of self-esteem for the individual taking the test.

Definitions of The Four Factors of Tennessee Self-Concept Scale (Fitts, 1965, p. 2) used in the Study:

TSCS Factor #1--The self criticism score

This is a scale composed of ten items. These are all mildly derogatory statements that most people admit as being true for them. Individuals who deny most of these statements most often are being defensive and making a deliberate attempt to present a favorable picture of themselves. High scores generally indicate a normal, healthy openness and capacity for self-criticism. Extremely high scores (above the 99th percentile) indicate that the individual may be lacking in defenses and may in fact be pathologically undefended. Low scores indicate defensiveness, and suggest that the positive scores are probably artificially elevated by this defensiveness.

TSCS Factor #2--The true/false ratio

This is a measure of response set or response bias, an indication of whether the subject's approach to the task involves any strong tendency to agree or disagree regardless of item content. The actual meaning of T/F can be approached in three ways. (1) It can be considered solely as a measure of response set and interpreted in terms of the findings about the meaning of deviant response sets. (2) It can be treated purely as a task approach or behavioral measure which has meaning only in terms of empirical validity. In this sense the T/F ratio differentiates patients from non-patients and correlates significantly with other tests. (3) It can also be considered from the framework of self theory. From this approach, high T/F scores indicate the individual is achieving self definition or self description by focusing on what he is and is relatively unable to

accomplish the same thing by eliminating or rejecting what he is not. Low T/F scores would mean the exact opposite, and scores in the middle ranges would indicate that the subject achieves self definition by a more balanced employment of both tendencies--affirming what is self and eliminating what is not.

TSCS Factor #5--Total positive score

This is the most important single score on the counseling form. It reflects the overall level of self-esteem. Persons with high scores tend to like themselves, feel that they are persons of value and worth, have confidence in themselves, and act accordingly. People with low scores are doubtful about their own worth; see themselves as undesirable; often feel anxious, depressed, and unhappy; and have little faith or confidence in themselves.

TSCS Factor #18--Distribution sub-scores

"This score represents a count of the number of fives marked on the answer sheet."

State-Trait Anxiety Inventory

The State-Trait Anxiety Inventory was developed from a pool of items which were obtained from the IPAT Anxiety Scale, the Taylor Manifest Anxiety Scale, and the Welsch Anxiety Scale. Items which had proven relationship to A-Trait were selected from this pool. These items were then rewritten to retain the content of the item but the form was altered to allow for use in both the A-Trait and A-State portions of the inventory.

Levitt, (1967, p. 71), in reviewing the State-Trait Anxiety Inventory comments: "The STAI is the most carefully developed instrument, from both theoretical and methodological standpoints, of those presented in the chapter.

Other tests reviewed in the chapter were Taylor's Manifest Anxiety Inventory, MMPI anxiety measures, IPAT Anxiety Scale, S-R Inventory of Nervousness, Fear Schedule Survey, The Assimilation Scales, Affect Adjective Check List, The Subjective Stress Scale, Freeman Manifest Anxiety Test, Test Anxiety Questionnaire, and Achievement Anxiety Test.

Reliability. Substantial internal consistency reliabilities indicate that values of between .80 and .85 for both the A-State and A-Trait portions of the inventory were obtained under normal conditions. The reliability on the A-State portion of the STAI for undergraduate college students who had just taken a difficult intelligence test was .92 and .93 after they had observed an upsetting movie. The K-R 20 internal consistency reliabilities as modified by Cronbach were used to obtain the above reliabilities. Test-re-test reliabilities for undergraduate students over a 104 day period indicated reliabilities between .70 and .80 for the A-Trait portion of the STAI. Test-re-test reliabilities for the A-State portion were substantially lower (approximately .30) as might be expected from the theory of the A-State. The concept of A-State as being a vacillating condition of physiological arousal which is dependent upon the conditions at the time of administration would provide a rationale for these low reliabilities.

Validity. The validity of the A-Trait portion of the STAI is presented in the manual in the form of correlations with other instruments of established validity. A-Trait was found to be correlated .76, .79 and .58 with the IPAT Anxiety Scale, Taylor Manifest Anxiety Scale and the Affective Adjective Check List, respectively, for a sample of 80 undergraduate men at Florida State University. The correlations were .75, .80 and .52 for a sample of 126 undergraduate females from the same institution on the above mentioned inventories.

Correlations of .56 for males and .72 for females between the A-State portion of the STAI and the Zuckman Anxiety Scale (today form) were found for the undergraduate sample at Florida State. Validity studies for the A-State portion were also done utilizing four different experimental conditions. These conditions were relaxation, normal condition, after taking a difficult examination and after viewing a stressful movie. The results indicated that the A-State portion differentiated successfully between these four conditions with a progression in anxiety from the relaxed state to the normal state to examination conditions and finally to the stressful movie. Full details of the results are reported in the State-Trait Anxiety Inventory Manual (Spielberger, 1968) along with other results of studies which utilized the inventory.

Rokeach Value Scale

The Rokeach Value Scale (Rokeach, 1969) consists of two separate lists of 18 values each. The first list is composed of "terminal" values which describe what might be called "end states of existence." Such values as happiness, equality, salvation and true friendship are among the 18 terminal values which the subject is asked to rank from 1 to 18 depending on the priority he gives each value in his own life. The second set of 18 values are "instrumental" values and may be characterized as being ways of behaving. Such values as cheerful, independent, loving and obedient are among the 18 values presented in this list. These values are ranked in the same way as the terminal values.

Reliability. The reliability of the scale was determined by correlating (ρ) the rank-order of test data with the rank order of re-test data. The median reliabilities obtained for form E (the form used in the present study) with a college student sample of 189 was .74 for the terminal value scale and .65 for the instrumental value scale over a three week interval in testing. Reliabilities for form D are reported as being .78 for terminal values and .72 for instrumental values over a four week, four day period with 36 students, and .78 for terminal and .71 for a seven week period using a sample of 100 college students. The two forms (D) and (E) are

identical except that form D uses gummed stickers to rank the items and form E uses a simple paper and pencil ranking of the items.

Validity. Validity data in the form of discriminations between different groups is presented by Rokeach (1969a) in his article "The Role of Values in Public Opinion Research". Rokeach (1969a, p. 555), states that the value scale discriminates between "men and women, hippies from non-hippies, hawks from doves, policemen from unemployed negroes, good students from poor students, fifth-graders from seventh-ninth and eleventh graders, retail merchants from sales clerks, Jews from Catholics, Democrats from Republicans, and so forth."

Rokeach (1969a) also presents data which indicates that different rankings on the value inventory are predictive of differences in the behavior of certain individuals. He cites differences in church going behavior as being significantly correlated to a high or low ranking of "salvation". Other data showed that students at Michigan State University who participated in civil rights demonstrations ranked "equality" fifth, while those who were unsympathetic toward civil rights demonstrations ranked it seventeenth in importance.

Very interesting data was also presented on the differing values held by various political groups. Rokeach (1969b) studied the values of supporters of

Lyndon Johnson, Robert Kennedy, Eugene McCarthy, Richard Nixon, Ronald Reagan, Nelson Rockefeller, and George Wallace. He found that the values of a world of beauty, true friendship, wisdom, capable, clean, obedient, polite, responsible, and self-control were discriminating items.

Barrett-Lennard Relationship Inventory
(Respect, Empathy, Congruence Scales)

One of the instruments used in the present study was an adapted version of the Barrett-Lennard Relationship Inventory. The inventory was administered in an endeavor to understand the perceptions of group members of their self-understanding groups on the dimensions of respect, empathy and congruence.

The instrument was developed by Barrett-Lennard in an effort to measure the conditions of therapy which promoted client recovery resulting from a therapeutic relationship. The inventory originally contained five separate scales. These scales measured the therapists level of regard, empathetic understanding, congruence, unconditionality of regard and willingness to be known. These scales were used to assess the feelings of the therapist about the client and the client about the therapist. The adaptations made for the present study consisted of dropping the scales of unconditionality of regard and

willingness to be known and then making the following changes in directions: (The full inventory is presented in Appendix C)

"Below are listed a variety of ways that one person could feel or behave in relation to another person (a group).* Please consider each statement with respect to whether you think it is true or not true in your present relationship with your therapist (group).* Mark each statement in the left margin according to how strongly you feel it is true or not true.
Please mark every one. Write in 1, 2, 3; or -1, -2, -3, to stand for the following answers:

- 1: I feel that it is probably true, or more true than untrue.
- 2: I feel it is true.
- 3: I strongly feel it is true.
- 1: I feel that it is probably untrue, or more untrue than true.
- 2: I feel it is not true.
- 3: I strongly feel it is not true.

*-These words were substituted for the underlined words.

Reliability. In order to shorten the testing time only the level of regard, congruence, and empathetic understanding scales were used. The reliability of each scale was computed using the Spearman-Brown Split half reliability formula. Reliabilities were computed for both client perceptions and therapist perceptions of the relationship. The following reliability coefficients were obtained: Level of regard, client data .93,

therapist data .93, empathetic understanding, client data .86, therapist data .96, Congruence scale, client data .89, therapist data .94.

Validity. Content validation of the scales was assessed by having five client-centered therapists judge each of the items for the directionality of the variable under consideration. They also rated the items from 1 to 5 and -1 to -5 depending upon their perception of the strength of importance as a positive or negative indicator of the variable. Items which were agreed upon perfectly by all five judges were included in the scales.

The research of Barrett-Lennard showed a correlation between therapeutic change and different levels of respect, empathy and congruence as assessed by the relationship inventory. The assessment of therapeutic change took the form of therapist and client ratings of the impact of therapy upon the clients. Also considered as outcome measures were the Q adjustment scale, Taylor Manifest Anxiety scale and MMPI D scale. Changes in the expected directions were found to depend on different levels of respect, empathy and congruence. They also demonstrated that expert therapists demonstrated more respect, empathy and congruence than non-expert therapists.

Factor Analysis of the Barrett-
Lennard Relationship Inventory
(Respect, Empathy, Congruence
Scales)

The Respect, Empathy and Congruence Scales were factor analyzed to determine whether the scores were offering distinct information with respect to how the students felt about their groups. The results indicated that the scores on the three scales were highly correlated. Because the scales were highly correlated it was assumed that they were all measuring essentially the same thing. Consequently the scores for the three scales were combined to yield one total score. This total score was then used in the statistical analyses.

Analysis of the Data

The data collected was analyzed using a number of statistical and descriptive procedures. The computations performed in the study were primarily done on the 3600 computer.

The first procedure used was a factor analysis of the Tennessee Self-Concept Scale and the Respect, Empathy, and Congruence Scale. The Tennessee Self-Concept Scale gave 29 different scores which were analyzed to find the major factors. Four major factors were found. The Respect, Empathy, and Congruence Scale was found to contain one major factor as a result of the factor analysis. Pretest and posttest scores on the Tennessee Self-Concept

Scale were correlated using the Pearson Correlation Coefficient. A Pearson Correlation was also computed for the pretest and posttest measures on the Trait Anxiety Inventory.

Both the Tennessee Self-Concept Scale and the State-Trait Anxiety Inventory were analyzed using a multivariate analysis of variance with change scores. The change scores were a result of subtracting the pretest score from the posttest score (in the case of the State Anxiety Inventory, the first administration score was used as the pretest measure.) Analysis of variance using change scores assumes a slope of one between the pretest and posttest measures. As in the case of the present study, if the correlations are high between pre and post scores, it can be assumed that the slope is approaching one and that change scores may be used. Analysis with change scores was selected because of its simplicity of concept and its capacity to do a multivariate test.

Since no significance was found through the above analysis an analysis of covariance was performed on the same data. Analysis of variance using change scores is more conservative. It is possible that significance could be reached with a covariance analysis even if it was not reached in the previous analysis. Covariance analysis takes into account the degree of correlation between pretest variables and posttest scores. The

pretest measure was the covariable in each analysis. It was not possible, however, to do a multivariate test with covariates for the instruments used in this study except the State Anxiety Inventory which used the first administration as a covariate for the other three administrations.

The trend for the four administrations of the State Anxiety Inventory for each of the three groups was analyzed using planned comparisons of group means. The method of planned comparisons is used when it is important to avoid making a Type II error (not finding a difference when one exists.) It is a more powerful method than the post hoc comparisons method. Since the planned comparisons showed a significant trend for the heterogeneous group, the procedure of least squares curve fitting with orthogonal polynomials was used. This analysis gave the coefficients of the appropriate equation (quadratic) so that a curve could be drawn to describe the trend.

An analysis of variance was employed to analyze the differences between the three types of groups on the Respect, Empathy and Congruence Scale. A brief questionnaire designed to determine the feelings of the group members on a number of questions related to the group experience was also administered. The answers to six of the ten questions were analyzed using an analysis of

variance. Significant differences between the three composite groups on these questions were further analyzed with the post hoc method of comparison. The remaining four questions were treated descriptively as they did not lend themselves to statistical analysis.

The investigation of the interactive effects of group composition and personality types, although not the primary focus of the study, was considered to be of interest. Such interactions, where found, were graphed and treated descriptively. Because a completely crossed research design involving at least 42 groups would be needed to conduct a comprehensive study of the interactive effects of the 16 personality types and the three group compositions, a limited emphasis should be placed upon the findings presented. The method used to investigate these interactive effects was an analysis of variance.

An analysis of variance was done on the pretest scores of the Trait Anxiety Inventory for feeling and thinking orientations to determine if there was a significant difference in anxiety between the two groups. All individuals originally participating in the study were included in the analysis regardless of whether they dropped out, as this analysis was not dependent on the treatment.

The Rokeach Value Inventory was analyzed for the three types of groups using Kendall's Coefficient of Concordance. Kendall's Tau coefficient gives values from 0.00 to 1.00 and indicates the degree of agreement within a particular category. A rank of 0.00 would indicate absolutely no agreement among members of a group and a value of 1.00 would indicate perfect agreement. The inventory is divided into two parts--terminal values and instrumental values--so two coefficients were found for each group.

CHAPTER IV

RESULTS OF THE STUDY

The results of the study are presented under the following sub-titles: self-concept, anxiety, respect-empathy-congruence, questionnaire data (including friendships formed), interactive effects of group composition and personality type, Rokeach Value Inventory, pre-test trait anxiety comparison between feeling types and thinking types. The hypotheses of the study are also summarized at the conclusion of the chapter. It should be pointed out before presenting the results that the results of the interactive effects of group composition and personality type are considered speculative and suggestive. They are included to highlight possible areas for future research. The study's design does not warrant heavy statistical emphasis upon the interactions presented.

Self-Concept

The Pearson Correlations between pre-test and post-test scores for the Tennessee Self-Concept Scale are presented in Table 1.

TABLE 1.--Pearson correlations between pre-test and post-test scores for the four factors of the Tennessee self concept scale.

Factor	Pearsonian Correlation
TSCS 1	.76
TSCS 2	.57
TSCS 5	.84
TSCS 18	.68

Table 2 indicates there was no significant difference from pre-test to post-test for the combined Tennessee Self-Concept Scale factors using a Multivariate Analysis of Variance with change scores at the .05 level of significance. The Analysis of Variance for the individual factors of the Tennessee Self-Concept Scale is also presented in Table 2 and indicates again no significance on any one factor at the .05 level.

Since significance was not reached with change scores, the data was reanalyzed using an Analysis of Covariance. The pre-test score was used as the covariable for the post-test score for each of the factors. The results shown in Table 3, indicate there were again no significant differences on any of the Tennessee Self-Concept Scale factors at the .05 level of significance.

TABLE 2.-- Multivariate analysis of variance using change scores for the Tennessee Self-Concept Scale.

		Degree of Freedom	F Statistic	Prob. of F Statistic
Mult. Test		8	0.18	0.98

Factor	Degree of Freedom Between	Degree of Freedom Within	Mean Square Between	Mean Square Within	F Statistic	Prob. of F Statistic
TSCS 1	2	6	3.59	3.93	0.91	0.45
TSCS 2	2	6	0.00	0.01	0.15	0.85
TSCS 5	2	6	18.06	52.57	0.34	0.72
TSCS 18	2	6	4.28	9.92	0.43	0.66

TABLE 3.--Analysis of covariance for the Tennessee Self-Concept Scale.

Factor	Deg. of Freedom Between	Deg. of Freedom Within	Mean Square Between	Mean Square Within	F Statistic	Prob. of F Statistic
TSCS 1	2	5	0.28	3.01	0.09	0.91
TSCS 2	2	5	0.00	0.01	0.28	0.76
TSCS 5	2	5	17.93	53.70	0.33	0.73
TSCS 18	2	5	3.80	11.33	0.33	0.73

Tennessee Self-Concept Scale means and standard deviations for the composite (all three similarly composed groups combined) homogeneous, complimentary and heterogeneous groups are given in Table 4. The means of the individual nine groups were used in computing the composite group means and standard deviations thus weighting each of the three individual groups in each composite group equally.

Means and standard deviations for the Tennessee Self-Concept Scale factors for each of the nine individual groups are presented in Table 5.

Anxiety

Trait Anxiety

Table 6 shows the Pearson Correlation between the pre-test and post-test scores of the Trait Anxiety Inventory.

Table 7 presents the results of an analysis of variance using change scores for the pretest - posttest measures of the Trait Anxiety Inventory. No significant difference was found at the .05 level of significance.

The data was then reanalyzed using an Analysis of Covariance. The pretest measure was the covariable for the posttest measure. Again, no significant difference was found at the .05 level as shown in Table 8.

TABLE 4.--Tennessee Self-Concept Scale mean values and standard deviations.

