

A STUDY OF INTERPERSONAL TRUST IN A  
GROUP AND ITS RELATION TO THE AMOUNT AND TYPE OF  
COMMUNICATION AND LEADERSHIP-ROLE BEHAVIOR WITHIN THAT GROUP

by

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## CHAPTER I

### INTRODUCTION

During the past three decades much research has centered around one particular area of communication: that which exists in small groups. Experimentalists have plunged into a multiplicity of approaches in attempting to analyze data concerning the communication and interaction characteristics of small groups. Some of the greatest problems for these experimentalists have been to identify all of the factors involved in the interaction, to test them adequately, and then to use the results accurately to describe that small group interaction competently, comprehensively, and precisely. One significant factor that has had a relatively limited amount of attention given to it is interpersonal trust. It is to this factor that the present writer directs his attention, positing as his major hypothesis that the amount of interpersonal trust in a group will be related to the amount and type of communication which occurs, and the leadership-role behavior. It is the task of this chapter to show the relevancy of such a hypothesis by studying the concept of trust as it occurs in the communication process, factors which influence interpersonal trust as well as factors which themselves are influenced by variations in interpersonal trust, the historical background of this research, the concept of leadership, and then, finally, to describe

the present project of which this writer is a part.

### Concept of Trust In The Communication Process

As a pioneer, Morton Deutsch (1958, p. 265) struggled with the problem of defining trust. He noted that it involves risk or "something invested" as a requisite and that when trust is not fulfilled, the trusting individual suffers an unpleasant consequence.

The following conditions seem to be essential for describing the behavior of a trusting person:

1. A person is relying upon an object, person, event, or process.
2. Something is being risked by the trusting person.
3. The trusting person hopes to achieve some goal by taking this risk.
4. The achievement of the desired goal is uncertain.

In light of these essential elements, Giffin (1967b, p. 224) adopted this formal definition of interpersonal trust in the communication process: reliance upon the communication behavior of another person in order to achieve a desired but uncertain objective in a risky situation.

In an analysis of the communication process, Newcomb (1953, pp. 149-50) described the relationship between a person and the object or concept about which he is communicating as an 'orientation'. He defined 'orientation' as "equivalent to 'attitude' in its more inclusive sense of referring to both cathectic and cognitive tendencies." This writer accepts Giffin's definition of trust for his present study and, as

does Giffin (1967b, p. 225), views the relationship between a trusting person and the object of his trust as an orientation, and thus as an attitude in Newcomb's sense of the term.

Furthermore, this writer uses the phrase 'communication process' to mean the oral-aural-visual exchange of messages, including meaning conveyed by words and by means other than words. This specific definition was used by Giffin (1967a, p. 106) when he wrote:

It involves the entire individual as he talks, writes, reads, or listens, his social environment, and the ways in which he relates to it through sending and receiving messages. It includes motivations, perceptions, cognitions, and personalities of both message sender and receiver as they exchange ideas, along with the changes in both persons which are thus produced.

It appears that this communication process includes both interpersonal and intrapersonal trust:

1. Trust of a speaker by a listener. Aristotle called it ethos; Hovland, Janis, and Kelley (1953) called it source credibility.
2. Trust of a listener by a speaker. Rogers (1951) called it sense of psychological safety and Gibb (1961) identified it as perceived supportive climate.
3. Trust of oneself as a speaker. This is a person's willingness to rely upon himself to communicate adequately in order to achieve a desired goal in a situation perceived as risky or threatening.
4. Trust of oneself as a listener. This is a person's willingness to rely upon himself to receive communication adequately in order to achieve a desired goal in a situation perceived as risky or threatening.



Interpersonal trust must be viewed as a possible intervening variable in a set of variables comprising the communication process. This research attempts to determine the relationship of interpersonal trust to selected variables in the communication process. These variables were chosen on the basis of (1) availability of dependable measuring instruments, and, (2) results of previous research which shows some probability of an important relationship to interpersonal trust in the communication process.

#### Factors Which Influence Interpersonal Trust

The small amount of research which has been done tends to indicate that three sets of factors appear to influence interpersonal trust: (1) interpersonal perceptions, (2) situational conditions, and (3) personality characteristics of the person doing the trusting.

Interpersonal Perceptions. The manner in which one person's perceptions of another influences interpersonal trust has been considered since Aristotle. According to Lane Cooper (1932, p. xxii), Aristotle's concept of ethos was a "favorable disposition" of the listener toward the speaker; it implied a "habit of choice" or a "disposition to act in a certain way." Cooper (1932, pp. 8-9) also indicates that Aristotle used the term to denote the character of the speaker as perceived by the listener. This concept of ethos appears to denote the degree of trust a listener is willing to place in the message of a speaker; it reflects a willingness to rely upon or show

confidence in the speaker and his message.

Hovland, Janis, and Kelley (1953, p. 21) defined source credibility as the combined effect of:

1. the extent to which a communicator is perceived to be a source of valid assertions (his expertness), and,
2. the degree of confidence in the communicator's intent to communicate the assertions he considers most valid (his trustworthiness).

Experimental research has provided some information on the question which tends to disagree to some extent with the Hovland, Janis, and Kelley model of credibility. According to Schweitzer and Ginsburg (1966, p. 99), factors other than expertness and trustworthiness are required for source credibility. In a study to determine the characteristics of communicators that affect recipients' judgments of the communicator's credibility, they concluded:

The present results differ on many points from what would be predicted by the Hovland, Janis, and Kelley model....Many factors in addition to "expertness" and "trustworthiness" are required to describe either of the communicators. Although no claim is made for the stability of the particular factors that emerged in this analysis, it does seem clear that the Hovland, Janis, and Kelley model is incomplete.

