A STUDY OF THE RELATIONSHIPS BETWEEN SELECTED FACTORS IN INTERPERSONAL COMMUNICATION AND GROUP ATTRACTION

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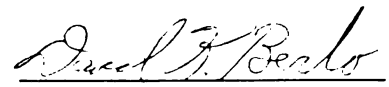

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ABSTRACT

A STUDY OF THE RELATIONSHIPS BETWEEN SELECTED FACTORS IN INTERPERSONAL COMMUNICATION AND GROUP ATTRACTION

By Dan Lanier Costley

The major purpose of this study was to investigate the relationships between interaction characteristics in small group communication and sources of group attraction. This study also investigated the relationships among interaction characteristics and the relationships among sources of group attraction.

Eighty-four male students at Michigan State University served as subjects for the study. The subjects were assigned to three-man groups and participated in a thirty minute discussion of civil rights issues. Each of the twenty-eight groups was observed by two trained observers who recorded the interaction, using a modification of the Bales interaction process analysis system.

From the observer scores obtained for each of the groups, the following group interaction measures were obtained: frequency of interaction, percentage of positive social-emotional reactions, percentage of negative social-emotional reactions, percentage of attempted answers in the task area, percentage of questions in the task area, and an index of equality of participation.

The following sources of group attraction were measured, using a questionnaire which the subjects filled out after the discussions: personal attraction, task attraction, coordination of effort, and satisfaction with group decisions.

The product-moment correlations between interaction measures and group attraction measures revealed the following significant relationships: (1) A negative relationship between the percentage of negative social-emotional reactions and each of the following variables: (a) personal attraction, (b) coordination of effort, and (c) satisfaction with group decisions. (2) A significant positive relationship between the percentage of attempted answers in the task area and the satisfaction with group decisions. (3) A significant negative relationship between the percentage of questions in the task and the satisfaction with group decisions.

The product-moment correlations between the interaction measures revealed the following significant relationships: (1) A positive relationship between frequency of interaction and the percentage of positive social-emotional reactions. (2) A negative relationship between frequency of interaction and the percentage of attempted answers in the task area. (3) A negative relationship between the percentage of attempted answers in the task area and each of the following variables: (a) the percentage of positive social-emotional reactions, (b) the

percentage of negative social-emotional reactions, and (c) the percentage of questions in the task area.

The product-moment correlations between the group attraction measures revealed the following significant relationships: (1) A positive relationship between personal attraction and coordination of effort. (2) A positive relationship between personal attraction and satisfaction with group decisions. (3) A positive relationship between coordination of effort and satisfaction with group decisions. Task attraction did not correlate significantly with any of the other measures of group attraction.

The findings are discussed in terms of possible research problems suggested by the obtained relationships.

A STUDY OF THE RELATIONSHIPS BETWEEN SELECTED FACTORS IN INTERPERSONAL COMMUNICATION AND GROUP ATTRACTION

By

Dan Lanier Costley

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF ILLUSTRATIONS

CHAPTER I

RATIONALE AND RESEARCH QUESTIONS

Rationale

Of the many assumptions implicit in theoretical positions on small group behavior, a number are concerned with the formation of groups. In most of these theories the assumptions concerning the origin of the group are not very well spelled out. The events occurring during the formation of the group are often taken as given and are not considered as sources of future variability within the group. Most students of small group behavior take a position similar to that stated by Thibaut and Kelley, "We take the existence of groups for granted." (Lindzey, 1954, p. 735)

There have, however, been some attempts to identify the variables influencing group formation. In general, three reasons have been advanced to account for this phenomenon. First, it has been suggested that the formation of groups is partially a function of the proximity, or physical nearness, of individuals (Festinger, Schachter, and Back, 1950). While it is true that individuals must be in physical proximity before a group can be formed, this is only a necessary, not a sufficient, condition for the

formation of a group. In order for a group to evolve from physical proximity, there must be some communication among the individuals in this face-to-face situation.

Second, it has been suggested that the formation of groups is partially dependent upon the ability of individuals to mediate goals for one another within the group context. For example, it may be necessary to join a union to hold a job, and in order to play baseball it is necessary to affiliate with a baseball team. A number of studies have demonstrated that group and individual attraction will vary with the promised or proven success of these groups and individuals in facilitating goal attainment (Gilchrist, 1952; Thibaut, 1950). It should be pointed out, however, that in this type of affiliation a non-social means of goal attainment may be just as satisfactory and attractive as a social means.

Third, it has been suggested that groups are formed because individuals represent goals for one another; that is, individuals have needs which can be satisfied only in interpersonal relations. Approval, support, friendship, and prestige have been given as examples of such needs. Among researchers taking this approach to small group behavior are Schachter (1959), with his notion of need for affiliation and Festinger (1954), with his theory of need for social comparison. These investigators have looked for intra-individual needs that are related to the seeking out of other individuals and the forming of groups.

In all three of the reasons advanced to account for the formation of groups, interpersonal communication is an essential element. Given that individuals are involved in face-to-face communication, the question can be raised as to whether or not there are characteristics of the interaction among the individuals that are associated with their interpersonal attraction. In terms of the ability of the individuals to mediate goals for one another through the process of interpersonal communication the question becomes: What are the characteristics of interpersonal communication that lead to the achievement of specific individual goals and thus lead to interpersonal attraction? In the areas of satisfying individual needs which can be satisfied only in interpersonal relations the question becomes: What are the characteristics of interpersonal communication that tend to satisfy needs or desires of the individual that cannot be satisfied outside of a group situation?

The distinction drawn in these last two propositions is not a sharp one, and one could argue endlessly as to its utility. Even so, the differing emphases of these two propositions seems clear enough to imply a potentially fruitful problem for research. In the one case, association represents a means to an essentiallyasocial goal, and in the other, the gratifications of the association itself represent the goal.

Since all people seek the company of fellow human beings, we are not concerned with the question of whether

or not individuals do form associations with others. We are concerned with the communication antecedents that lead individuals to form groups as a result of their interpersonal associations. One of the major questions of concern in the area of small group behavior is: Why are some interpersonal associations preferred to others? One method of approaching this problem is through the study of the relationship of aspects of interpersonal communication to group attraction. The major question dealt with in the present study concerns the relationship between selected characteristics of interpersonal communication and group attraction.

Homans has presented the proposition that "person's liking for Other varies directly as the frequency of his interaction with him." (1961, p. 182) Evidence supporting this position has been found in a number of studies. Schachter (1951) found that when the other members of a group recognized a deviate they interacted with him often in an effort to get him to change his expressed opinion; but, when he would not change, they interacted with him less and less often and gave him little sociometric choice. As the group tended toward practical equilibrium, the conformists communicated less with the deviate than with other group members and were less attracted to him. This study seems to support the conclusion that the less the liking, the less the interaction.

In an experiment by Potashin (1946), children in three grades of a primary school were used as subjects. Simple sociometric tests were given, and pairs of children were formed. The two members of every pair in one group were children who had chosen one another sociometrically; the two members of every pair in the other group were children who had not chosen one another. The investigator then gave each pair a standardized subject for discussion and observed the interaction that followed. He found that the amount of uninterrupted discussion was greater in pairs of friends than in pairs of nonfriends. The main finding, that friends interacted more often than non-friends, is certainly not surprising. While Potashin used friendship or interpersonal attraction as the independent variable, frequency of interaction may also be considered as the independent variable, with an increased frequency of interaction leading to an increased interpersonal attraction or liking.

In a study by Bovard (1951), four groups of college students were formed. Each group discussed the same problem under the chairmanship of a man appointed by the investigator. Bovard trained the chairman of two groups, which he called "leader-centered," to monopolize the discussion, so that all comments and questions would be addressed to, and answered, by the chairman, with little communication passing between the members themselves.

He trained the chairman of the other two groups, which he called "group-centered," to behave quite differently. The chairman was to ask few questions, make few comments, and, if comments and questions were addressed to him, to refer them back to the other group members for discussion. At the end of the meetings, the investigator administered a sociometric test and found that the number of choices given by members to other members of the same group was greater in the "group-centered" discussion than in the "leader-centered" ones, indicating a greater degree of personal attraction in the former groups. Within the framework of this study, it cannot be claimed that the interaction directly produced greater personal attraction. Instead, when the chairman of the "group-centered" discussion encouraged interaction among the members, he gave the members an opportunity to reward one another, and it is assumed that the reward produced greater personal attraction and liking.

A more elaborate study was conducted by the Sherifs at a summer camp for preadolescent boys (Sherif and Sherif, 1953). At the beginning of the season, these investigators allowed all of the boys to mingle in a single group. At the end of a specified period, they obtained the subjects' responses to a sociometric test, and then divided them into two groups, equal in both size, and, in so far as possible, sociometric desirability; i.e., members of the group were

chosen in such a way that any one boy would now find in his own group and in the other group about the same number of his sociometric choices. The investigators then separated the groups for a time. When they again administered the sociometric test, choices had shifted, and now the choices made by any one boy tended overwhelmingly to go to other members of his own group. Once again, increased interaction resulted in increased attraction.

The relationship between frequency of interaction and attraction is summed up by Newcomb, when he says (1956, p. 576)

> So widespread and so compelling is the evidence for the relationship between frequency of interaction and positive attraction that Homans has ventured to hypothesize that 'If the frequency of interaction between two or more persons increases, the degree of their liking for one another will increase.' Actuarially speaking, the evidence is altogether overwhelming that, ignoring other variables, the proposition is correct in a wide range of circumstances.

The previous studies in this area have dealt only with the relationships between frequency of interaction and personal attraction. These previous studies have not attempted to analyze the nature of the communication behaviors that occurred. This study extends the analysis of interaction to include the classification of types of interaction into categories. A modification of the Bales interaction process analysis categories (1950) was used to analyze the interaction structure in the experimental groups. This system made it possible to classify four types

of interactions: (1) positive social-emotional reactions: showing solidarity, tension release, and agreement; (2) negative social-emotional reactions: disagreeing, showing tension, showing antagonism; (3) attempted answers related to the group task: giving direction, orientation, and opinion; and (4) questions related to the group task: asking for direction, orientation, and opinion. The Bales analysis system will be explained in greater detail in Chapter II.