	Mean TSCS 1	S. D.	Pretest	Mean TSCS 1	S. D.	Posttest	Mean TSCS 2	S. D.	Pretest	Mean TSCS 2	S. D.	Posttest
Composite												
Homogeneous	38.73	2.18		37.64	1.45		.9296	.0556		.9383		.0669
Composite												
Complimentary	36.71	.53		37.47	1.29		.8133	.0645		.8628		.0668
Composite												
Heterogeneous	37.09	1.86		37.84	2.11		.9602	.1629		.9644		.1058
Composite												
Homogeneous	319.39	21.16		323.45	13.66		14.30	1.45		13.67		4.92
Composite												
Complimentary	319.80	8.83		319.23	10.19		11.53	1.28		12.50		2.32
Composite												
Heterogeneous	336.75	10.87		337.07	16.29		13.85	5.72		15.57		4.71

TABLE 6.--Pearson correlation between pretest and post-test scores for the Trait Anxiety Inventory.

Variable	Pearsonian Correlation
Trait	.85

TABLE 7.--Analysis of variance using change scores for the Trait Anxiety Inventory.

Variable	Degree of Freedom Between	Degree of Freedom Within	Mean Square Between	Mean Square Within	F Statistic	Problem of F Statistic
Trait	2	6	1.51	1.12	1.34	0.32

TABLE 8.--Analysis of Covariance for the Trait Anxiety Inventory.

Variable	Degree of Freedom Between	Degree of Freedom Within	Mean Square Between	Mean Square Within	F Statistic	Prob. of F Statistic
Trait	2	5	1.45	1.35	1.07	0.40

Means and standard deviations on the Trait Anxiety Inventory for the composite groups are given in Table 9. Individual group means were used in computing the composite group statistics.

Individual group means and standard deviations for the Trait Anxiety Inventory are presented in Table 10.

TABLE 9.--Means and standard deviations for the composite groups on the Trait Anxiety Inventory.

	Mean Trait Pretest	S. D. Trait Pretest	Mean Trait Posttest	S. D. Trait Posttest
Composite Homogeneous	42.88	1.63	41.46	2.69
Composite Complimentary	42.17	5.57	41.57	5.48
Composite Heterogeneous	40.74	0.80	38.72	0.77

State Anxiety

The Multivariate Analysis of Variance using change scores revealed no significance at the .05 level of significance for the last three administrations (given after sessions 4, 8, 11) combined on the State Anxiety Inventory as shown in Table 11. The first administration of the State Anxiety Inventory was used as a pretest measure. An analysis of variance of each of the last three

TABLE 10.--Trait Anxiety Inventory mean values and standard deviations.

	Mean Trait Pretest	S. D. Trait Pretest	Mean Trait Posttest	S. D. Trait Posttest
Homogeneous #1 INTP	41.57	10.11	39.71	9.63
Homogeneous #2 ENFP	42.37	11.66	40.12	12.19
Homogeneous #3 INFP	44.71	13.13	44.57	8.92
Complimentary #1 intuition	44.57	8.73	42.57	8.52
Complimentary #2 feeling	46.16	4.11	46.50	7.28
Complimentary #3 thinking	35.80	3.96	35.60	5.22
Heterogeneous #1	41.66	7.39	39.33	7.42
Heterogeneous #2	40.14	9.22	39.00	8.30
Heterogeneous #3	40.42	14.54	37.85	12.11

administrations also showed no significance at the .05 level. These findings are included in Table 11.

TABLE 11.--Multivariate analysis of variance using change scores for the State Anxiety Inventory.

	Deg. of Freedom	F Statistic	Prob. of F	Statistic		
Mult. Test	6	1.19	0.39			
	Deg. of Freedom Between	Deg. of Freedom Within	Mean Square Between	Mean Square Within	F Statistic	Prob. of F Statistic
State 2	2	6	9.85	24.50	0.40	0.68
State 3	2	6	65.40	39.37	1.66	0.26
State 4	2	6	31.96	10.05	3.17	0.11

Table 12 contains the findings of a Multivariate Analysis of Covariance done on the final three administrations of the State Anxiety Inventory. No significant differences were found at the .05 level. Table 12 also includes the results of an Analysis of Covariance for each of the final administrations for which there was again no significance. In all computations the covariate was the first administration of the State Anxiety Inventory which was considered a pretest measure.

TABLE 12.--Multivariate Analysis of Covariance for the State Anxiety Inventory.

	Degree of Freedom	F Statistic	Prob. of F Statistic			
Mult. Test	6	0.88	0.55			
	Deg. of Freedom Between	Deg. of Freedom Within	Mean Square Between	Mean Square Within	F Statistic	Prob. of F Statistic
State 2	2	5	14.04	25.23	0.55	0.60
State 3	2	5	35.70	46.98	0.75	0.51
State 4	2	5	26.94	6.97	3.86	0.09

Table 13 gives the means and standard deviations for the composite homogeneous, complimentary, and heterogeneous groups for the four administrations of the State Anxiety Inventory. Means of the individual groups were used to compute the means and standard deviations of the composite groups. It should be noted that the means for State #4 for the homogeneous and heterogeneous composite groups each represent only the means of two of the three individual groups. Due to incorrect testing administrations during the final testing for the Homogeneous Group 3 and the Heterogeneous Group #3 those scores were not included in computing the mean.

TABLE 13.--Means and standard deviations State Anxiety Inventory.

	Mean State #1	S. D. State #1	Mean State #2	S. D. State #2	Mean State #3	S. D. State #3	Mean State #4	S. D. State #4
Composite Homogeneous	38.68	3.24	45.56	8.71	41.06	4.35	41.33	0.91
Composite Complimentary	38.80	2.05	42.06	5.43	36.91	3.36	35.44	4.08
Composite Heterogeneous	34.81	1.95	39.63	3.77	42.25	9.97	36.66	0.66

Means and standard deviations on the four administrations of the State Anxiety Inventory for the nine individual groups are found in Table 14. Again, it should be noted that the corresponding composite group mean for the State #4 was substituted for the Homogeneous Group 3 mean and the Heterogeneous Group 3 mean.

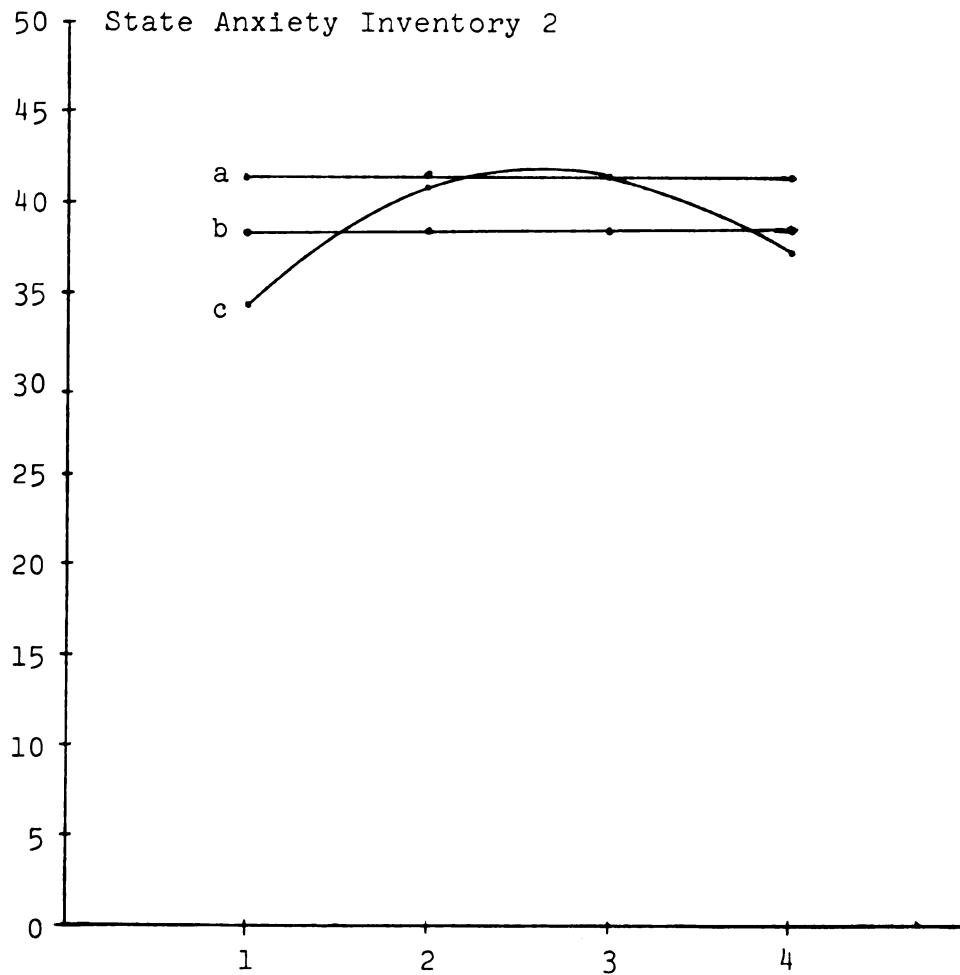
The results of the planned comparisons on the four State Anxiety Inventory administrations for the homogeneous, complimentary and heterogeneous composite groups are found in Tables 15, 16 and 17, respectively. A significant F ratio indicating a quadratic trend in anxiety was found for the heterogeneous composite group at the .05 level of significance (Table 17.) Comparison 1 represents a linear trend, comparison 2--a quadratic trend, and comparison 3--a cubic trend. It should be noted that only the scores from those individuals who took all four administrations of the State Anxiety Inventory were used in the planned comparison analysis. Hence, those groups that were incorrectly administered the inventory at the last testing session were not included in the analysis.

Graphs 1a, b, and c show the trends for the composite homogeneous, complimentary and heterogeneous groups respectively. The plotted values for Graph C were computed using the coefficients of the polynomial of the second degree as found by analyzing the State Anxiety Inventory heterogeneous scores with the Least Squares

TABLE 14.--State Anxiety Inventory mean values and standard deviations.

	Mean score	Standard deviation	Mean score	Standard deviation	Mean score	Standard deviation	Mean score	Standard deviation
Homogeneous #1 INFP	35.14	5.29	35.57	10.01	37.33	9.10	40.42	9.21
Homogeneous #2 ENFP	41.50	10.29	41.62	10.66	40.00	9.46	42.25	10.79
Homogeneous #3 INFP	39.42	6.93	49.50	11.13	45.85	15.53	41.33*	
Complimentary #1 intuition	37.85	9.40	37.71	6.65	36.42	11.35	39.66	9.71
Complimentary #2 feeling	41.16	5.68	48.16	12.61	40.50	8.78	35.16	6.60
Complimentary #3 thinking	37.40	7.63	40.33	12.58	33.83	5.63	31.50	6.02
Heterogeneous #1	36.16	7.41	35.40	5.20	33.60	7.57	36.00	7.51
Heterogeneous #2	35.71	7.42	40.85	10.39	53.16	8.87	37.33	8.95
Heterogeneous #3	32.57	5.18	42.66	8.37	40.00	12.60	36.66*	

*Mean value of other two groups due to incorrect testing procedure in given group.



Graph 1

Heterogeneous-Composite Quadratic Relationship

- a = homogeneous - no significant anxiety trend
- b = complimentary - no significant anxiety trend
- c = heterogeneous - quadratic anxiety trend

TABLE 15.--Planned comparison for the homogeneous composite group on the State Anxiety Inventory.

	Sum of Squares	Degree of Freedom	Mean Square	F Ratio
Between Groups Comparison	263.15	3		
1	15.44	1	15.44	0.13
2	38.42	1	38.42	0.32
3	209.29	1	209.29	1.78
Error Within Groups	6,098.86	52	117.28	--
Totals	6,362.01	55		

TABLE 16.--Planned comparisons for the complimentary composite group on the State Anxiety Inventory.

	Sum of Squares	Degree of Freedom	Mean Square	F Ratio
Between Groups Comparison	102.94	3		
1	76.21	1	76.21	0.82
2	18.56	1	18.56	0.20
3	8.17	1	8.17	0.09
Error Within Groups	4,791.29	52	92.14	--
Totals	4,894.23	55		

TABLE 17.--Planned comparisons for the heterogeneous composite group on the State Anxiety Inventory.

	Sum of Squares	Deg. of Freedom	Mean Square	F Ratio
Between Groups Comparison	937.79	3		
1	69.06	1	69.06	0.59
2	552.44	1	552.44	4.79*
3	316.29	1	316.29	2.74
Error Within Groups	3,230.87	28	115.39	--
Totals	<u>4,168.66</u>	<u>31</u>		

* Significant at the .05 level

Curve Fitting for Orthogonal Polynomials. Since the homogeneous and complimentary composite groups did not have a significant comparison (linear, quadratic, or cubic), the trend is graphed as straight line parallel to the x-axis and intersecting the y-axis at the mean for the group.

Respect, Empathy and Congruence

The results of the analysis of variance on the Respect, Empathy and Congruence Scale are presented in Table 18. No significant differences were found between the composite homogeneous, complimentary and heterogeneous groups at the .05 level of significance.

Table 19 shows the means and standard deviations for the composite groups on the Respect, Empathy and

TABLE 18.--Analysis of variance of the Respect, Empathy and Congruence Scale.

Source of Variance	Sum of Squares	Deg. of Freedom	Mean Square	F Statistic	Approx. Signif. Prb. of F Stat.
Between Categories	1,507.41	2	753.71	0.55	0.58
Within Categories	<u>78,780.77</u>	<u>57</u>	1,382.12		
Total	80,288.18	59			

TABLE 19.--Means and standard deviations for the composite groups on the Respect, Empathy and Congruence Scale.

	Mean REC	S. D. REC
Composite Homogeneous	28.95	39.97
Composite Complimentary	37.52	11.99
Composite Heterogeneous	37.77	24.54

Congruence Scale. The means and standard deviations for the individual nine groups are found in Table 20.

TABLE 20.--Respect-Empathy-Congruence mean values and standard deviations.

	Mean REC	S. D. REC
Homogeneous #1 INTP	-16.42	10.79
Homogeneous #2 ENFP	59.00	32.90
Homogeneous #3 INFP	44.28	22.96
Complimentary #1 intuition	33.57	20.35
Complimentary #2 feeling	51.00	15.89
Complimentary #3 thinking	43.00	37.52
Heterogeneous #1	13.33	37.94
Heterogeneous #2	37.57	50.73
Heterogeneous #3	62.42	23.36

Questionnaire

Questions 1, 2, 3, 4, 7, and 10 were analyzed statistically with an analysis of variance. The remaining questions will be dealt with descriptively. Questions which were found to be significant between composite groups were reanalyzed with a Post Hoc comparisons of means. The results of the analysis of variance for the questions are found in Tables 21 through 26. The means and standard deviations for the composite and individual groups are presented in Tables 27 and 28, respectively. The Questionnaire in its entirety is found in Appendix D.

Question 1 asked the group members to indicate the number of hours spent each week with group members outside the group. An analysis of variance on the resulting data indicated that, although the composite homogeneous group spent more time with group members outside the group than either the complimentary or heterogeneous groups, the difference was not significant at the .05 level. The results of the analysis are shown in Table 21.

Significant differences between the three composite groups were found on Question 2, which asked the group member if he would volunteer again after knowing what he now knows about self-understanding groups. Table 22 contains the results of the analysis of variance. Post Hoc analysis found the significant difference to be between

the composite homogeneous group and the composite complimentary group. Homogeneous group members indicated significantly less desire to participate again in a self-understanding group than complimentary group members. The heterogeneous group was not significantly different from either the homogeneous or complimentary groups. (A value of one was given a response of "yes" and two, a response of "no".)

Question 3 also discriminated significantly between the three composite groups as determined by the analysis of variance. The results are found in Table 23. A Post Hoc comparison of means found the complimentary group members responded significantly more affirmatively than the homogeneous group members to the question: "Do you feel that you understand yourself better now than you did before this group experience?" Once again, the heterogeneous group was not significantly different from either the homogeneous or complimentary groups.

Also significant at the .05 level was Question 4 which asked group members if they would like to "continue this experience." Table 24 contains the results of the analysis of variance. Homogeneous group members were found to respond significantly different from both the complimentary and heterogeneous group members on this question. They indicated less desire to continue the experience.

TABLE 21.--Question 1, Analysis of variance.

Source of Variance	Sum of Squares	Degs. of Freedom	Mean Square	F Statistic	Approx. Signif. Prob. of F Stat.
Between Categories	55.50	2	27.75	2.11	0.13
Within Categories	<u>748.14</u>	<u>57</u>	13.12		
Total	803.65	59			

TABLE 22.--Question 2, Analysis of variance.

Source of Variance	Sum of Squares	Degs. of Freedom	Mean Square	F Statistic	Approx. Signif. Prob. of F Stat.
Between Categories	1.44	2	0.72	4.62	0.01
Within Categories	<u>8.89</u>	<u>57</u>	0.15		
Total	10.33	59			

TABLE 23.--Question 3, Analysis of variance.

Source of Variance	Sum of Squares	Degs. of Freedom	Mean Squares	F Statistic	Approx. Signif. Prob. of F Stat.
Between Categories	1.94	2	0.97	4.45	0.01
Within Categories	<u>12.45</u>	<u>57</u>	0.21		
Total	14.4	59			

TABLE 24.--Question 4, Analysis of variance.

Source of Variance	Sum of Squares	Degs. of Freedom	Mean Square	F Statistic	Approx. Signif. Prob. of F Stat.
Between Categories	1.53	2	0.76	5.43	0.00
Within Categories	<u>8.06</u>	<u>57</u>	0.14		
Total	9.60	59			

Question 7 asked the group member how well his expectations had been met by his participation in a self-understanding group. The results of the analysis of variance as found in Table 25, indicate a significant difference between composite groups in the way they answered this question. Post Hoc comparison of means found the difference to lie between the homogeneous group and the complimentary group. Homogeneous group members indicated that less of their expectations had been met compared with the complimentary group members. (Answers were ranked from five down to one with five indicating complete satisfaction and one meaning their expectations were not met at all.)