Recently Giffin (1967a, p. 107) reported a detailed analysis of studies of interpersonal perceptions as they relate to interpersonal trust. The evidence is not entirely clear; however, interpersonal trust appears to be influenced by a listener's perceptions of the following characteristics of a speaker:

1. Expertness relevant to the topic under discussion; this expertness may be in the form of pertinent information, degree of ability or skill, or validity of judgment.
2. Reliability as an information source; this reliability may be perceived as dependability, predictability, or consistency.
3. Intentions toward the trusting person, perceived by him as favorable or unfavorable.
4. Dynamism, that is, communication behavior perceived as more active than passive.
5. Personal attractiveness of the speaker for the listener.

Situational Conditions. A second set of variables which appear to influence interpersonal trust seems best identified as factors inherent in the interpersonal situation. These include:

1. Power relationships. Power is here defined as the ability to influence another person's behavior; this ability may involve leadership, authority, persuasion, use of sanctions, or physical control (Solomon, 1960).

2. Possibility of gain through trust violation. In a situation where it appears to p that o may stand to gain no significant advantage by violation of p's trust of o, p will tend to trust o more (Solomon, 1960).

3. Presence of an external threat. It is commonly believed that two or more persons will trust each other more when together they are faced with an external threat (Farr, 1957).

4. Social conformity pressure. Research on social conformity has not focused upon interpersonal trust as such.

However, from the research reports by Asch (1951, 1958), Crutchfield (1954, 1955, 1958, 1959, 1962), and Tuddenham (1959, 1961), it appears that interpersonal trust of the group majority is involved and that a person seems to be influenced to trust others when they present a strong majority opinion.

Personality Characteristics of the Trusting Person. Personality dimensions which influence trust of another person are suggested primarily by experimental studies of Deutsch (1960) and by social conformity studies of Crutchfield (1955). Utilizing a two-person non-zero-sum game, Deutsch (1960, p. 140) concluded:

There was a striking tendency for Ss (subjects) who were trusting to be trustworthy and for Ss who were suspicious to be untrustworthy. F scale scores correlated significantly with game behavior; Ss with Low scores tended to be trusting and trustworthy while Ss with High scores tended to be suspicious and untrustworthy in their game choices.

As mentioned above (cf. p. 6), even though research on social conformity has not focused upon interpersonal trust as such, it appears that a person is influenced to trust others when they present a strong majority opinion. In his experimental measuring of conformity tendencies, Crutchfield (1955, p. 194) reported that,

as contrasted with the high conformist, the independent man shows more intellectual effectiveness, ego strength, leadership ability and maturity of social relations, together with a conspicuous absence of inferiority feelings, rigid and excessive self-control, and authoritarian attitudes.

### Factors Which are Influenced by Variations in Interpersonal Trust

Variables which are influenced by changes in interpersonal trust have not been given a great amount of study, although some work has been done by students of small group interaction. The findings of small group studies which are related, have been reviewed in detail in a recent paper published by Giffin ( 1967b).

This research on small group interaction has tended to show that changes in interpersonal trust apparently produced changes in:

1. Interpersonal Relationships. An important result of increased interpersonal trust which is implied in the studies by Deutsch (1958) and his colleagues is increased cooperation.

From work reported by Gibb (1961) it appears that the following interpersonal relationships are changed as interpersonal trust is increased: (1) acceptance of legitimate influence by others, (2) acceptance of perceived motives of others, (3) acceptance of diverse (deviant) behavior by others, and, (4) shifting of emphasis on control over process rather than over people.

2. Personality Dimensions. The work of Gibb (1961) indicates that two very important changes may occur in the personality of a person as his trust of others is increased: (1) greater feelings of personal adequacy, and/or (2) easier acceptance of one's own feelings and conflicts.

### Historical Background

Two men who have given special attention to the problem of trust are Morton Deutsch and Jack Gibb. In each case their research has stretched over a number of years.

Deutsch began investigating cooperation and competition in 1949 and in the mid-fifties his concern turned more to interpersonal trust. In 1958 he reported that he was the first to study trust in the laboratory. He offered an hypothesis dealing with the basic elements of his definition of trust, namely, expectation and the ratio of anticipated positive consequences to anticipated negative consequences. This hypothesis asserted that as an individual becomes more confident that his trust will be reciprocated, the probability of his engaging in trusting behavior will increase; and as the ratio of anticipated positive consequences to anticipated negative consequences increases, the probability of his engaging in trusting behavior will increase. The aims of these studies were (1) to ascertain if the experimental conditions would elicit trust or suspicion, and (2) to study further some of the conditions which might affect trust.

In his experiments, Deutsch utilized a two-person non-zero-sum game. Whether a given person gained or lost from the situation was determined by the choices made by both his partner and himself. These experiments involved persons who were led to have one of three motivational orientations:

1. Cooperative - each person was led to feel that both he and the other person were concerned with the welfare of the other.

2. Individualistic - each person was led to feel that he must only be concerned with his own welfare.
3. Competitive - each person was led to feel that he must do as well as he could for himself and also better than the other.