This study investigated the relationships between the frequency of interaction and the percentage of interaction classified in the four interaction analysis categories. This was done to see if it is possible to account more precisely for the relationships, if any, between interaction characteristics and group attraction. It may be possible to account for any relationship between interaction and attraction in terms of the percentage of positive and negative social-emotional reactions in a group. It is suggested that it is not the frequency of interaction, in and of itself, that leads to increased attraction, rather this greater attraction results from an increase in the percentage of positive social-emotional reactions and a decrease in the percentage of negative social-emotional reactions in a group. None of the studies dealing with the relationship between interaction and group attraction have dealt with this relationship in terms of the percentage of positive

and negative social-emotional reactions characterizing the group's interaction.

If interaction is not characterized by positive social-emotional reactions or if it is characterized by negative social-emotional reactions, individuals should not continue to emit responses in an interpersonal situation and the frequency of interaction should decrease. Positive social-emotional reactions in relation to a stimulus object should be accompanied by an increase in the attractiveness of the object, and negative social-emotional reactions should be accompanied by a decrease in the attractiveness of the object. In the case of this study, the object in question is a group for which individuals have differential degrees of attraction.

If interaction classified as attempted answers tends to reduce the uncertainty of group members concerning a solution to the task problem or moves the group toward completion of the task, an increase in the percentage of attempted answers should be accompanied by an increase in group attraction. If questions tend to increase uncertainty of group members or hinder the group in completing a task, an increase in the percentage of questions should be accompanied by a decrease in group attraction. These relationships should be especially true in the area of task attraction. If increased progress is not made toward a solution to task problems, the rate of interaction in

the group should decrease or the group should change the task in which it is involved.

This study also investigated possible relationships between spread of participation by group members and subsequent ratings of group attraction. One criterion often given for the effectiveness of a group discussion is the evenness of participation by the group members. Findley (1948, p. 47) states that "Other things being equal, a discussion in which all members participate frequently is considered good." Findley does not elaborate on what he means by "good," but he states (1948, p. 50) that data accumulated from flow charts indicates in several instances that deterioration of discussion in successive phases was clearly measured by a decline in equality of participation by group members. He also asserts that observers noted a correspondence between estimates of the general excellence of group discussions and equality of participation by group members.

There are a number of speculative statements about the value of equality of participation appearing in the group discussion literature. Typical of the advice given in group discussion texts is that of Braden and Brandenburg (1955), who suggest that individuals, if given the chance to express their ideas, will have a more cooperative attitude toward the other members of the group; while, if one person dominates the group, the other members may feel a certain amount of dissatisfaction and may engage

in interpersonal conflict.

The relationship between equality of participation and group attraction has never been empirically investigated. One purpose of this study was to examine the relationships, if any, between these two variables. Such an examination should make it possible to provide more specific statements concerning the relationship of equality of participation and group attraction than those appearing in the quotations cited above.

This study differs from previous studies in that, in addition to measuring personal attraction, measures were obtained of the group attraction to the task, the group coordination of effort, and member satisfaction with group decisions. It is possible that the relationships, if any, between interaction measures and group attraction hold only for personal attraction and not for other possible sources of group attraction.

In the following discussion of the measurement of group attraction, no attempt will be made to draw a distinction between the concept of group attraction and cohesiveness. The position taken in this discussion corresponds to that taken by Cartwright and Zander (1960, p. 72) when they stated that "We propose to limit the concept of cohesiveness to refer to the phenomena of attraction to the group."

Many definitions of group attraction and cohesiveness may be found in the small group literature. In this discussion, no attempt will be made to exhaustively review all of these definitions. That group attraction is a complex matter is suggested by the variety of definitions available. An attractive group can be characterized in many ways. The forces affecting group attraction are usually hypothesized to be a function of the degree to which members of a group find the group experience actually or potentially need-satisfying. Attraction has been associated with formal and informal group goals and activities (Schachter, 1951), with the prestige position of the group (Back, 1951), with affectional ties to group members (Festinger, Schachter, and Back, 1950), with opportunities for free emotional expression (Festinger, Pepitone, and Newcomb, 1952), and with protection against external threat (Gerard, 1953). Cartwright and Zander (1960, p. 70) point out some additional ways of viewing group attraction when they state:

> A cohesive group might be characterized as one in which the members all work together for a common goal, or where everyone is ready to take responsibility for group chores. The willingness to endure pain or frustration is yet another possible indication of its cohesiveness. Finally, we might conceive of a cohesive group as one which its members will defend against criticism or attack.

Golembiewski (1962, p. 150) points out that "cohesiveness has been defined in terms of several partially overlapping but still quite distinct conceptualizations." From the

different conceptualizations he distinguishes three general classes of meaning,

> 1. The attraction of a group for its members
> 2. The co-ordination of the efforts of members
> 3. The level of motivation of group members to do a task with zeal and efficiency (Golembiewski, 1962, p. 150)

As has been indicated by the variety of definitions presented above, group attraction is a complex matter and the researcher may choose any one, or several, of the available approaches. These approaches range from very general conceptualizations (e.g., attraction defined as all forces acting upon members to remain in the group) to much more specific and limited definitions (e.g., attraction defined as the reciprocation of sociometric choices in a group). It seems highly unlikely that a single concept can be developed which would adequately represent all the meanings of attraction that have been presented.

The rationale which has been presented takes into account only those variables that are to be measured in this study. In the development of the rationale, the assumption was made that "other things will be equal," while at the same time recognizing that other things are seldom, if ever, equal. Obviously, a number of other important variables in interpersonal relations could have been included, but it seemed wise not to attempt to suggest additional relationship since there is little empirical evidence and no comprehensive theory dealing with the

relationships of interaction variables and sources of group attraction. Any contribution of this study to the broad and general understanding of interpersonal relations must, of necessity, be considered in light of the restricted formulation relating only to specific sectors of the general problem of interpersonal communication and group attraction.

Research Questions

This research was descriptively oriented, seeking to discover and explore some relationships assumed to be important in the development of interpersonal relations in small groups. Since there is no comprehensive theory dealing with the relationships of interaction characteristics and group attraction, it is not possible to predict with precision the consequences that variability in interaction characteristics will have on group attraction. Some of the main relationships that are expected have been outlined in the previous section. Other relationships will have to be discovered through analysis of the data.

Three major research questions were advanced in this study.

1. What are the interrelationships among interaction characteristics in small group communication? The following six interaction characteristics were measured in this study: frequency of interaction, percentage of positive social-emotional reactions, percentage of negative social-emotional reactions, percentage of attempted answers in

the task area, percentage of questions in the task area, and equality of participation. The correlations among these variables were examined to gain information about the patterning of interaction characteristics.

2. What are the interrelationships among sources of group attraction? The following four sources of group attraction were measured in this study: personal attraction, task attraction, coordination of effort, and satisfaction with group decisions. The intercorrelations among these variables were examined to gain information about the relationships among these sources of attraction.

3. What are the relationships between interaction characteristics and sources of group attraction? The correlations between the six interaction measures and the four group attraction measures were examined to gain information about the relationships between interaction characteristics and group attraction.

CHAPTER II

METHOD

Variables

Interaction Measurement

Several attempts have been made to develop a general and standardized set of categories for observation and analysis of small group interaction. The categories which have been used in many of the studies of interaction are for the most part, special categories, since they are so closely bound to the original research context that they usually cannot be applied to other groups. Often, if they are applied, they do not provide for useful description.

The problems involved in the use of specialized category systems and their lack of theoretical purpose led Bales (1950) to the conclusion that there was a need for a "general-purpose set of categories derived as clearly as possible from a generalized theoretical framework, with detailed definitions of categories and detailed instructions and training methods for observers." (Bales, 1950, p. v.)

Bales' Interaction Categories. The twelve categories of the Bales' interaction process analysis system are shown in Figure 1. Perhaps the simplest way to conceive

Social-Emotional Area: Positive Reactions	A	1	Shows solidarity, raises other's status, gives help, reward
		2	Shows tensions release, jokes, laughs, shows satisfaction
		3	Agrees, shows passive acceptance, understands, concurs, complies
Task Area: Attempted Answers	B	4	Gives suggestions, direction, implying autonomy for other
		5	Gives opinion, evaluation, analysis, expresses feeling, wish
		6	Gives orientation, information, repeats, clarifies, confirms
Task Area: Questions	C	7	Asks for orientation, information, repetition, confirmation
		8	Asks for opinion, evaluation, analysis, expression of feeling
		9	Asks for suggestion, direction, possible ways of action
Social-Emotional Area: Negative Reactions	D	10	Disagrees, shows passive rejection, formality, withholds help
		11	Shows tension, asks for help, withdraws out of field
		12	Shows antagonism, deflates other's status, defends or asserts self

Fig. 1.--Bales' System of Observational Categories

of an ideal problem-solving sequence is in terms of the four sections labeled A, B, C, and D. Section C constitutes a group of activities which can be characterized as questions. Section B constitutes a group of attempted answers. Section A contains several types of positive reactions, and Section D contains a similar group of negative reactions. Using this conception, it can be suggested that the interaction process consists of questions, followed by attempted answers, followed by either negative or positive reactions.

Another way of describing the relationships among the categories is to regard the middle area of the system, Sections B and C, as constituting an area of task problems, while the terminal sections, A and D, constitute an area of social-emotional reactions. When attention is given to the task, strains are created in the social and emotional relations of the members of the group, and attention then turns to the solution of these problems. As long as the group devotes its interaction entirely to social-emotional activity, the task remains uncompleted, and attention should eventually return to the task area.

Four major categories were employed for the interaction analysis conducted in this study: positive social-emotional reactions, negative social-emotional reactions, attempted answers in the task area, and questions in the task area. These categories are similar to those employed by Bales.