The results of the analysis of variance for Question 10 are in Table 26. No significant differences were found between composite groups on the question: "What is your overall evaluation of the small group experience for you?" (Answers were assigned values of five down to one. Five was given to "very favorable" and one to "very poor.")

Interactive Effects of Group Composition and Personality Types

An examination of the interactive effects was not the primary focus of the present study and consequently, because the research design was not completely crossed, the results do not warrant statistical emphasis.

TABLE 25.--Question 7, Analysis of variance.

Source of Variance	Sum of Squares	Degs. of Freedom	Mean Square	F Statistic	Approx. Signif. Prob. of F Stat.
Between Categories	7.48	2	3.74	3.81	0.02
Within Categories	<u>55.91</u>	<u>57</u>	0.98		
Total	63.40	59			

TABLE 26.--Question 10, Analysis of variance

Source of Variance	Sum of Squares	Degs. of Freedom	Mean Square	F Statistic	Approx. Signif. Prob. of F Stat.
Between Categories	4.97	2	2.48	2.47	0.09
Within Categories	<u>57.21</u>	<u>57</u>	1.00		
Total	62.18	59			

TABLE 27.--Means and standard deviations for the composite groups for the questions.

	Mean Question 1	S. D. Question 1	Mean Question 2	S. D. Question 2	Mean Question 3	S. D. Question 3	Mean Question 4	S. D. Question 4	Mean Question 7	S. D. Question 7	Mean Question 10	S. D. Question 10
Composite Homogeneous	4.59	4.70	1.36	.58	1.64	.49	1.41	.50	2.64	1.00	3.40	1.18
Composite Complimentary	2.39	2.40	1.00	.00	1.27	.46	1.06	.24	3.38	.91	4.05	.64
Composite Heterogeneous	2.85	3.11	1.00	.30	1.25	.44	1.10	.31	3.35	1.03	3.95	1.05

TABLE 28.--Means and standard deviations for the questions.

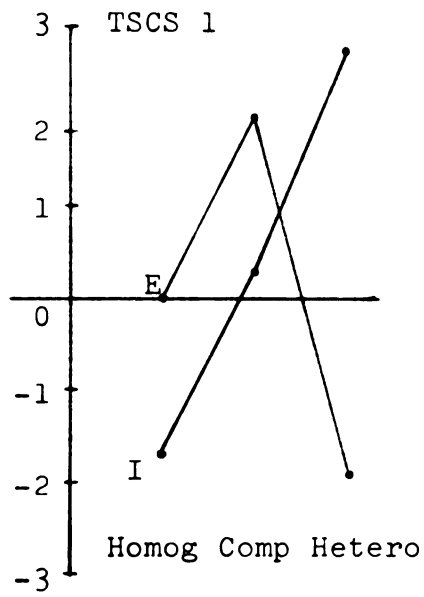
	Mean Question 1	S. D. Question 1	Mean Question 2	S. D. Question 2	Mean Question 3	S. D. Question 3	Mean Question 4	S. D. Question 4	Mean Question 7	S. D. Question 7	Mean Question 10	S. D. Question 10
Homogeneous #1 INTP	1.86	2.67	1.71	0.49	1.86	0.38	1.71	0.49	1.71	0.76	2.14	0.90
Homogeneous #2 ENFP	8.25	4.77	1.12	0.35	1.63	0.42	1.13	0.35	3.38	0.92	4.38	0.52
Homogeneous #3 INFP	3.14	3.84	1.09	0.76	1.43	0.53	1.43	0.53	2.71	0.49	3.57	0.77
Complimentary #1 intuition	3.14	3.18	1.00	0.00	1.29	0.49	1.00	0.00	3.43	0.98	4.14	0.38
Complimentary #2 feeling	2.50	1.76	1.00	0.00	1.17	0.41	1.17	0.41	3.33	0.82	3.83	0.75
Complimentary #3 thinking	1.20	1.64	1.00	0.00	1.40	0.55	1.00	0.00	3.40	1.14	4.20	0.84
Heterogeneous #1	0.16	0.40	1.33	0.52	1.50	0.55	1.33	0.52	2.83	1.17	3.00	.09
Heterogeneous #2	3.71	3.72	1.00	0.00	1.29	0.49	1.00	0.00	3.43	1.13	4.14	0.90
Heterogeneous #3	4.28	2.49	1.00	0.00	1.00	0.00	1.00	0.00	3.71	0.76	4.57	.53

However, the results of an analysis of variance are considered of interest to the study and indications of significant findings will be treated graphically.

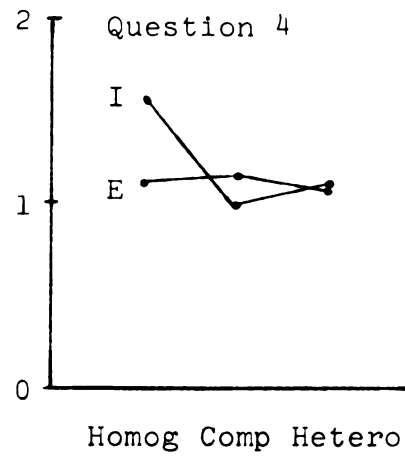
The analysis of the interactive effects of the composite groups with Introversion and Extraversion suggests the Tennessee Self-Concept Scale (Factor 1), Question 4, and Question 10 are discriminating measures. Group means for introverts and extraverts are plotted against group composition for these three measures in Graphs 2, 3, and 4.

Graph 2 shows that homogeneous introverts became more defensive (see the description of factor one of the Tennessee Self-Concept Scale on page 54) over the period of the group process while homogeneous extraverts did not change in defensiveness. (Change scores are presented as the means.) The opposite occurred in the heterogeneous groups with the heterogeneous introverts becoming less defensive and the heterogeneous extraverts becoming more defensive. Both introverts and extraverts in complimentary groups were less defensive after the group experience.

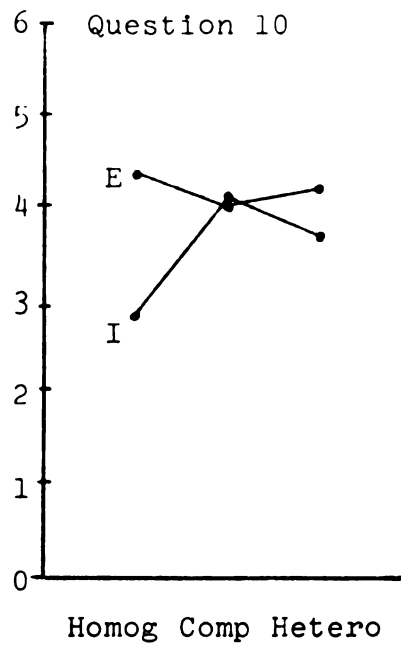
Graph 3 suggests that introverts in homogeneous groups tended not to want to continue the group experience when compared with homogeneous extraverts and introverts and extraverts in the other groups.



Graph 2



Graph 3



Graph 4

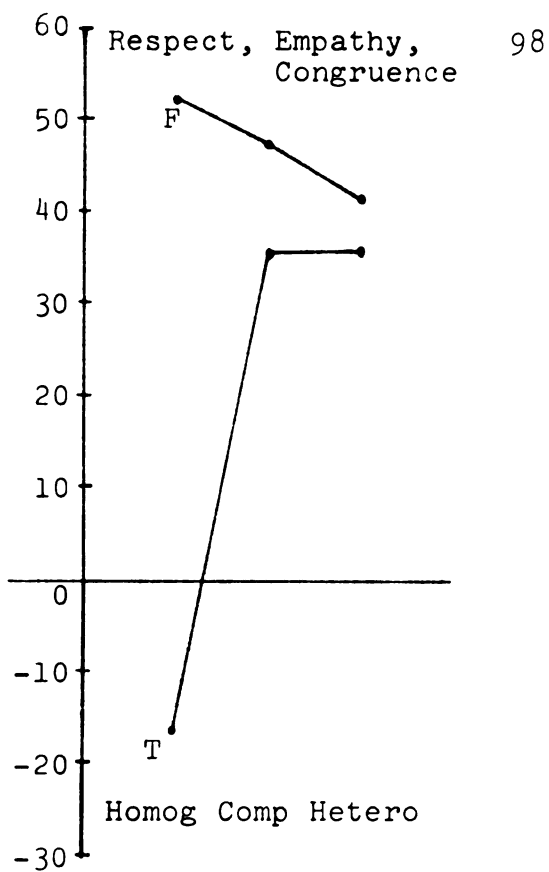
Interaction with Intraversion-Extraversion

Homogeneous introverts also gave a lower evaluation of their group experience than the other participants as pictured in Graph 4. Heterogeneous introverts also tended to give a slightly lower evaluation compared with homogeneous and heterogeneous extraverts and complimentary group members.

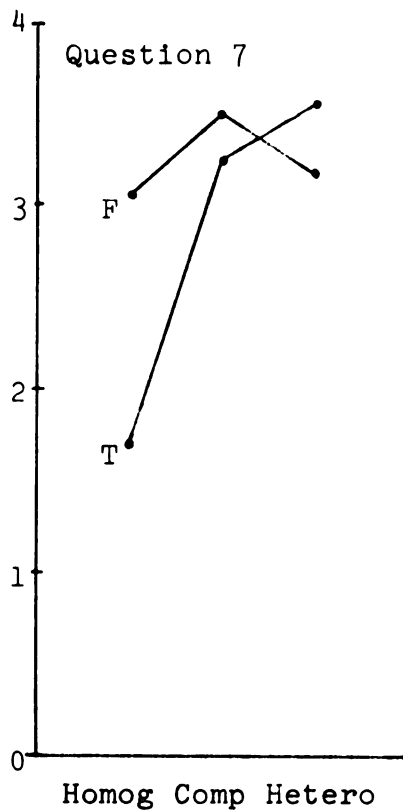
Four measures were found by the analysis to distinguish between the six cells formed by the composite groups separated into feeling and thinking. The means for the Respect, Empathy, and Congruence Scale and Questions 4,7, and 10 for feeling types and thinking types are plotted against the various group compositions as pictured in Graphs 5, 6, 7, and 8.

Graph 5 shows a rather definite trend for the homogeneous thinking types to perceive less respect (warmth), empathy, and congruence (genuineness) from fellow group members than homogeneous feeling or thinking types or feeling types in the other groups. It also suggests that individuals with a feeling orientation generally perceived their groups as showing more warmth, empathy, and genuineness. Mean scores of homogeneous feeling types on the Respect, Empathy, and Genuineness Scale were higher than complimentary feeling types who in turn scored higher than heterogeneous feeling types.

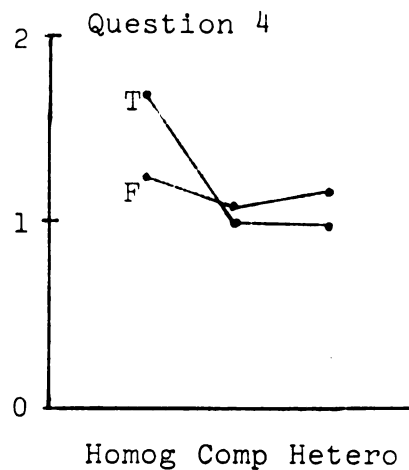
Thinking types in homogeneous groups reported that they were less likely to want to continue their group



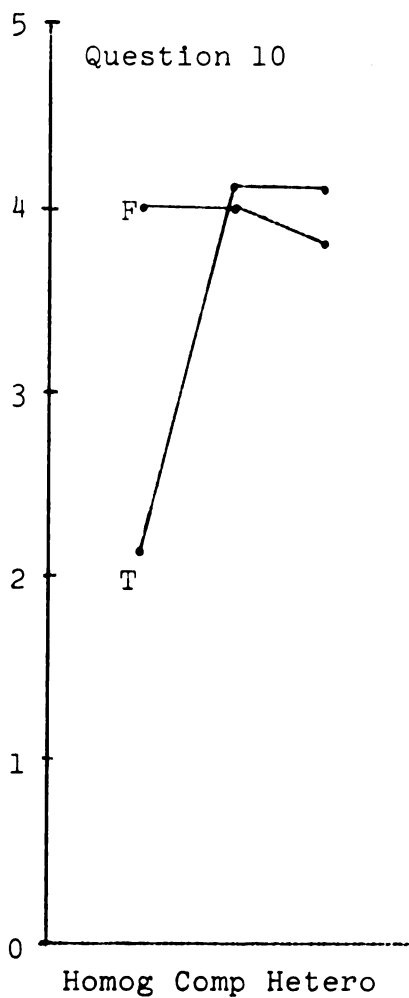
Graph 5



Graph 7



Graph 6



Graph 8

Interaction with Feeling-Thinking

experience as compared with the other five cells. The mean scores, as indicated in Graph 6, show little difference between feeling and thinking types in complimentary and heterogeneous groups on Question 4.

Graph 7 shows homogeneous thinking types indicated their expectations for the self-understanding group had been fulfilled to a lesser degree than homogeneous feeling types or feeling types and thinking types in the complimentary and heterogeneous groups. It is also interesting to note that in heterogeneous groups, thinking types reported the greatest fulfillment of expectations.

A comparatively lower rating was given the group experience by homogeneous thinking types. The means on Question 10 which are shown in Graph 8 indicate little difference between the other cells, although thinking types in complimentary and heterogeneous groups rated the group experience the highest.

The significance indicated by the analysis of variance on the four measures above appears to be largely attributable to the differences between feeling types and thinking types.

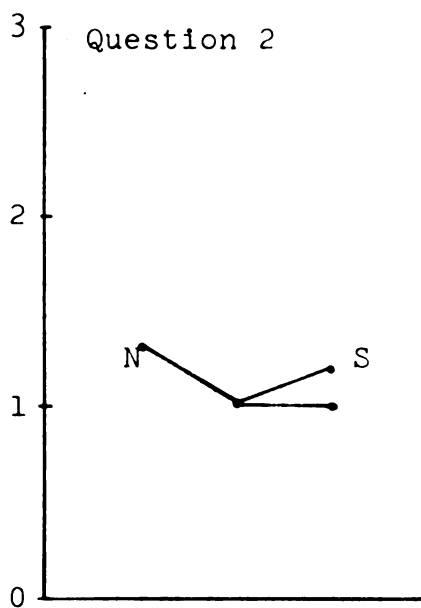
The analysis of the interactive effects of group composition with intuition and sensing is five-celled as there was no homogeneous sensing group. Means on Questions 2, 3, 4, and 7 for the five cells appear to show

some differences. Interactions on these four measures are pictured in Graphs 9, 10, 11, and 12.

Graph 9 shows that homogeneous intuitive types rated their willingness to participate again in a small self-understanding group, lower than intuitive types and sensing types in the complimentary and heterogeneous groups. Heterogeneous sensing types also indicated a slightly lower willingness to participate again compared with the remaining groups.

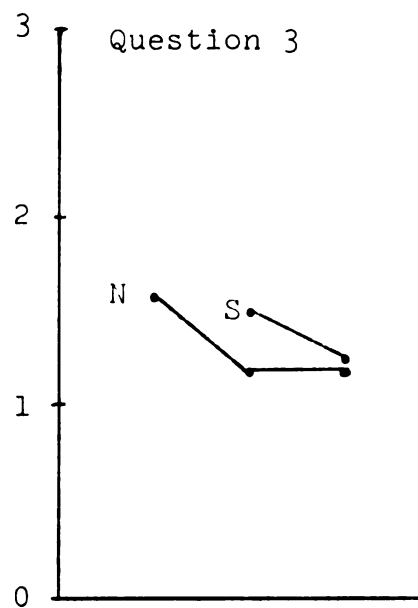
Intuitive types in complimentary and heterogeneous groups felt they understood themselves better than intuitive types in homogeneous groups. Sensing types in complimentary and heterogeneous groups and sensing types in heterogeneous groups. The relationships between means are presented in Graph 10.

Graph 11 shows an almost identical interactive pattern as Graph 10. Homogeneous intuitive types, in this case, indicated less desire to continue the group experience compared with the other four cells. Complimentary sensing types again were less enthusiastic to continue the group compared with the remaining groups. It should be noted, however, that all five cells tended to answer the question affirmatively.