The experiments were conducted under four different conditions;

1. No communication between the two persons.
2. Communication - the persons were allowed to communicate before choosing.
3. Non-simultaneous - the first person made a choice, and the choice made by him was announced to the other person before this latter one made his choice.
4. Reversibility - both persons announced their choices, and either or both could change; they could continue to change as long as they desired.

In all four experimental conditions a cooperative orientation led primarily to a cooperative choice, resulting in mutual gain. A competitive orientation led to choices primarily influenced by specific situational conditions. Under non-simultaneous and non-communication conditions the results of the individualistic and competitive orientations were similar, whereas under conditions of communication and reversibility the individualistic and cooperative orientations were similar.

These results suggest that when communication is absent and one has to choose without knowledge of the other person's choices, a cooperative orientation will tend to produce trusting and trustworthy behavior. On the other hand, a competitive orientation will tend to result in suspecting

rather than trusting behavior, even when situational factors such as communication possibilities are encouraging. In contrast to both the cooperative and competitive orientations, which are not influenced by situational factors to any great extent, the individualistic-oriented person is influenced greatly by situational determinants.

In 1958 Deutsch also studied 'trust and suspicion' and drew the following conclusions:

1. It is possible to capture in the laboratory the phenomena of 'trust' and to study experimentally some of the variables which influence the tendency to engage in 'trusting' and 'responsible' behavior.
2. There are social situations which do not allow the possibility of rational behavior as long as the conditions for mutual trust do not exist.

Solomon (1960), a student of Deutsch, conducted a research on the influence of certain types of power relationships and motivational strategies upon the development of trust. His findings supported Deutsch's theory of trust in the following ways:

1. A subject is more likely to engage in trusting behavior as the amount of power he has over the trusted person is increased.
2. Under conditions of equal power, a subject tends to respond to unconditional cooperation by another person with exploitative game behavior, whereas he tends to cooperate more with a conditionally cooperative other person.

Prior to the publication of Solomon's findings, Deutsch (1958) had already noted that the results of this study indicated that an individual is more likely to trust another if



he believes the other person has nothing to gain from untrustworthy behavior and if he perceives that he is able to exert some control over the other's outcome.

Farr (1957), another of Deutsch's students, did research to determine if two individualistic-oriented persons in the game situation would trust each other more if they each knew that they both disliked a third player. The results were that the introduction of a disliked third person increased the tendency to make trusting choices.

From the work of Deutsch and his students the following inferences concerning trust in the communication process may be drawn:

1. A cooperative or non-cooperative orientation on the part of the listener will influence his tendency to trust or not to trust a speaker.
2. Communication between the speaker and listener will tend to increase the likelihood of interpersonal trust between them, especially if they express their intentions and expectations regarding interpersonal trust, and indicate their plan of reacting to violations of their expectations.
3. Increased social power over the communicator by the listener increases the likelihood of the listener trusting the communicator.
4. A listener will tend to trust a speaker if he knows they both dislike a third person.

While Deutsch approached this matter experimentally, Jack Gibb approached it analytically. Although he started his research efforts in 1953, it was only in 1961 that he began to focus publically on trust and its development. In

1962 he emphasized the reduction of defensive behavior in groups which seemed to be caused, in part, by distrust.

The concern for acceptance, according to Gibb (1964), p. 280), is the formation of trust and acceptance of self and others. This trust of self and others is facilitated by a supportive climate or a climate of trust. A forerunner of Gibb's concept of supportive climate was Rogers' (1951) concept of acceptance or psychological safety. In a more recent work (1961), Rogers emphasized a relationship between self-trust, self-awareness, and self-acceptance.

Gibb's work is still in progress. His own summary (1961) of his views on defensive and supportive communication behavior was written especially for The Journal of Communication. His views were developed "over an eight year period with recordings of discussion in varied settings," (1961, p. 142). The inference for his theory of personal trust in the communication process is that interpersonal trust is facilitated by communication which is perceived as descriptive rather than evaluative, oriented toward problems instead of toward interpersonal control, spontaneous rather than strategic, empathic rather than neutral, indicative of an attitude of equality instead of superiority, and expressive of provisionally held viewpoints rather than dogmatic certainties.

From these studies, then, it becomes apparent that in the communication process, interpersonal trust takes on

great importance. This is especially probable where the members are interdependent, that is, where the contribution of an individual is viewed as an integral part for achieving the task of a group, or, as Haney describes it (1967, p. 9), "when the performance of one person affects and is affected by the performance of others."

#### Concept of Leadership

Until just a few years ago the problem of leadership study was confused by a lack of clear conceptualization of leadership behavior (Stogdill, 1948, pp. 35-71). A major stride was taken in leadership research with a new emphasis on situation-oriented leadership behavior. Stogdill (1948, pp. 64-65) stated this principle as follows:

It is not especially difficult to find persons who are leaders. It is quite another thing to place these people in different situations where they will be able to function as leaders. Thus, any adequate analysis of leadership involves not only a study of the leader but also the situation in which leadership acts occur.

A similar additional forward step was taken by a new emphasis on the interpersonal relations between a leader and a follower. Thus, leadership became defined as the behavior of an individual when he is directing the activities of a group toward a shared goal (Hemphill & Coons, 1957, p. 7). Two major problems were attacked: (1) isolation of behavior of an individual which influenced other group members, and (2) classification of these broad areas of interpersonal behavior into useful categories. Early experimental work pro-

duced items involving nine categories: this instrument was known as the Leadership Behavior Description Questionnaire and is described in detail by Hemphill and Coons (1957).

