Homeostasis Theory of Small Groups VIII: Longitudinal Study

Bernard P. Indik

in collaboration with

John Tyler

Rutgers · The State University
New Brunswick, New Jersey

F. K. Berrien, Principal Investigator

Technical Report II
January, 1963
Contract Nonr-404 (10)

Group Psychology Branch, Office of Naval Research
Department of Defense
Washington, D. C.

(5) -774800

(6) Homeostasis Theory

of Small Groups VIII: Longitudinal Study

(10) by Bernard P. Indik and

~~in collaboration with~~

John Tyler

(11) Jan 63

Rutgers - The State University
New Brunswick
New Jersey

(7) N.A.
(8) ll
(9) N.A.
(12) 72p.
(13) N.A.
(14) N.A.
(17) N.A.
(18) N.A.
(19) N.A.
(20) 11

G.C.

F. K. Berrien, Principal Investigator

14 Technical ~~Report~~ rept. 11
(17) January, 1963
(15) Contract Nonr-401(10)

Group Psychology Branch, Office of Naval Research
Department of Defense
Washington, D. C.

Table of Contents

Abstract

The present report is a longitudinal study of six groups of females. Six hypotheses developed from a homeostatic conception of small groups were studied over time. In contrast to earlier studies, the members of these groups were at times markedly uncooperative during the periods studied.

After the early development of the groups, we found that as expected, the outcome variables, Adaptability, Group Need Satisfaction (G.N.S.), Formal Achievement (F.A.) maintained considerable stability during pre-disturbance group sessions. Communications variables, however, showed some volatility prior to and during both the induced minor and major disturbances.

The minor disturbances (addition of another female of the same status to the group) tended to change the kinds of communication (proportions of Bales general categories of communication) that occurred in the group more than the communication activity level of the group, which in turn tended to be more affected than the pattern of communication in the group.

Further, we found some evidence of homeostatic readjustments in these variables in post-disturbance sessions, as well as some tendency for these new levels to be maintained in some few cases. It is also clear from these data that when a more severe disturbance occurred (entry of a higher status person into the group) groups high in G.N.S. and F.A. adapted more adequately to

the more severe disturbance than groups that were moderate in G.N.S. and F.A., who in turn adapted more adequately than groups that were low in G.N.S. and F.A.

The data showed marked effects on the kinds of communication (Bales proportions) during the major disturbance with some changes (though not consistent changes directionally) occurring in both the communication activity level and communication structure. Homeostatic readjustments were also noted in these communication variables after the major disturbance.

As in earlier studies, we found no association between G.N.S. and F.A. (rho = -.09). Contrary to earlier findings with cooperative groups, ~~we found~~ G.N.S. negatively related to Adaptability (rho = -.77), but as in earlier studies, F.A. was positively related to Adaptability (rho = +.49), though not significantly.

Acknowledgements

We would like to thank all those who have made this study possible -- most especially the subjects of this study whose indulgence with the researchers was an aid both to the researchers and eventually to the subjects themselves. Further, we would like to give special thanks to the instructor, James E. Durkin, Jr., of these two classes for his aid in the present research.

We would also like to thank Mrs. Louise Aerstin for her helpful and conscientious secretarial assistance on this study.

This study, like the previous studies in this series, has been made possible by the continued support of Luigi Petrullo of the Office of Naval Research's Group Psychology Branch.

Homeostasis Theory of Small Groups VIII: Longitudinal Studies II

Technical Report 11

Introduction

This report describes a study of a semi-experimental nature which was intended as a partial follow-up of an earlier longitudinal study (Indik and Tyler, 1962) and a further attempt to explore in more careful detail some notions derived from a homeostatic theory of small groups.

While this study is primarily concerned with the testing of hypotheses relevant to a homeostatic theory of small groups, it attempts to describe some of the problems inherent in small group experiments. Such problems as these: how do we identify groups; what makes a group a group; how can these problems be assessed and what are the variables in the context or the climate of the situation that condition the results observed; will be taken up in turn within the framework of the present study.

Some Hypotheses for Empirical Study

First of all it is important to describe the theoretical point of view that was behind this study. A homeostatic theory of small groups had been developed earlier through the process of the

interplay of theoretical thinking about homeostatic mechanisms of small groups and attempting to obtain evidence relevant to this theory through a series of empirical studies. (Berrien and Angoff, 1959; Berrien and Angoff, 1960; Berrien, Indik, Tyler and Kleckner, 1961; Indik and Tyler, 1961; and Indik and Tyler, 1962). We have come to the point where it seems necessary to specify for further empirical analysis several important ideas and hypotheses.

We have considered that a small group is an open system of two or more individuals "who relate to one another producing effects noticeable on the larger context in which it exists, and whose influence is also detectable on the individuals composing it. Furthermore, the group's interactions are themselves partly determined in frequency or quality by the larger context." "The boundary of a human group is defined by the nature of the communications and interactions. Communications and interactions within the boundary are different in quality and/or frequency than across the boundary." "Communications within the group are more intimate, more frequent, or more confidential than communications across the boundary." (Berrien, 1962) Further, groups tend to (a) possess some differentiation within their role structure, (b) possess a set of norms which regulate members' interaction and (c) exist over a time span at least sufficient to establish (a) and (b).

It is emphasized that when a group ceases to exist two things are likely to occur. "First the compensatory interrelations

among the system's components cease and, second, the unique nature of the interactions within the boundary (as contrasted with those across the boundary) also disappear." (Berrien, 1962)

These propositions will be explored in the body of this report. However, let us turn to more clearly specifiable hypotheses derived from a homeostatic theory of small groups specifically in the area of the adaptability of small groups to disturbance situations.

Hypotheses

For the purposes of this study a "disturbance" is defined as an environmental change permanent or temporary in nature, either within or without the system, which results in some changes in the affective relationships among at least two members of the system. Such an environmental change does not become a disturbance until its introduction into the system.

Hypothesis One:

Prior to the point where a disturbance is introduced into a group, the group will tend to develop characteristic (after its initial developmental period) stable levels on a number of important group variables concerned with communication, attitudes and norms, and Formal Achievement (F.A.), Group Need Satisfaction (G.N.S.) and Adaptability.

Further,

Hypothesis Two:

When minor disturbances (here the addition of a new member of the same status for the first time) occurs in a group

there should be concomitant change in the kind, amount and pattern of the communications occurring in the group.

Hypothesis Three:

When a minor disturbance occurs in a group there will be a tendency for the group to return to its pre-disturbance level on measures of internal group interaction.

Hypothesis Four:

When a more severe disturbance occurs (here the entry of a higher status person than the group members into the group), then we expect systematic changes to occur in groups that are attempting to adapt to this disturbance.

Corollary One: Groups that are high in G.N.S. and F.A. will adapt more adequately to disturbances than groups that are moderate in G.N.S. and F.A., who will in turn adapt more adequately than groups that are low in both G.N.S. and F.A.

Corollary Two: If the disturbance is severe enough, only the high G.N.S., high F.A. groups will maintain the pre-disturbance level of G.N.S., F.A. and Adaptability after the disturbance has subsided. The moderate G.N.S., F.A. group will show a small decline in G.N.S., F.A. and Adaptability and the low G.N.S., F.A. group might show drastic changes in G.N.S., F.A. and Adaptability.

Hypothesis Five:

When major disturbances occur in a group there should be concomitant changes in the kind, amount and pattern of communications occurring in the group.

Also it has been clearly established by past studies that:

Hypothesis Six:

There is a positive association between G.N.S. and Adaptability and between F.A. and Adaptability.

Background Description of This Study

In the present study it is especially important to understand the background of the situations under study. The present study was conducted in two sections of a class in Personality Adjustment. The course was somewhat modified from the usual course in personality adjustment in that an attempt was made to give the students both understanding of conceptual content area and training in the experiential problems of personality adjustment.

The structural design of the course was as follows:

a) The first half of the course was intended to provide for the presentation of the conceptual tools and observational skills necessary for the second segment of the course. This was attempted by covering text materials in personality adjustment and a series of exercises to develop skills in observing others in solitary, dyadic and small group situations.

b) The second segment of the course was structured in such a way as to divide each of the two sections into three leaderless groups which met in sequence over a period of weeks at the

usual class period time in a room, equipped with one-way screens, special lighting and a tape recording apparatus in plain view. These groups were told that what they did with their time was up to them and, there would be no interference either by the instructor or by the research staff who were present as observers. These groups were to meet for twenty-five-minute sessions twice a week for as long as they felt it was helpful. They were informed that they were free to dissolve their groups as they chose, though many didn't believe it.

c) The final segment of the course (unannounced in advance to the participants) was an attempt to explore the significant events of the course and the reactions of the participants in order to provide for a learning experience of an emotional nature.

Significant Events and Facts

Phase One

1. Initially the class members were not aware of the exact nature of the experience which they were to encounter. They were, however, aware of the fact that this was to be an unusual course and persons other than their usual instructors were to be involved. Because of this ambiguity, an uncooperative attitude developed resulting in turn in several other effects to be noted later.

2. Because of the reduced time available for the coverage of course text material and the addition of observation training,

the work load in the first part of the course was inordinately heavy.

3. Class time used for personality testing early in the course added to the time pressures for the students.

4. All of the above combined to contribute to the development of hostility toward the instructor which in turn had strong negative effects on the cooperativeness of the class members during the experimental period.

5. The final examination covering the text materials and lecture discussions of the first half of the course was given at the time of the usual midterm examination.

Phase Two

1. The project director was introduced one session prior to the final examination. In both classes, though an attempt to be non-threatening was made, he was seen as an ambiguous threat.

2. After the final exam (at mid semester time) the class was brought into the experimental situation. Each class (all females) was divided into three groups.

This was done in such a way as to have four females in each of the small groups and have eight females in each of the larger groups so that size effects might be studied.