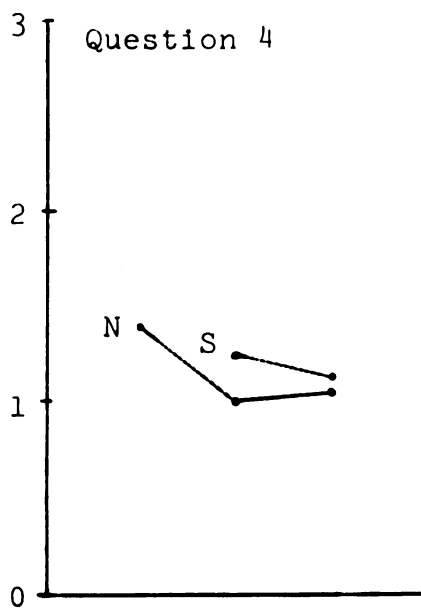
Homog Comp Hetero

Graph 9



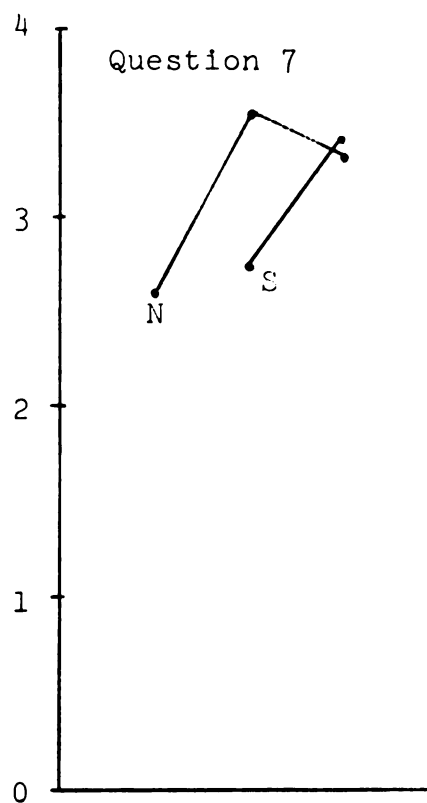
Homog Comp Hetero

Graph 10



Homog Comp Hetero

Graph 11



Homog Comp Hetero

Graph 12

Intuitive types in homogeneous groups, and sensing types in complimentary groups indicated they did not have their expectations met as well as intuitive types in complimentary and heterogeneous groups and sensing types in heterogeneous groups. Graph 12 shows the means for the various cells.

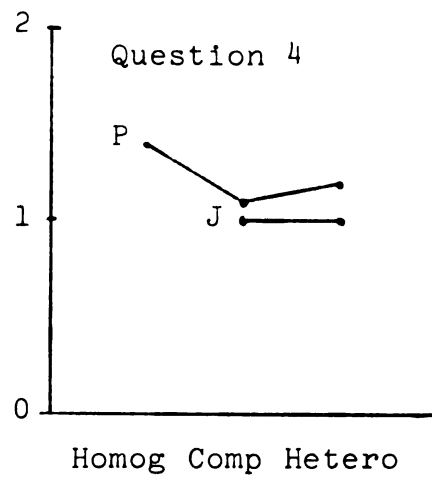
Interactions with composite groups and judging and perceiving also resulted in a five-celled analysis as there were no judging types in the homogeneous groups. Questions 4 and 10 appeared to discriminate between the five cells. The means for the five cells on these questions are presented in Graphs 13 and 14.

Graph 13 shows that perceptive types in homogeneous groups tended to be less desirous of continuing the group experience when compared with all other categories. Judging types showed a slight preference over all perceiving types in wanting to continue the group experience.

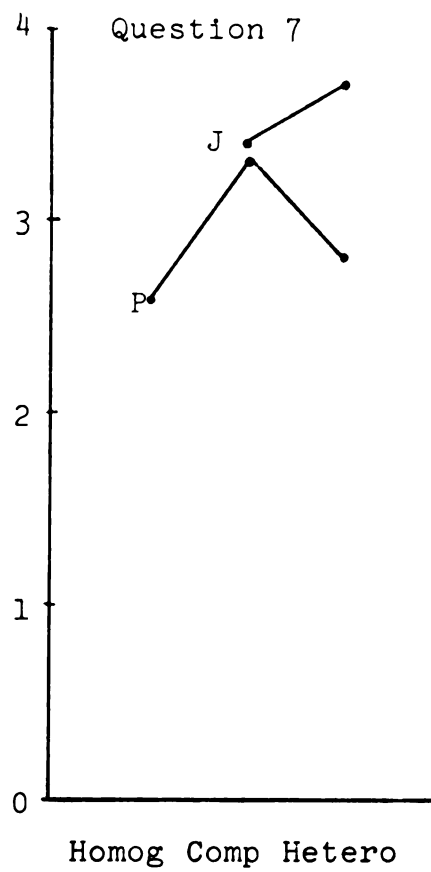
Graph 14 indicates that perceptive types in homogeneous and heterogeneous groups had their expectations only partially met compared with perceiving types in complimentary groups and all judging types who tended to indicate almost complete fulfillment of their expectations.

Rokeach Value Inventory

Kendall's Coefficients of Concordance for the three composite groups on the Rokeach Value Inventory are presented in Table 29. The two coefficients for each group



Graph 13



Graph 14

Interaction for Judging-Perceiving

represent the two parts of the inventory--terminal values (RVI-1) and instrumental values (RVI-2). The coefficients presented in the table are the mean values of the coefficients for the three individual groups in each category.

TABLE 29.--Kendall's Coefficients of Concordance for the three composite groups on the Rokeach Value Inventory.

	Kendall's Coef. for RVI-1	Kendall's Coef. for RVI-2
Composite Homogeneous	.42	.51
Composite Complimentary	.47	.50
Composite Heterogeneous	.28	.39

Results suggest that the homogeneous and complimentary composite groups were more similar in terminal and instrumental values than the heterogeneous group. It is also apparent that all three composite groups were more similar on instrumental values than terminal values.

Pretest Trait Anxiety Comparison Between Feeling Types and Thinking Types

An analysis of variance was done for feeling and thinking types on the Trait Anxiety Inventory pretest scores to determine if there was an initial difference

in the anxiety level of the two orientations. The results, presented in Table 30, show there is no significant difference between feeling types and thinking types in trait anxiety. The means for the two groups are presented in Table 31.

TABLE 30.--Analysis of variance for feeling and thinking types on the Trait Anxiety Inventory.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F Statistic
Between Categories	342.94	1	342.94	3.55*
Within Categories	<u>6,462.31</u>	<u>67</u>	96.45	
Total	6,805.25	68		

* Significance reached at 4.00 at the .05 level of significance for 1 and 67 d.f.

TABLE 31.--Mean values for feeling and thinking types for the Trait Anxiety Inventory pretest

Type	Mean on Trait Pretest
Feeling Orientation	43.68
Thinking Orientation	39.14

Results of the Research HypothesesSelf-Concept

1. Homogeneous groups will experience a greater enhancement of self-concept than complimentary groups. Rejected.
2. Homogeneous groups will experience a greater enhancement of self-concept than heterogeneous groups. Rejected.
3. Complimentary groups will experience a greater enhancement of self-concept than heterogeneous groups. Rejected.

Anxiety

4. Homogeneous groups will experience less state anxiety than complimentary groups. Rejected.
5. Homogeneous groups will experience less state anxiety than heterogeneous groups. Accepted.
6. Complimentary groups will experience less state anxiety than heterogeneous groups. Accepted.
7. Homogeneous groups will experience a greater decrease in trait anxiety than complimentary groups. Rejected.
8. Homogeneous groups will experience a greater decrease in trait anxiety than heterogeneous groups. Rejected.

9. Complimentary groups will experience a greater decrease in trait anxiety than heterogeneous groups. Rejected.

Respect, Empathy and Congruence

10. Homogeneous groups will experience greater respect, empathy and congruence than complimentary groups. Rejected.
11. Homogeneous groups will experience greater respect, empathy and congruence than heterogeneous groups. Rejected.
12. Complimentary groups will experience greater respect, empathy and congruence than heterogeneous groups. Rejected.

Friendships

13. Homogeneous group members will establish more friendships outside the group than complimentary group members. Rejected.
14. Homogeneous group members will establish more friendships outside the group than complimentary group members. Rejected.
15. Complimentary group members will establish more friendships outside the group than heterogeneous group members. Rejected.

Feeling Types vs. Thinking
Types--Trait Anxiety

16. Feeling type individuals will experience greater pretest trait anxiety than thinking type individuals. Rejected.

CHAPTER 5

SUMMARY, DISCUSSION AND CONCLUSION

Summary of the Study

The present study was conceived as a response to a growing body of research which indicates the reality of the existence of stress among a significant number of college students. The study's purpose was to investigate the human environment of students as represented by small self-understanding groups. The impact of these groups upon the anxiety level and self-concept was seen as the important area to examine because of the relevance of these two concepts to campus stress and the often expoused goal of self-understanding and development of the "whole person" stated by many educational institutions.

The literature in the area of group composition indicated that groups do influence their constituents and that the composition of groups was indeed a crucial variable in this impact. It was also shown that groups could be formed so that the behavior of the members could be predicted.

The research design included the use of nine small self-understanding groups (six to eight people) composed

of undergraduate volunteers from the east campus residence hall complex of Michigan State University. These students were assigned to three types of groups--homogeneous, complimentary, and heterogeneous. Each group was led by a trained group leader who was a graduate student in student personnel work with previous small group experience. These group leaders were instructed to behave in a non-directive fashion because of the focus of the study upon the interaction of students with students.

The groups met for a total of thirteen sessions. The first and last sessions were occupied with pretesting and posttesting. A total of 11 treatment sessions were held, with the groups meeting twice a week for six weeks.

The Myers-Briggs Type Indicator was administered to all students who volunteered to participate in the study. The three types of groups (homogeneous, complimentary and heterogeneous) were formed by selecting the three homogeneous groups first, from the three most prevalent personality types represented among the volunteers. This procedure was necessary to allow a sufficient number of students for the complimentary and heterogeneous groups. The homogeneous groups consisted of individuals scoring identically on all four scales of the Myers-Briggs Type Indicator.

The heterogeneous groups were formed by placing individuals together who represented a great diversity of personality as measured by the Myers-Briggs Type Indicator. No two individuals were similar in personality type in the heterogeneous groups. The complimentary groups were formed by placing students together who shared one of the four primary orientations as measured by the Myers-Briggs Type Indicator (sensing, intuition, feeling and thinking). However, no two individuals had identical personality types.

Also administered were a number of instruments designed to measure the impact of the groups upon their constituents. The Tennessee Self-Concept Scale and Trait Anxiety Inventory were administered both before and after the group treatment to measure changes on self-concept and trait anxiety, respectively. The State Anxiety Inventory was administered at four different times. The first administration was during the pretest session and the other administrations were after the fourth, eighth, and eleventh sessions of the groups. The four administrations were made to examine the anxiety trend for the three types of groups. Also administered at the pretest session was the Rokeach Value Inventory. Its purpose was to examine the correlation between personality and value similarity.

A Respect, Empathy, and Congruence Scale was administered during the posttesting session to assess the feelings of the group members toward the other group members. The Respect, Empathy and Congruence Scales were factor analyzed and found to contain one component. A short ten item questionnaire was also administered, asking students to respond to their group experience and the number of friends they had made due to the group experience.

The results of the study indicated no significant differences at the .05 level of significance from pre-test to posttest for the Tennessee Self-Concept Scale and Trait Anxiety Inventory using both a multivariate analysis of variance with change scores and analysis of covariance.

The State Anxiety Inventory was analyzed using planned comparisons of means. The results showed no significant anxiety trend for the homogeneous or complementary composite groups at the .05 level of significance. A significant quadratic trend was found in the heterogeneous composite group. The least squares fitting with orthogonal polynomials provided the coefficients of the quadratic formula for the trend so that a curve representing the anxiety level for the heterogeneous group could be graphed. This trend might best be described as an increase in anxiety from the first testing

session through the second and third testing sessions and decreasing at the fourth session. No differences were found between the three composite groups for testings one, two, three, or four in state anxiety at the .05 level of significance using both a multivariate analysis of variance using change scores and a multivariate analysis of covariance (testing one was considered the pretest in both cases). An analysis of variance on the pretest Trait Anxiety Inventory scores of the thinking and feeling types revealed no significant difference at the .05 level.

No significant differences were found on the Respect, Empathy, and Congruence Scale between the three composite groups at the .05 level of significance. Kendall's Coefficients of Concordance indicated that the homogeneous and complimentary groups were very close in terminal and instrumental value similarity as measured by the Rokeach Value Inventory and were more similar than the heterogeneous group.

Six of the ten items on the questionnaire were analyzed using an analysis of variance. Four of the six questions were found to significantly discriminate between the three composite groups at the .05 level of significance. (The other four remaining questions were dealt with descriptively.) Sheffe's Post Hoc analysis revealed that three of the questions discriminated

between the complimentary group and the homogeneous group. The complimentary group reported that they would be more willing to volunteer again for a self-understanding group, understood themselves better after the group experience and had their expectations fulfilled by the group experience to a greater extent than the homogeneous group members. The fourth discriminating question showed that both complimentary and heterogeneous groups indicated a significantly greater desire to continue their present group experience than the composite homogeneous group. All questions discriminated at the .05 level of significance.

Even though the study of the interactive effects of group composition and personality type was not the major focus of the study, such patterns were studied and treated in a descriptive fashion. Each of the dependent variables in the study was analyzed with two-way analysis of variance. Significant interactions between group composition and I-E, S-N, F-T, and J-P for any of the measures were plotted. Factor one of the Tennessee Self-Concept Scale; Respect, Empathy, and Congruence Scale; and the questions were found to be discriminating measures. The primary purpose of studying these interactive patterns was to explore areas for future research.

Discussion of the Results

An appropriate starting place for the analysis of the results is to examine the distribution of personality types of the students volunteering for the study. As may be noted by turning to the Appendix, 98 out of the 178 volunteers were of the INTP, INFP and ENFP personality types. The distribution was approximately equal for these three types. It should be noted that these findings are similar to those of Mendelsohn (1962) who found that individuals who came for counseling were predominately individuals who scored N and P on the Myers-Briggs Type Indicator. Steele (1968) also found that the small group experience was particularly suited to intuitive types and that individuals of this type were both attracted to the small group experience and were more adept at the type of behaviors needed to operate successfully and comfortably in the small group experience. The lack of volunteers of the sensing type could be speculated to mean that this personality type of individual was either lacking in the approximately 4,000 students who were sent letters or were simply not attracted to the small self-understanding group experience. The volunteers for the study numbered 150 scoring as preferring intuition and 28 as preferring sensing as their perceiving mode. These findings then should place the present study in the perspective of being

interpretable only for those types represented and not necessarily for those not represented.

The major hypotheses of the study were not supported by the analysis of the data. The results indicated that no significant differences existed between the three types of composite groups on self-concept or trait anxiety at the .05 level of significance. It should also be noted that no trends were evident from looking at the results. The probabilities did not approach significance for any of the Tennessee Self-Concept Scale or Trait Anxiety Inventory. These results suggest that either group composition is not a factor in influencing the self-concept and trait anxiety level or that these two personality components are so stable that a more enduring and intensive experience is needed to significantly affect them.

Even though significance was not reached, a number of considerations should be evaluated. First, when groups are left in an unstructured setting, as the present groups were, the interaction can and often does remain superficial. It might be speculated that by having active group leaders who facilitate interaction within the group a more meaningful level of interaction can be obtained. This then would be an argument for the employment of trained individuals to facilitate peer group interaction in college residence halls,

fraternities, sororities, and off-campus housing--if colleges are really concerned about the goal of self-understanding. It was the major assumption of the present study that individuals who were placed together based on similarities would experience more understanding of their common and shared characteristics, and consequently would feel understood and accepted to a greater degree. However, it would seem evident that before this would happen the individual group members need to perceive the fact that they are similar. To the extent that this perception never occurred, the freedom of expression and exploration was not optimized.

Secondly, since self-concept and trait anxiety appear to be rather stable it would be of considerable interest to examine the influence of different group compositions on self-concept and trait anxiety in a setting which offers a greater intensity of experience and of longer duration. The six week group experience might have been insufficient in both of these respects to allow for much of an impact upon self-concept and trait anxiety. Perhaps forming peer groups in a residence hall, fraternity, or sorority setting could afford a natural environment for studying the effects of group composition on these two crucial personality components over a one, two, three, or four year period of college.

The results of the state anxiety data is suggestive of a more immediate and pronounced effect upon the student. The only significant anxiety trend among the three composite groups was found in the heterogeneous group. These results of the planned comparison analysis are regarded as suggestive rather than conclusive. Testing errors during the last session for the State Anxiety Inventory eliminated one entire homogeneous group (INFP) and one entire heterogeneous group from the data analysis. One of the assumptions which must be satisfied for planned comparisons analysis is that "the number of observations made, n_j , is the same for each value of X_j ." Hays (1963, p. 551). This meant that any group member who missed one testing time could not be included in the data analysis. The elimination of students who missed one or more testing sessions left 14 students in homogeneous groups, 14 in complimentary groups, and 8 in heterogeneous groups. Such a process certainly does not negate the findings but rather it argues for a cautious interpretation.

The significant anxiety trend in the heterogeneous composite group is consistent with the stated hypotheses and does support the idea that individuals who differ markedly in personality type find the group experience more anxiety producing than those groups which are composed of more similar types. If future research

corroborates these findings then college administrators may need to examine the placement of students in residential settings where the self selection process cannot operate. Such situations are frequently found in campus residence halls where students are assigned roommates and suitemates and where peers who are immediately contiguous physically form the primary human environment of the student. These peers then may have an impact upon the student which can create stress. For some students this may represent an added increment of anxiety which compounds some of the problems which are inherent in the adjustment to college among freshmen, such as leaving home for the first time, adjustment to the collegiate curriculum, the general noise level and physical structure of most residence halls, and adjustment to a new roommate.

One consideration that is particularly relevant to this author is the "initial shock" factor for many entering college students. Few societies emphasize the necessity of a college education to the extent that America does. Young men and women in late adolescence are "encouraged" to continue their formal education, not only for the sake of learning, but because there appear to be no real viable alternatives if one is to be "successful". This emphasis leads to the creation of concentrated adolescent environments in the form of residence halls and

off campus housing. This author's own ten years of experience in residence halls, along with the research of Katz (1968) leads him to conclude that a young adolescent of 17 or 18 is particularly sensitive to the universal need to belong to some kind of group. Upon being rewarded for leaving the family to go to a new environment, a student often finds that the only real significant others in his environment, are his peers. It has never been this author's experience, that we can safely assume that a student will find a peer group to which he can belong, which is necessarily consonant with the stated ideal goals of the student and institution. Yet, it is at this level where many students find their personal needs for belonging satisfied. To the extent that students are randomly placed together with other young adolescents who are markedly different from them in personality and yet the only significant others to be involved with, the added measure of anxiety in relating to these others may prove to be dysfunctional and inhibit adjustment to the group and college.