Bales' categories were designed for use in the observation of social interaction in small groups. Bales' definition of what constitutes a small group is an arbitrary one constructed to limit the concept to groups that can be studied with the observational system.

A small group is defined by Bales (1950, p. 33) "as any number of persons engaged in interaction with each other in a single face-to-face meeting or a series of such meetings, in which each member receives some impression or perception of each other member distinct enough so that he can, ..., give some reaction to each of the others as an individual person, ..."

Kinds of Content Formulated by the Categories. The categories used in this study provide a general-purpose framework for observation which can be used to obtain standard indices of the structure of interaction in any small group. One of the main advantages of such descriptive indices is that they may be used for inter-group comparisons of different small groups, or they may be employed for intra-group comparisons of a particular group at different points of its development. In addition to the use of descriptive indices for comparative analysis, they can be used to explore hypotheses which seeks to formulate regular relationships between different aspects of interaction structure within groups.

The categories are concerned with interaction content or process content as distinguished from topical

content. The observer assumes that all small groups are similar to the extent that they involve two or more persons who have certain common task problems and certain problems of social and emotional relationships arising out of their contact with each other.

At their level of analysis, the categories are inclusive and continuous. The categories are completely inclusive, in the sense that every act which can be observed can be classified in a defined category. The method is continuous in that it requires the observer to make a classification of every sequential act he observes, so that his work of classification and scoring for any given period of observation is continuous. Save for possible error, no observed acts in a given period are omitted from classification.

The Unit to be Scored. In this study, the unit scored was the smallest discriminable segment of verbal or nonverbal behavior to which the observers could assign a classification under conditions of continuous serial scoring. This unit is referred to as an act, or single interaction.

Often the unit was a single simple sentence expressing or conveying a complete simple thought. Complex sentences always involved more than one score. Dependent clauses were separately scored. Compound sentences joined by "and," "but," etc., were broken down into their component

simple parts, each of which was given a score. The definitions of the interaction categories used by the observers in this study are provided in Appendix A.

The Observer's Point of View. The observers attempted to take the "role of the generalized other," with regard to the actor at any given moment. The observers tried to think of themselves as a generalized group member, as the specific other to whom the actor was talking, or toward whom the actor's behavior was directed, or by whom the actor's behavior was perceived. The observers endeavored to classify the act of the actor according to its instrumental or expressive significance to the other group members.

The observers assumed that the group members were attempting to empathize with the actor and, at the same time, were testing their own reaction to what they perceived. All categories were described in terms which assumed the point of view of the group member toward whom the action was directed. The actor as described in the system was the actor as seen by the other, as seen in turn by the observer. Although this point of view can become theoretically complicated, Bales' (1950, p. 39) states that "in practice there seems to be little confusion about it, apparently because it is so similar to the point of view from which we ordinarily apprehend action when we are one of the participants." The point of view of the

observers was intentionally different from that of a participant only insofar as the framework provided by the categories may have given him a somewhat more selective, generalized, abstract and possibly more articulate mental set.

The categories express a conception of the various elements in interaction systems as they are observed at a relatively low level of abstraction. The categories fit together so that, even without extensive theoretical explanation, they can be grasped and used. The distinctions between the categories can be gauged almost by feel and one does not have to memorize literally a maze of detailed definitions in order to classify interaction as it occurs.

Observers. Five observers were trained to record the interaction in the experimental groups. Four of the observers were male graduate students in the Department of Communication at Michigan State University and the other was a married female with a B.A. degree in communication. The observers went through a series of training sessions conducted by the experimenter in which they read and discussed the theoretical framework of the Bales' interaction process analysis system, read and discussed the definitions of the interaction analysis categories, and recorded the interaction in two practice discussions. After each practice discussion, the records of the observers were analyzed and discussed with them. After two

practice runs the inter-observer agreement was considered to be sufficiently high to begin observation of the experimental groups. Two observers scored each of the twenty-eight experimental groups by placing each act in one of four categories: positive social-emotional reactions, negative social-emotional reactions, attempted answers in the task area, and questions in the task area. Each act was scored as to the individual in the group that originated the communication.

Interaction Indicies. From the scores obtained for each group by averaging the ratings of the two observers, the following measures of interaction were computed:

1. Frequency of interaction - the total number of scored acts taking place in the group discussion.

2. The percentage of the total number of scored acts that were classified as positive social-emotional reactions.

3. The percentage of the total number of acts that were classified as negative social-emotional reactions.

4. The percentage of the total number of scored acts that were classified as attempted answers in the task area.

5. The percentage of the total number of scored acts that were classified as questions in the task area.

6. Index of participation. To measure the equality of participation by group members, the following index developed by Findley (1948) as a measure of the evenness of discussion was used.

$$\text{I.P. (Index of Participation)} = 100\left(1 - \frac{2s^2}{(N-2)M^2}\right)^2$$

In this formula, N is the number of members of the group. M and s are the mean and standard deviation of the number of contributions to the discussion by individual group members.

The index takes on a maximum value of 100 when all members of a group make the same number of contributions.

Group Attraction Measurement

In this study, four measures of group attraction were used, in an attempt to represent the different theoretical positions. The following sources of group attraction were measured in this study: (1) personal attraction, (2) task attraction, (3) coordination of effort, (4) satisfaction with group decisions.

To measure the sources of attraction, each subject indicated the extent of his agreement or disagreement with four statements relevant to each of the four sources of attraction. Subjects responded to each statement in terms of a seven step unit scale utilizing polar terms of "agree" and "disagree." The individual's score for each source of attraction was the sum of his score on four items. The group score for each source was the sum of the scores of the individuals in the group.

The items used to measure each source of attraction were selected on the basis of the results of a factor analytic study of the dimensions of group attraction conducted by Costley and Miller (1963).

To measure personal attraction, the following four statements were used:

1) If I were to participate in another discussion of this type I would prefer to be with different people.
2) Members of this group were considerate of the feelings of others in the group.
3) There was a friendly atmosphere in the group.
4) I like the other members of the group.

To measure task attraction, the following four statements were used:

1) The discussion topic was interesting.
2) If I were to participate in another project of this type I would prefer to discuss a different topic.
3) I enjoyed discussing this topic.
4) I would like to spend more time discussing this topic.

To measure coordination of effort, the following four statements were used:

1) Group members were uncooperative.
2) Group members agreed with each other on most things.
3) Group members worked together to obtain common objectives.
4) Members of the group worked as a team.

To measure satisfaction with the discussion outcome, the following four statements were used:

1) The group accomplished as much as could have been expected in the limited time.
2) I was not satisfied with the conclusions reached by the group.
3) I would be willing to try to convince my friends that the conclusions reached by the group are the best ones on this topic.
4) I would be willing to have my name made public in support of the conclusions of the group.

A copy of the measuring instrument for the group attraction variables appears in Appendix B.

Subjects

Eighty-four male students at Michigan State University volunteered to participate in the experiment. These eighty-four subjects were assigned to twenty-eight, three-man discussion groups. Assignment to a discussion group was partially governed by the times the subject was available. No two subjects who were personally acquainted were placed in the same group.

Prior to the experiment, the subjects were informed that their task was to participate with two other students in a thirty minute discussion of certain civil rights issues. Subjects were not told the actual purpose of the experiment, but were told that the purpose of the experiment was to develop a system for categorizing interpersonal communication according to the type of statements used by individuals in a discussion.

Task Problem

The discussion topic selected was designed to meet several criteria. It had to be sufficiently interesting to the subjects to insure motivation for communication. It had to involve questions of social reality for which there were no "correct" answers. It had to permit several defensible solutions and to allow for differences of opinion among group members. It had to be a topic on which all subjects would have adequate information to carry on a discussion.

After consideration of several possible discussion areas, the general topic of civil rights and inter-racial relations was selected. At the beginning of the session, subjects were provided with a list of suggested questions for discussion. They were instructed to feel free to spend as much or as little time as they wanted on any one of the questions. More questions were provided than could possibly be discussed in the thirty minutes allowed for the discussion.

The questions were grouped into five general areas, with from one to four questions devoted to each area. The five areas were: civil rights and voting, civil rights and public facilities, civil rights and education, civil rights and employment, and civil rights and housing. The list of suggested discussion questions given to the subjects is reproduced in Appendix C.

Procedures

When all three subjects arrived for a discussion, they were seated around a small table and one of the observers read the following instructions:

> This is a study to determine methods for observing group discussion. We are trying to categorize your statements according to their general type and not their content. Your statements will be categorized according to length of statement, grammatical structure, whether it is a question or an answer to someone else's question. These and other similar classifications of the statements in the discussion will be made. After the discussion starts, do not ask the observers any questions. You should completely ignore

> the observers - they will not participate in the discussion in any way. You may spend as little or as much time on any of the suggested areas for discussion as you want. Do not try to keep track of the time. We will stop the discussion after thirty minutes.

After reading the instructions, the observer answered any questions that the subjects asked. Then the observer handed out a copy of the suggested discussion questions to each subject. The thirty minute time period for the discussion began when all three persons had received their copies of the discussion topic.

The two observers were seated in the same room as the subjects, but were separated from them by a large table. Figure 2 provides a top view of the experimental room.

After thirty minutes, the observers stopped the discussion and handed out the group attraction measurement instrument for the subjects to complete. The subjects were placed at separate desks to fill out the group attraction measures, so that no subject had any chance of seeing how the other subjects were rating the group. At no time were the subjects asked for their names.

After the subjects had filled out the attraction measures, the observers answered any questions that they had. This completed the subject's participation in the study.