Each group was in the observation room for one-third of the class period, and then observed the members of other groups as they took their turns in the observation room. The order of the

groups into the observation room was specified by a schedule which was drawn up to balance and equalize the number of times a group was the first, second or third one to be observed. The normal one and one-half hour class session was divided into three twenty-five-minute segments, one for each of the three groups of the particular class. The sequence used is given below.

Figure 1 - Design

	N = 4 in each group			N = 8 in each group		
	Group A	Group B	Group C	Group D	Group E	Group F
Session 1	1*	2*	3*	1*	2*	3*
Session 2	2	3	1	2	3	1
Session 3	3	1	2	3	1	2
Session 4	***	***	***	1	2	3
Session 5	1	2	3	**2 (41 entered)	**3 (42 entered)	**1 (40 entered)
Session 6	**2 (41 entered)	**3 (42 entered)	**1 (40 entered	3	1	2
Session 7	3	1	2	1	2	3
Session 8	1	2	3	2	3	1

* The 1, 2 or 3 indicates whether the group designated was first, second or third to enter the observation room on a given day.

** These sessions were marked by a major disturbance to the group since a higher status outsider entered the group.

40 indicates that a member of the research staff entered the group

41 indicates that the research supervisor entered the group and 42 indicates that the class' course instructor entered the group. It was expected that these individuals would cause disturbances.

*** Since this session was held on Good Friday and attendance was optional the class unanimously preferred not to come.

Observers of each person in a given group were scheduled in such a way as to minimize any consistent observation of one individual by the same individual from one session to the next. We also attempted to minimize a person observing someone who had just observed her. These two precautions were instituted in an attempt to avoid possible biasing effects on the observations.

3. The groups were "organized" in an unstructured group type (Weschler & Reisel, 1959) situation with some marked differences including the following:

(a) No group trainer was present.

(b) There was no prior commitment of the group members to attempt to learn about themselves.

(c) There were few attempts to provide theory of group action to these group members.

(d) The sessions were of relatively short duration (twenty-five minutes to a session). The usual group time allotment is somewhat longer.

(e) Hostility toward the instructor was present in the class prior to the experimental situation.

(f) The group members were being observed by their classmates, researchers, their instructor and through the use of a tape recording instrument.

(g) The setting was not especially comfortable. (High back chairs were used and the room was warmer than normal because of extra lighting.)

(h) Performance in the group situation was not used for course grading. (Initially this was not believed by the group members.)

(i) The members of the groups were free to stop the groups any time they wanted to vote themselves out of existence. (Initially this also was not believed by the group members.)

Like some of the unstructured group situations:

(a) The members of the groups were given no "agenda" for the activities that were to be performed.

(b) The members were to meet together to do what they felt they wanted to do.

(c) The members of the group were free to be present or be absent as they wished.

(d) The members were part of a class of students receiving instruction.

The above background information is valuable in creating an understanding of subsequent events and how these events affected the results of our study. Too often studies are reported without the consideration of the context and without consideration of the effect of the specific environment on the specific findings of that study. We shall here attempt to avoid this pitfall.

Methodology

These small groups were composed for two purposes: first, for the purpose of giving the students an opportunity to

have an experiential learning experience in personality adjustment in a group situation, and secondly, as the focus of attention for the study of these groups as groups. Each of these purposes was equally important. We shall be most concerned here with the latter but will also be cognizant of the former in how it had impact on the latter.

Prior to the placement of the 38 college girls into their respective groups, several personality instruments were taken by each of the girls including the following:

Personality Measures

1) California Psychological Inventory - This was used as a general, personality screening device so as to avoid placing hypersensitive individuals in a somewhat difficult situation. Further, certain dimensions on the C.P.I. might allow for predictions of behavior in the group situation. (This is to be covered in a subsequent report.)

2) Reactions to Group Situations Test (Stock and Thelen, 1958) - This test also was used as a device to aid in predicting behavior in the group situations. (This is to be covered both here and in a subsequent report.) All of the following measures were administered and can be found either in the appendix or referenced below:

3) Abbreviated F Scale 25 items (Adorno et al, 1950)

4) Job Preference Inventory (Williams, 1961), a measure of risk-taking propensity.

5) Dogmatism and Opinionation (a modification of the Rokeach and Fruchter, 1956 scales.)

6) Value of Achievement (Adapted from Indik, 1958)

7) Need for Independence (As modified by Vroom, 1958)

8) Fundamental Interpersonal Relations Orientation (F.I.R.O.) - B.; (Schutz, 1961) - This set of six Guttman type nine point scales is aimed at assessing the degree to which the individual assessed wants to give or receive the following: (a) inclusion (b) control and (c) affection.

Since the groups to be studied were to be essentially operating on the affection dimensions, an attempt was made to form two groups (one of four and one of eight persons), composed of individuals high in both wanting to give affection and receive affection ("overpersonals"). We also attempted to form two groups (one of four and one of eight persons), composed of individuals who were low on both wanting to give and to receive affection ("underpersonals"). A third set of two groups was composed of mixed types of individuals on the wanting to give and receive affection. These two groups were considered the "incompatibles."

The expectations, then, were that the "overpersonal" groups would show high G.N.S., since the situation was to be one where personal attraction and interaction could be high. Since the members were all relatively high in wanting to give and receive affection, this situation should provide good opportunity

Table 1 - Group Composition

Person	CD*	Work***	Value of Achieve.	I.Q.**	Want to Control	Want to be Controlled	Want to Give Affection	Want to Receive Affection
Group A - Underpersonal								
05	7	9	18	505	1	4	1	0
16	12	10	20	425	3	4	2	0
26	12	8	27	476	1	9	1	1
38	12	16	15	419	0	4	2	6
Mean Score	10.8	10.8	20.00	456.25	1.25	5.25	1.50	1.75
Group B - Incompatible								
23	13	6	21	592	0	8	2	8
31	8	7	21	535	2	1	1	5
35	10	13	8	605	3	6	2	8
36	13	11	31	702	2	2	6	2
Mean Score	11.00	9.25	20.25	608.50	1.75	4.25	2.75	5.75
Group C - Overpersonal								
12	12	15	14	570	1	8	8	8
24	7	14	24	461	2	7	7	7
27	16	6	25	502	2	2	3	5
37	14	9	22	492	5	9	9	5
Mean Score	12.25	11.00	21.25	506.25	2.50	6.50	6.75	6.25

Group D - Underpersonal

Person	CD*	Work***	Value of Achieve.	I.Q.**	Want to Control	Want to be Controlled	Want to Give Affection	Want to Receive Affection
03	4	10	12	599	1	3	3	1
06	8	14	22	610	5	4	2	1
10	15	7	14	685	8	1	0	0
15	16	7	20	671	0	1	0	0
18	4	7	22	506	3	8	3	5
20	12	4	22	515	5	6	3	1
21	No Data		21	392	4	2	1	2
28	11	6	20	564	3	3	2	3
Mean Score	10.00	7.86	20.38	567.75	3.63	3.50	1.75	1.63

Group E - Incompatible

02	5	12	27	442	5	3	3	5
07	11	9	12	599	2	4	4	3
08	11	12	20	707	2	5	6	1
09	6	7	17	442	3	8	6	1
14	14	8	23	574	3	5	2	5
17	9	8	25	498	2	4	8	1
19	13	6	15	444	9	2	4	1
34	11	10	8	539	1	7	3	5
Mean Score	10.00	9.00	18.38	530.63	3.38	4.75	4.50	2.75

Group F - Overpersonal

Person	CD*	Work***	Value of Achieve..	I.Q.**	Want to Control	Want to be Controlled	Want to Give Affection	Want to Receive Affection
01	12	16	11	426	6	3	3	8
11	11	13	20	560	7	9	9	9
22	11	8	16	418	1	9	5	5
25	6	12	27	567	1	1	5	5
29	8	9	10	406	4	4	3	6
30	10	8	21	702	3	1	4	5
32	5	8	12	637	2	1	5	6
33	8	2	23	412	6	4	5	8
Mean Score	8.88	9.50	17.50	516	3.75	4.00	4.88	6.50

* CD = Counter-dependency score on the Reaction to Group Situations Test - This dimension is an attempt to predict the amount of behavior in opposition to the leader. (Stock and Thelen, 1958)

** I.Q. - Intelligence scores are taken from College Board Examinations

*** Work - This is also a dimension measured by the Reaction to Group Situations Test intended to predict the amount of task oriented behavior by the individuals measured.

---

for high degree of need satisfaction for these "overpersonal" groups. The "underpersonals", on the other hand, while compatible with each other, being low in wanting and receiving affection, could satisfy their needs by developing a group situation which would also allow for need satisfaction but with less affection being present in the situation. These groups should, therefore, show moderate group need satisfaction.

The "incompatible" groups, however, contained members whose needs did not mesh, i.e. some were high and some were low in wanting to give and receive affection, and, therefore, we should not find their needs satisfied in the projected group situation and they should develop groups low in group need satisfaction.

	Expected	
	F.A.	G.N.S.
Group A	Moderate	Moderate
Group B	Low	Low
Group C	High	High
Group D	Low	Moderate
Group E	Moderate	Low
Group F	High	High

Group Measures

1) Adaptability - Three raters who were pre-trained and familiar with the concept and the measures to be used rated each session meeting of the groups on the following three items:

a. How well does the group handle internal interruptions in its normal pattern of behavior? (5) extremely well--- to (1) poorly.

b. How well does the group move from one activity to another? (1) poorly --- to --- (5) extremely well.

c. How well does the group handle external interruptions in its normal pattern of behavior? (5) extremely well --- to --- (1) poorly.

For each session each of the three raters rated each group on each of the three items. Scores were summed and averaged for each group. Average scores could range from a low of 1.00 to a high of 5.00. Except for some early inter-rater inconsistency, inter-rater reliability of these independent assessments was high.

Formal Achievement (F.A.) - Three raters also rated each of the six groups during each session on each of the following items.

a) Did the group set a task for itself during this twenty-five-minute session? (task setting need not be explicit)

___(1) no

___(2) yes

b) (If yes to (a)) How long did it take for the group to set its task? (task setting need not be explicit) (7) The task was set within the first few minutes --- to --- (1) The group never agreed on a task.

c) How well do you think the group accomplished the task they set for themselves?