It should also be noted that college attendance and admittance is awarded to certain personality types. This can be discerned by examining the correlations between the various personality types and intelligence, work habits, SAT scores, and interests as presented in the Myers-Briggs Manual. It is already well established

that colleges have certain "environmental presses." These presses connote specific characteristics which are more apparent or evident at an institution than one might expect by chance. In other words, the school environment emphasizes certain ways of behaving and perceiving for students. It might also be said that the behaviors emphasized in college represent a general "press." Perhaps one of the responsibilities of an institution is the assessment of the human press of their institution so that minority types of personalities can be offered the opportunity to associate with others who can provide them with the security of a peer group of similar personality types in an institution of incompatible others. Newcomb and Feldman (1969, p. 294) suggest that a peer group of compatible others might be a good "insulation" against many of the abrasive aspects of a dominant collegiate culture which is incompatible with the values of the student.

The inspection of the group means for the Tennessee Self-Concept Scale suggests as might be expected from Jungian type theory, that the introverted feeling type is considerably lower in the total score of the scale. Although not specifically a focus of the data analysis, this lower score does provide an interesting area for exploration. The lower score on self-concept implies a greater amount of anxiety since anxiety and self-concept

are known to be inversely related. It can be speculated that some personality types coming to the college environment have a greater need for security than other types. It then might be helpful for these individuals to be offered the opportunity to participate in a small self-understanding group where they can understand the implications of their higher need for security and how they might appropriately deal with these needs. A homogeneous or complimentary group (peer or self-understanding) experience for these individuals might then make the initial shock of college less pronounced. The work of Spielberger indicates that those individuals higher in anxiety also are more directly influenced in their state of anxiety by threatening situations.

The introverted feeling type's greater anxiety and lower self-concept can be explained theoretically by an analysis of the behavior of this particular type. The introverted feeler is hypothesized by Jungian theory to run his life with a more personal and subjective orientation. The current analysis of the correlation between anxiety and feeling types did not show a significant difference between anxiety and a preference for feeling on the Myers-Briggs Type Indicator. However, an F-ratio of 3.55 was obtained which approaches very closely the 4.00 ratio needed for significance. This close approach to significance deserves, in this author's opinion, further

research with a larger sample. The analysis included all types preferring feeling, both dominant and auxillary feeling types. The dominant type uses feeling as his primary function while other feeling types may use either intuition or sensing as their primary function with feeling as the auxillary function.

The main point to be made with regard to the introverted feeler's behavior or response tendencies is that he may, in fact, possess greater activity in the sympathetic branch of the central nervous system when compared with the other personality types. Wolpe (1958), Levitt (1967), Morris (1967), and others have stated that it is this branch of the nervous system which mediates the anxiety response. This greater activity in the sympathetic nervous system when combined with the introverted feeler's penchant for not expressing these feelings in an assertive manner may cause even more pronounced anxiety and lack of self esteem. Wolpe (1958) states that the socially acceptable expression of one's feelings tends to reciprocally inhibit the anxiety response. He has found it necessary with a number of his clients to teach them to be more expressive of their internal arousal states as a means to combat this anxiety. To the extent then that the introverted feeler does not behave in an appropriate manner, as a natural inclination of his personality type, and is then placed in an

environment (college residence hall or similar housing) where he becomes threatened, he is then prone to be threatened to a greater degree than the other types.

The greater need among some students for security might also be ascertained through the use of the Trait Anxiety Inventory. High scorers could then be offered the opportunity for participation in a self-understanding group. The work of Schultz (1965) and Levitt (1967) have shown that individuals who have greater anxiety, also have a greater need for a secure environment since they are more easily stimulated and have less of a need for stimulation.

Perhaps the outstanding point to be made with respect to the security--stimulation continuum is that each student who enters college has certain needs which can only be recognized through some type of assessment of his personality characteristics. Whether this assessment is performed by using the Trait Anxiety Inventory, Myers-Briggs Type Indicator or some other instrument, it is important that a form of individual analysis be performed. The reason then for this analysis is to determine the human environment most suited to the optimization of anxiety level and enhancement of self-concept and subsequent adjustment to college.

The results of an analysis of variance for the Respect, Empathy, and Congruence Scale indicated no

significant differences for the three composite groups. However, an inspection of the individual group means shows that the homogeneous INTP group was considerably lower in their perception of warmth from the other group members than any of the other eight groups. As was mentioned in Chapter IV, a factor analysis of the Respect, Empathy, and Congruence Scale revealed one significant factor. It is stated in the Myers-Briggs manual that the INTP personality type is the type which is most difficult to get to know. The preference for thinking is indicative of a preference for a logical and systematic response tendency. The introversion factor connotes a reserved and quiet demeanor with an appreciation for directing the perception to the world of ideas rather than to the environment. The manual (1962, p. A-2) states, "This type's special problem is to make himself understandable." The results of the present study would certainly seem to support the notion that the participants in this group did not perceive one another as being warm and empathetic.

These results point to a basic limitation in the research design of the present study. Each of the personality types (16) could conceivably be characterized as possessing certain characteristics which influence the climate of a small group. As pointed out in Chapter II

in the discussion of Harrison's (1965, p. 426) multiplier effect:

There seem to exist processes in the homogeneous group which tend to influence individuals to behave in much more predictable ways than they normally do. It is as though there were a kind of "Multiplier Effect" which operates when people who are selected to have some interpersonal characteristic in common are placed in a relatively unstructured group setting.

Since each of the group members in the INTP group had as their dominant function thinking, they appeared to be unable to communicate the warmth and empathy which would be more characteristic of the feeling type. The Myers-Briggs Manual (1962) discusses this from the Jungian framework in stating that the dominant thinker has as his "shadow" the feeling orientation. The "shadow" represents the least developed of the four primary functions (feeling, thinking, sensing or intuition). For the INTP group, then, feeling was the least developed of their orientations and this appears to have resulted in the inability of this group to show warmth to one another. Another function which appears to have contributed is the introversion factor which, along with the dominant thinking, may have caused the interaction of these students to illustrate Harrison's Multiplier Effect. The absence of other types in the group who had as their personality orientation the expression of feelings creates an atmosphere which emphasizes or highlights the personality characteristics of the present group members.

In other words, when the members of a group behave quietly and without the expression of feeling they place a demand on the other group members which is incompatible with their usual personality style thus highlighting the absence of these behaviors within the group.

An important point to be made here is that the kinds of behaviors necessary to catalyze group interaction within a small unstructured group may be lacking in some homogeneously composed groups. If this point had been brought out by an active group leader (which was not the role of the group leader in the present study) the group experience might have been a successful learning experience even if the group had decided that they needed to include others with different personality orientations in order to catalyze interaction. Once pointed out, they might have been able to observe the similarities of personality preference in others and discuss these factors on a cognitive level. The implications of their personality preferences in other non-group situations (classroom, residence hall, dating, family, etc.) might also have been examined with a good deal of insight accruing from the experience.

Each of the 16 personality types could then be hypothesized to create its own group climate with quite distinctive characteristics. The other two homogeneous groups in the present study scored much higher on the

Respect, Empathy, Congruence Scale than the INTP group. It should be noted that both of these groups had a preference for responding with a feeling orientation. The ENFP group scored higher in the formation of friendships outside of the group than the other eight groups. This is characteristic of their personality orientation. The Myers-Briggs Manual describes them as being high in activity and free with the expression of feelings. It is interesting to note that these two deviations (INTP with low warmth and ENFP with high friendships) would occur in the homogeneously composed groups.

The present research design placed the INTP, INFP, and ENFP groups into one category. Upon viewing the design in retrospect, it appears that homogeneity, although theoretically a reasonable way of categorizing groups, is an insufficient means of categorizing the type of interaction which takes place. A more reasonable way to conceptualize groups composed homogeneously is to examine the dimension which is used in the groups formation and make predictions of the behavior of the constituents based on the characteristics observed in individuals of this type. In the present study then we might have hypothesized that the INTP group would not show warmth to each other and that the ENFP group would have high activity and numerous friendships, while the INFP

group would show sensitivity to each other in a quiet but respectful way.

The implication for future research with homogeneous groups might be to form groups similar in all 16 of the personality types and record the behavior and impacts of the group members in the areas of self-concept and anxiety. It might then be possible to use these groups for explicit purposes, such as providing security for incoming freshmen or as a way of enhancing the self-understanding process through the observation of Harrison's Multiplier Effect where students could observe their own characteristics in others as pointed out by an active group leader.

The analysis of variance on the questionnaire which was administered at the groups' conclusion (the questionnaire may be found in Appendix D) showed no significant differences between the three composite groups on Question 1 which asked about the number of friendships formed outside of the group with group members. However, as can readily be seen by inspection of the group means, the ENFP group, as mentioned previously, scored considerably higher than the other groups.

Questions 2, 3 and 7 discriminated significantly between the homogeneous and complimentary composite groups in the same direction. The three questions were: 2--"Would you volunteer again for a self-understanding

group knowing now what you do about them?"; 3--"Do you feel you understand yourself better now than you did before this group experience?"; 7--"How well have your expectations been met by this group experience?". The analysis showed that the complimentary composite group would volunteer again, understood themselves better, and had their expectations met better than the homogeneous composite group. An inspection of the group means showed that the INTP homogeneous group contributed most of the variance to the above three questions. As mentioned earlier in this chapter, the INTP group was considerably less attracted to their group experience than the other groups.

Question 4 discriminated between the homogeneous group and both the complimentary and heterogeneous groups. The homogeneous group responded that they had less desire to continue with the group experience than the complimentary and heterogeneous groups, with the INTP group once again giving the most negative response.

Question 10 did not discriminate at the .05 level but did approach significance in the same direction as the other questions. This question asked, "What is your overall evaluation of the small group experience for you?" The homogeneous INTP group was again less satisfied with the overall experience.

The interactive effects of group composition and personality type were not a specific focus of the research design but deserve some consideration with respect to areas for future research and speculations about the present findings. It should be noted that the present discussion is considered as suggestive in its nature. The design of the study does not warrant heavy statistical emphasis on the interactions. The interactions discussed were obtained by doing a two-way analysis of variance on all the dependent variables used in the study. The significant interactions are presented in graphical form in Chapter IV. The reader is referred to Chapter IV for a detailed description of these interactions. It should also be noted that the questionnaire provided the most discriminating measures. It is obvious after an examination of the individual group means on the questions that they all measure essentially the same thing--satisfaction with the group experience. Some variance may be observed in the interactions with respect to the way different personality orientations responded to the questions but it is well to remember that a person answering negatively on one question, probably answered the other questions in the same manner.

The interaction of introversion-extraversion with the composite groups showed the Tennessee Self-Concept Scale (Factor 1), and Questions 4 and 10 to be

discriminating questions. It is difficult to explain the results on the Tennessee Self-Concept Scale (Factor 1) which indicated that homogeneous introverts and heterogeneous extraverts became more defensive after the group experience. It might be speculated that a general atmosphere of guarded communication prevailed in the homogeneous introvert group, with few group members willing to spontaneously share their feelings with the other group members. This would seem to be consistent with the orientation of introverts. Heterogeneous extraverts may have gone unrewarded in their attempts at expression early in the group experience and decided to be less free with their feelings in the presence of others who were different in personality orientation. However, the reason for heterogeneous introverts becoming less defensive is speculated to signify a freedom to share feelings with other group members as a result of becoming more comfortable as the group continued. These results seem confusing and contradictory when viewed along with the significant anxiety trend in heterogeneous groups. This author would have hypothesized the opposite trend in defensiveness, with heterogeneous extraverts becoming less defensive and heterogeneous intraverts becoming more defensive.

Since the homogeneous introvert group was composed exclusively of the INTP group and the INFP group, a look

at the means on Question 4 and 10 shows that these two groups indicated the least desire of the nine groups to continue the experience and gave two out of the three lowest evaluations of the group experience. Therefore, the low scores of homogeneous introverts on the interactions is obvious.

A similar pattern occurred in the interactions of feeling--thinking with the composite groups. The Respect, Empathy, and Congruence Scale and Questions 4, 7, and 10 discriminated between the six cells in this analysis. The homogeneous thinking group was made up entirely of the INTP group, hence, the wide variation between this cell and the other five. The negative response to these three questions and the perception of a lack of warmth from their group members in the INTP group has already been discussed in this chapter. It should also be noted that thinking types in all groups indicated that they felt less warmth from the other members of their group (Respect, Empathy, and Congruence Scale) than those of feeling orientation. As was already pointed out, some individuals with a thinking orientation appear to be unable to communicate warmth as well as a feeling type and apparently perceive less warmth in others. It is also an interesting observation that the homogeneous feeling types felt more warmth than the complementary feeling types who in turn indicated more

warmth than the heterogeneous feeling types. This would suggest that feeling type individuals, at least, feel more accepted in a homogeneous group where others are all feeling types too. Eight of the twelve feeling types in complimentary groups were in a group where all members had a feeling orientation (Complimentary 2) and, as it can be seen from the group means on the Respect, Empathy and Congruence Scale, they scored high in their perception of warmth. This then would account for the higher score for the complimentary feeling types and would again support the idea that feeling types perceive more respect, empathy, and congruence when in a group with all others of feeling orientation.

It should be kept in mind while discussing the interactions of intuition--sensing with the composite groups that there were no homogeneous sensing types and thus the analysis is only five-celled. For these interactions the differentiating measures were Questions 2, 3, 4, and 7. Homogeneous intuitives (which in this case was all homogeneous group members) indicated less satisfaction with the group experience as measured by those four questions. By observing the group means on these questions for the individual homogeneous groups it can readily be seen that the variance was primarily contributed to by the INTP group and the INFP group, with the INTP group scoring considerably different from the other

groups. Apparently sensing types in complimentary groups were somewhat less satisfied than the other remaining four categories. Since there were only four persons in this category, the results must be viewed with this in mind.

The analysis of the interaction of judging--perceiving with the composite groups was again five-celled, as there were no homogeneous judging types. Questions 4 and 7 discriminated between the five cells. Again, the INTP and INFP groups influenced the results significantly as the homogeneous perceivers indicated they had less desire to continue with the group experience and had their expectations fulfilled to a lesser degree than the other categories. It is also worthy of mention that the judging types indicated that they had their expectations met to a greater extent than the perceiving types. This supports the description of the perceiving type in the Myers-Briggs Manual (1962) which says that this personality orientation finds it difficult to bring closure to an experience and may feel there is much more information to be gained before an experience is complete.

The results of the Kendall's coefficients of concordance suggested that members within homogeneous and complimentary composite groups were more similar to each other in values as measured by the Rokeach Value Survey than members of heterogeneous composite groups. These

results support the findings presented in the Myers-Briggs Manual (1962, p. B-3) which show that personality type and values (Allport-Vernon Lindzey Value Scale) are correlated.

Conclusion

The present study has had as its major emphasis an investigation of the impact of students upon other students in small self-understanding groups. The results of the study are considered by this author to be suggestive of trends which need considerably more research. Major findings did not support the notion that group composition has an effect on self-concept and trait anxiety level, both of which appear to be highly stable components of the personality. However, the present results may be a reflection of an experience which was insufficient in duration, intensity or both. Therefore, the present results should be considered in the context of these qualifications.

The significant quadratic trend for the composite heterogeneous group is a signal that further research needs to be conducted to determine if the present findings are replicated.

The unique characteristics of the homogeneous groups is also an area which stimulates speculation that each personality type if represented by a homogeneous group will have different qualities and produce a

distinct "climate." This was illustrated by the INTP group's inclination to perceive less warmth from their group members than the other groups and the ENFP group's greater number of friendships with group members outside the group. Another characteristic of interest is the overall lower evaluation of the group experience by both the INFP and INTP groups. This author's opinion is that groups composed of all introverts leads to insufficient interaction between group members due to the preference of the introvert to conceal his dominant function.

Another area which is considered as deserving of future research is the relationship between trait anxiety and the feeling orientation of the Myers-Briggs Type Indicator. Results approaching significance were obtained for the present study using individuals who preferred feeling either as a dominant or auxillary function. Also of interest is the influence of introversion and extraversion to trait anxiety. The study of interactive effects is a difficult area for research because of the large number of groups necessary for a completely crossed research design (all personality characteristics in each type of group--homogeneous, complimentary or heterogeneous.) A total of 42 groups would be necessary for such a design (each personality type with one replication--16 X 2, a complimentary group for intuition, sensing, feeling and thinking and one replication of

each--4 X 2, and two heterogeneous groups.) However, the present research suggests that the study of interactive effects would be a fruitful area to examine.

Perhaps the outstanding insight that this author has received as a result of the present research study is that the collegiate environment (both human and physical) has an extremely complex impact upon the diverse student population. It is clear that both the environment and student are multidimensional. It has been the attempt of the present study to unravel a small portion of what seems to be an almost inextricable web of relationships and impacts. It is hoped that others may find the present findings both stimulating and useful in moving toward a better understanding of how small groups, natural or contrived, may be used to alleviate campus stress and provide the atmosphere where creative exploration between students will result in the accomplishment of the goal of self-understanding.

The highest function of education I would maintain, is for people to understand the meaning of their lives, and become more sensitive to the meaning of other peoples lives and to relate to them more fully.

Friedenberg (1967, p. 221)

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APPENDICES

APPENDIX A
STATE AND TRAIT ANXIETY INVENTORY

Self-Analysis Questionnaire
FORM X-1

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel right now, that is, at this moment.