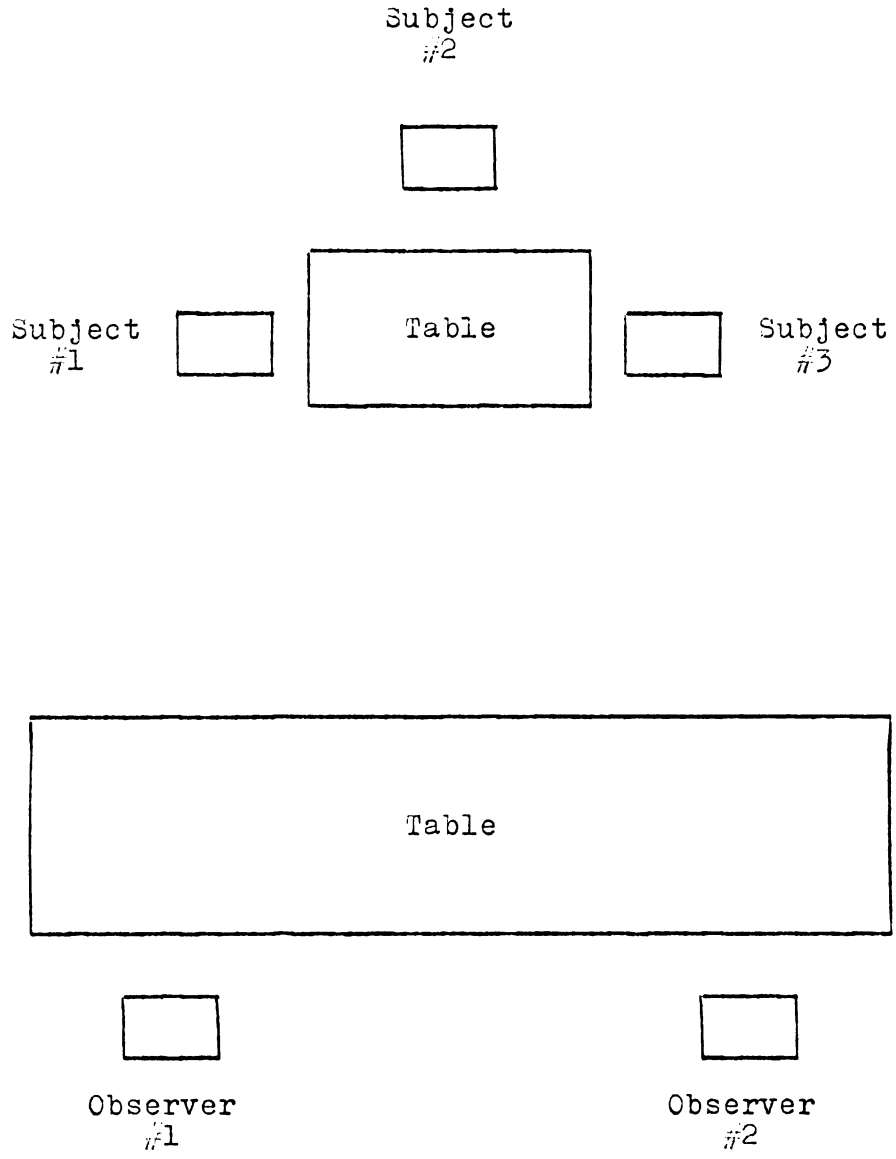

Fig. 2.--Top View of the Experimental Room

CHAPTER III

RESULTS

Observer Reliability

As an estimate of the reliability of observer scores, inter-observer correlations were computed for each of the interaction measures used in the study. A total of five observers were utilized, two of whom scored the interaction process in each of the twenty-eight experimental groups. In each of these groups, the observers were randomly assigned as observers number one and two. In computing the correlations used to estimate reliability, the scores of observer one were correlated with the scores of observer two for the twenty-eight groups. For each pair of observers, the six interaction measures were computed and the correlations calculated for the twenty-eight pairs. These inter-correlations are presented in Table 1.

For the six interaction measures, the inter-observer correlations ranged from .91 for the frequency of interaction to .71 for the percentage of answers in the task area. The average correlation was .81. These correlations were sufficiently high for measures of this type and justified the further analysis of the interaction measures

based on observer scores. Work carried out by Heinicke and Bales (1953) has indicated between observer reliability for highly skilled observers of between .62 and .98, depending on the interaction categories and the scoring system used.

TABLE 1

INTER-OBSERVER CORRELATIONS FOR SIX INTERACTION MEASURES

Measure	Correlation
Frequency of Interaction	.91
Percentage of Positive Social-emotional Reactions	.83
Percentage of Negative Social-emotional Reactions	.80
Percentage of Attempted Answers in Task Area	.71
Percentage of Questions in Task Area	.77
Index of Participation	.86
Average	.81

Variability of Interaction Measures

In this study, one concern of the experimenter was the possibility that sufficient differences in interaction characteristics would not occur among the experimental groups. It was recognized that analysis of relationships among the variables would not be very meaningful if there was little or no variability among the groups in interaction characteristics.

An examination of the data seems to indicate sufficient variability to assure meaningful measures. One method of analyzing differences among groups is to compare the highest and lowest groups on each of the interaction measures.

When completed, this procedure demonstrated rather large differences among groups. For instance, the group with the highest number of scored interactions had 133 more interactions than the group with the lowest number of scored interactions, illustrating the possible magnitude of the differences in frequency of interaction in a group during a thirty minute discussion. In terms of positive and negative social emotional reactions, the group with the largest percentage of positive reactions had 22 percent more of its interaction scored in this category than the group with the smallest percentage, and the group with the largest percentage of negative reactions had 12 percent more of its interaction scored in this category than the group with the smallest percentage. In terms of attempted answers and questions, the group with the largest percentage of attempted answers had 28 percent more of its interaction scored in this category than the group with the smallest percentage, and the group with the largest percentage of questions had 21 percent more of its interaction scored in this category than the group with

the smallest percentage. Finally, the difference between groups with the highest and lowest indexes of participation was 67.9. Table 2 presents a complete summary of the range of interaction measures for the high and low groups. The range of all these measures was greater than expected and illustrates the possible variability in small group interaction characteristics during a thirty minute discussion.

TABLE 2

RANGE OF INTERACTION MEASURES FOR HIGH AND LOW GROUP FOR SIX INTERACTION MEASURES

Measure	High Group	Low Group
Frequency of Interaction	229	96
Percentage of Positive Social-emotional Reactions	36	14
Percentage of Negative Social-emotional Reactions	13	1
Percentage of Attempted Answers in Task Area	67	39
Percentage of Questions in Task Area	29	8
Index of Participation	98.6	30.7

Another method of analyzing the interaction characteristics of the experimental groups is in terms of the means and standard deviations for the interaction measures. Table 3 contains the means and standard deviations for the six interaction measures. It can be seen that the

standard deviations are of sufficient magnitude for all variables to indicate that there is considerable variability in interaction characteristics among groups.

TABLE 3

MEANS AND STANDARD DEVIATIONS FOR SIX INTERACTION MEASURES

Measure	Mean	Standard Deviation
Frequency of Interaction	144.89	32.31
Percentage of Positive Social-emotional Reactions	22.93%	5.82
Percentage of Negative Social-emotional Reactions	4.57%	3.33
Percentage of Attempted Answers in Task Area	54.50%	7.35
Percentage of Questions in Task Area	18.00%	5.24
Index of Participation	76.71	19.12

The mean percentages for the twenty-eight groups indicate that the most frequent type of interaction was in the area of attempted answers, with a mean of 54.50 percent; while the least frequent type of interaction was in the area of negative social-emotional reactions, with a mean of 4.57 percent. The mean percentage of interaction in the other two categories was not greatly divergent, with a mean of 22.93 percent in the positive social-emotional reactions area and a mean of 18.00 percent in the task area of questions.

Relationships Between Interaction Measures

The first major research question advanced in this study concerned the relationships among interaction characteristics in small group communication. The approach to this question is through the obtained inter-correlations among the interaction measures. Product-moment correlation coefficients are used to describe the strength of the relationships.

The intercorrelations among the interaction variables are reported in Table 4.

The suggested positive relationship between the percentage of positive social-emotional responses and the frequency of interaction was confirmed ($r = .674$; $p < .01$). Under the conditions of this study, the greater the percentage of positive social-emotional reactions, the greater the frequency of interaction.

The suggested negative relationship between the percentage of negative social-emotional reactions and the frequency of interaction was not confirmed. The correlation between the percentage of negative social-emotional reactions and the frequency of interaction was only .019, which was not significant.

The suggested positive relationship between the percentage of attempted answers in the task area and the frequency of interaction was not confirmed. Instead, there was a significant negative relationship between the

TABLE 4

INTERCORRELATIONS AMONG INTERACTION MEASURES

Interaction Measures	Intercorrelations					
	I	II	III	IV	V	VI
I Frequency of Interaction	---					
II Percentage of Positive Social-emotional Reactions	.674**	---				
III Percentage of Negative Social-emotional Reactions	.019	.013	---			
IV Percentage of Attempted Answers in Task Area	-.455*	-.552**	-.506**	---		
V Percentage of Questions in Task Area	-.123	-.354	.059	-.467*	---	
VI Index of Participation	.091	.131	-.066	-.109	.050	---

* $p < .05$ two tailed
** $p < .01$ two tailed

percentage of attempted answers and the frequency of interaction ($r = -.455$; $p < .05$). Thus, contrary to expectations, the greater the percentage of attempted answers, the lower the frequency of interaction.

The suggested negative relationship between the percentage of questions in the task area and the frequency of interaction was not confirmed. While the correlation between the percentage of questions and the frequency of interaction was in the predicted direction, it was only -.123, which was not significant.

In addition to the relationships suggested in the rationale for the study, the following significant negative relationships were obtained among the interaction measures. There was a negative relationship between the percentage of attempted answers and the percentage of positive social-emotional reactions ($r = -.552$; $p < .01$); a negative relationship between the percentage of attempted answers and the percentage of negative social-emotional reactions ($r = -.506$; $p < .01$); a negative relationship between the percentage of attempted answers and the percentage of questions ($r = -.467$; $p < .05$).

In considering the relationships among the interaction characteristics it should be kept in mind that four of the characteristics are percentages of the total number of acts. Thus, the percentages are not independent of the total number of acts in the group. In the distributions of the percentages of acts classified in the four categories, the total

of the categories must equal 100 percent. If one type of activity increases, not only do the empirical probabilities of other types of activity decrease, but because all are calculated on a common base, each other rate is decreased by a small amount.