___(0) never set a task
___(1) not well at all
___(2) fairly well
___(3) well
___(4) very well
___(5) extremely well

Scores on the three items were summed and averaged for each group for each session. Average scores could range from a low of 1.00 to a high of 4.67. Except for some early inter-rater

inconsistency, inter-rater reliability of their independent assessments was high.

Group Need Satisfaction (G.N.S.) - For each session after the first two sessions for each group each of the girls in each of the groups was asked to answer the following two questions.

a) How well do you like your group? (5) like it very much --- to --- (1) dislike it very much.

b) If you had a chance to move to another group, how would you feel about moving? (1) would want very much to move --- to --- (5) would want very much to stay where I am.

For each session for each group all answers were summed and averaged so that the highest G.N.S. was indicated at 5.00 and the lowest G.N.S. possible was 1.00. (This is the same measure as was used by Indik and Tyler, 1962.) The validity of this measure in this study is questionable since the girls were not especially cooperative.

Communication Activity Level - This variable is measured by the frequency of communication interactions observed in a group during the twenty-five minute period. This variable and the subsequent communication interaction variables were scored by a highly trained rater. The validity of these measures is probably higher than normally obtained also because the rate of communication found in this study was lower than is normally found. Changes in this variable are measured by the Activity Difference Coefficient

$$\text{A.D.C.} = \sum \frac{|A_i - A_j|}{n^2} \cdot S_n \qquad S_n = 35$$ (See Indik & Tyler, 1962).

Proportion of Socioemotional Positive Communications - The relative frequency of Bales categories 1, 2 and 3 communications in each twenty-five-minute time period. (See Appendix A)

Proportion of Task Oriented Communications - a) The relative frequency of Bales categories 4, 5 and 6 (giving information) communications in each twenty-five-minute time period. (See Appendix A)

Proportion of Task Oriented Communications - b) The relative frequency of Bales categories 7, 8 and 9 (asking for information) communications in each twenty-five-minute time period. (See Appendix A)

Proportion of Socioemotional Negative Communications - The relative frequency of Bales categories 10, 11 and 12 communications in each twenty-five-minute time period. (See Appendix A)

Geographic Consistency - A crude measure of the degree to which individuals remain in the same place in relation to the rest of the group. This is measured by the number of people in a session who are seated in the same place they were in during the past session divided by the number of persons attending the present session.

Absence - Percentage absent in any given session. (Potential members of each of the groups were allowed to absent themselves from any session free of any penalty.)

Pattern Configuration of Communication

This variable is measured by the pattern of communication interaction. Changes in this variable from session to session are measured by the Configural Difference Coefficient, C.D.C. $= \leq \frac{|C_i - C_j|}{n^2} \div S_n$

$S_n = 35$ (See Indik and Tyler, 1962, Technical Report 10)

a) Proportion of Person to Group Interaction - This is the proportion of communication interactions in each session of each group which were directed by any member of the group to the group in general.

Results

A group, for our purposes, is an open system of two or more individuals who relate to one another producing effects on each other and on the larger context in which it exists. Members of a group usually relate to each other through interaction. Member interaction within the group is in some way uniquely different from their interaction across the boundaries. Further, groups exist over time at least sufficient to establish some differentiation in role structure and a set of norms which regulate members' interaction.

In order to find out the degree to which our semi-experimental situation provided us with "groups" to observe, it was necessary to measure the groups studied on these above outlined characteristics.

These groups were four or eight member systems that were open to communications from outside of themselves and were to a degree embedded in the class of which they were originally a part. Also outside of the experimental situation they had the opportunity to have interaction with each other as students in the same rather small female college community. The present major concern is with the groups during the periods of observation when no external communication was available.

These subjects for study did interact with each other both outside and inside of the observation sessions reported here and these interactions produced marked effects on the behavior observed in the groups as we shall see. We can clearly show that these groups existed over time in such a manner as to make norms which regulated interaction operative while the groups were under observation. While the members were under observation, they communicated with members of their own group in every session observed except after the demise of the groups.

With reference to role structure formation in these groups, it was clear that by the second session of each of these groups, there was clear role differentiation among the members.

Hypothesis One

Prior to the point where a disturbance is introduced into a group, the group will tend to develop characteristic (after

its initial development period) stable levels on a number of interaction variables and outcome measures.

The outcome variables include Adaptability, Formal Achievement (F.A.) and Group Need Satisfaction (G.N.S.). Interaction variables include Communication Activity Level, Pattern Configuration of Communication, Proportion of Socioemotional Positive Communications, Proportion of Task Oriented Communications a) and b), Proportion of Socioemotional Negative Communications, Geographic Consistency, Absence and Indicators of Leadership Interaction.

In exploring this hypothesis we allowed essentially the first two sessions as developmental periods during which groups would fluctuate somewhat on the variables considered until a relatively stable state was achieved. The next two sessions were expected to show rather stable levels on both outcome and interaction variables since no major disturbances were either expected or (except for one possible instance) occurred. This exception might have affected the results with reference to groups A, B and C, but not groups D, E or F. At the time of scheduled session 4 for the A, B, C groups, the option to cut without penalty (for Good Friday) was accepted by all members of each of these three groups. This fact might have upset the stability of variables from session 3 to actual session 4 for these groups. It should be noted that two minor disturbances occurred at session 2 for Group C and at session 3

for Group A. Table 2 shows the data relevant to hypothesis one for the outcome variables.

Table 2 - Tests of Hypothesis One - Outcome Variables

	Group A	Group B	Group C	Group D	Group E	Group F
Adaptability						
Session 1	3.00	3.75	3.20	2.75	4.00	3.00
Session 2	3.17	2.67	3.83	3.00	2.88	2.25
Session 3	3.37	3.00	3.20	3.29	3.00	3.00
Session 4	2.87*	2.86*	2.75*	2.43	2.86	2.50
Formal Achievement (F.A.)						
Session 1	3.00	4.11	2.67	0.67	1.22	0.67
Session 2	3.89	3.22	4.14	4.11	3.33	0.67
Session 3	3.67	3.78	3.67	4.00	3.78	1.56
Session 4	3.11*	2.89*	2.33*	2.67	3.22	0.78
Group Need Satisfaction (G.N.S.)						
Session 1	---	---	---	---	---	---
Session 2	---	---	---	---	---	---
Session 3	3.38	3.88	3.17	3.50	3.75	3.63
Session 4	3.25*	5.00*	2.50*	3.88	3.39	3.81

* For these three groups (A, B and C) the data from actual session 4 are substituted for the data that would have been collected in scheduled session 4.

--- No G.N.S. data were collected for sessions 1 and 2.

We find that the average differences between scores on both Adaptability and Formal Achievement are smaller between sessions 3 and 4 or between 2 and 3 than between sessions 1 and 2. For Adaptability the average difference between sessions 3 and 4 is 0.43; between sessions 2 and 3 is 0.39; and between sessions 1 and 2 is 0.67. For F.A. the average difference between session 3 and session 4 is 0.91; between sessions 2 and 3 is 0.45; and between sessions 1 and 2 is 1.47. Further, the G.N.S. measures show some stability between sessions 3 and 4. These data indicate some relative stability in the outcome variables for sessions 2, 3 and 4.

With reference to the interaction variables, remembering that these first four periods are not major disturbance periods, we expect some fluctuation in these variables but again expect more stability in these variables between sessions 3 vs. 4, and 2 vs. 3 than between sessions 1 vs. 2, except for the minor disturbances which occurred in session 2 for Group C and session 3 for Group A. For Groups A, B and C we find considerable instability in A.D.C.'s, especially between sessions 3 and 4 for all three groups, and some instability in communication activity level (see A.D.C.'s) between sessions 2 and 3 for Group A and between sessions 1 and 2 for Group B. Groups D, E and F each seem to show characteristic and highly stable communication activity levels for all four sessions. (See Table 3)

On the other hand, we find that each of the A, B, C groups has characteristic communication configurations and small configural differences between sessions 1, 2, 3 and 4, except for Group A between sessions 3 and 4. However, we find marked configural changes between sessions 1, 2, 3 and 4 for Groups D, E and F. (See Table 3)

Table 3 - Tests of Hypothesis One - Interaction Variables

	Group A	Group B	Group C	Group D	Group E	Group F
Change in Communication Activity Level (Activity Difference Coefficient)						
Session 1 vs. 2	.009	.241*	.005	.032	.002	.012
Session 2 vs. 3	.386*	.000	.002	.020	.007	.011
Session 3 vs. 4	.241*	.464*	.088*	.029	.003	.025
Session 1 vs. 3	.395*	.241*	.004	.012	.004	.023
Session 2 vs. 4	.144*	.464*	.086*	.049	.009	.015
Session 1 vs. 4	.154*	.223*	.091*	.017	.007	.003
Change in Configuration of Communication (Configural Difference Coefficient)						
Session 1 vs. 2	.007	.005	.007	.050	.061	.096
Session 2 vs. 3	.021	.004	.011	.075	.050	.075
Session 3 vs. 4	.139	.007	.014	.051	.092	.054
Session 1 vs. 3	.015	.006	.004	.056	.066	.091
Session 2 vs. 4	.025	.007	.018	.042	.065	.034
Session 1 vs. 4	.011	.412*	.007	.048	.066	.091

Table 3 (continued)