There are no right or wrong answers.
Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	Not at all	Somewhat	Moderately So	Very much So
1. I feel calm.....	1	2	3	4
2. I feel secure.....	1	2	3	4
3. I am tense.....	1	2	3	4
4. I feel regretful.....	1	2	3	4
5. I feel at ease.....	1	2	3	4
6. I feel upset.....	1	2	3	4
7. I am presently worrying over possible misfortunes.....	1	2	3	4
8. I feel rested.....	1	2	3	4
9. I feel anxious.....	1	2	3	4
10. I feel comfortable.....	1	2	3	4
11. I feel self-confident.....	1	2	3	4
12. I feel nervous.....	1	2	3	4
13. I am jittery.....	1	2	3	4
14. I feel "high strung".....	1	2	3	4
15. I am relaxed.....	1	2	3	4
16. I feel content.....	1	2	3	4
17. I am worried.....	1	2	3	4
18. I feel over excited and "rattled".....	1	2	3	4
19. I feel joyful.....	1	2	3	4
20. I feel pleasant.....	1	2	3	4

FORM X-2

DIRECTIONS. A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you generally feel.

There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

	never	Almost	Sometimes	Often	Almost always
21. I feel pleasant.....	1	2	3	4	
22. I tire quickly.....	1	2	3	4	
23. I feel like crying.....	1	2	3	4	
24. I wish I could be as happy as others seem to be.....	1	2	3	4	
25. I am losing out on things because I can't make up my mind soon enough.....	1	2	3	4	
26. I feel rested.....	1	2	3	4	
27. I am "clam, cool, and collected".....	1	2	3	4	
28. I feel that difficulties are piling up so that I cannot overcome them.....	1	2	3	4	
29. I worry too much over something that really doesn't matter.....	1	2	3	4	
30. I am happy.....	1	2	3	4	
31. I am inclined to take things hard.....	1	2	3	4	
32. I lack self-confidence.....	1	2	3	4	
33. I feel secure.....	1	2	3	4	
34. I try to avoid facing a crisis or difficulty.....	1	2	3	4	
35. I feel blue.....	1	2	3	4	
36. I am content.....	1	2	3	4	
37. Some unimportant thought runs through my mind and bothers me.....	1	2	3	4	
38. I take disappointments so keenly that I can't put them out of my mind.....	1	2	3	4	
39. I am a steady person.....	1	2	3	4	
40. I get in a state of tension or turmoil as I think over my recent concerns and interests.....	1	2	3	4	

APPENDIX B
ROKEACH VALUE SURVEY

VALUE SURVEY

Name _____ Sex: Male _____ Female _____

Birthdate _____ City and State of Birth _____

Below is a list of 18 values arranged in alphabetical order. Your task is to arrange them in order of their importance to YOU, as guiding principles in YOUR life.

Study the list carefully. Then place a 1 next to the value which is most important for you, place a 2 next to the value which is second most important to you, etc. The value which is least important, relative to the others, should be ranked 18.

Work slowly and think carefully. If you change your mind, feel free to change your answers. The end result should truly show how you really feel.

- _____ A COMFORTABLE LIFE (a prosperous life)
- _____ AN EXCITING LIFE (a stimulating, active life)
- _____ A SENSE OF ACCOMPLISHMENT (lasting contribution)
- _____ A WORLD AT PEACE (free of war and conflict)
- _____ A WORLD OF BEAUTY (beauty of nature and the arts)
- _____ EQUALITY (brotherhood, equal opportunity for all)
- _____ FAMILY SECURITY (taking care of loved ones)
- _____ FREEDOM (independence, free choice)
- _____ HAPPINESS (contentedness)
- _____ INNER HARMONY (freedom from inner conflict)
- _____ MATURE LOVE (sexual and spiritual intimacy)
- _____ NATIONAL SECURITY (protection from attack)
- _____ PLEASURE (an enjoyable, leisurely life)
- _____ SALVATION (saved, eternal life)
- _____ SELF-RESPECT (self-esteem)
- _____ SOCIAL RECOGNITION (respect, admiration)
- _____ TRUE FRIENDSHIP (close companionship)
- _____ WISDOM (a mature understanding of life)

Below is a list of another 18 values. Rank these in order of importance in the same way you ranked the first list on the preceding page.

- _____ AMBITIOUS (hard-working, aspiring)
- _____ BROADMINDED (open-minded)
- _____ CAPABLE (competent, effective)
- _____ CHEERFUL (lighthearted, joyful)
- _____ CLEAN (neat, tidy)
- _____ COURAGEOUS (standing up for your beliefs)
- _____ FORGIVING (willing to pardon others)
- _____ HELPFUL (working for the welfare of others)
- _____ HONEST (sincere, truthful)
- _____ IMAGINATIVE (daring, creative)
- _____ INDEPENDENT (self-reliant, self-sufficient)
- _____ INTELLECTUAL (intelligent, reflective)
- _____ LOGICAL (consistent, rational)
- _____ LOVING (affectionate, tender)
- _____ OBEDIENT (dutiful, respectful)
- _____ POLITE (courteous, well-mannered)
- _____ RESPONSIBLE (dependable, reliable)
- _____ SELF-CONTROLLED (restrained, self-disciplined)

APPENDIX C
RESPECT, EMPATHY, CONGRUENCE SCALES

Directions: Below are listed a variety of ways that one person could feel or behave in relation to a group. Please consider each statement with respect to whether you think it is true or not true in your present relationship with your group. Mark each statement in the left margin according to how strongly you feel it is true or not true. Please Mark Every One. Write in +1, +2, +3; or -1, -2, -3 to stand for the following answers:

+1: I feel that it is probably true, or more true than untrue.

+2: I feel it is true.

+3: I strongly feel that it is true.

-1: I feel that it is probably untrue, or more untrue than true.

-2: I feel it is not true.

-3: I strongly feel that it is not true.

- _____ 1. They respect me.
- _____ 2. They try to see things through my eyes.
- _____ 3. They pretend that they like me or understand me more than they really do.
- _____ 4. They disapprove of me.
- _____ 5. They understand my words but not the way I feel.
- _____ 6. What they say to me never conflicts with what they think or feel.
- _____ 7. They are curious about the "way I tick", but they are not really interested in me as a person.
- _____ 8. They are disturbed whenever I talk about about or ask about certain things.
- _____ 9. They are interested in knowing what my experiences mean to me.
- _____ 10. They like seeing me.
- _____ 11. They nearly always know exactly what I mean.
- _____ 12. I feel that they have unspoken feelings or concerns that are getting in the way of our relationship.
- _____ 13. They are indifferent to me.
- _____ 14. At times they jump to the conclusion that I feel more strongly or feel more concerned about something than I actually do.
- _____ 15. They behave just the way that they are; in our relationship.
- _____ 16. They appreciate me.
- _____ 17. Sometimes they think that I feel a certain way, because they feel that way.
- _____ 18. I do not think that they hide anything from themselves that they feel about me.

Directions: Same as for the previous page.

+1: I feel that it is probably true, or more true than untrue.

+2: I feel it is true.

+3: I strongly feel that it is true.

-1: I feel that it is probably untrue, or more untrue than true.

-2: I feel it is not true.

-3: I strongly feel that it is not true.

- _____ 19. They are friendly and warm toward me.
- _____ 20. They understand me.
- _____ 21. They care about me.
- _____ 22. Their own attitudes toward some of things I say, or do, stop them from really understanding me.
- _____ 23. They do not avoid anything that is important to our relationship.
- _____ 23. They feel that I am dull and uninteresting.
- _____ 25. They understand what I say, from a detached, objective point of view.
- _____ 26. I feel that I can trust them to be honest with me.
- _____ 27. They are interested in me.
- _____ 28. They appreciate what my experiences feel like to me.
- _____ 29. They are secure and comfortable in our relationship.
- _____ 30. They just tolerate me.
- _____ 31. They play roles with me.
- _____ 32. They do not really care what happens to me.
- _____ 33. They do not realize how strongly I feel about some of the things I discuss.
- _____ 34. There times when I feel that their outward response is quite different from their inner reaction to me.
- _____ 35. They seem to really value me.
- _____ 36. They respond to me mechanically.

Directions: Same as for the previous page.

+1: I feel it is probably true, or more true than untrue.

+2: I feel it is true.

+3: I strongly feel that it is true.

-1: I feel that it is probably untrue, or more untrue than true.

-2: I feel it is not true.

-3: I feel strongly that it is not true.

_____ 37: I don't think that they are being honest with themselves about the way they feel toward me.

_____ 38. They dislike me.

_____ 39. I feel that they are being genuine with me.

_____ 40. They are impatient with me.

_____ 41. Sometimes they are not at all comfortable but we go on, outwardly ignoring it.

_____ 42. They feel deep affection for me.

_____ 43. They usually understand all of what I say to them.

_____ 44. They do not try to mislead me about their own feelings or thoughts.

_____ 45. They regard me as a disagreeable person.

_____ 46. What they say gives a false impression of their total reaction to me.

_____ 47. At times they feel contempt for me.

_____ 48. When I do not say what I mean at all clearly, they understand me.

_____ 49. They try to avoid telling me anything that might upset me.

_____ 50. They try to understand me from their own point of view.

_____ 51. They can be deeply and fully aware of my most painful feelings without being distressed or burdened by themselves.

APPENDIX D
QUESTIONNAIRE TO ALL GROUP MEMBERS

TO: Participants in Self-Understanding Groups

FROM: Patrick McCary

This is just a note to thank you for your tremendous cooperation in these groups. I apologize for the testing and ask your patience in completing these questionnaires. They are very important to the completion of my research as you already know.

The results will be made available either individually or in your group as you prefer.

Thank you for your cooperation and understanding.

Pat McCary

Name _____

1. Have you made friendships with group members which have carried-over outside the group? ____yes ____no; if yes, how much time have you spent talking to, or being with the other person(s). If more than one person, please indicate time for each, including group leader. (Circle number of people)

1 2 3 4 5 6 7 8

(Check appropriate spaces)

1	2	3	4	5	6	7	G.L.	
_____	_____	_____	_____	_____	_____	_____	_____	less than 1 hour total
_____	_____	_____	_____	_____	_____	_____	_____	1-3 hours total
_____	_____	_____	_____	_____	_____	_____	_____	3-5 hours total
_____	_____	_____	_____	_____	_____	_____	_____	1 hr/week average
_____	_____	_____	_____	_____	_____	_____	_____	more than 1 hr/week average

2. Knowing what you do now about self-understanding groups, would you volunteer again yes _____ no _____

Comment:

3. Do you feel that you understand yourself better now than you did before this group experience? yes _____ no _____

Comment:

4. Do you feel that you would want to continue this experience? Comment:
yes _____ no _____

5. What do you consider to be the three most outstanding features in your college experience thus far? (rank 1, 2, 3):

_____ classes	_____ social events	_____ personal freedom
_____ male friend(s)	_____ activities	_____ self understanding groups
_____ female friend(s)	_____ faculty members	_____ job
_____ roommates	_____ athletics	_____ books read
_____ residence	_____ other (list) _____	
_____ intellectual atmosphere		

Comment:

6. At the beginning, what did you expect to get from your participation in a self-understanding group? (Rank 1, 2, 3)

☐ feel better about myself	☐ vocational advice
☐ get to know others	☐ other _____
☐ a new experience	_____
☐ meaningful personal dialogue	_____

7. How well have your expectations been met by your participation in a self-understanding group?

☐ completely ☐ almost fully ☐ partially ☐ little ☐ not at all

Comment: _____

8. What is responsible for your expectations being met (or not met) to the extent you noted in item 7? (Rank 1, 2, 3)

☐ group members	☐ lack of structure	☐ meeting place
☐ group leader	☐ time schedule	☐ outside factors (job, class work, etc.)
☐ yourself	☐ group disagreements	☐ specify _____
☐ others(list) _____		

9. What would you change if the project were starting again and you could control what happens? (Rank 1, 2, 3):

☐ join different group	☐ meet at different time _____
☐ not participate	☐ change your behavior _____
☐ change members' behavior	☐ talk less ☐ be friendlier
☐ more even participation	☐ talk more
☐ better attendance	☐ listen better
☐ friendlier behavior	

10. What is your overall evaluation of the small group experience for you?
☐ very favorable ☐ favorable ☐ mediocre ☐ poor ☐ very poor
- Comment: _____

APPENDIX E
COMMENTS RECORDED ON THE QUESTIONNAIRE

COMMENTS RECORDED ON THE QUESTIONNAIRE

Question 2

Knowing what you do now about self-understanding groups, would you volunteer again?

Homogeneous #1 (INTP)

- no - Chances are pretty slim. I can predict how I'll react in the situation and it tends to be a waste of time.
- yes - Conditional--A re-run of what I've done for the last few weeks is not worth all that time.
- yes - I welcome a chance to be with a group of people, just to talk.
- no - It didn't have any real meaning for me, although under different circumstances it might.
- no - I don't feel that our group interacted in a beneficial manner--and it definitely was a waste of time more than 50% of the time.
- no - Bored with it; I might for a "marathon" one, though because it wouldn't last for weeks.
- no - At least never an experimental one. Nothing accomplished.

Homogeneous #2 (ENFP)

- yes - I love people and any chance I have of learning more about people I'll take it.
- yes - It was fun and interesting, but I don't think that I have achieved any greater self-understanding.
- yes - (No comment)
- yes - I guess; it was an interesting experience.
- yes - Made friends and visably helped me.
- yes - (No comment)
- no - I feel that I have gained what I wanted from this experience and there is no need to repeat it.
- yes - A little hesitantly, as the group seemed to bog down to mediocrity at the end, most people being talked out, and all activity being limited to talking.

Homogeneous #3 (INFP)

- yes - (No comment)
- no - The group lacked organization, which is very hard for nine strangers to formulate.
- yes - (No comment)
- no - I guess I pretty much understand myself. I enjoyed helping other people, but such opportunities were too rare.
- yes - I like getting to know others in the group, though it didn't really help me with myself.
- yes - I think that it could have been better but I would try again.
- no - (No comment)

Complimentary #1 (intuition)

- yes - I am interested in a sensitivity group with a competent instructor. ENTJ
- yes - I really feel that I learned something about myself and about other people's feelings. INFJ
- yes - (No comment) ENFJ
- yes - The experience of meaningful conversation--deeper than the hi's, what's your major type thing. In listening to others you discovered similar feelings (fears, problems). INFP
- yes - I feel that the experience would be profitable in another group or continuance of the same group. INTP
- yes - (No comment) INTJ
- yes - This was more of a sensitivity and self-explaining group. Self-understanding came to individuals through group contact. (I believe I already know myself.) ENFP

Complimentary #2 (feeling)

- yes - Hoping it could be better having had one experience. ENFP
- yes - I believe that I did get to know myself better and to me this was worthwhile. ESFP
- yes - I felt it satisfied a basic need of mine to relate to others in stimulating deep conversations. INFP
- yes - I enjoy this kind of discussion and seem to learn alot about myself. INFJ
- yes - Always something to learn and group is a pleasurable way to learn. ENFJ
- yes - (No comment) ISFJ

Complimentary #3 (thinking)

- yes - (No comment) ENTP
- yes - (No comment) ESTP
- yes - I enjoyed listening to what the other people in the group thought and felt. INTP
- yes - (No comment) ENTJ
- yes - But only on the condition that such a group was structured by the leader. I got very frustrated by the slow or often nil and inane progress and discussions. ISTJ
- no - I didn't gain any measurable amount of self-understanding from my participation in the group. Though it was interesting to hear the varied viewpoints some of the others held on the topics we discussed, I felt the whole thing was in general a waste of time. INTJ

Heterogeneous #1

- yes - I believe that next time I would be different--not quite so obstinate and more willing to step in and start something. ENFP
- no - They take too much time for the benefit derived. I'd rather spend the time reading. ISFP
- yes - If I had more free time. These things should be started in the fall and carried over a whole year. ENTJ
- yes - If I were going only on the information obtained from this group I would probably think it over very carefully. Since I know people in other groups I would probably do so again because I think that the main problem with this group is that it never really got off the ground. INFJ
- yes - (No comment) INTP
- no - It seems to be just a 1 1/2 hour bull session. ISTJ

Heterogeneous #2

- yes - (No comment) ENTJ
- yes - I'm not satisfied with the results so I want to try a different approach. INTP
- yes - Would like to get more involved from here on--go further and deeper than this group did. ISFP
- yes - (No comment) ENTP
- yes - (No comment) ENFJ
- yes - Found it to be an exciting experience. INFJ
- yes - They seem to really be of help to achieve their purpose--helping one to understand one's self. ISFJ

Heterogeneous #3

- yes - (No comment) ENFP
- yes - Need more time, activities, etc. INTJ
- yes - I've been very favorably impressed with this group's actions and reactions. ENTJ
- yes - Beneficial in that you can learn about yourselves and others and build friendships. ESFJ
- yes - (No comment) ISTJ
- yes - (No comment) INFP
- yes - (No comment) ESFP

Question 3

Do you feel that you understand yourself better now than you did before this group experience?

Homogeneous #1 (INTP)

- no - Same as ever; sure didn't learn anything.
- yes - A few realizations that I made outside of the group, while thinking about it, were interesting.
- no - I have not made any significant changes as far as beliefs or attitudes. This was just a rather pleasant thing.
- no - (No comment)
- no - (No comment)
- no - (No comment)
- no - (No comment)

Homogeneous #2 (ENFP)

- no - I understood my motives, morals, and values before and they haven't changed. I have learned to communicate better.
- no - I don't think that I have achieved any greater self-understanding.
- yes - A little more.
- no - Not really, but perhaps I understand other people better but if I do understand myself better, it is due to other factors than the group, or rather, outside factors were more influential.
- yes - It's hard to say I understand myself better now because I don't have anything to compare it with. But a general feeling I have says it has.
- no - Others, but not myself.
- no - (No comment)

- yes - Not really, though I feel a little bit more comfortable with myself, only by telling one thing that bothered me. On the other hand, I'd say yes, because I've interacted with personalities different from my normal group of friends.