It should be noted that there were no significant relationships between the index of participation and other interaction measures, and all the correlation coefficients were very small. The correlations between the index of participation and the other interaction measures were: .091 for frequency of interaction, .131 for positive reactions, -.066 for negative reactions, -.109 for attempted answers, and .050 for questions.

Relationships Between Group Attraction Measures

The second major research question advanced in this study concerned the relationships among the measures of group attraction. Product-moment correlation coefficients are again used to describe the strength of the relationships among the measures of group attraction.

The means and standard deviations for the four measures of group attraction are presented in Table 5. For each of the group attraction measures, the possible range for a group was from 12 to 84. As indicated by the means, the group attraction scores were all relatively high.

The highest mean attraction score was 72.50 for the personal attraction measure and the lowest mean score was

59.82 for the satisfaction with group decisions measure. The mean scores for the other two group attraction measures were 66.25 for the coordination of effort measure and 65.25 for the task attraction measure.

TABLE 5

MEANS AND STANDARD DEVIATIONS FOR GROUP ATTRACTION MEASURES

Measure	Mean	Standard Deviation
Personal Attraction	72.50	6.65
Task Attraction	65.25	8.99
Coordination of Effort	66.25	10.35
Satisfaction with Group Decisions	59.82	9.10

The intercorrelations among the group attraction measures are presented in Table 6. It can be seen that several of the measures are inter-correlated. There were significant positive relationships between the measure of personal attraction and the measure of coordination of effort ($r = .562$; $p < .01$), between the measure of personal attraction and the measure of satisfaction with group decisions ($r = .500$; $p < .01$), between the measure of coordination of effort and the measure of satisfaction with group decisions ($r = .501$; $p < .01$).

The measure of task attraction was not significantly related to any of the other measures of group attraction. There was an unexpected, but non-significant, negative

correlation between task attraction and coordination of effort (r = -.233). The correlations between task attraction and the measures of personal attraction and satisfaction with group decisions were non-significant and very small (r = .011 for personal attraction and r = .171 for satisfaction with group decisions).

TABLE 6

INTERCORRELATIONS AMONG GROUP ATTRACTION MEASURES

Attraction Measures	Intercorrelations			
	I	II	III	IV
I Personal Attraction	--			
II Task Attraction	.011	--		
III Coordination of Effort	.562*	-.223	--	
IV Satisfaction with Group Decisions	.500*	.171	.501*	--

* $p < .01$ two tailed

To summarize, there were significant positive relationships among the measures of personal attraction, coordination of effort, and satisfaction with group decisions.

RELATIONSHIPS BETWEEN INTERACTION MEASURES AND GROUP ATTRACTION MEASURES

The third major research question advanced in this study concerned the relationships between interaction characteristics and group attraction. Product-moment

correlation coefficients are used to describe the strength of the relationships, between these two categories of variables.

In the rationale for this study, the following relationships were suggested: (1) A positive relationship between frequency of interaction and group attraction. (2) A positive relationship between the percentage of positive social-emotional responses and group attraction. (3) A negative relationship between the percentage of negative social-emotional responses and group attraction. (4) A positive relationship between the percentage of attempted answers in the task area and group attraction. (5) A negative relationship between the percentage of questions in the task area and group attraction. (6) A positive relationship between equality of participation and group attraction.

The correlations between the interaction measures and group attraction measures are reported in Table 7. It can be seen that the suggested positive relationship between frequency of interaction and group attraction was not confirmed. The correlations between frequency of interaction and the group attraction measures were as follows: .003 for personal attraction, -.286 for task attraction, .018 for coordination of effort, and -.291 for satisfaction with group decisions. None of these correlations between frequency of interaction and group

TABLE 7

CORRELATIONS BETWEEN INTERACTION MEASURES AND GROUP ATTRACTION MEASURES

Interaction Measures	Group Attraction Measures			
	Personal Attraction	Task Attraction	Coordination of Effort	Satisfaction with Group Decisions
Frequency of Interaction	.003	-.286	-.018	-.291
Percentage of Positive Social-emotional Reactions	.113	-.254	.134	.062
Percentage of Negative Social-emotional Reactions	-.645*	-.167	-.567*	-.592*
Percentage of Attempted Answers in Task Area	.333	.362	.101	.535*
Percentage of Questions in Task Area	-.188	-.119	.014	-.482*
Index of Participation	-.038	-.058	.021	-.058

* $p < .01$ two tailed

attraction measures were significant, but it should be noted that the two largest correlations were negative.

The suggested positive relationship between the percentage of positive social-emotional reactions and group attraction was not confirmed. The correlations between the percentage of positive social-emotional reactions and the group attraction measures were as follows: .118 for personal attraction, -.254 for task attraction, .184 for coordination of effort, .062 for satisfaction with group decisions. None of these correlations between positive reactions and group attraction measures were significant, but the largest correlation was for task attraction and was negative.

The suggested negative relationship between the percentage of negative social-emotional reactions and group attraction was supported for three of the four sources of group attraction. Significant negative correlations were obtained for the percentage of negative social-emotional reactions and measures of personal attraction ($r = -.645$; $p < .01$), coordination of effort ($r = -.567$; $p < .01$), and satisfaction with group decisions ($r = -.529$; $p < .01$). The correlation of -.167 between the percentage of negative social-emotional reactions and task attraction was not significant.

The suggested positive relationship between the percentage of attempted answers in the task area and group attraction was supported for only one of the sources of

group attraction. There was a significant correlation of .533 between the percentage of attempted answers and satisfaction with group decisions, which indicates a most feasible relationship. Non-significant correlations were obtained for the percentage of attempted answers and the three other group attraction measures ($r = .333$ for personal attraction, $r = .362$ for task attractions, and $r = .014$ for coordination of effort). Although the correlations for personal and task attraction were not significant, they were positive and fairly large.

The suggested positive relationship between the equality of participation and group attraction was not confirmed. The correlations between the index of participation and group attraction measures were: -.038 for personal attraction, -.058 for task attraction, .021 for coordination of effort, and -.058 for satisfaction with group decisions. None of these correlations between the index of participation and group attraction measures were significant, and all the correlation coefficients were extremely low.

CHAPTER IV

CONCLUSIONS, DISCUSSION, AND SUGGESTIONS FOR FURTHER RESEARCH

Conclusions

Relationships Between Interaction Measures

As a result of the analysis of the intercorrelations between the interaction measures used in this study, the following conclusions can be drawn concerning significant relationships between the interaction measures.

(1) There is a significant positive relationship between frequency of interaction and the percentage of positive social-emotional reactions in small group interaction.

(2) There is a significant negative relationship between frequency of interaction and the percentage of attempted answers in the task area in small group interaction.

(3) There is a significant negative relationship between the percentage of attempted answers in the task area and (a) the percentage of positive social-emotional reactions, (b) the percentage of negative social-emotional reactions, and (c) the percentage of questions in the task area.

The following conclusions summarize the relationships between interaction measures that were not significant.

(1) There is no significant relationship between frequency of interaction and (a) the percentage of negative social-emotional reactions, (b) the percentage of questions in the task area, and (c) the equality of participation in small group interaction.

(2) The intercorrelations between the percentages of interaction in the four categories indicated that there is no significant relationship between (a) the percentage of negative social-emotional reactions and the percentage of positive social-emotional reactions, (b) the percentage of negative social-emotional reactions and the percentage of questions in the task area, and (c) the percentage of positive social-emotional reactions and the percentage of questions in the task area.

(3) There is no significant relationship between equality of participation and (a) frequency of interaction, (b) the percentage of positive social-emotional reactions, (c) the percentage of negative social-emotional reactions, (d) the percentage of attempted answers in the task area, and (e) the percentage of questions in the task area.

Relationships Between Group Attraction Measures

As a result of the analysis of the intercorrelations between the group attraction measures used in this study the following conclusions can be drawn concerning the significant relationships between the measures of group attraction.

(1) There is a significant positive relationship between personal attraction and coordination of effort in a small group.

(2) There is a significant positive relationship between personal attraction and satisfaction with group decisions in a small group.

(3) There is a significant positive relationship between coordination of effort and satisfaction with group decisions in a small group.

The following conclusion summarizes the relationships between group attraction measures that were not significant.

There is no significant relationship between task attraction and (a) personal attraction, (b) coordination of effort, and (c) satisfaction with group decisions in a small group.

Relationships Between Interaction Measures and Group Attraction Measures

As a result of the analysis of the correlations between the interaction measures and the group attraction measures used in this study, the following conclusions can be drawn concerning the significant relationships between interaction and group attraction.

(1) There is a significant negative relationship between the percentage of negative social-emotional reactions in a small group and (a) personal attraction, (b)

coordination of effort, and (c) satisfaction with group decisions.

(2) There is a significant positive relationship between the percentage of attempted answers in the task area and the satisfaction with group decisions in a small group.

(3) There is a significant negative relationship between the percentage of questions in the task area and the satisfaction with group decisions in a small group.

The following conclusions summarize the relationships between interaction measures and group attraction measures that were not significant.

(1) There is no significant relationship between frequency of interaction and (a) personal attraction, (b) task attraction, (c) coordination of effort, or (d) satisfaction with group decisions.

(2) There is no significant relationship between the percentage of positive social-emotional reactions and (a) personal attraction, (b) task attraction, (c) coordination of effort, or (d) satisfaction with group decisions.

(3) There is no significant relationship between the percentage of negative social-emotional reactions and task attraction.

(4) There is no significant relationship between the percentage of attempted answers in the task area and (a) personal attraction, (b) task attraction, or (c) coordination of effort.

(5) There is no significant relationship between the percentage of questions in the task area and (a) personal attraction, (b) task attraction, or (c) coordination of effort.

(6) There is no significant relationship between the equality of participation and (a) personal attraction, (b) task attraction, (c) coordination of effort, or (d) satisfaction with group decisions.