	Group A	Group B	Group C	Group D	Group E	Group F
Proportion of Socioemotional Positive Communications						
Session 1	16.7	19.0	0.0	37.3	34.4	34.2
Session 2	36.3	50.0	20.0	24.1	31.0	28.3
Session 3	18.5	0.0	25.0	38.5	39.0	28.9
Session 4	16.3**	18.3**	20.9**	14.3	21.8	29.3
Proportion of Task Oriented Communications a) - Giving Information						
Session 1	50.0	53.3	50.0	42.6	47.3	45.9
Session 2	27.3	0.0	40.0	54.5	57.9	57.2
Session 3	48.9	50.0	75.0	39.9	33.3	42.1
Session 4	54.3**	55.3**	51.2**	51.9	49.7	40.7
Proportion of Task Oriented Communications b) - Asking for Information						
Session 1	33.3	24.1	50.0	20.0	15.7	18.5
Session 2	18.2	0.0	40.0	17.1	11.9	11.6
Session 3	24.7	0.0	0.0	17.5	15.6	23.9
Session 4	27.2**	23.7**	27.9**	32.5	8.2	23.6
Proportion of Socioemotional Negative Communications						
Session 1	0.0	3.6	0.0	0.0	3.8	1.4
Session 2	18.2	50.0	0.0	4.3	7.1	2.9
Session 3	7.9	50.0	0.0	4.2	12.1	5.1
Session 4	2.2**	2.7**	0.0**	1.3	20.4	7.1

Table 3 (continued)

Geographic Consistency

	Group A	Group B	Group C	Group D	Group E	Group F
Session 1-2	0.50	0.25	0.50	0.00	0.00	0.00
Session 2-3	0.25	0.50	0.50	0.29	0.29	0.29
Session 3-4	0.00	0.50	0.75	0.00	0.00	0.25
Proportion of Person to Group Interaction - ***						
Session 1	0.0	47.4	0.0	77.4	47.3	96.6
Session 2	18.2	0.0	80.0	44.4	55.6	99.4
Session 3	35.7	0.0	75.0	79.0	66.7	95.9
Session 4	10.9**	97.3**	100.0**	80.5	48.3	97.1
Percentage Absent						
Session 1	0.0%	0.0%	50.0%	25.0%	0.0%	0.0%
Session 2	0.0	0.0	25.0	0.0	0.0	0.0
Session 3	50.0	0.0	25.0	0.0	12.5	0.0
Session 4	0.0**	0.0**	25.0**	0.0	0.0	0.0

* Significant changes in A.D.C. or C.D.C. at the $p < .05$ level.

** These data are taken from what would have been session 5 for Groups A, B, and C since session 4 was scheduled for Good Friday and "cuts" were allowable and were taken by all twelve members of the three groups.

*** The measure used for obtaining the proportion of person to group interaction was the number of person to group interactions divided by the total number of interactions in a session.

What then may we conclude from these findings with reference to the changes in gross indicators of communication activity and interaction? In the small groups activity levels changed, but the configuration did not. With larger groups the reverse was true: configuration of communication was stable, but activity level was not. With the larger groups (eight-person groups) configural charges were at characteristic levels for each group, and stability in activity level was at characteristic levels for each group. Further, we found more variation in gross communication interaction variables than with the outcome variables. Finally, it is clear that marked changes in these gross communication interaction variables can occur when no disturbance is present.

Let us now look into the effects on the various broad content or type of communication interaction variables (See Table 3). The general Bales categories used here show characteristic and stable levels on all four types of categories of communication interaction for the six groups. There are minor exceptions as in the case of Group B in sessions 2 and 3 where communication interaction was extremely low so that stable Bales sub-category proportions were unlikely.

Generally in these six groups the proportion of task oriented communications a) (giving information) was highest; the proportion of task oriented communications b) (asking for information) was next largest; the proportion of socioemotional positive communications was next largest; and the proportion of socioemotional negative communications was smallest in each group on the average.

With reference to geographic stability the smaller groups seemed to be more geographically stable than the larger groups over the first four sessions. Group C was the most geographically stable and Groups D and E were the least geographically stable groups.

The proportion of person to group interaction seems to be at characteristic levels for each group, being extremely high for Group F and extremely low for Group A. Some marked volatility is present in the data for Groups B and C in this proportion. This proportion is also on the average higher for the eight-person groups than for the four-person groups. Stability is clearer for Groups F, E, A and D in that order. Stability and characteristic levels of absence are also clear (See Table 3) for each group.

There is then in the above results only mixed support for the initial hypothesis that the interaction variables will remain stable in the absence of disturbances.

Hypothesis Two

When a minor disturbance (here the addition of another person of the same status into the group) occurs in a group, there should be concomitant changes in the kind, amount and pattern of the communications occurring in the group.

We have three tests of this corollary within the framework of the present study. In session 2 of Group C,

individual 04 was placed in the group. We can by observing the data presented in Table 3 for that session for that group see the effects of this added individual of the same status. There is no evidence of an effect on either the communication activity level or the configuration of communication for that session relative to either session 1 or session 3. With reference to the kind of communication we find some increase in the proportion of socioemotional positive communications and some minor decrease in the proportions of task oriented communications (both "giving information" and "asking for information").

In session 3 of Group A, individual 04 was placed in Group A. The data from Table 3 show the effects of a marked elevation in communication activity level for session 3. There also seems to be a less emphatic change in the configuration of communication. There also seem to be some changes in the kind of communications but in line with readjusting these proportions to the changes found in session 2 for this group. We also do have an elevation in the proportion of person to group interactions for session 3 for Group A.

The third test of this corollary appeared in session 7 of Group D. Individual 13 was introduced into the group. There was an increase in communication activity level and a change in configuration of communication. There were also minor increases in the proportions of task oriented communications (both "giving

information" and "asking for information") and minor decreases in the proportions of socioemotional communication for this group for this session. We also found an increase in the proportion of person to group interaction during this session.

There is then only mixed support for hypothesis two.

Hypothesis Three

After a minor disturbance occurs in the group there will be a tendency for the group to return to its pre-disturbance level on measures of internal group interaction.

Only in two of the three cases of the minor disturbances described above can we explore hypothesis three, since we do not have comparable data for session 8 for Group D to compare with the minor disturbance of session 7 for this group.

From Table 3 it can be seen that for session 3 for Group C comparing it to session 2 we find that since little change in either communication activity, communication configuration or kind of communication occurred in session 2 little readjustment changes in session 3 occurred for these variables. A minor exception should be noted as the proportion of task oriented communications b) ("asking for information") decreased. However, due to the very low rate of interaction these changes cannot be considered reliable.

Session 3 for Group A provided another minor disturbance session so that comparisons between sessions 3 and 4 and between sessions 2 and 4 with reference to communication inter-

action are relevant to hypothesis three. Session 3 showed a significant elevation in communication activity and session 4 a partial return back to the activity level of session 2. The small change in configuration appearing in session 3 was more than readjusted to in session 4.

With reference to the kinds of communications, the Bales categories data for session 4, which are shown in Table 3, look to be more like the data of session 3 than the data for session 2. The data on the proportion of person to group interaction show a return in session 4 to the level of session 2.

The tests of hypothesis three also show mixed results, some supportive of the hypothesis and some contrary findings.

Hypothesis Four

When a more severe disturbance occurs (here the entry of a higher status person into the group) then we expect systematic changes (described below) to occur in groups that are attempting to adapt to this disturbance.

Corollary One: Groups that are high in G.N.S. and F.A. will adapt more adequately to severe disturbances than groups that are moderate in G.N.S. and F.A., who will in turn adapt more adequately than groups that are low in both G.N.S. and F.A.

Corollary Two: If the disturbance is severe enough, only the high G.N.S., high F.A. groups will maintain their pre-disturbance level of G.N.S., F.A. and Adaptability after the

disturbance has subsided. The moderate G.N.S., F.A. groups will show a small decline in G.N.S., F.A. and Adaptability, and the low G.N.S., F.A. groups might show drastic changes in G.N.S., F.A. and Adaptability.

For the purposes of this study these two corollaries will be considered together. First, let us look at how our predicted levels -- from member personality data -- of G.N.S. and F.A. compare to the actual F.A. and G.N.S. levels found. The respective group scores were averaged for the pre-disturbance sessions for each of the six groups. Table 4 shows these comparisons.

Table 4: Predicted vs. Actual Average Scores for G.N.S. and F.A. for the Six Groups

	Predicted G.N.S.	Predicted F.A.	Actual G.N.S.*	Actual F.A.*
Group A	Moderate	Moderate	3.32**	3.42
Group B	Low	Low	4.44	3.50
Group C	High	High	2.84	3.20
Group D	Low	Moderate	3.69	2.86
Group E	Moderate	Low	3.57	2.89
Group F	High	High	3.72	0.92

* Data presented here for each group's mean scores were obtained by averaging the scores for the pre-disturbance sessions for each group. Sessions 3 and 4 were used for G.N.S. since no G.N.S. data were collected in sessions 1 and 2. Sessions 1,2,3 and 4 were used for F.A. computations.

** We have some reason to question the validity of the G.N.S. data especially for Groups A,B and C. For these groups we had little more than 50% participation in the taking of the measures by the members of these groups during some sessions. Further, there was hostility present that was not expressed by the groups on these measures.

The data in Table 4 clearly show that our predictions with reference to G.N.S. and F.A. were not borne out by the data. We also note, as in our earlier study, no high correlation between G.N.S. and F.A. If, however, we take the actual figures rather than the predictions, we can explore the data relevant to hypothesis four. Weighting the G.N.S. and F.A. scores equally, and adding their average scores, we obtain the following order in total average G.N.S.-F.A. scores: Group B = 7.94; Group A = 6.74; Group D = 6.55; Group E = 6.46; Group C = 6.04 and Group F = 4.64.

Clearly from these data Group B seems like a high group and Group F seems like a low group with Group C also rather low, and the other three groups in the middle. The reactions of some of the groups to the minor disturbances were illustrated above and their reactions to the major disturbances will be illustrated below.

During the fifth session of each group, a higher status individual entered the groups when they were in the observation room. Person 41 entered Groups A and D. Person 42 entered Groups B and E. Person 40 entered Groups C and F. The intent in each case was to cause a major disturbance by just being in the group and attempting to get the group members to express their hostility to the situation in which they found themselves within the situation itself.