Halpin and Winer (1957) were interested in the interaction process and used this questionnaire in experimental studies. From their data they derived two major dimensions of leadership behavior: (1) consideration of group members, and (2) initiation of structure of member activity toward accomplishment of a group task.

Consideration of group members means the extent to which the leader, while carrying out leadership functions, is considerate of other group members. This dimension is best represented by him doing personal favors for group members, looking out for the personal welfare of members, not refusing to explain his actions, treating all members as his equal, being friendly and approachable, and finding time to listen to group members. This dimension is associated with behavior indicative of friendship, mutual trust, respect, and warmth in relating to others.

Initiating the structure of member activity toward accomplishment of a group task is best represented by the leader asking that members follow standard procedures of operation, maintaining definite standards of performance, making sure his part in the group is understood, trying out his new ideas on the group, making his attitude clear to the group, and assigning group members to particular tasks. This

dimension is associated with behavior which indicates that the leader, to a marked degree, organizes and defines the relationship between himself and the members of his group. He tends to define the role which he expects each member to assume, and endeavors to establish well defined patterns of organization, channels of communication, and ways of getting jobs done. This dimension represents a basic and unique function of leadership, while the dimensions of consideration represents facilitating means for accomplishing this end.

#### Present Project

Although Deutsch in his laboratory studies and Gibb with his clinical studies have produced a great amount of significant material for the study of trust in the communication process, there also exists a need to study the process of trust in an on-going, real-life situation. A review of this need was presented in a paper to the Speech Association of America by Giffin (1966, p. 4) when he said:

Golembiewski (1962) noted that the field study allows the researcher to gather data from a real-life, on-going, task-oriented group, whereas, the laboratory setting must induce processes that normally take place in a natural-state group. There is the question of the degree to which the processes in the laboratory context correspond to processes in natural-state, real-life contexts.

Daniel Katz (1953) noted three important advantages of the field study. The first is that the field study tends to continue over a period of time, so that it is possible to maintain continued observation....A second advantage of the field study is the opportunity for direct observation of interaction (communication) and of social relationships....A third advantage of the field study is the important resource of going beyond measures obtained from a single instrument.

At the present time there is a research project employing the field study method to study "interpersonal trust in task-oriented small groups" headed by Dr. Kim Giffin, director of the Communication Research Center at the University of Kansas in Lawrence. The members of this research project have as their first objective to determine those variables which influence the degree of interpersonal trust in "real-life" task-oriented small groups. Their second objective is to determine the relationship of varying degrees of interpersonal trust upon (1) group interaction, (2) group leadership, (3) group task achievement, and (4) group member-satisfaction.

In view of the research of Deutsch (1958), interpersonal trust in the communication process has been defined as reliance upon the communication behavior of another person in order to achieve a desired but uncertain objective in a risky situation. Newcomb (1953, pp. 149-50) has described the relationship involved in this communication process as an orientation or an attitude. Thus, Giffin (1967b, p. 225) views the relationship between a trusting person and the object of his trust as an orientation or an attitude. It is for this reason that this writer posits the first part of his major hypothesis, namely, that the amount of interpersonal trust in a group will be related to the amount and type of communication which occurs in the group.

One variable which appears to influence interpersonal trust is situational conditions. This variable includes

power relationships - the ability to influence another person's behavior; part of this ability is leadership (Solomon, 1960). Stogdill's (1948) research on leadership has led him to place an emphasis on situation-oriented leadership behavior. One of the factors which is influenced by variations in interpersonal trust is interpersonal relationships. From the work of Gibb (1961) it seems that these relationships include the acceptance of legitimate influence by others. Halpin and Winer (1957), in their research, derived two major dimensions of leadership behavior. One of these dimensions, consideration of group members, is especially associated with interpersonal trust. It is in view of these research efforts that this writer posits the second part of his major hypothesis, namely, that the amount of interpersonal trust in a group will be related to the amount and type of leadership behavior in the group.

## CHAPTER II

### METHODS OF PROCEDURE

#### Subjects

The members of this small, task-oriented group which was chosen for this particular research were also members of a larger religious community, namely, a Benedictine monastery. Among other tasks, the members of this religious community conducted a seminary for priesthood students. These students lived in residence halls on the campus and in each of these halls lived two or three priests (members of the community) who are known as counselors. Each counselor was responsible for any disciplinary matters pertaining to the students living in his particular wing, as well as being available to all students for counseling and/or spiritual direction. These counselors met every week to discuss task-related matters.

This group of counselors were the men with whom this writer carried out his research. As a small group, all members of the same religious community, with like job responsibilities and who met on a regular basis, the following criteria were met:

1. Task-oriented: the group members have a goal involving some mutual need other than social enjoyment or psycho-therapy; it involves problem-solving, policy formation, group member self-improvement and satisfaction, and task improvement.
2. Small in size: the group consists of nine persons.



3. Psychological membership: the members have interdependent role relationships and a common set of values or norms which regulate their behavior in matters of concern to the group. (This is further emphasized by the fact that through religious vows these men have established a psychological contract with the community and with one another.)
4. A cooperative attitude toward the objectives of this research project.