Homogeneous #3 (INFP)

- yes - (No comment)
- no - (No comment)
- yes - (No comment)
- no - My self-concept is decided finally in my own mind, though others do influence final decisions.
- no - (No comment)
- yes - Every day I must learn something.
- yes - A little. Natural course of two months and talking with people.

Complimentary #1 (intuition)

- yes - I have become more aware that my small number of friends is due to a tendency to orientate the talk around me in terms I understand and too few others do. ENTJ
- yes - Especially how I project to others. INFJ
- yes - I don't think I've made any real significant discoveries about myself, but I feel that any interaction with other people helps me see myself a little more clearly. ENFJ
- yes - I see that I must talk more--not simply ask questions and offer brief comments. I must try to be more personal in my speaking, not talk of things and other people only. INFP
- yes - A lot of worries I had had I found in other people also thus reassuring myself that I was normal. INTP
- no - Most of what has been discussed has occupied my thoughts previously. If there have been any new insights on my part I can't remember them. INTJ
- no - I already knew myself. ENFP

Complimentary #2 (feeling)

- no - (No comment) ENFP
- yes - (No comment) ESFP
- yes - Especially as far as trusting my perceptions of other people. INFP

- yes - I understand the way I interact with a group of people and I understand making new friends. INFJ
- yes - (No comment) ENFJ
- yes - (No comment) ISFJ

Complimentary #3 (thinking)

- yes - I understand more how others perceive me and how I relate to them. ENTP
- no - (No comment) ISTP
- yes - Knowing that others share some of my beliefs and question some of the same things that I do makes me feel somewhat more secure. INTP
- yes - (No comment) ENTJ
- no - It was a good social experience but it did not benefit me in such a way because of the nature of the group progress was slow, so when we could have benefited the experiment was over. ISTJ
- yes - But I do not feel it is due to the group experience, rather to certain interpersonal relationships I formed outside the group. INTP

Heterogeneous #1

- no - (No comment) ENFP
- no - The group was not willing to give of themselves-- I was--after the first few meetings I stopped too. It seemed useless. ISFP
- yes - With or without an understanding group, just by living from day to day you gain a greater understanding of yourself. ISFP
- no - (No comment) ENTJ
- yes - I feel that as a result of the few (1 or 2) really good sessions we have had that I might have gained a little, but I wouldn't say that I have made any startling discoveries or tremendous progress in understanding myself. INFJ
- yes - (No comment) INTP
- no - It seems to be just a 1 1/2 hour bull session. (Repeat of answer to 2.) ISTJ

Heterogeneous #2

- yes - This is not however, a complete result of these groups. I have also done a great deal of personal introspection not only as a result of this group, but also as a reaction to class material presented in several classes this term. ENTJ

- no - My main reason for joining the group was to try and understand other people so that my relations would improve in the future. INTP
- no - I'm thinking more about myself now and am becoming even more confused. However, I think in time (???) this will clear up! ISFP
- yes - Understand and realize what I have to do from now on. This has helped me out of a bad rut (or at least helped me move in it!) ENTP
- yes - (No comment) ENFJ
- yes - To some extent. INFJ
- yes - I think I now know who I am and where I am going, and why I want to go there. ISFJ

Heterogeneous #3

- yes - I really don't know who "myself" is. But since this is a point of semantics I would say "yes." ENFP
- yes - Kind of hard to say--i.e., I understand myself better, true; but how my behavior will be affected I'm not sure. INTJ
- yes - I'm now able to express what I feel with having my ideas understood by others. ENTJ
- yes - My self concept was strengthened and found weaknesses in my character that need attention. ESFJ
- yes - Due to outside factors, I prefer to say I changed at this time, but the group was only one factor involved. ISTJ
- yes - (No comment) INFP
- yes - Possibly. ESFP

Question 4

Do you feel that you would want to continue this experience?

Homogeneous #1 (INTP)

- no - It would be nice to continue if possibly the group could be meaningful. Occasionally it has approached this but the probability of any long term meaning is nil.
- yes - Some different group members.
- yes - (No comment)
- no - (No comment)
- no - I don't feel that our group interacted in a beneficial manner--and it definitely was a waste of time more than 50% of the time. (Same answer as 2)

no - What experience?
 no - (No comment)

Homogeneous #2 (ENFP)

yes - 7 no - 1

yes - I don't want to lose contact with the people in
 my group whom I see only at the meetings.
 yes - Possibly with new people added.

Homogeneous #3 (INFP)

yes - 4 no - 3

no - The group did not always open up.
 yes - Perhaps I needed more time.

Complimentary #1 (intuition)

yes - 7 no - 0

yes - I think we will. ENTJ
 yes - With more time I would have opened up more and
 gotten to know the others better. INFP
 yes - Yes, because I like the people. INTJ
 yes - I feel I would want to continue with this group,
 not the experiment. ENFP

Complimentary #2 (feeling)

yes - 5 no - 1

no - I want to put what I've learned into practice.
 ESFP
 yes - I think it would be beneficial to my growth.
 INFJ

Complimentary #3 (thinking)

yes - 5 no - 1

yes - We know each other some and I would like to know
 them better and help them if I could. ISTJ

Heterogeneous #1

yes - 4 no - 2

yes - I think given enough time this group could get
off the ground.

yes - If I didn't have anything else to do.

Heterogeneous #2

yes - 7 no - 0

Heterogeneous #3

yes - 7 no - 0

yes - Definitely.

yes - We are going to.

Question 5*

What do you consider to be the three most outstanding features in your college experience thus far: (rank 1, 2, 3)

Number of times item ranked 1:

<u>0</u> classes	<u>0</u> social events	<u>15</u> personal free-
<u>9</u> male friends	<u>1</u> activities	dom
<u>8</u> female friends	<u>0</u> faculty members	<u>1</u> self under-
<u>6</u> roommates	<u>0</u> athletics	standing groups
<u>2</u> residence	<u>5</u> other (list)	<u>0</u> job
<u>6</u> intellectual	<u>Loss of personal</u>	<u>2</u> books read
atmosphere	<u>freedom, Being away from home,</u>	
	<u>Counselor (3)</u>	

Number of times item ranked 2:

<u>6</u> classes	<u>2</u> social events	<u>2</u> personal free-
<u>12</u> male friends	<u>5</u> activities	dom
<u>11</u> female friends	<u>3</u> faculty members	<u>1</u> self under-
<u>6</u> roommates	<u>1</u> athletics	standing groups
<u>3</u> residence	<u>1</u> other (list)	<u>3</u> job
<u>4</u> intellectual	<u>Bicycle racing</u>	<u>1</u> books read
atmosphere		

Number of times item ranked 3:

<u>7</u> classes	<u>0</u> social events	<u>11</u> personal free-
<u>7</u> male friends	<u>4</u> activities	dom
<u>6</u> female friends	<u>1</u> faculty members	<u>5</u> self under-
<u>4</u> roommates	<u>0</u> athletics	standing groups
<u>2</u> residence	<u>5</u> other (list)	<u>0</u> job
<u>3</u> intellectual	<u>"Grill Rats", Time</u>	<u>4</u> books read
atmosphere	<u>to think, (2) Counselor, Other group</u>	

*Discrepancy in total number answering question is a result of some individuals not following directions (checking items, giving same rank to more than one item, not answering question, etc.)

Question 6*

At the beginning, what did you expect to get from your participation in a self-understanding group? (rank 1, 2, 3)

Number of times item ranked 1:

<u>15</u> feel better about myself	<u>0</u> vocational advice
<u>16</u> get to know others	<u>3</u> other: <u>sensitivity,</u>
<u>12</u> a new experience	<u>understanding myself and</u>
<u>13</u> meaningful personal dia-	<u>goals, find new things in</u>
logue	<u>myself</u>

Number of times item ranked 2:

<u>10</u> feel better about myself	<u>0</u> vocational advice
<u>16</u> get to know others	<u>1</u> other: <u>to learn what</u>
<u>9</u> a new experience	<u>to expect from others</u>
<u>19</u> meaningful personal dia-	
logue	

Number of times item ranked 3:

<u>12</u> feel better about myself	<u>0</u> vocational advice
<u>10</u> get to know others	<u>4</u> other: <u>understand</u>
<u>14</u> a new experience	<u>self as driven by same</u>
<u>10</u> meaningful personal dia-	<u>basic desires as everybody</u>
logue	<u>else, obtain more self</u>
	<u>confidence, help others to</u>
	<u>understand themselves,</u>
	<u>share my feelings with</u>
	<u>others</u>

*Discrepancy in total number answering question is a result of some individuals not following directions (checking items, giving same rank to more than one item, not answering question, etc.)

Question 7

How well have your expectations been met by your participation in a self-understanding group?

_____ completely _____ almost fully _____ partially
 _____ little _____ not at all

Homogeneous #1 (INTP)

- partially - It was a new experience, but there was little meaningful personal dialogue and no self-understanding resulted.
- partially - A little of each.
- little - I feel that none of us has reached the others or been reached on a personal, real, basis.
- not at all - (No comment)
- little - (No comment)
- not at all - (No comment)
- little - (No comment)

Homogeneous #2 (ENFP)

- almost fully - (No comment)
- little - (No comment)
- partially - (No comment)
- partially - I really don't know, for I actually didn't know what to expect from the group or vice-versa.
- completely - It was a great experience. In my classes that I can participate (vocally) in, I am adding more and more meaningful comments.
- partially - I did not get to understand myself better.
- almost fully - (No comment)
- partially - See 3, also. I gave the mediocre answer because the dialogue became less meaningful at the end. At times it was good. Item 2 was well satisfied. Item 3 was satisfied mostly outside of the group, not by group members but by my girl.

Homogeneous #3 (INFP)

- partially - I feel that we spent most of the time just getting started and that we really didn't have enough time.
- little - My participation on the whole was satisfying but I expected more answers from the group than just questions.
- partially - (No comment)
- little - Mostly it became a dull session.
- partially - I do know others and it was a new experience but I don't feel any better about myself.
- partially - (No comment)
- partially - (No comment)

Complimentary #1 (intuition)

- almost fully - Which means I have only started discussing myself or really understanding what any other one person is. ENTJ
- almost fully - I still feel there is a lot to be accomplished within myself and I feel that some of the others did not get as much out of the group as I did. INFJ
- partially - (No comment) ENFJ
- partially - I heard meaningful personal dialogues, but didn't participate. But still I heard my thoughts vocalized by the others which is "comforting". INFP
- little - I seem to have a much more intense drive towards my goals than others, but my experience (especially ego-destroying) in dating has been shared by the other men in the group. INTP
- partially - Some "meaningful dialogue" a few new acquaintances. INTJ
- completely - (No comment) ENFP

Complimentary #2 (feeling)

- little - (No comment) ENFP
- partially - We didn't get into people as deeply as as I would have liked. ESFP
- almost fully - I feel we have made a lot of progress in our group toward understanding, but we still could go farther. INFP

- almost fully - Except for slight lack of participation on other members' parts, I feel very satisfied. INFJ
- almost fully - Could have gone on longer, still more to know of self and others. ENFJ
- partially - (No comment) ISFJ

Complimentary #3 (thinking)

- completely - (No comment) ENTP
- partially - (No comment) ISTP
- partially - I'm not sure exactly what goals were achieved, however, I'm sure the experience helped me. INTP
- almost fully - I really didn't know what to expect, other than I would try to understand the way I and others perceive themselves. ENTJ
- little - Due to the unstructured nature of the group a lot of time was wasted on trivia. ISTJ
- little - I could not loosen up and relax with the group. It did not get easier as the time went by, rather more difficult. I had personal problems almost the entire time which I felt I could not discuss with anyone, especially the group. Everyone else was so free and open that my inability to open up bothered me even more. INTJ

Heterogeneous #1

- not at all - Took me too long to get over suspicions of you - (P.M.) ENFP
- almost fully - (No comment) ISFP
- almost fully - (No comment) ENTJ
- little - (No comment) INFJ
- partially - (No comment) INTP
- partially - (No comment) ISTJ

Heterogeneous #2

- almost fully - (No comment) ENTJ
- little - I felt as though I could understand and empathize with what other people had to say--unfortunately it was mostly trivia. INTP

- little - We didn't seem to go too deeply into everyone's problems, just a few. This was a little disappointing. ISFP
- almost fully - I really didn't know what to expect, but some vague expectations have been realized. ENTP
- almost fully - (No comment) ENFJ
- partially - Better if all members would come--if sessions were longer at times--after an hour we just are getting started. INFJ
- completely - I understand myself. ISFJ

Heterogeneous #3

- partially - It's my fault that they haven't been met more fully. ENFP
- almost fully - Needed more time, different atmosphere (i.e.,--meet elsewhere than in dorm.) INTJ
- completely - (No comment) ENTJ
- almost fully - Not enough time allotted. ESFJ
- partially - (No comment) ISTJ
- almost fully - (No comment) INFP
- almost fully - (No comment) INFP
- no response - ESFP

Question 8*

What is responsible for your expectations being met (or not met) to the extent you noted in item 7? (Rank 1, 2, 3)

Number of times item ranked 1:

<u>31</u>	group members	<u>12</u>	lack of structure
<u>3</u>	group leader	<u>2</u>	time schedule
<u>7</u>	yourself	<u>2</u>	group disagreements
<u>4</u>	others (list)	<u>1</u>	meeting place
	<u>unwillingness of others</u>	<u>2</u>	outside factors (job, class, work, etc.)
	<u>to open up; no depth of</u>		specify _____
	<u>communication, meaning-</u>		
	<u>ful dialogue, false dis-</u>		
	<u>cussion.</u>		

Number of times item ranked 2:

<u>11</u>	group members	<u>4</u>	lack of structure
<u>12</u>	group leader	<u>4</u>	time schedule
<u>20</u>	yourself	<u>2</u>	group disagreements
<u>3</u>	others (list)	<u>2</u>	meeting place
	lack of interest, personal experience and	<u>3</u>	outside factors (job, class, work, etc.)
	problems, subjective		specify _____
	analysis by members		_____

Number of times item ranked 3:

<u>7</u>	group members	<u>9</u>	lack of structure
<u>9</u>	group leader	<u>4</u>	time schedule
<u>10</u>	yourself	<u>1</u>	group disagreements
<u>4</u>	others (list)	<u>5</u>	meeting place
	the fact that we really	<u>2</u>	outside factors (job, class, work, etc.)
	talked, not knowing what		specify _____
	we were after, help		_____
	others learn to understand themselves, more individual counseling.		

* discrepancy in total number answering question is a result of some individuals not following directions (checking items, giving same rank to more than one item, not answering question, etc.)

Question 9*

What would you change if the project were starting again and you could control what happens? (Rank 1, 2, 3):

Number of times item ranked 1:

<u>6</u>	join different group	<u>1</u>	meet at different time
<u>4</u>	not participate	<u>5</u>	change your behavior
<u>8</u>	change members' behavior	<u>3</u>	talk less
<u>16</u>	more even participation	<u>8</u>	talk more
<u>4</u>	better attendance	<u>3</u>	listen better
<u>0</u>	friendlier behavior	<u>1</u>	be friendlier

Number of times item ranked 2:

<u>7</u>	join different group	<u>3</u>	meet at different time
<u>1</u>	not participate	<u>3</u>	change your behavior
<u>5</u>	change members' behavior	<u>1</u>	talk less
<u>9</u>	more even participation	<u>6</u>	talk more
<u>8</u>	better attendance	<u>6</u>	listen better
<u>0</u>	friendlier behavior	<u>1</u>	be friendlier

Number of times item ranked 3:

<u>3</u> join different group	<u>2</u> meet at different time
<u>3</u> not participate	<u>4</u> change your behavior
<u>2</u> change members' behavior	<u>4</u> talk less
<u>6</u> more even participation	<u>5</u> talk more
<u>4</u> better attendance	<u>4</u> listen better
<u>1</u> friendlier behavior	<u>5</u> be friendlier

Comments:

have unlimited time on meetings
 have more relevant discussion
 different type of participation--less intellectual, more emotional

* discrepancy in total number answering question is a result of some individuals not following directions (checking items, giving same rank to more than one item, not answering question, etc.)

Question 10

What is your overall evaluation of the small group experience for you?

_____ very favorable _____ favorable _____ mediocre
 _____ poor _____ very poor

Homogeneous #1 (INTP)

mediocre	- (No comment)
mediocre	- (No comment)
mediocre	- It has not been an experience which greatly affected me or brought me greater awareness of myself, or others, or made me feel close to those in the group.
very poor	- Almost no meaningful interaction.
poor	- I think that main lack of structure was the immediate cause of our group's difficulty--me and other members did not know how to begin to explore and reach each other through dialogue.
very poor	- (No comment)
poor	- (No comment)

Homogeneous #2 (ENFP)

- favorable - In small groups I express myself better and I can get to know people better. There were all types of people not just one kind. I could be myself and be honest which I am working very hard on. It gave me a chance to try it out. It works.
- favorable - (No comment)
- favorable - (No comment)
- very favorable - I think it was quite good. The friendships were the best part rather than the group aspect, and communication was possible, with which I believe were quite truthful feelings--was different and is perhaps the best feature, communication feeling other's emotions, becoming aware that others exist.
- very favorable - Overall it developed in me a greater sense of confidence in myself.
- very favorable - (No comment)
- favorable - (No comment)
- favorable - More or less previously explained. Good outside experience with group members was fun.