The effects of the major disturbance will be explored separately for each of the six groups. Group B, the actual

"highest" group in F.A. and G.N.S., will be discussed first and then the reactions of other groups will follow.

Group B - By the time of the major disturbance this group had developed rather strong positive in-group feelings among three of the four girls and had developed strong hostility to the situation. They worked at attempting to sabotage the groups by not interacting during sessions 2 and 3. Individual 36 did not interact during any of the sessions of this group except for one time during the major disturbance session. Individual 31 had tried walking out of two of the earlier sessions in rebellion to non interaction, but now was attempting to take the lead of the group by interacting with 35 essentially at 31's insistence. The group then was somewhat fragmented, but the members had clear tasks in mind and had positive feelings for each other.

It can be seen from Table 5 that Group B showed high adaptability during the major disturbance (session 5) and small declines in G.N.S. and F.A. for that session and that in session 6 there is an increase in F.A. and a further decrease in G.N.S.

Group A - This is the group that was next highest in actual G.N.S.-F.A. score but can be considered a moderate G.N.S.-F.A. group. During the disturbance, adaptability was high -- as high as for Group A -- 3.44. F.A. increased slightly in session 5 but G.N.S. declined slightly. In session 6 this group showed stability in F.A. and a slight decline in G.N.S.

Group D - This group was characterized by a moderate actual G.N.S.-F.A. score. In earlier sessions G.N.S. was moderate to high and their F.A. was on the low side. During the major disturbance members of this group were able to express their hostility. Their adaptability was moderate 3.29. Their F.A. increased markedly as did their G.N.S. However, in sessions 6 and 7 we find F.A. dropping severely and G.N.S. decreasing down toward where it was in session 4.

Group E - This was a group that in the early sessions was characterized by an internal split with some intra-group hostility and as well, the marked rejection of leadership attempts by one of its members by the group. The pre-disturbance sessions gave a moderate actual G.N.S.-F.A. score and a rather low Adaptability score. The entry of the higher status person was handled essentially by the spokesmen for each of the sub groups. The disturbance session showed a decline in the Adaptability score, a decline in the F.A. score and a slight increase in the G.N.S. score. Sessions 6 and 7 showed an increase in Adaptability score toward the pre-disturbance level and a further decline in F.A. with some fluctuations in G.N.S. (See Table 5)

Group C - The norm that had developed in this group was to attempt to keep as silent as possible basically under the leadership of 27. This group was doing a reasonably good job with reference to F.A.; but were feeling the negative effects internally. Hostility was high and G.N.S. was low prior to the

Table 5 - Outcome Variables Before, During and After the Major Disturbance

Adaptability	Group A	Group B	Group C	Group D	Group E	Group F
Ave. Sessions 1,2,3,4	3.10	3.07	3.24	2.87	3.18	2.69
Session 5 (Dist.)	3.44	3.44	3.29	3.25	2.75	3.00
Session 6	3.50	3.33	3.00	3.29	3.00	3.13
Session 7	---	---	---	3.25	3.00	2.80
Formal Achievement						
Ave. Sessions 1,2,3,4	3.42	3.50	3.20	2.86	2.89	0.92
Session 5 (Dist.)	3.55	3.25	3.11	3.89	2.44	2.67
Session 6	3.50	4.00	3.57	0.67	1.44	1.56
Session 7	---	---	---	0.67	0.67	0.67
Group Need Satisfaction						
Ave. Sessions 3,4	3.32	4.44	2.84	3.69	3.57	3.72
Session 5 (Dist.)	3.25	4.00	3.67	4.58	3.70	3.86
Session 6	2.84	3.33	4.00	3.92	3.80	4.00
Session 7	---	---	---	3.58	3.33	3.17

--- There was one less session for the smaller groups due to a missed session on Good Friday.

entry of the outside person. The Adaptability of this group to the major disturbance was slow and difficult by its nature. Three of the four girls gave the outsider the "silent treatment", the fourth girl, 24, was attempting unsuccessfully to make the outside.

more comfortable with the group. The other group members were hostile. Their Adaptability in session 5 stayed about as it was in the earlier sessions. F.A. declined and G.N.S. increased in session 5 for this group. Session 6 showed a marked increase in both G.N.S. and F.A. which was at a point higher than for the pre-disturbance periods.

Group F - This group was characterized by a low actual F.A.-G.N.S. score and a low pre-disturbance Adaptability score. This group had in its history, prior to the disturbance, considerable fragmented and unrelated activity. F.A. was very low and G.N.S. was on the high side. During the disturbance period Adaptability improved as did F.A. and G.N.S., but session 6, and especially session 7, showed a decline in each of these three outcome variables for this group.

From these results in each of these groups we can see that with reference to corollary one of hypothesis four we have evidence that the actual G.N.S.-F.A. combined scores do have some relationship to the ordering of the adequacy of adaptability of these groups to the major disturbance. The two groups that were predicted by actual G.N.S.-F.A. combined scores to be high, i.e. Groups A and B, were high in Adaptability during the disturbance period. The correlation between actual G.N.S.-F.A. combined scores and Adaptability during the disturbance period was .70.

We also find that the correlation between the actual G.N.S.-F.A. combined scores and Adaptability -- computed using

the averaged data prior to the major disturbance -- gives a correlation of +.03. This indicates that the actual G.N.S.-F.A. combined score compiled from the pre-disturbance periods is a better predictor of Adaptability during the major disturbance than it is of Adaptability when the groups were under the normal conditions.

Table 6 - G.N.S.-F.A. and the Declines in G.N.S., F.A. and Adaptability After the Major Disturbance

Group	Combined Average G.N.S.-F.A. Actual Scores	Size of Group	Change in F.A. in Session 6	Change in G.N.S. in Session 6	Change in Adaptability in Session 6
A	6.74	4	-.05	-.41	+.06
B	7.94	4	+.75	-.67	-.11
C	6.04	4	+.46	+.33	-.29
D	6.55	8	-3.22*	-.83*	*.02*
E	6.46	8	-1.05*	-.14*	+.25*
F	4.64	8	-2.00*	-.28*	-.04*

* Averaged data for sessions 6 and 7 since no comparable data for session 7 is available for Groups A, B and C.

The correlations between combined G.N.S.-F.A. and change in Adaptability is +.15 and with change in G.N.S. is -.66. Both of these pieces of data are contrary to expectations; neither is statistically significant.

With reference to F.A. declines following the disturbance, we find that the declines of significance are present in

the eight-person groups and not the four-person groups and seem to be more size related, rather than related to the combined G.N.S.-F.A. actual scores. The correlation with the latter is +.49 in the expected direction but not significantly different from zero.

Hypothesis Five

When a major disturbance occurs (a person of a higher status than the present group members enters a group situation for the first time), there should be concomitant changes in the kind, amount and pattern of communications occurring in the group.

During the fifth session of each group a higher status individual entered the respective groups when they were in the observation room. Person 41 entered Groups A and D. Person 42 entered Groups B and E. Person 40 entered Groups C and F.

It can be seen in Table 7 that in the groups where instability in communication activity level was characteristic i.e. Groups A and B, marked changes in communication activity level appeared with the entry of the higher status person into these groups. Groups C, D, E and F, where little communication activity differences were present for sessions 1 to 4, showed little communication activity differences in session 5.

With reference to the configural differences in communication structure we find differences appearing in Groups A and B for session 5, but relatively insignificant changes in configuration in Groups C, D, E and F.

With reference to changes in the kind of communication we find that the major disturbance in session 5 tended to markedly effect the kind (the proportions of Bales general categories) of communications going on in the group. In five of the six groups there was a decrease in the proportion of socioemotional positive communications. Group C showed an increase in the proportion of socicemotional positive communications. In the case of each group there was a change in this variable during session 5. The more marked changes in this proportion occurred in the larger group.

The groups in session 5 also showed changes in the proportion of task oriented communications a) ("giving information"). These changes again generally were more marked in the three larger groups. Five of the six groups showed declines in the proportion of task oriented communications a) ("giving information"). Group A showed little change, if any, in session 5.

Table 7 - Tests of Hypothesis Five

Minor Disturbance Effects

	Group A	Group B	Group C	Group D	Group E	Group F
Change in Communication Activity Level (A.D.C.)						
Ave. Sessions 1,2,3,4	.222*	.272*	.046	.026	.005	.015
Ave. Session 5 with 1,2,3,4	.245*	.227*	.056	.021	.029	.038
Session 6 with 5	.352*	.363*	.055	.004	.012	.091*
Session 6 with 4	.130*	.289*	.014	.010	.013	.063

Table 7 - (continued)

	Group A	Group B	Group C	Group D	Group E	Group F
Change in Configuration of Communication						
Ave. Sessions 1,2,3,4	.036	.074	.010	.054	.067	.074
Ave. Session 5 with 1,2,3,4	.370*	.417*	.058	.043	.081	.039
Session 6 with 5	.388*	.363*	.077	.040	.110	.042
Session 6 with 4	.207	.289*	.121	.049	.116	.074
Proportion of Socioemotional Positive Communications						
Ave. Sessions 1,2,3,4	22.0	21.8	16.5	28.6	31.0	30.1
Session 5	07.9	08.3	25.0	06.6	12.7	13.9
Session 6	25.0	00.0	63.6	27.3	26.6	31.9
Proportion of Task Oriented Communications a) (giving information)						
Ave. Sessions 1,2,3,4	45.1	39.6	54.0	47.2	47.0	46.4
Session 5	45.4	36.5	35.0	31.9	40.2	22.8
Session 6	45.0	00.0	09.1	46.5	58.8	45.0
Proportion of Task Oriented Communications b) (asking for information)						
Ave. Sessions 1,2,3,4	25.8	12.0	29.5	21.8	12.0	19.4
Session 5	26.1	22.2	35.0	45.1	24.0	34.2
Session 6	30.0	00.0	27.3	10.1	11.9	17.0
Proportion of Socioemotional Negative Communications						
Ave. Sessions 1,2,3,4	07.1	26.6	00.0	02.4	10.0	04.1
Session 5	20.6	33.0	05.0	16.5	23.0	29.1
Session 6	00.0	00.0	00.0	16.2	02.8	06.0

* Changes are statis tically significant at $p < .05$.