The selection of this particular group was based on the belief that the group was representative of small task-oriented groups. Thus, the data derived from the results of this case study could be generalized to all groups which fit these norms. To insure this fact, the following measurement tools were used to collect the normative data:

1. Bales' (1950) Interaction Process Analysis
2. Cattell's (1957) 16 P.F. (Personality Factor) Questionnaire
3. Hemphill's (1956) Group Dimensions Description Questionnaire

In addition to the measurement tools used to collect normative data, instruments were used to determine the relationship of interpersonal trust in group communication to the selected possibly related variables. These measurement tools were:

1. Bales' (1950) Interaction Process Analysis
2. Giffin & Wilson's (1967) Scales of Interpersonal Trust
3. Halpin & Winer's (1957) Leadership Behavior Description Questionnaire

Possibly Related Variables Which Can Be Reliably Measured  
Bales' (1950) Interaction Process Analysis Scales. An interactionist observing a group is concerned with the frequency of interaction, the participants in interaction, the initiation of interaction, the ordering of interaction, the durations of actions, and the interruption of actions. Some are interested in observing more than interaction patterns, however, and place enough emphasis on feelings, intentions, and meanings, for them to earn consideration as a separate group. Bales developed a set of twelve paired categories into which all communication behavior of a group can be analyzed (Table 1, on the next page): (1) shows solidarity, (2) shows tension release, (3) expresses agreement, (4) gives suggestions, (5) asks opinions, (6) gives orientation, (7) asks for orientation, (8) asks for opinions, (9) asks for suggestions, (10) expresses disagreement, (11) shows tensions, and (12) shows antagonism.

In brief, the heart of this method is a way of classifying direct, fact-to-face interactions that take place, act by act, and a series of ways of summarizing and analyzing the resulting data so that they yield useful information. This set of categories is based on two very important assumptions (Bales, 1950, pp. 34-35): (1) All small groups are similar in that they involve a plurality of persons who have certain common task problems arising out of their relation to an outer situation, and certain problems of social and emotional re-

TABLE 1

BALES' SYSTEM OF CATEGORIES USED IN OBSERVATION  
AND THEIR MAJOR RELATIONS

Social-emotional area: Positive	A	1 <u>Shows Solidarity</u> , raises other's status, gives help, reward:	←
		2 <u>Shows tension release</u> , jokes laughs, shows satisfaction:	
		3 <u>Agrees</u> , shows passive acceptance, understands, concurs, complies:	
Task area: Neutral	B	4 <u>Gives suggestions</u> , direction, implying autonomy for other:	←
		5 <u>Gives opinion</u> , evaluation, analysis, expresses feeling, wish:	
		6 <u>Gives orientation</u> , information, repeats, clarifies, confirms:	
	C	7 <u>Asks for orientation</u> , information, repetition, confirmation:	a ←
		8 <u>Asks for opinion</u> , evaluation, analysis, expression of feeling:	b ←
		9 <u>Asks for suggestion</u> , direction, possible ways of action:	c ←
Social-emotional area: Negative	D	10 <u>Disagrees</u> , shows passive rejection formality, withholds help:	d ←
		11 <u>Shows tension</u> , asks for help, withdraws out of field:	e ←
		12 <u>Shows antagonism</u> , deflates other's status, defends or asserts self:	f ←

## KEY

- |                                  |                              |
|----------------------------------|------------------------------|
| a. Problems of Communication     | f. Problems of Reintegration |
| b. Problems of Evaluation        | A. Positive Reactions        |
| c. Problems of Control           | B. Attempted Answers         |
| d. Problems of Decision          | C. Questions                 |
| e. Problems of Tension Reduction | D. Negative Reactions        |

relationships arising out of their contact with each other;

(2) Each act of each individual in the group can be analyzed with regard to its bearing on these problems. This set of categories provides a systematic framework in terms of which this interaction process analysis can be made.

This set of categories, then, is concerned with interaction content or process content as distinguished from topical content. It is concerned with aspects of interaction so general that they will appear in communication between the members of any small group, regardless of the idiosyncratic content of the topic of their discussion or the kind of concrete problems or subjects with which they may be dealing. Further, in addition to the formulation of behavior that always appears, the list is concerned with certain variations of behavior which may not be frequent in certain groups but which potentially can and do appear under certain conditions.

This writer taped each of the eight meetings and later scored the interactions of the group members on scoring sheets. Having obtained the scores for the total number of interactions during these meetings, he compared this data with published generalizations (Bales, 1965, p. 447), so as to obtain a profile of his research group.

Having obtained an average score for each of the twelve factors for every group member, rank correlations were run for each of these factors against the two factors of the trust scale (cf. p. 26), namely, trust of others and being trusted by others; and against the two factors of the leadership scale

(cf. p.33 ), namely, initiating structure and consideration.

Basically, there are two reasons why this writer used the Bales' Interaction Process Analysis for his research. First, as a method for classifying direct, face-to-face interactions within a group and for summarizing and analyzing the resulting data, Bales' Interaction Scales are very widely accepted among researchers as reliable. Secondly, this instrument was constructed for small groups 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, either at the time or in later questioning, give some reaction to each of the others as an individual person, even though it be only to recall that the other was present.

This particular research group was such a group and, therefore, since this is a reliable instrument, it seemed logical to this writer to choose it for analyzing interaction or process content.

> In order to determine the consistency of internal reliability of this writer's perceptions in the use of Bales' (1950) Interaction Process Analysis, rankings were compared to two other judges, both of whom were familiar with the use of the instrument. A tape-recording of a Speech I-B staff meeting (held at the University of Kansas during the fall of 1967) was listened to by the three judges, all of whom has a personal acquaintance with the members of the group and were

able to identify readily each member by his voice. Group interaction was scored by each judge, using the Bales' Score Sheet. Table 2 lists the pertinent scores which indicate that all three similarly perceived the group interaction.