Homogeneous #3 (INFP)

- very favorable - (No comment)
- mediocre - I feel a greater closeness with all the members in the group and experienced true feeling from my fellow companions but I lacked the ability to produce great friendships with the other members.
- favorable - I have strong walls.
- mediocre - Mediocre.
- favorable - I enjoyed it and I'm glad I participated. It gave me a chance to know people that I wouldn't have been friends with by myself. One of the members became good friends with me and helped me with some of my problems.
- mediocre - In some ways we didn't seem to get too far
- mediocre - I do better on one-to-one basis.

Complimentary #1 (intuition)

- no answer - (No comment) ENTJ
- very favorable - (No comment) INFJ
- favorable - Even though I don't feel that I discovered any new truths about myself, I feel that I learned quite a bit from hearing the others talk about themselves, and I enjoyed knowing new people. ENFJ
- favorable - It was relaxing in our group leader's apartment. There was more opportunity to participate--less "competition" to speak with this number. The number was convenient to handle in relating. INFP
- favorable - (No comment) INTP
- favorable - Did see some people in a new light. INTJ
- favorable - It's much easier to communicate, verbally as well as non-verbally, with a small group. ENFP

Complimentary #2 (feeling)

- mediocre - 1. It didn't get started; not enough time. 2. No complete goal in depth of discussion. 3. Arguments on levels of discussion being used. Too busy finding out only about what the person knows and understands, rather than helping him understand what he doesn't but is evident to others. ENFP
- favorable - I really felt it was worthwhile when one of the members would open up but when no one would open up it was rather draggy. ESFP
- favorable - I came into the group feeling that I had a number of personal problems in communicating that could be cleared up by others, but I have found more that just being with them and focusing my attention on them has given me the most confidence in myself. INFP
- very favorable - I have experienced a new awareness of myself in a group situation. My responses are newly learned and my understanding of other peoples

- reactions and my own have been enlightened. INFJ
- favorable - It's not often that people take time out to sit down and think about their own motives and those of others; self-perceptions and perceptions of others. We did these things. ENFJ
- mediocre - (No comment) ISFJ

Complimentary #3 (thinking)

- very favorable - (No comment) ENTP
- very favorable - (No comment) ISTP
- favorable - There is a great deal that could be accomplished through a meaningful group discussion. By talking about yourself in relation to the people in the group helps develop an understanding of what other people think. INTP
- favorable - (No comment) ENTJ
- mediocre - More could have been gained, but it was an interesting experience. ISTJ
- poor - With one or two other people and a lot of time to get to know them, the experience might have been more favorable. But I could not feel free to discuss my inner feelings with six total strangers. I felt no inhibitions about talking to my group leader, but when it came to those other people who seemed so different in their values and outlooks, I couldn't do it. I didn't think they could possibly empathize with the way I felt or offer any advice or criticism that I would take. INTP

Heterogeneous #1

- very poor - This one only--all others I have been in have been highly rewarding. ENFP
- mediocre - (No comment) ISFP
- favorable - (No comment) ENTJ
- mediocre - I think these things can be very good, but since this group never got off the ground it was rather mediocre. Many evenings I could have gained as much or more sitting in the grill

talking with my friends. On other evenings it was very worthwhile.
INFJ

- favorable - Not at all what I anticipated but interesting and informative. INTP
- mediocre - I don't feel I got any lasting good out of it. ISTJ

Heterogeneous #2

- very favorable - I have always enjoyed small group interaction. These sessions were therefore very enjoyable and meaningful. ENTJ
- mediocre - My expectations not being reached left me unsatisfied and I look at it as a mediocre experience. However, maybe only later will I realize the effect this group had on me. I disapprove of the short hour and a half sessions and would recommend a longer perhaps four hour sessions. INTP
- mediocre - (No comment) ISFP
- very favorable - (No comment) ENTP
- favorable - (No comment) ENFJ
- favorable - (No comment) INFJ
- very favorable - One is better able to get to know each person so much better--and you can really communicate with each other then. ISFJ

Heterogeneous #3

- very favorable - (No comment) ENFP
- favorable - (No comment) INTJ
- very favorable - Given on the first page. ENTJ
- very favorable - (No comment) ESFJ
- favorable - (No comment) ISTJ
- very favorable - (No comment) INFP
- no response - ESFP

APPENDIX F
DISTRIBUTION OF PERSONALITY TYPES
AMONG VOLUNTEERS

DISTRIBUTION OF PERSONALITY TYPES
AMONG VOLUNTEERS

ENFP	32
ENTP	14
INFP	42
INTP	24
ENFJ	6
ENTJ	10
INFJ	10
INTJ	12
ESFP	5
ESTP	0
ISFP	6
ISTP	1
ESFJ	3
ESTJ	1
ISFJ	7
ISTJ	5
Total	178

APPENDIX G
GROUP ATTENDANCE

GROUP ATTENDANCE

The numbers represent the total number of sessions attended by each participating student out of a possible 13 sessions.

INTP	ENFP	INFP
12	13	13
11	13	13
12	10	12
12	11	12
13	13	13
12	13	12
11	12	11
	13	
Complementary (Intuition)	Complementary (Thinking)	Complementary (Feeling)
12	13	9
12	10	10
12	13	10
11	13	10
13	9	10
12	13	11
13		
Heterogeneous 1	Heterogeneous 2	Heterogeneous 3
11	9	10
13	13	11
7	13	11
13	12	12
12	12	12
11	7	13
	9	13

APPENDIX H
INSTRUCTIONS TO GROUP LEADERS

Pretest Instructions
For Group Leaders

To: Group Leaders (self-understanding groups)

From: Pat McCary

The purpose of these groups is to help each of the participants to better understand himself. Your task as group leaders will be to facilitate this self-understanding which should lead to an enhancement of self-concept and reduction of anxiety level.

Your behavior should be natural and normal while at the same time encouraging the group to interact. This means you should be unobtrusively quiet. This simply means that you should not be conspicuous in resisting participation or act in a way that connotes to the group that you have taken responsibility for the success or failure of the group. You will participate when you feel it will help another understand himself while allowing others to play this role. If the group behaves in such a way that the anxiety level or self-concept of a particular individual is, in your opinion, not being enhanced, then behave in a supportive manner.

The groups will meet for six weeks (12 sessions). A number of tests will be given to the groups. These tests are short and should not interfere with your sessions. At the first meeting I will provide materials for you and ask you to administer them.

Miscellaneous directions:

1. Each session should last for exactly one and one-half hours. Because the groups are experimental it is essential that they meet for the same amount of time. Please don't schedule extra sessions or extend the sessions past the hour and a half time period. I suggest that you explain this to the group and begin exactly on the hour and end on the half hour.
2. Explain confidentiality to the groups and emphasize the importance of keeping all communication confidential.
3. Explain to the group the importance of coming to each session and that by missing sessions they change the dynamics of the group.

4. Please keep track of those people who are absent during the first session. Call them to find out if they are planning to participate. If they have decided not to participate we will replace them with someone else.

5. Please be responsible for scheduling a room in the East complex for your group meetings. Once I have the times for your meetings I would be glad to assist in helping you find a room.

HAVE STUDENTS PUT THEIR NAME ON ALL MATERIAL.

Directions for giving tests.

1. Please pass out the Tennessee Self-Concept Scale and go over the directions with the group.
 - a. Be sure everyone puts their name on the test.
 - b. Discuss the answer sheet with them. It can be confusing, the numbers are not in order.
 - c. Collect the Tennessee Self-Concept Scale only after everyone is finished.
 - d. Have them note the time they started and finished.
2. Pass out the self-analysis questionnaire.
 - a. Go over the questionnaire with the group being sure to have them notice the different directions on both pages.
 - b. Read the directions to them. If they ask questions be non-committal and tell them to respond "as they feel now" or "as they feel in general".
 - c. Collect after everyone has finished.
3. Pass out Rokeach's Value Scale. Some of the Briggs students have already taken the scale. If they mention this just have them take it over again.
 - a. Collect the Rokeach Value Scales.
4. If questions are raised regarding the testing tell the students it is for research. You should not find it necessary to give any detailed information.

Other procedures

Be sure to set a permanent meeting time for your group sessions which is convenient for all group members. We will notify the students in your group as to the permanent meeting room this weekend.

DIRECTIONS FOR ADMINISTRATION

The STAI was designed to be self-administering and it may be given individually or to groups. Complete instructions are printed on the test sheet for both the A-State and the A-Trait Scales. Although the test has no time limits, college students generally require only six to eight minutes to complete either the A-State or the A-Trait Scales when given independently, and ten to twelve minutes to

complete both together. Repeated administration of the A-State Scale typically requires five minutes or less.

The validity of the STAI assumes that the examinee has a clear understanding of the state and trait instructions, and that he is able to shift from the "state-set", which asks him to indicate how he generally feels. In introducing the STAI, the examinee's attention should be called to the fact that the instructions are different for the two parts of the inventory, and that both sets of instructions must be read very carefully. It is generally helpful to have the examinee read the directions silently while the examiner reads them aloud and to give the examinee an opportunity to raise questions.

In responding to specific questions that arise in a testing session, the examiner should answer them in a non-committal manner, for example, "Just answer according to how you generally feel," or "Answer the way you feel right now." Examinees should be told not to omit any items if this question arises. Although many of the items have face validity as measure of "anxiety", this term should not be used when administering the STAI, nor should the examiner use the actual title of the inventory. Rather, he should refer to the STAI and its subscales as the Self-Analysis Questionnaire (the title that is printed on the test sheet).

Posttest Instructions
For Group Leaders

TO: Group Leaders

FROM: Pat McCary

The tests should be given in the following order on the final day of your group.

1. Tennessee Self-Concept Scale.
2. Trait Portion Self Analysis Questionnaire.
3. Group Questionnaire.

Please read the directions over with the group, specially that portion of STAI.

IMPORTANT! Please impress upon them the importance of the testing. Thank them for me and tell them I apologize for as much testing as they have had.

If your group wishes to schedule another meeting next week for test interpretation just let me know, otherwise either you or I can interpret their test results to them individually.

Pat

APPENDIX I
LETTERS TO STUDENTS

First Letter To Residents
Of Holmes Hall

TO: Residents of Holmes Hall

FROM: Patrick McCary (Director of Research - LBC)

During the spring quarter a number of small groups of students will be formed. The purpose of these groups will be to help the participants to better understand themselves. The groups will be part of a project conducted to fulfill the requirements of my Ph.D. degree.

If you would be interested in participating in a self-understanding group, please contact the Lyman Briggs College Office (E-30 Holmes Hall, 353-6480). The groups will have eight students and a professionally trained group leader. They will be composed of equal numbers from East Holmes and West Holmes residents. Each group will meet once a week for the entire spring quarter.

Because a limited number of students will be needed, it will be necessary that you leave your name in the Briggs Office before the end of finals week. It should be clear that you are under no obligation to participate by signing this list. It will only be after the general information session on Wednesday, March 26, that I will formally accept students to participate who have indicated their interest.

Research indicates that students generally find such an experience highly rewarding and educational.

Please give some thought to the project and if you have any questions, feel free to stop in to my office (E-187 Holmes Hall, phone 353-6480) or contact Jud Carlberg (Head Advisor, East Holmes Hall, phone 353-7767). The secretaries in the LBC office will have a list which you may sign before March 15. The list is for planning purposes and obligates you in no way to participate.

Letter To All Residents
Of Holmes Hall

TO: All Resident of Holmes Hall

FROM: Patrick McCary, Director of Research
Lyman Briggs College

If you didn't get the opportunity to sign up for a self-understanding group during final exam week I am still accepting volunteers. The last day for signing up will be Monday, March 31st. The groups will begin shortly after this date. Please sign up in the Lyman Briggs College Office in Room E-30.

A couple of minor changes have been made in procedure.

1. The groups will meet twice a week for six weeks. The sessions will be one and one-fourth hours in length. We will be finished at least two weeks before final exams.
2. There will be no general information session on Wednesday, March 26th.
3. Any results of the tests you take will be made available to you if you so desire, following the six weeks.

The response so far has been amazingly high and I appreciate the cooperation already received in conducting this research for my Ph.D.

TO: All Residents of Akers, Fee, Hubbard Halls

FROM: Patrick McCary (Director of Research - Lyman Briggs College)

During the spring quarter a number of small groups of students will be formed. The purpose of these groups will be to help the participants to better understand themselves. The groups will be part of a research project conducted to fulfill the requirements of my Ph.D. degree.

If you would be interested in participating in a self-understanding group, please call the Lyman Briggs College office (353-6480), or stop into the Lyman Briggs College office (E-30 Holmes Hall). The groups will have eight students and a professionally trained group leader. The groups will contain students from Akers, Fee, Hubbard and Holmes Halls, both men and women's sides.

Because a limited number of students will be needed, it will be necessary that you contact the Lyman Briggs College office by Wednesday, April 2 (3-6480). Once you contact the Briggs office you will receive a brief questionnaire in the campus mail. The questionnaire should be completed and returned to the reception desk of your respective residence hall by Friday, April 4, 1969. Volunteers will be contacted directly by their group leaders and a meeting time determined to fit the schedules of the group members. Your group leader will be able to offer more direction and assistance to you in understanding the nature of the groups.

The groups will meet twice a week for six weeks. Each session will last one and $\frac{1}{4}$ hours. We will be finished with the project two weeks before final exams. During the group sessions a few brief tests will be administered. All results will be made available to you on a personal basis if you so desire at the conclusion of the groups. The information will, of course, be confidential and used only for research purposes. I will attempt to present some tentative findings of the study to all participants before the end of spring quarter.

Research indicates that students generally find such an experience highly rewarding and educational. Please give some thought to the project and contact the Lyman Briggs College office by Wednesday, April 2 if interested.

Memo To All Volunteers

April 12, 1969

Dear

The next meeting of our self-understanding group will be _____ at _____ o'clock in room _____. If you decide before this meeting that you are not going to participate, please contact me immediately at _____. Over 170 students volunteered and less than 70 are able to participate. Replacements can only be made before the first meeting. After this time the groups will remain as they are.

I am looking forward to seeing you soon.

Sincerely,

Group Leader

Second Letter To Residents
Of Holmes Hall
(Volunteers Only)

FROM: Patrick McCary
(Director of Research)
Lyman Briggs College

DATE: March 24, 1969

Dear _____

Thank you for your interest in participating in a self-understanding group. A couple of minor changes have been made in procedure which I wanted to communicate to you.

1. The groups will meet twice a week for six weeks, each session will last one and one-fourth hours. We will be finished at least two weeks before final exams.
2. There will be no general information session on Wednesday, March 26th. Instead, I am going to ask you to complete a brief questionnaire which I have enclosed.
3. The questionnaire answer sheets will be confidential and are to be returned to the Lyman Briggs Office by Friday, March 28th.
4. You will be notified as to when your group will meet by your group leader.
5. Although I would like to discuss at length the nature of your group, I cannot do so because of experimental reasons. However, I can tell you that the task of the group will be for the members to understand themselves and the others in the group. Your group leaders will be able to offer more direction and assistance in understanding this matter.
6. I will assume that if you do not return your questionnaire completed by Friday, March 28th that you have decided not to participate in a group. If you do not participate please return the questionnaire to the LBC office.
7. During the group sessions a few tests will be administered. All results will be made available to you on a personal basis if you so desire, at the conclusion of the groups. I will also attempt to present some tentative findings of my study to all participants in these groups before the end of spring quarter.

Even if you have decided not to participate in the project I appreciate your interest. Please remember to sign the answer sheet and return all materials to the Lyman Briggs College Office by March 28th. Do not write on the test booklets.

LYMAN J. BRIGGS COLLEGE • HOLMES HALL

April 10, 1969

Dear

I am unhappy to tell you that because of the large number of volunteers for self-understanding groups it will be impossible to include you in a group. It may interest you to know that well over 150 people volunteered to participate. Since the research calls for only nine groups it is possible to include only 70 students.

However, I will make the results of the test you took available to you. You can expect these results in approximately six weeks.

I appreciate greatly your interest and cooperation in taking the time and effort to complete the test. It is my hope that we might have more self-understanding groups in the future so that you can participate.

Sincerely,

Patrick McCary
Director, Research

dc

May 29, 1969

Dear Student:

Thank you once again for your participation in taking the Myers Briggs Type Indicator. Your results are enclosed.

The experiment consisted of seeing if there were differences in self-concept and anxiety level as a result of participation in three different kinds of groups. The three kinds of groups were Homogenous (people who are all alike on the MB), Complimentary (people who were somewhat alike and somewhat different on the MB), and Heterogenous (people who were very different on the MB). The results have not yet been tabulated because the groups are just finishing with the project.

IMPORTANT!

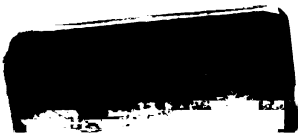
These results are simply hypothetical! As you read the profile sheet you may find that it does not accurately describe your personality. Please don't put too much weight on what it says because it's not uncommon for the results to be affected in such a way that you score differently than you would normally. If the test does not seem to describe you, simply regard this as a fault of the instrument and certainly not something with hidden meaning.

The test is normally used in talking with a student about his strength and weaknesses in certain areas. If you would like to discuss the results, please contact me at E-187 Holmes Hall.

Once again thank you for your participation and cooperation. It is my hope that we might have more self-understanding groups in the future and that you can participate.

Patrick McCary
Director of Research
Lyman Briggs College

PM:dc



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