Table 7 - (continued)

	Group A	Group B	Group C	Group D	Group E	Group F
Proportion of Person to Group Interaction						
Ave. Session 1,2,3,4	16.2	36.2	63.8	70.3	54.5	97.2
Session 5	21.2	89.2	90.0	58.2	55.9	65.8
Session 6	00.0	00.0	100.0	77.8	100.0	98.2

The proportion of task oriented communications b) (asking for information) showed an increase in session 5 for all groups -- from a minimal increase in Group A to some rather large proportional increases in Groups D and F. Again the larger groups showed more of a change -- this time an increase in the proportion of "asking for information" communication interactions.

Session 5 also brought with it an increase in the proportion of socioemotional negative communications for all the groups. The larger increases occurred in the larger groups. This fifth session also showed an increase in the proportion of person to group interaction for four of the six groups. Minor increases for Groups A and E, and major increases for Groups B and C were found, and major decreases in this proportion for Groups D and F also occurred.

We then clearly find charges in the proportions of different kinds of communication occurring in these groups when a person of higher status enters the group. The tendency is for the changes to be larger in the eight-person groups than in the

four-person groups, except in the case of the proportion of person-group interactions where the magnitude of the changes did not seem to be related to the size of the groups.

We find a decrease in amount of communication from session 5 to session 6 for Groups A, B, C. It will be remembered that session 5 showed an increase in total communication interaction during the session. This seems to indicate something of a return to equilibrium reaction for these groups. However, Group B seemed to show a more marked reaction showing no communication interaction for session 6, much like sessions 2 and 3 for this group where there were very few interactions (2 and 2, respectively).

Groups D, E and F showed little change in total communication interaction in session 5 from the earlier sessions, and session 6 showed no marked changes for Groups D and E. Session 6 showed a marked increase for Group F in total communication interaction and something of a return to where it was in session 4 as is seen in the data for session 6. (See Table 6).

This major disturbance had some effects on the configural structure of communication interaction in the groups. Table 7 shows marked changes in C.D.C. for Groups A and B but not for Groups C, D, E and F. However, session 6 did not seem to bring readjustment to the session 4 communication structure for Groups A and B.

Table 7 also shows us some interesting results with reference to homeostatic readjustment. Many of the changes that

occurred in the Bales general category proportions in session 5 seem to find themselves readjusted in session 6 to the pre-session 5 levels for the respective groups. Examples of this readjustment for Group A are in the proportions of socioemotional positive and negative communications. For Group C we find this readjustment in the proportion of task oriented communication b) (asking for information) and in the proportion of socioemotional negative communications. These homeostatic-like reactions are clearly present for Groups D, E and F for essentially all the Bales category proportions except the socioemotional negative proportion for Group D. We also see some homeostatic type reactions for the proportion of person to group interaction for Groups D and F, since the data for session 6 look much like the data for session 4 for these groups after the changes of session 5.

Hypothesis Six

There is a positive association between G.N.S. and Adaptability, and between F.A. and Adaptability.

In exploring this hypothesis, it is first important to clarify the relationship between G.N.S. and F.A. The theory which we have been working with requires that no necessary relationship be found between G.N.S. and F.A. and in past studies wide variation has occurred in findings about this relationship. These results are summarized elsewhere (Indik, 1962). In the present study, using the averaged pre-disturbance data for each group the correlation between G.N.S. and F.A. is -.09.

With reference to the relationship of G.N.S. and Adaptability which past studies have shown to be positive, we find that using the averaged pre-disturbance data from this study for measuring both variables, strong evidence contrary to this hypothesis is present since the correlation found was -.77 ($p < .05$)---showing that high G.N.S. groups were showing little adaptability and low G.N.S. groups were showing high adaptability. Considering that these groups were fighting the situation, high G.N.S., or the satisfaction of member needs, could well be served by not adapting effectively to the situation. This piece of evidence, though contrary to our hypothesis and to results of earlier studies summarized by Indik, 1962, is quite understandable in this study and points up the desirability of having a wide range of situations studied prior to drawing conclusions about the hypothetical connection between two variables. Certainly the special conditions of this study allow for the expansion of our knowledge with reference to the relationship of G.N.S. to Adadptability.

Formal Achievement (F.A.), on the other hand, showed a positive association +.49 with Adaptability though not large enough to be statistically significant. This finding is in line with the positive results of earlier studies of this series summaried by Indik, 1962.

The Demise of the Groups

In addition to the tests of these formal hypotheses, we had the opportunity in this study to watch the demise of these

groups as groups in order to explore the supposition that when a group ceases to exist two things tend to occur. First, the compensatory interrelations among the systems' components cease and second, the unique nature of the interactions within the boundary as contrasted to across the group boundary also disappears.

The demise of these groups came about in the seventh session of the groups for Groups A, B and C, and in the eighth session for Groups D, E and F. The "break-up" of the A, B, and C groups came implicitly, for at the beginning of session 7 the members of these groups refused to enter the observation room voluntarily. They had implicitly merged back into the classroom group form that they had been in prior to the sessions discussed here. The nature and form of interaction were quite different from what they had been before or during the group situations. These three groups had lost their identity. They were now one and were operating as one group. The smaller groups had lost their boundaries and communication among members was free in the larger group as the members were throwing off the felt controls of the experimental situation. The larger classroom group was doing this with hostility and some reticence for it was testing the limits even though the explicit rules of the situation clearly allowed this kind of behavior.

The breakup of Groups D, E and F, the three eight-person groups, occurred very explicitly. At the end of the first group meeting of session 8 of this set of three groups, the members of

the other two groups entered the observation room all at the same time and along with the others commenced to call an end to the groups. The leadership of this "breakup" session was in the hands of 28 and 10. They received strong support from many of the other group members. Communications among the members of the larger group was independent of membership in the original D, E, F groupings. The base of the boundary of the system was the class and membership in the respective smaller D, E, F groupings was no longer of relevance. It was all one big chaotic class tension release. Interrelationships of members were based on class membership, not group membership.

In each class after the "tension release" session (the "breakup") both classes turned in the direction of analyzing what had happened and what problems led to what events. How the class members adapted or handled the situation, and why they did, and what they did, were also discussed. Considerable discussion in subsequent sessions led to considerable self learning from this set of experiences. The persons most involved in the "experimental" situation seemed to learn the most about themselves.

Discussion and Summary

This longitudinal study of six female groups should be considered a follow-up of an earlier study (Indik and Tyler, 1962) of a homeostatic theory of small groups. This study deals with many of the same hypotheses; however it attempts to test them in a quite different kind of situation. The earlier studies were

done with mainly cooperative subjects. This study, in contrast to most small group studies, was not done with cooperative subjects. Yet some interesting results were forthcoming.

The groups that were studied fell within the definition of groups that we have been using (Berrien, 1962). Six groups, i.e. three four-person groups and three eight-person groups, were studied with reference to six hypotheses derived from a homeostatic theory of small groups.

Hypothesis One:

Prior to the point where a disturbance is introduced into a group, the group will tend to develop characteristic (after its initial developmental period) stable levels on a number of important group variables concerned with communication, attitudes and norms and Formal Achievement (F.A.), Group Need Satisfaction (G.N.S.) and Adaptability.

The first two sessions for each group, with one minor exception, were allowed as the developmental period for each group. We find that the outcome variables Adaptability and F.A. show considerable stability for the six groups during the second, third and fourth sessions. G.N.S. shows stability in the third and fourth sessions except for Group B.

The communication interaction variables show some interesting findings with reference to hypothesis one. Communication activity changes were characteristic of the small four-person groups with stability occurring in the configuration of

communication whereas the larger eight-person groups showed stability in activity level and instability in configuration of communication. The kind of communications (the proportion of communications falling into the four Bales general categories) showed characteristic and stable levels on all four types of categories of communication interaction for each of the six groups for the pre-disturbance sessions. The smaller groups showed more geographic stability than the larger groups. Little data is available with reference to attitudinal and normative variables.

There is then evidence that the outcome variables show more stability than do the communication variables and that size or size related effects condition the support found for hypothesis one. Further, we find that changes in some of the communications variables can occur without a disturbance.

Hypothesis Two:

When a minor disturbance (here the addition of another person of the same status into the group) occurs in a group, there should be concomitant changes in the kind, amount and pattern of communications in the group.

Since the communication interaction variables are expected to be the most volatile, then minor disturbances should affect them if any of the variables to be considered here are to be effected. We have explored three tests of this hypothesis and found mixed results. One test showed no change in either communi-

cation activity level or configuration of communication. A second test showed some change in communication activity level and a lesser change in communication pattern while the third test showed changes in both communication activity and configuration.

With reference to the general Bales categories of proportions of communications we found changes in these variables coordinate with the minor disturbances; however the pattern of changes is not consistent. In the first test we found some increase in the proportions of task oriented communications a) ("giving information") and some minor decrease in the proportions of task oriented communications b) ("asking for information"). In the second and third tests of this hypothesis there were increases in task oriented communications and decreases in the proportions of socioemotional communications. In all three tests we found an increase in the proportion of person to group interactions.

It is clear that the hypothesis is supported with reference to changes in the kind of communications effected by a minor disturbance but mixed results were obtained with reference to changes due to a minor disturbance, both in the amount and in the pattern of the communications occurring in the groups.

In summary we might interpret these findings to mean that the relative proportions of the different kinds of communication are more sensitive to minor disturbances than either overall activity level or overall pattern of communication.

However, since we did not have any way of calibrating each of the minor disturbances prior to its introduction into the group, we have to rely on the effects on the group to help us infer the magnitude of the disturbance. This is risky since the effects found are not only a function of the size of the disturbance introduced, but are also a function of the adaptability of the group to the disturbance.