TABLE 2

THE KENDALL COEFFICIENT OF CONCORDANCE COMPUTATION  
OF SPEECH I-B STAFF MEETING

Dimensions	2	3	5	6	7	8 (Bales)	Judges
Scorings	2	3	3	13	14	2	A
Rankings	1.5	3.5	3.5	5	6	1.5	A
Scorings	2	4	3	15	14	3	B
Rankings	1	4	2.5	6	4	2.5	B
Scorings	3	4	3	15	15	2	C
Rankings	2.5	4	2.5	5.5	5.5	1	C

$\Sigma$ Rankings 5 11.5 8.5 16.5 16.5 5 = 63 (M=10.5)

$$\underline{\underline{S}} = 30.25 + 1 + 4 + 36 + 36 + 30.25 = \underline{\underline{137.50}}$$

$$W = \frac{S}{1/12K^2 (N^3 - N) - K \sum T}$$

$$W = \frac{137.50}{1/12 \times 9 \times 210 - 3 \times 2.5}$$

$$W = \frac{137.50}{150} = .916$$

(S = 137.50 SIGNIFICANT @ .01 LEVEL)

Giffin and Wilson's (1967) Scales of Interpersonal Trust. A pool of sixty-one items was developed for analysis by the Likert method of summated ratings - a technique of attitude scaling based upon the sum score of all the responses of an individual. Ideas for the items were gathered from the literature and from four groups of respected authorities in the field of group interaction. The original list was revised for purposes of clarity and avoidance of duplication; a pre-test was administered to the four groups of subjects, identified above, and these subjects were then interviewed to provide additional clarity of the items.

The sixty-one items were then randomly arranged into a questionnaire to be presented to one hundred and one subjects. The analysis of the data consisted of the following steps: the t-test was applied to determine the power of discrimination of each item; factor analysis was used to determine which items appeared to be measuring the same latent variable, finally, principle component analysis and a Varimax rotation were used to determine clusters of items.

For the formation of a useable scale, the twenty-six items with t-scores above 6.000 appeared to represent a well-balanced measuring instrument. Each item was statistically significant well beyond the .01 level of confidence, and the negative-positive nature of the items was at a good balance with twelve negative and fourteen positive items. In addition, the content of the items formed an acceptable distribution.

The twenty-six item scale, which this writer used, presents an instrument which is easily administered and scored. It can be given in a short period of time, is easily understandable to the testee, and appears to hold his interest.

At this time an estimation of the validity of this instrument can only be based upon the content of the items. This continues to be part of the expansion and refinement of the concept of trust.

This scale was answered once by each group member for every other group member with the intention of measuring (1) the amount of trust that each member of the group displayed for every other member, and (2) the degree that each group member was trusted by the other group members. After obtaining the average of every group member for each of these two factors, this writer used the data in the statistical procedure of rank correlations. First of all, he ran correlations of each of these two trust factors against the two factors of consideration and initiating structure as found in the Halpin and Winer Leadership Questionnaire (cf. p. 33), seeking any statistical significance between (1) trust of others and consideration of others, (2) trust of others and initiating structure, (3) trusted by others and consideration of others, and (4) trusted by others and initiating structure. Thirdly, this writer ran rank correlations between the two trust factors of this scale and the twelve categories of Bales' Interaction Analysis Scale.



Cattell's (1957) Sixteen Personality Factor Questionnaire.

Cattell's 16 P.F. Questionnaire was constructed during the years of 1949-57 to measure or determine the different factors of personality of those persons sixteen years of age or older.

Researchers who are associated with respected studies and theories of interaction in small groups have struggled with the need to describe the personality dimensions of the group members more accurately. One of the major problems is this: if one individual personality in the group varies widely from the norm, the influence of that single personality seems to be such that a fairly average group's behavior becomes something definitely not average. A good explication of this point is that presented by Golembiewski (1962, pp. 273-74):

Perhaps the most promising of other avenues of exploration of the interaction of personality and small-group properties is the work of Cattell and his associates with a comprehensive set of personality dimensions isolated by factor analysis...The general pattern of results of its use by Haythorn (1953) in the study of the effect of the individual's personality on group characteristics demonstrates that the 16 P.F. Questionnaire usefully describes member characteristics as they influence (group) structural and style properties.

This questionnaire was administered once to the present group. Having obtained both the raw scores and sten scores for the sixteen factors, this writer used the Kolmogorov-Smirnov One-Sample Test to obtain his information and to compare it with published norms.

The reason for using Cattell's 16 P.F. Questionnaire for obtaining personality dimensions of the group-members is satisfactorily explained by Golembiewski.

Hemphill's (1956) Group Dimensions Description Questionnaire.

The Group Dimensions Description Questionnaire is designed to yield a description of an individual's perception relation to a group.

Hemphill gathered concepts of group characteristics from the available literature, and through factor analysis reduced this list to thirteen dimensions. According to Hemphill's system a group's characteristics may be described by choices made by the group members on scales of "definitely true" to "definitely false" for 150 statements calssified into the following dimensions: (Hemphill, pp. 2-4):

1. Autonomy is the degree to which a group functions independently of other groups and occupies an independent position in society. It is reflected by the degree to which a group determines its own activities, by its absence of allegiance, deference and/or dependence relative to other groups.

2. Control is the degree to which a group regulates the behavior of individuals while they are functioning as group members. It is reflected by the modifications which group membership imposes on complete freedom of individual behavior and by the amount of intensity of group-derived government.