Discussion

Relationships Between Interaction Measures and Group Attraction Measures

In this study, the best predictor of group attraction was the percentage of negative social-emotional reactions that occurred in the group discussion. The negative relationship between percentage of negative reactions and personal attraction supports the view that individuals are not attracted to those who disagree with them. Also, the negative relationship between the percentage of negative reactions and coordination of effort indicates that negative reactions lead to perceived reduction of the ability of members of a group to work together to solve a problem. Finally, the negative relationship between percentage of negative reactions and satisfaction of group members with group decisions indicates that the greater the number of social-emotional disagreements among group members the less satisfied they are with group decisions. This relationship would be expected; since, in

a way, negative reactions are themselves statements of dissatisfaction with group decisions.

The negative relationship between group attraction and the percentage of negative social-emotional reactions is especially interesting, since there was no significant relationship between the percentage of positive social-emotional reactions and group attraction measures. Even though the percentage of positive reactions was accompanied by an increase in the frequency of interaction, an increase in the percentage of positive reactions had no systematic effect on the ratings of group attraction. The correlations between the percentage of positive reactions and the group attraction measures were all non-significant and were very small. It should also be noted that the results of this study indicate that the percentage of negative reactions occurring in small group interaction is independent of the percentage of positive reactions. The correlation between these measures was not significant and was extremely small ($r = .013$).

The findings suggest that increased effort by group members to provide additional positive social-emotional reactions will result in no significant systematic increase in group attraction. If individuals in a small group situation desire to increase interpersonal attraction, the most effective communication procedure is to minimize the percentage of negative social-emotional reactions.

The significant positive relationship between the percentage of attempted answers in the task area and satisfaction of group members with the group decisions indicates that an increase in the percentage of attempted answers results in more positive evaluation of group decisions by group members. It is possible that those groups with a higher percentage of attempted answers contained members who were well informed on the discussion topic. One interesting research problem aimed at testing this possibility would be to compare the interaction characteristics of groups composed of members with a high level of information on the discussion topic and groups composed of members with a low level of information. The results of the present study suggest that the higher the information level of group members, the greater the percentage of attempted answers and the greater the satisfaction with group decisions.

The significant negative relationship between percentage of questions in the task area and group members' satisfaction with group decisions tends to support the position that questions increase the uncertainty of group members in relation to the desirability of solutions to task problems. It is possible that questions which were raised could not be answered by group members. In further research, useful information could be gained by analyzing the adequacy of answers given to questions that are raised,

since it is obvious that answers could either aid or hinder a group in the solution of task problems, depending both upon the ability of the members to ask relevant questions and the ability of other members to provide adequate answers to these questions.

It is interesting to note that there was no significant relationship between the frequency of interaction and any of the measures of group attraction. This finding suggests that it is not the amount of interaction, per se, that leads to group attraction; rather, it is the type of interaction that appears to be the crucial factor. As has been previously indicated, there was no significant relationship between the frequency of interaction and the percentage of negative reactions, while a significant negative relationship was found between group attraction and the percentage of negative reactions. This indicates that an increase in the frequency of interaction may be accompanied by either an increase or a decrease in the percentage of negative reactions.

As suggested by Homans (1961), frequency of interaction might have been related to group attraction, if the groups had been free to continue or discontinue their discussions without a restriction being placed on the length of interaction. The results of this study suggest that in groups where there is a high percentage of negative reactions, members given a choice would probably not continue to interact. Thus, it could be suggested that in interpersonal

relations characterized by an increasing percentage of negative reactions individuals will prefer to discontinue the relationship.

One of the more interesting findings of this study is that equality of participation was not significantly related to any of the measures of group attraction. This result supports the position that equality of participation, in and of itself, does not lead to increased group attraction. It is possible that one person could largely dominate a discussion and the group would still be highly attractive to its members; e.g., the person dominating the discussion might be highly informed and might convey needed information to the other group members. In other cases, however, all members might participate equally, but the group might not be attractive because none of the members have adequate information or because there is a great deal of difference of opinion among group members. Thus, equality or inequality of participation may be accompanied by either agreement or disagreement among group members. Also the notion of equality of participation does not take into account individual differences in desire to participate in discussion. Some individuals may be more attracted to a group where they do not have to participate extensively, while others may desire to participate more than their "share of the time." Further research should deal with the ways in which individual differences among group members, desire to participate and the nature of differences in

individual contributions affect spread of participation and subsequent ratings of group attraction.

Relationships Among Interaction Measures

The positive relationship between the frequency of interaction and the percentage of positive social-emotional reactions suggests that positive social-emotional reactions encourage the initiation of interaction by group members, possibly because such reactions provide positive feedback and function as support for group members. The results of this study suggest that in a group discussion individuals increase their frequency of interaction to the extent that they receive positve feedback and support for their statements.

It is probable that reduction of positive feedback results in a lower rate of interaction, because individuals do not receive the necessary information to evaluate the reaction of other group members. The lack of positive social-emotional reactions may promote uncertainty on the part of group members; and this, in turn, may result in their becoming cautious about initiating interaction.

The suggested negative relationship between percentage of negative social-emotional reactions and frequency of interaction was not confirmed. If these reactions served as negative feedback for the group members, their reactions to this feedback were not consistent enough to result in an increase or decrease in the rate of interaction. In the case

of negative feedback, group members could either increase interaction, in an attempt to gain support and positive feedback from group members, or decrease interaction, in an attempt to avoid further negative feedback. The present findings indicate that increases and decreases in the percentage of negative reactions affect the group interaction pattern differentially. When the individuals increase the frequency of interaction in an attempt to resolve differences, an increase in the percentage of negative social-emotional reaction may stimulate discussion. Or, on the other hand, when attempts are made to avoid conflict and differences, an increase in the percentage of negative reactions may result in a decrease in the rate of interaction.

Whereas a significant positive relationship between percentage of attempted answers in the task area and frequency of interaction was suggested, the converse occurred; i.e., there was a significant negative relationship between these two interaction measures. There are several possible explanations for this finding. First, it may be that concentration on the task resulted in less attention to the social-emotional functions of providing social support for other group members. Also, it can be suggested that concentration on attempted answers in the task area creates a condition of uncertainty about the group evaluation of these answers, which in turn results in members being cautious about initiating interaction. Finally, it could be that with interaction concentrated

in the attempted answer area, members of the group ran out of things to say because of a lack of evaluation or controversy. Further research could be conducted in which groups that are high and low in the percentage of attempted answers are compared in terms of relationships between group attraction and the group members' desires for social support, evaluation, and uncertainty reduction.

Equality of participation was not significantly related to any of the other interaction variables employed in this study. It would seem that in the case of frequency of interaction equality of group participation could serve either to increase or to decrease the frequency of interaction. One member of the group could dominate discussion; and, at the same time, frequency of interaction could be high, if the individual actively participated throughout the entire discussion period. In this case, the group would manifest a high frequency of interaction but would have a low score on the index of participation. In other instances, one individual might dominate the discussion for a short time, thus discouraging others from speaking, but then quit participating. In this case, there would be a low frequency of interaction and also a low index of participation. It could also be that in some groups, all individuals participated equally, but none were highly verbal; while, in other groups, all members participated equally and all were highly verbal. Individual differences in verbal ability and desire to interact seem to have produced differential effects on the interaction patterns in the groups.

Relationships Among Group Attraction Measures

The positive relationship between personal attraction and coordination of effort indicates that the more individuals are able to coordinate their efforts in problem-solving group discussions, the more they will be personally attracted to each other. That an increase in coordination of effort would be accompanied by an increase in personal attraction (or, vice-versa) is certainly not an unexpected finding.

The positive relationship obtained in this study between personal attraction and satisfaction with group decisions indicates that the more individuals are satisfied with the decisions of the group, the more they will be personally attracted to each other. This relationship is consistent with the position that cognitive similarity leads to personal attraction, since satisfaction with group decisions indicated that the members of the group agreed to some extent on the answers to the problem discussed. Further research to determine the antecedent-consequent relations that culminated in this finding should systematically vary the degree of cognitive similarity of group members.

The positive relationship between coordination of effort and satisfaction with group decisions may indicate that when individuals work together and coordinate their efforts in attempting to solve a problem, they are more likely to be satisfied with group decisions. It may also

be, however, that when individuals are satisfied with group decisions, they are more likely to feel, after the discussion, that the group members did coordinate their efforts in attempting to solve the problems with which the group was concerned.

No significant relationships were obtained between task attraction and any of the other group attraction measures. It is probable that the individuals' attraction to the task utilized in this study did not depend as much on the discussion itself as it did on the experiences that individuals had previously had with the problem. Since most of the individuals involved in this study had probably discussed civil rights topics frequently, it is likely that they had relatively fixed levels of attraction for this discussion topic.

It is also possible that task attraction is a relatively independent dimension of group attraction, while the other three measures of attraction are closely tied to the personal attraction group members have for each other; e.g., since we all like each other, we will coordinate our efforts to come up with a good solution to the problem, regardless of whether we feel it is boring or interesting.

Reinforcement Principles Related to Findings

The small group discussions in this study involved three individuals, each emitting behaviors reinforced to some degree by the behaviors of the others. Communication

characteristics measured in this study may be seen as providing positive reinforcement, when accompanied by an increase in other behaviors, and as providing negative reinforcement, when accompanied by a decrease in other behaviors. Each of the individuals who was involved in the discussions entered the situation with learned behavior patterns acquired in previous interpersonal situations. They had also learned to find certain behaviors of others positively reinforcing and other behaviors negatively reinforcing. In terms of the variables in this study, the emitting of interaction behaviors could serve as reinforcement for other interaction behaviors or for group attraction ratings. Thus, one difficulty encountered in the interpretation of the results is to determine what behaviors were reinforcing for what other types of behaviors. In other words, what were the behaviors that were reinforced and what were the behaviors that were perceived as reinforcing. The preceding discussion has been an attempt to explicate some of the reinforcing characteristics of social interaction, however, future controled research is needed to ascertain the validity of this interpretation.