Considering the above, it is possible that the most severe of the three minor disturbances not only affected the proportions of the kinds of communication but the pattern and the activity level of communications while the lesser disturbances had progressively smaller effects. This might be an appropriate explanation of the mixed results with reference to hypothesis two.

Hypothesis Three:

After a minor disturbance occurs in the group there will be a tendency for the group to return to its pre-disturbance level on measures of internal group interaction.

For this hypothesis there were two tests, one of rather a negative sort and one of a positive variety. Since the minor disturbance of Group C during session 2 seemed to foment few changes in the communication interaction variables it was expected that little change should have occurred between session 2 and session 3. That is, the results for sessions 1, 2 and 3 for Group C should be somewhat similar. They were found to be similar. No marked changes occurred in communication activity

level, the proportion of socioemotional negative communications or communication configuration. There were some peculiar changes in the other Bales proportions.

The second test of this hypothesis, i.e. the minor disturbance in session 3 for Group A where changes seem to have occurred due to the disturbance, we found that in session 4 readjustment occurred in communication activity level and in the pattern of communication for this group. However, the changes in the Bales proportions found in session 3 maintained themselves in session 4, but the proportion of person-to-group interaction which was elevated in session 3 readjusted to the session 2 level for session 4 for this group.

Hypothesis Four:

When a more severe disturbance occurs (here the entry of a higher status person into the group) then we expect systematic changes (described below) to occur in groups that are attempting to adapt to this disturbance.

Corollary One: Groups that are high in G.N.S. and F.A. will adapt more adequately to severe disturbances than groups that are moderate in G.N.S. and F.A., who will in turn adapt more adequately than groups that are low in both G.N.S. and F.A.

This Corollary is supported by our present data since the correlation between the actual combined G.N.S.-F.A. scores (computed for the pre-disturbance periods) for the six groups, and the Adaptability scores during the disturbance, was rho=+.70.

However, we also found that these same combined G.N.S.-F.A. scores and Adaptability (computed using the averaged data prior to the pre-disturbance periods) give a correlation of rho=+.03. We can conclude that combined G.N.S.-F.A. can better predict Adaptability during disturbances rather than under pre-disturbance conditions.

Corollary Two: If the disturbance is severe enough, only the high G.N.S., high F.A. groups will maintain their pre-disturbance levels of G.N.S., F.A. and Adaptability after the disturbance has subsided. The moderate G.N.S., F.A. groups will show a smaller decline in G.N.S., F.A. and Adaptability, and the low G.N.S., F.A. groups might show drastic changes in G.N.S., F.A. and Adaptability.

The findings of this study give mixed results with reference to this corollary. Possibly because of the small number of groups studied, the findings with reference to average G.N.S.-F.A. scores and changes in Adaptability and F.A. -- though positive in direction -- are small in magnitude and low in terms of statistical significance, rho=+.15 and +.49 respectively. The correlation with reference to G.N.S. is also not significant statistically, but unexpected both in direction and magnitude, rho=-.66. The latter finding might be explicable in terms that the high G.N.S.-high F.A. groups were -- after the major disturbance -- not finding the sessions need-satisfying since they were fighting the situation and felt themselves to be losing. The low

G.N.S.-F.A. groups were already low and had less to decline to get to the same low level.

Hypothesis Five:

When a major disturbance occurs (a person of a higher status than the present group members enters a group situation for the first time), there should be concomitant changes in the kind, amount and pattern of communications occurring in the group.

The major disturbance caused marked increases in communication activity in two of the six groups and little communication activity increases in the other four groups. The same was true with reference to configural changes in communication. The Bales proportions showed more marked changes due to the major disturbance than did the gross indicators of communication activity or pattern of communication. Seemingly then we find the Bales general proportions more sensitive to disturbances of this kind than the activity differences or the configural differences. This seemed to be the case with reference to the minor disturbances as well as the major disturbances. Size related effects were also noted in the changes in the Bales proportions of communications during the major disturbance. Some evidence of homeostatic adjustments in these communications variables after the major disturbance was also noted.

It is possible to interpret these specific findings in a more general light that is consonant with earlier findings in this study, as well as the findings appropriate to this hypothesis. The proportions of kinds of communication interaction

seem to be the most sensitive variables to the types of disturbances used in this study, and seem also to function in a manner most consonant to the hypotheses under consideration. The gross indicators of communication interaction (communication activity level and pattern) variables seem to react less in agreement with the hypotheses studied. The reason for these findings is as yet unclear. Several possibilities exist.

First, it may be that the hypotheses with reference to these variables need to be modified to conform more adequately to the data available here and in earlier studies. (Indik and Tyler, 1961, 1962) It might be that we can state the relevant hypotheses in the following form: When a disturbance occurs, there should be concomitant changes in the kinds of communication occurring and/or changes in either or both communication activity level or the pattern of communication interaction.

Secondly, it is also possible that these gross indicators of communication are at too gross a level to be considered with the proportion communication variables. That is, other hypotheses may be relevant at the level of these gross indicators of communication.

Hypothesis Six:

There is a positive association between G.N.S. and Adaptability and between F.A. and Adaptability.

As in earlier studies, we found no association between G.N.S. and F.A. (rho=-.09). Contrary to earlier findings, we found in this study that with the six groups studied a negative

relationship between G.N.S. and Adaptability was apparent (rho=-.77). This meant that high G.N.S. groups were showing little Adaptability and, remembering that these groups were fighting the situation, member satisfaction could well be served by inadequate adaptation to the situation. Formal Achievement (F.A.) showed a positive, though not statistically significant (rho=+.49) relationship to Adaptability. This agrees with earlier studies.

Finally, in this study we had the opportunity to explore some suppositions about the demise of groups. Information relevant to the homeostatic theory proposed by Berrien (1962) was found. That is, the compensatory interrelations among the group members did not cease as would be expected if the groups were to dissolve, but the sets of three groups merged into larger groups made up of the members of the A, B, C and D, E, F groups respectively. These large clusters of individuals, including the researchers, now became the relevant systems to observe. The boundaries between the initial groups were lost and the character of communication was now leveled at the membership of the larger systems which now seemed to develop interrelatedness.

In summary then, it is clear that this study has found some data supportive of a homeostatic theory of small groups and some data of non-supportive character. More particularly, we found that communication interaction variables are more volatile over time than the group "outcome" variables (G.N.S.-Group Need Satisfaction, F.A.-Formal Achievement and Adaptability).

Further, we found that among more specific, detailed findings explored earlier, generally disturbances -- both of a major and minor nature -- affect communication interaction variables (usually the kinds of communication interaction) more frequently than they do such gross indicators of interaction as communication activity level or the pattern of communication activity. We also note that these above communications variables show some tendency to readjust to prior levels or states after a disturbance subsides, though the generality of this finding is not complete even for this study.

Also, it is clear that the "outcome" variables are not as likely to show changes directly related to the disturbances as are the communications variables. The effects of the disturbances on outcome variables take some time to take place, while the effects on the communications variables are more immediate.

The present study supports the idea that knowledge of the level of G.N.S. and F.A. of a group can enable better prediction of the Adaptability of that group during a disturbance than the Adaptability of that group under normal pre-disturbance conditions. As in earlier studies, we found no correlation between G.N.S. and F.A. for the groups studied here. While F.A. showed a positive correlation with Adaptability (though not statistically significant) in agreement with earlier studies, our findings here were that G.N.S. and Adaptability were negatively correlated. This latter finding was contrary to earlier

studies and was interpreted to mean that in this situation where uncooperative subjects were used, remembering that these groups were fighting the situation, member satisfaction could well be served by inadequate adaptation to the situation.

This study has also shed some light on the effects of non-cooperative subjects on a small group study. This gives us pause to caution ourselves against over-generalizing from the conclusions of studies using cooperative subjects only. However, it is also clear that our theory is at a sufficiently general level so that whether or not the subjects cooperate has relatively little effect on our ability to test these hypotheses successfully.

Appendix A

All but three of the testing and rating instruments are included. These three are well known or published instruments and are listed under references. They are the F-Scale of authoritarianism by Adorno *et al*, the Firo-B Scale by Schutz (which deals with social tendencies influencing individuals' behavior in groups) and the California Psychological Inventory by Gough.

Dogmatism and Opinionation

The following is a study of what people think and feel about a number of important social and personal questions. The best answer to each statement below is your personal opinion. We have tried to cover many different and opposing points of view; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others; whether you agree or disagree with any statement, you can be sure that many people feel the same as you do.

Mark each statement in the left margin according to how much you agree or disagree with it. Please mark every one. Write +1, +2, +3, or -1, -2, -3, depending on how you feel in each case.

+1: I agree a little	-1: I disagree a little
+2: I agree on the whole	-2: I disagree on the whole
+3: I agree very much	-3: I disagree very much

___(1) Fundamentally, the world we live in is a pretty lonely place.

___(2) It is often desirable to reserve judgment about what's going on until one has a chance to hear the opinions of those one respects.

___(3) A person who thinks primarily of his own happiness is beneath contempt.

___(4) In the history of mankind there have probably been just a handful of really great thinkers.

___(5) Most people just don't know what's good for them.

___(6) Once I get wound up in a heated discussion I just can't stop.

___(7) The worst crime a person can commit is to attack publicly the people who believe in the same thing he does.

___(8) In this complicated world of ours the only way we can know what is going on is to rely upon leaders or experts who can be trusted.

___(9) In the long run the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.

___(10) While I don't like to admit this even to myself, I sometimes have the ambition to become a great man like Einstein, or Shakespeare.

JOB PREFERENCE INVENTORY

All of us have different requirements for the job that we would find most attractive.. The following are a number of alternatives that you might be faced with in considering job opportunities. Please check one alternative in each of the following pairs.