3. Flexibility is the degree to which a group's activities are marked by informal procedures rather than by adherence to established procedures. It is reflected by the extent to which duties of members are free from specification through custom, tradition, written rules, regulations, codes of procedure, or even unwritten but clearly prescribed ways of behaving.

4. Hedonic Tone is the degree to which group membership is accompanied by a general feeling of pleasantness or agreeableness. It is reflected by the frequency of laughter, conviviality, pleasant anticipation of group meetings, and by the absence of griping and complaining.

5. Homogeneity is the degree to which members of a group are similar with respect to socially relevant characteristics. It is reflected by relative uniformity of members with respect to age, sex, race, socio-economic status, interests, attitudes, and habits.

6. Intimacy is the degree to which members of a group are mutually acquainted with one another and are familiar with the personal details of one another's lives. It is reflected by the nature of topics discussed by members, by modes of greeting, forms of address, and by interactions which presuppose a knowledge of the probable reaction of others under widely differing circumstances, as well as by the extent and type of knowledge each member has about other members of the group.

7. Participation is the degree to which members of a group apply time and effort to group activities. It is reflected by the number and kinds of duties members perform, by voluntary assumption of non-assigned duties and by the amount of time spent in group activities.

8. Permeability is the degree to which a group permits ready access to membership. It is reflected by absence of entrance requirements of various kinds, and by the degree to which membership is solicited.

9. Polarization is the degree to which a group is oriented and works toward a single goal which is clear and specific to all members.

10. Potency is the degree to which a group has primary significance for its members. It is reflected by the kind of needs which a group is satisfying or has the potentiality of satisfying, by the extent of readjustment which would be required of members should the group fail, and by the degree to which a group has meaning to the members with reference to their central values.

11. Stability is the degree to which a group persists over a period of time with essentially the same characteristics. It is reflected by the rate of membership turnover, by frequency of reorganizations and by constancy of group size.

12. Stratification is the degree to which a group orders its members into status hierarchies. It is reflected by

differential distribution of power, privileges, obligations, and duties, and by asymmetrical patterns of differential behavior among members.

13. Viscosity is the degree to which members of the group function as a unit. It is reflected by absence of dissension and personal conflict among members, by absence of activities serving to advance only the interests of individual group members, by the ability of the group to resist disrupting forces, and by the belief on the part of members that the group does function as a unit.

Each group member filled out this questionnaire once. Having obtained both the raw scores and the stanine scores, this writer used the data by means of the Kolmogorov-Smirnov One-Sample Test to obtain the maximum deviation within this group and to compare it with published norms.

Although the Hemphill scales are not perfect, they are valuable for collecting data on such a wide range of group dimensions. Three problems have not been solved satisfactorily. First, the dimensions are not entirely independent. Two independent factor analyses, one by Hemphill (1954) and one by Borgatta, Cottrell and Mayer (1956) failed to establish such independence. Second, observer's ratings are not highly in agreement; some of the studies reported by Hemphill (1956) reveal noteworthy differences between members' ratings of their own group. Third, rather obvious differences between groups are not always revealed by use of Hemphill's scales (Hemphill, 1956).

But the fact that norms are available makes these scales valuable. These norms are based on responses of 950 respondents each of whom described a group in which he was a member of answering the questionnaire. The respondents were participants in one of five research studies in which the Group Dimensions Description Questionnaire was utilized as one of the research instruments or tools.

Halpin & Winer's (1957) Leadership Behavior Description Questionnaire. Leadership has been defined by some researchers as the behavior of an individual when he is directing the activities of a group toward a shared goal (Hemphill & Coons, 1957, p. 7). Within the context of this definition, the Ohio State Leadership Studies have approached the topic of leadership by examining and measuring performance or behavior. Halpin and Winer have developed a short form scale which is a revised form of the Leadership Behavior Description Questionnaire developed at Ohio State University by Stogdill and Coons (1957) for measuring leadership behavior within a group. The thirty questions of this questionnaire all belong to the two dimensions of consideration and initiating structure (cf. pp. 14-15).

This questionnaire was answered once by each group member for every other member, responding on a scale from "always" to "never" to thirty questions pertaining to these two dimensions of leadership behavior. This writer used the data in rank correlations to seek any statistical signifi-

cance at the .05 level. First he determined four rank correlations between the factors of this questionnaire and the dimensions of the Giffin-Vance Trust Scale: (1) Trust of others and consideration of others, (2) trust of others and initiating structure, (3) trusted by others and consideration of others, and (4) trusted by others and initiating structure. Secondly, this writer ran rank correlations between the two dimensions of this leadership questionnaire and each of the twelve categories of Bales' Interaction Analysis Process Scale to seek any statistical significance.

This short form of the LBDQ with two dimensions was constructed from a questionnaire consisting of 130 items broken into four dimensions. Attempts to improve the contribution of the two dimensions of production emphasis and social awareness proved unsuccessful and so efforts have concentrated upon developing the best possible short scales for describing consideration and initiating structure. The reliability of this short form is found to be satisfactorily high for practical use (Halpin & Winer, p. 51). The two dimensions have been found to be correlated to a moderate degree, but are sufficiently independent to permit the use of the consideration and initiating structure scales as measures of different kinds of behavior.