One of the difficulties involved in discussing social interaction is that there is usually more than one course of behavior open to individuals when they receive reinforcement in the form of interactions of other individuals. One of the major problems in the interpretation of small group behavior is to state propositions relating the variations

in individual behavior to the distribution of behaviors among alternatives, where the values taken by one variable may determine in part the values for another.

In the discussion of the findings of this study, an attempt has been made to suggest the behaviors that reinforced other behaviors, in the sense that they resulted in an increase or decrease in other behaviors. In some cases it may be that behaviors were mutually reinforcing, i.e., the emission of behavior A reinforced behavior B, so that the probability of B was increased, and behavior B reinforced behavior A, so that the probability of emission of A was increased. It seems very likely that the emission of negative social-emotional reactions and personal attraction occur concurrently; i.e., the more people like each other the fewer negative reactions they emit in interaction, and the more negative reactions emitted in interaction, the more individuals come to dislike each other.

As additional empirical data are made available on the relationships between interaction characteristics and group attraction, the application of the concept of reinforcement should prove helpful in accounting for results and in developing a theory of small group communication. In order to make further use of the concept of reinforcement, two necessary basic assumptions that should be tested are: (1) when individuals continue to interact with one another, the ratio of positive to negative reinforcements will increase and (2) positively reinforcing interaction

is most likely to be obtained from those with whom one interacts most frequently.

Suggestions for Further Research

Variations in several of the conditions presented in this study provide interesting possibilities for future research. Three of the more important factors that could be varied are: (1) length of the interaction period, (2) prospects for future existence of the group, and (3) the purpose or goal of the interaction.

First, the length of the interaction period in this study was limited to thirty minutes. Conceivably, a more extended period of interaction would have resulted in the development of different interaction patterns and greater variability in group attraction. Results of interaction analysis conducted by Bales (1950) indicate that as the length of time individuals engage in interaction increases, the percentage of interaction devoted to social-emotional problems also increases. This raises the question of whether or not the relationship between the percentage of negative social-emotional reactions and group attraction would maintain in lengthened interaction situations where the group devotes a greater percentage of its time to the emotional areas of interaction.

Second, these groups were all created; i.e., they had no history and no future. As indicated in the rationale for this study, the primary concern was with factors

affecting groups in initial stages of interaction. Most of the external and internal pressures on members of functioning, "real-life" groups were not present in this study. Interesting future research could be conducted to compare the interaction characteristics of groups in initial stages of formation with those of groups that had been in existence for some time. The examination of existing groups in terms of the relationships between interaction characteristics and group attraction would extend the findings of this study. Also, an analysis of existing groups in terms of the relationships between interaction characteristics of group members and their status position in the group would provide valuable data on communication characteristics in small group behavior.

Third, these groups were all task oriented, in the sense that their instructions were to agree on answers to questions concerning civil rights issues. Future research should be conducted in which the orientation of the groups is systematically varied and interaction characteristics are analyzed. An example of an approach to the systematic variation of the orientation of groups is found in a study by Back (1951). Back provides evidence that the variable used to induce group attraction will affect the form and content of the interaction process. The three types of attraction experimentally produced by Back were personal attraction, task attraction, and group prestige. Although no formal interaction analysis was used in the study.

Back (1951, p. 23) reports that the following characteristics were observed; (1) In the groups based on personal attraction, members wanted to transform the discussion into a long, pleasant conversation, (2) In the groups where attraction was based on the performance of a task, members wanted to complete the task as quickly and efficiently as possible and members participated in discussion only as much as they thought it valuable to complete the task. (3) Where attraction was based on group prestige, members acted cautiously and tried to risk as little as possible to endanger their status. Whether these results could be replicated under conditions of formal interaction analysis awaits investigation.

The various findings that have been described in this study were based on empirical data, but there is no implication that the interaction process always functions as it did under the conditions of this study. It is easy to imagine differing conditions under which the interaction characteristics would be strikingly disparate from the characteristics found in this study. At the present time, there are no appropriate measures of significance of differences of total interaction patterns. Further research is needed to specify the conditions under which average interaction tendencies appear, and to determine which characteristics prove to be very general and common to a great many different situations.

Further research should be conducted on a large number of groups under different conditions in order to determine a set of norms for the interaction measures. A set of norms based on empirical data would provide a most advantageous baseline for theory construction and further research in small group interaction. If a baseline could be established, other sets of conditions expected to have different results could be described as modifications, accentuations, or reversals of the baseline conditions which produce regular gradations by time, members, and group size.

In small group studies, the researcher is usually looking for a few types of effects, and does not necessarily raise questions about changes in the total distribution of a system of rates or measures. Further research is needed to determine the systematic characteristics of the interaction process and further attempts should be made to find systems of descriptive measures which would describe the total state of changes in the interaction process under varying conditions.

Several special difficulties which are encountered in any attempt to analyze the process of small group interaction provide implications for further research. Because the interaction process seems to have a kind of organic character, in which parts are interdependent and where time is required for the process to develop, it does not seem adequate to sample from a complete meeting and the amount

of time spent in interaction appears to be an important variable. Thus, the population for a sample must be a hypothetical population of cases, each of which is a complete meeting, not a population of single acts. In taking the meeting as the sampling unit, the researcher can be handicapped because he cannot control the size of the sample units. Even when the length of time in which a group is involved in interaction is held constant, some groups will yield considerably more interactions than others. Thus, when the researcher wishes to compare the interaction characteristics of a number of groups, the total number of interactions in the groups are usually sufficiently different so that in analyzing the acts placed in defined classifications, i.e., positive and negative social-emotional reaction, some correction must be made. The interaction scores used in this study for the classified acts were percentages of the total number of acts. This method made analysis of the distribution of acts possible, even though the total number of acts differed widely among the groups, but it obscured the factor of the size of the sample units. Further research is needed to determine approaches to the problem of differences in the size of the sample units and the effect the differences in the size of the sample units have on the characteristics of the interaction process.

Another problem is the lack of independence of acts as they are distributed among the categories. To the

extent that the interaction process has systematic characteristics, the acts falling in one category affect the probabilities of acts falling in other categories. One approach to this kind of interdependence that could be a subject for further research would be to determine the probability of a question being followed by an attempted answer. Although it was not formally measured, observation of the groups involved in this study indicated that if an act was a "question" the probability that the next act would be an "attempted answer" was greatly increased. Further research is necessary for the successful solution of the problem of how to handle the interdependence of variables in small group interaction. At present, the fact of interdependence of variables leaves the researcher without appropriate tests of significance of difference on the distributions of interaction measures. It would appear that further research in the application of mathematical statistics may provide a solution to this problem.

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APPENDIX A

DEFINITIONS OF INTERACTION ANALYSIS CATEGORIES

I. POSITIVE SOCIAL-EMOTIONAL REACTIONS

Acts of Active Solidarity and Affection. Includes drawing near to another in order to speak, greeting another by saying "hello" or in some other friendly manner, welcoming another, acts in return to a friendly gesture, accepting an offer of help or assistance, thanking another, indications of mannerly considerations, indications of good will, indications that the actor is friendly. A friendly comment on the weather or some other matter of common interest to "break the ice." The expression of sympathy - "I can see how you feel." Any indication in the course of interaction that the relationship is becoming more intimate or familiar. Any act of adherence where the actor chooses to be a fellow member with another.

Status-Raising Acts. Includes all acts which have the specific aim or effect of raising or enhancing the other's status. Including praising, rewarding, boosting the other, giving approval or encouragement. Examples: "That's fine," "You've done a fine job," "Swell," "You've covered a lot of ground today." Complimenting, congratulating, showing approval of another, giving credit to

another, showing enthusiasm for another's views. Expressing gratitude or appreciation, showing admiration or respect.

Responses to Shows of Tension. Includes any behavior in which the actor offers assistance to another. Any act of sharing. Any behavior in which the actor defends another. Giving support, reassurance, comfort, encouragement, showing of sympathy.

Responses to Disagreements. Includes acts which may appear after a situation of difficulty, such as interceding, mediating, or moderating in a difficulty between two others. Any act where the actor urges unity or harmony, agreement, cooperation, or expressed other values of solidarity. In cases of disagreement or antagonism between members, the suggesting of a compromise.

Indications of Relief. Includes expressions of feeling better after a period of tension, any manifestation of cheerfulness, satisfaction, enjoyment, pleasure, delight, joy, happiness. Positive responses to a compliment. Includes the making of friendly jokes, trying to amuse or entertain. Positive responses to joking, such as smiling, grinning, or chuckling.

Responses to Acts of Decision with Agreement. Includes any concurrence in a proposed course of action. Examples: "I second the motion," "Let's do that." Includes any act in which the actor either verbally or overtly complies with a request or suggestion. Agreement with an observation or report, or analysis which another has made.

Examples: "That's the way I see it too," "I think you are right about that," "Yes, that's true." Similarly includes agreement, approval, or endorsement of an expression of value or feeling. Examples: "I feel the same way you do," "I hope so too," "That's right." Includes giving any sign of recognition, interest, receptiveness, readiness, responsiveness. Includes giving specific signs of attention to what the other is saying by nodding or saying "I see," "Yes." Includes showing comprehension, understanding, or insight. Examples: "Oh," "I see," "Yes," "Sure, now I get it." Includes admitting an error or oversight, admitting that some objection or disapproval is valid, conceding a point to the other, giving way, withdrawing politely. Examples: "Now I may be wrong about this . . ." "This is not an important point perhaps . . ." Includes any indication of a permissive attitude, where another is led to understand that he is accepted "as he is," so that the incorrectness of his solution to any problem or the quality of his performance does not adversely affect his status, so that he can "make mistakes without blame." Includes any act in which the actor submits passively, accepts coercion, criticism, without retaliation, rebuttal, rebellion, or complaint.