* * *

The kind of job that I would most prefer would be:

1. Check one:

____(1) A job where I am almost always on my own
____(2) A job where there is nearly always someone available to help me on problems that I don't know how to handle

2. Check one:

____(1) A job where I have to make many decisions by myself
____(2) A job where I have to make few decisions by myself

3. Check one:

____(1) A job where my instructions are quite detailed and specific
____(2) A job where my instructions are very general

4. Check one:

____(1) A job where I am almost always certain of my ability to perform well
____(2) A job where I am usually pressed to the limit of my abilities

5. Check one:

____(1) A job where I am the final authority on my work
____(2) A job where there is nearly always a person or a procedure that will catch my mistakes

6. Check one:

____(1) A job where I could be either highly successful or a complete failure
____(2) A job where I could never be too successful but neither could I be a complete failure

7. Check one:

___(1) A job that is changing very little

___(2) A job that is constantly changing

8. Check one:

____(1) An exciting job but one which might be done away with in a short time
____(2) A less exciting job but one which would undoubtedly exist in the Company for a long time.

Name_____ Instructor_____

RGST Protocol

1. When the group first started, Jane felt_____
_____.
2. It's more important for the group to_____
_____.
3. Kay felt the leader was _____
_____.
4. When Rita was joking, the group _____
_____.
5. When Alice asked the group's permission to present her idea, Lillian___
_____.
6. When the group was bogged down, Ruth said, _____
_____.
7. When Sylvia said, "Let's get to the problem," I _____
_____.
8. Since Phyllis liked some members more than others, she _____
_____.
9. When she realized she was angry at Laura, Ellen _____
_____.
10. Kathy praised the leader, and Ida _____
_____.
11. When Helen and Tom arrived twenty minutes late, the group_____
_____.
12. When the group disparaged her idea, Ella _____
_____.

13. When the leader offered to help her, Isabel _____
_____.

14. When several members dropped out of the discussion, Elaine_____
_____.

15. When Barbara suggested that the group assess its own resources, we
_____.

16. The leader usually _____
_____.

17. Eleanor's detached manner _____
_____.

18. Together Carol and Harriet _____
_____.

19. When Joanne realized quite a few people were taking digs at each other, she _____.

20. When the group just couldn't seem to get ahead, I _____
_____.

21. When Diane seemed to be daydreaming, Ann _____
_____.

22. Since the group wanted to test the suggested procedure, Gladys_____
_____.

23. The leader got mad at the group, and Grace _____
_____.

24. Martha felt that her role _____
_____.

25. When Janet turned to me, I _____
_____.

26. During the argument, Thelma's vehemence caused Susan _____ _____.

27. When the leader changed the subject, Lorna _____ _____.

28. When my attention wandered from the discussion, Margie _____ _____.

29. When Kitty said we needed more information about how we felt, I_____ _____.

30. When there was a pause in the group, Lois _____ _____.

31. When Betty contradicted the leader, I _____ _____.

32. When Gloria and the leader made side remarks to each other, Ina_____ _____.

33. When the group was particularly friendly toward one of its members, Debbie_____.

34. When Eva felt hostile to the group, she _____ _____.

35. When Annette said that we needed help, Linda _____ _____.

36. When Fay left the meeting early, we _____ _____.

37. When Loretta recommended that the group consider the theoretical aspects of the problem, I _____.

38. Occasionally the group needed_____ _____.

39. When Patty criticized Rose's idea, I _____

_____.

40. When it was suggested that the group stick to the job, Lila _____

_____.

41. When Nina attacked the group, Wendy _____

_____.

42. When the leader offered to help Marian, Joyce _____

_____.

43. When the group pointedly ignored Joan's idea, Gail _____

_____.

44. When the group seemed to breaking up, Louise _____

_____.

(For scoring procedure see Stock and Thelen, 1958.)

SUMMARY OF BALES' INTERACTION PROCESS CATEGORIES

I. Basic Steps in Content Analysis:

A. Divide raw observed data into segments a few seconds to a few minutes in length. Bales' definition of an act.
B. Develop a set of general content categories and assign each segment (or act) to one of them.
C. Collect all like segments together for frequency counts, some other forms of measure, or another cycle of analysis.

II. Bales' Twelve Interaction Categories:

1. Social Emotional Area: Positive	Shows solidarity, raises others' status, gives help, reward:
	Shows tension release, jokes, laughs, shows satisfaction:
	Agrees, shows passive acceptance, understands, concurs, complies:
2. Task Area "a" "Giving Information"	Gives suggestions, direction, implying autonomy for others:
	Gives opinion, evaluation, analysis, expresses feeling, wish:
	Gives orientation, information, repetition, confirmation:
3. Task Area "b" "Asking for Information"	Asks for orientation, information, repetition, confirmation:
	Asks for opinion, evaluation analysis, expression of feeling:
	Asks for suggestion, direction, possible ways of action:
4. Social-Emotional Area: Negative	Disagrees, shows passive rejection, formality, withholds help:
	Shows tension, asks for help, withdraws out of field:
	Shows antagonism, deflates others' status, defends or asserts self:

Need for Independence

1. How important is it for you to feel that you can run your life without depending upon people who are older and more experienced than you? (check one)

___(1) not at all important
___(2) slightly
___(3) somewhat
___(4) very
___(5) extremely important

2. How often do you find that you can carry out other people's suggestions without changing them any? (check one)

___(1) almost always
___(2) very often
___(3) often
___(4) sometimes
___(5) rarely

3. How much do you usually want the person who is in charge of a group you are in to tell you what to do? (check one)

___(1) very much
___(2) quite a bit
___(3) somewhat
___(4) a little
___(5) very little

4. If you have thought about something and come to a conclusion, how hard is it for someone else to change your mind? (check one)

___(1) not at all hard
___(2) somewhat
___(3) quite
___(4) very
___(5) extremely hard

5. How much do you dislike being told to do something by your teacher that is contrary to your ideas? (check one)

___(1) not at all
___(2) a little
___(3) somewhat
___(4) quite a bit
___(5) very much

Need for Independence - (continued)

6. How much respect do you think should be shown to a person because of his position? (check one)

____(1) very much
____(2) quite a bit
____(3) some
____(4) a little
____(5) none at all

(Summary score is obtained by summing item scores. The highest possible score is 6. The lowest possible score is 30.)

Value Achievement

1. How much do you dislike being only average in the things you do? (check one)

___(1) very much
___(2) quite a bit
___(3) somewhat
___(4) a little
___(5) not at all

2. How important is it for you to do your best in whatever you undertake? (check one)

___(1) very important
___(2) quite important
___(3) somewhat important
___(4) of little importance
___(5) of no importance

3. How much do you like to accomplish tasks that others recognize as requiring skill and effort? (check one)

___(1) very much
___(2) quite a bit
___(3) somewhat
___(4) a little
___(5) not at all

4. How important is it for you to do things better than other people? (check one)

___(1) very important
___(2) quite important
___(3) somewhat important
___(4) of little importance
___(5) of no importance

5. How much would you like to do something that would make you a great success? (check one)

___(1) very much
___(2) quite a bit
___(3) somewhat
___(4) a little
___(5) not at all

6. How much would you like to be a recognized authority on some job? (check one)

___(5) not at all
___(4) a little
___(3) somewhat
___(2) quite a bit
___(1) very much

7. How important do you feel it is to strive hard for personal success? (check one)

___(1) very important
___(2) quite important
___(3) somewhat important
___(4) of little importance
___(5) not at all

8. How often do you set difficult goals for yourself which you attempt to reach? (check one)

___(1) almost always
___(2) very often
___(3) often
___(4) sometimes
___(5) rarely

(Summary score is obtained by adding item scores. The highest possible score is 8. The lowest possible score is 40.)

References

Adorno, T.S., Frenkel-Brunswik, Else, Levinson, D.J. and Sanford, R.N. The Authoritarian Personality. New York: Harpers, 1950.

Berrien, F.K. Homeostasis and Small Groups. Unpublished book. Rutgers, The State University, 1962.

Berrien, F.K., and Angoff, W.H. Homeostasis theory of small groups III. Technical Report 4, New Brunswick, New Jersey: Rutgers, The State University, 1959.

Berrien, F.K., and Angoff, W.H. Homeostasis theory of small groups IV: light manufacturing personnel. Technical Report 6, New Brunswick, New Jersey: Rutgers, The State University, 1960.

Berrien, F.K., Indik, B.P., Tyler, J. and Kleckner, J. Homeostasis theory of small groups VI: voluntary organizations. Technical Report 8, New Brunswick, New Jersey: Rutgers, The State University, 1961.

Gough, H.G. Manual for The California Psychological Inventory. Palo Alto, California: Consulting Psychologists Press, Inc., 1957.

Indik, B.P. Unpublished manuscript. Ann Arbor, Michigan: University of Michigan, 1958.

Indik, B.P. Some empirical tests of a homeostatic theory of small groups. Transactions of the New York Academy of Sciences, 1962, Ser. II, 24, 5, 536-539.

Indik, B.P. and Tyler, J. A technique for the longitudinal study of group stability and its application to group homeostasis. Technical Report 9, New Brunswick, New Jersey: Rutgers, The State University, 1961.

Indik, B.P. and Tyler, J. Homeostasis theory of small groups VII: longitudinal studies. Technical Report 10, New Brunswick, New Jersey: Rutgers, The State University, 1962.

Rokeach, M., and Fruchter, B. A factorial study of dogmatism and related concepts. J. Abnorm. Soc. Psychol., 1956, 53, 356-360.

Schutz, W.C. On Group Composition. J. Abnorm. Soc. Psychol., 1961, 62, 2, 275-281.

Stock, Dorothy, and Thelen, H.A. Emotional Dynamics and Group Culture. New York: New York University Press, 1958.

Vroom, H.H. Some Personality Determinants of the Effects of Participation. Englewood Cliffs, N.J.: Prentice-Hall, 1960.

Wechsler, I.R., and Reisel, J. Inside a Sensitivity Training Group. Los Angeles: Institute of Industrial Relations, University of California, 1959.

Williams, L.K. The Measurement of a Risktaking Propensity in an Industrial Setting. Unpublished doctoral dissertation, University of Michigan, 1961.