II. ATTEMPTED ANSWERS: TASK AREA

Giving Suggestions or Direction Related to Task. Includes all acts which suggest concrete ways of attaining a desired goal by attacking or modifying the outer situation, or by adapting activity to it, proposing a solution,

indicating or suggesting where to start, what to do, how to cope with a problem in terms of action in the near future. Includes giving instructions or making proposals about the task, showing where, when, how, why, something is to be done. Examples: "We will have to stop at the end of one-half hour." "Consider for a moment what would happen if . . ." "Suppose we set up the following situation . . ." "Go right ahead." Includes direct attempts to guide the others regarding some activity, to persuade someone, to urge or to inspire someone.

Giving Opinions, Evaluations, or Analysis. Includes all indications of thought-in-process leading to an understanding, such as reasoning, thinking, or concentrating. The actual statement of a hypothesis or expression of understanding or insight. Includes logical elaboration, exploration, or testing of a hypothesis, whether by example, analogy, analysis of cause and effect relations, categorical labeling or any sort of conjectural process. Includes any expression of desire, want, liking, wishing, any expression of moral obligation, any affirmation of values, any statement of intention, referring to a broad and indefinite future time perspective, as yet unimplemented as to ways and means. Examples: "I think we ought to be fair about this." "I hope we can do something about that." "That seems to be the right thing to do." Includes activity in which the actor attempts, by inference or reasoning, to understand or interpret his own motivation or the "why" of his own behavior in relation to the task

or problem being discussed. Examples: "I can see now that I misjudged the situation." "I think I behave that way because . . ." Includes activity in which the actor attempts to understand the motivation or activities of others in relation to the task or problem situation. Includes all statements about the nature of the outer situation in relation to the group task.

Giving Orientation, Information or Clarifying. Includes all acts which are intended to focus attention on the problem to be discussed, calling attention to what one is going to say, or pointing out the relevance of what one is saying. Examples: "There are two points I'd like to make." "In the first place . . ." "Now with regard to our problem of . . ." "Going back for a moment . . ." "What I am about to say relates to . . ." Includes efforts to prevent or repair breaks in the flow of communication, such as, repeating, clarifying confusion about something said, explaining, summarizing, restating. Includes any account of one's own private experience where the actor tells what he felt, what was done, how it was done, the position he took on some issue. Includes showing an understanding of the other or something the other has said by restating or reporting the essential content of what has been said. Includes statements of fact about the nature of the outer situation facing the group.

III. QUESTIONS: TASK AREA

Asking for Orientation or Information. Includes acts which indicate or express a lack of knowledge, confusion

or uncertainty about the position of the group with regard to its task, about what has been said or is going on, about the meaning of a word or phrase. Includes the appearance of any attitude the observer would describe as puzzled, bewildered, or baffled. Examples: "What?" "What was that?" "I don't quite get what you mean." "Where are we?" "Where do we stand now?" Includes direct or outright questions which require the giving of a factual answer. Also includes more indefinite expressions of a lack of knowledge. Examples: "I don't know about this." "It isn't clear to me." "It may be true, or it may not be."

Asking for Opinion, Evaluation, or Analysis. Includes any kind of question which attempts to encourage a statement or reaction on the part of another without limiting the nature of the response. Examples: "Tell me more about it." "Tell me more about . . ." "What do you think?" "What should our policy be?" Includes inferences or evaluations requested. Examples: "How long do you suppose it will be?" "I can't figure out how long it would take." "I wonder if there are any other possibilities?" "Why do you think you feel that way?"

Asking for Suggestions or Direction. Includes requests for suggestions as to what should be done in terms of finding ways, means, and solutions, requests for suggestions as to where to start, what to do next, what to decide. Examples: "I wonder what we can do about this?" "I don't know what to do." "What do you suggest?"

IV. NEGATIVE SOCIAL-EMOTIONAL REACTIONS

Disagrees or Shows Passive Rejection. Includes passive forms of rejection such as remaining immobile, rigid, silent, uncommunicative, responseless, in the face of overtures of others. Working at something other than the problem with which the group is concerned. Includes disagreement, disbelief, incredulity regarding reports and observations made by others. Includes failure to give requested repetition, ignoring a request of any kind or a complaint. Examples: "I don't think so." "I'm not going to repeat it."

Showing Tension, Asks for Help. Includes all manifestations of impatience, indications that the subject feels strained, on edge, restless, agitated. Includes any manifestation or indication to the observer that the actor is startled, alarmed, dismayed, or has misgivings about something he has done or intends to do. Any show of anxious emotionality, such as hesitation, speechlessness, trembling, blushing, stammering. Includes nervous or apologetic acts where actor admits his own ignorance or incapacity. Acts of blaming, belittling, accusing, condemning, scorning, humiliating. Includes expressions of unhappiness, discouragement, despair, brooding, distress, discomfort, fatigue. Showing any kind of need to be supported, forgiven, consoled. Includes any behavior which indicates that the actor is unattentive, bored, or psychologically withdrawn - slouching, yawning, daydreaming.

Showing Antagonism. Includes the arbitrary assignment of a role, a defining or restricting of another's power by demands or commands such as "Come here!" "Stop that!" "Hurry up!" "Get out!" Includes acts that are assertive, inconsiderate, repressive. Includes any act in which the actor rejects, refuses, or ignores directions, shrugging the shoulders, avoiding or quitting activities. Includes agressive acts such as griping, nagging, annoying, disturbing, or pestering others. Includes attempts to override the other in conversation, interrupting the other. Active attacks on another's status, any implication of inferiority or incompetence on the part of another. Includes making charges against another, blaming, imputing unworthy motives, denouncing. Includes any acts of disapproval of self, or of others. Includes any behavior in which the actor appears to be provoking or irritating. Includes threats, attacking and challenging others.

APPENDIX B

MEASURING INSTRUMENT FOR GROUP ATTRACTION

I N S T R U C T I O N S

We are interested in the way people describe groups in which they have participated. You will be presented with a series of statements used to describe groups. Following each statement will be a seven-point scale. You are to judge the group in relation to the statement. Please make your judgments on the basis of how well you think the statement describes the group in which you have participated.

Below is a sample statement and a scale.

The group was active

Agree: 3 : 2 : 1 : 0 : -1 : -2 : -3 :Disagree

If you completely agree with the statement as applied to your group you would place a check mark in space number 3. If you mostly agree (but not completely) place a check mark in space number 2. If you slightly agree check number 1. If you neither agree or disagree check 0. If you completely disagree check -3. If mostly disagree check -2. If slightly disagree check -1.

The "0" or neutral space on the scale may also be used for "I don't know" or "I don't think this scale applies."

IMPORTANT:

(1) Place your check marks in the middle of spaces, not on the boundaries.
(2) Be sure to check the scale for every concept, DO NOT OMIT ANY ITEMS.
(3) Never put more than one check mark on a single scale.
(4) DO NOT look back and forth through the items, make each item a separate and independent judgment.
(5) Your first impression, the immediate "feelings" about the items, is what we want.

GROUP DIMENSIONS STUDY Date_____ SUBJECT NUMBER__
Time_____
DEPARTMENT OF COMMUNICATION Place_____ GROUP NUMBER____

---

1. If I were to participate in another discussion of this type I would prefer to be with different people.

Agree:____:____:____:____:____:____:____:Disagree

---

2. Members of this group were considerate of the feelings of others in the group.

Agree:____:____:____:____:____:____:____:Disagree

---

3. There was a friendly atmosphere in the group.

Agree:____:____:____:____:____:____:____:Disagree

---

4. I like the other members of this group.

Agree:____:____:____:____:____:____:____:Disagree

---

5. The discussion topic was interesting.

Agree:____:____:____:____:____:____:____:Disagree

---

6. If I were to participate in another project of this type I would prefer to discuss a different topic.

Agree:____:____:____:____:____:____:____:Disagree

---

7. I enjoyed discussing this topic.

Agree:____:____:____:____:____:____:____:Disagree

---

8. I would like to spend more time discussing this topic.

Agree:____:____:____:____:____:____:____:Disagree

---

9. Group members were uncooperative.

Agree:____:____:____:____:____:____:____:Disagree

---

10. The group members agreed with each other on most things.

Agree:____:____:____:____:____:____:____:Disagree

---

11. The group members worked together to obtain common objectives.

Agree:____:____:____:____:____:____:____:Disagree

---

12. Members of the group worked as a team.

Agree:____:____:____:____:____:____:____:Disagree

---

13. The group accomplished as much as could have been expected in the limited time.

Agree:____:____:____:____:____:____:____:Disagree

---

14. I was not satisfied with the conclusion reached by the group.

Agree:____:____:____:____:____:____:____:Disagree

---

15. I would be willing to try to convince my friends that the conclusions reached by the group are the best ones on this topic.

Agree:____:____:____:____:____:____:____:Disagree

---

16. I would be willing to have my name made public in support of the conclusions of the group.

Agree:____:____:____:____:____:____:____:Disagree

APPENDIX C

SUGGESTED AREAS FOR DISCUSSION

You will have 30 minutes to discuss the problems involved in civil rights and inter-racial relations. Some suggested areas for you to discuss are listed below. You should attempt to reach conclusions in as many of the areas as possible. You should feel free to spend as much or as little time as you want on any one area.

I. Civil Rights and Voting.
What should be done to guarantee all citizens the right to vote?

II. Civil Rights and Public Facilities.
Should all hotels, motels, restaurants, and gas stations be desegregated? If they are to be desegregated, how should desegregation be accomplished? Does the owner of a business serving the public have the right to refuse service to anyone? Should the rights of the owners of businesses serving the public be restricted in order to insure the rights of Negroes?

III. Civil Rights and Education.
How should school desegregation be accomplished? Should Federal troops be used to enforce school desegregation? Is school desegregation going too slow?

IV. Civil Rights and Employment.
How can discrimination by employers and labor unions be eliminated? Is it possible to determine when a company or union is practicing discrimination?

V. Civil Rights and Housing.
Should an individual refuse to sell his house to a Negro if he thinks it will reduce the value of his neighbors' property? Could laws be passed to integrate housing?