#### Data Collection

In order to test the hypothesis of this study, data was collected on the following groups of variables by means

of the above-mentioned measurement tools:

1. 12 communication dimensions (Bales' IPA)
2. 16 personality factors for each group member (Cattell's 16 P.F. Questionnaire)
3. 2 trust dimensions (Giffin & Wilson's Scales)
4. 13 group dimensions (Hemphill's Scales)
5. 2 leadership behavior dimensions (Halpin & Winer's Scales)

Data was collected once on the following thirty-three dimensions for this research group:

1. Cattell's (1957) Sixteen Personality Factor Questionnaire
2. Giffin & Wilson's (1967) Scales of Inter-personal Trust
3. Hemphill's (1956) Group Dimensions Description Questionnaire
4. Halpin & Winer's (1957) Leadership Behavior Description Questionnaire

This data was collected only once for this particular research group because it was the opinion of this writer that such dimensions would not change significantly so long as the membership of the group did not change.

Data was collected on Bales' (1950) Interaction Process Analysis each time that the group met for a series of eight meetings. Thus, data was collected on twelve dimensions of group behavior which would change significantly each time that the group met.

#### Data Treatment

Data treatment consisted of using two statistical procedures: Spearman Rank Correlation Coefficient and Kolmogorov-



Smirnov One-Sample Test. (For details, cf. Siegel, 1956, pp. 47-51, 202-213.) This writer used the Spearman Rank Correlation Coefficient to obtain rank correlations between (1) the twelve categories of Bales' IPA and the two dimensions of trust, (2) the two dimensions of trust themselves, (3) the twelve categories of Bales' IPA and the two dimensions of leadership behavior, and (4) the two dimensions of trust and the two dimensions of leadership behavior. He thus ran a total of fifty-two rank correlations. The efficiency of the Spearman Rank Correlation is about ninety-one per cent (Siegel, 1956, p. 213).

This writer used the Kolmogorov-Smirnov One-Sample Test to obtain (1) the raw scores and standard ten scores for the sixteen personality dimensions and to compare these scores to published norms, (2) the raw scores and the standard nine scores for the thirteen general group dimensions and to compare these scores to published norms. By making this comparison through the Kolmogorov-Smirnov One-Sample Test, this writer determined whether the scores in the samples can reasonably be thought to have come from a population having the theoretical distribution (established published norms).

The Kolmogorov-Smirnov One-Sample Test was chosen by this writer because he wanted to compare an observed distribution of scores on an ordinal scale with a theoretical distribution to seek any statistical significance at the .05 level. When samples are small, such as this particular

research, the Kolmogorov-Smirnov One-Sample Test appears to be powerful (Siegel, 1956, p. 51). Furthermore, upon becoming familiar with this test, this writer realized it was within the limits of his own statistical capabilities, and so, with the consent of his thesis adviser, he chose to use it.

## CHAPTER III

### DATA RESULTS AND INTERPRETATION

#### Normative Data

For this study to have any generalizability, it was necessary to establish the fact that this particular research group was representative of small task-oriented groups. To decide this, certain measurement tools were used to collect the normative data:

1. Bales' (1950) Interaction Process Analysis
2. Cattell's (1957) 16 P.F. (Personality Factor) Questionnaire
3. Hemphill's (1956) Group Dimensions Descriptions Questionnaire

Communication Interactions. First of all, this writer obtained the scores for the total number of interactions during eight sessions, each lasting one hour, according to the twelve categories of Bales' (1950) Interaction Process Analysis, and compared this data with his published generalizing profiles (Bales, 1965, p. 447). This information is in Table 3. Although Bales stated that his profile is "more or less typical of larger aggregates under laboratory standard conditions," (Bales, 1965, p. 447), it should be noted that these published percentage rates are the averages of two five-man groups - a "satisfied" and a "dissatisfied" group, each working on a task. Keeping this serious limitation in mind, comparing this data with these published generalizations can

only indicate that, with some exceptions, the interactions of this group appeared to be representative of small task-oriented group interaction. The possible exceptions are the categories "shows tension release," "disagrees," "gives opinion," and "gives orientation."

TABLE 3

TOTAL INTERACTIONS ACCORDING TO BALES' 12 CATEGORIES  
COMPARED WITH HIS PUBLISHED GENERALIZATIONS

Bales' 12 Categories	Total Interactions		Published Generalizations
1. Shows solidarity	15	.53%	.7%
2. Shows tension release	65	2.33	7.3
3. Agrees	151	5.41	17.0
4. Gives suggestions	275	9.87	5.9
5. Gives opinion	541	19.41	28.7
6. Gives orientation	1144	39.98	22.1
7. Asks for orientation	248	8.90	3.8
8. Asks for opinion	114	4.09	2.0
9. Asks for suggestion	105	3.76	1.1
10. Disagrees	131	4.70	8.13
11. Shows tension	0	0	1.8
12. Shows antagonism	27	.96	1.3

Personality Dimensions. After obtaining the raw scores and sten scores for the sixteen personality factors of Cattell's Questionnaire, this writer used the Kolmogorov-Smirnov One-

Sample Test to determine whether the scores for this particular group could reasonably be thought to have come from a population having the theoretical distribution. The point at which these two distributions, observed and theoretical, show the greatest divergence ( $D$ ) is determined and compared with the critical value of  $D$  at the .05 level for the theoretical distribution. Table 4 (cf. p. 41) supplies this information.

The critical value of  $D$  (greatest divergence) at the .05 level of significance for a group of nine members is .457. That the observed value of  $D$  for the sixteen personality dimensions is smaller than .457 indicates that the members of this group were representative of small task-oriented groups. Profiles comparing the mean scores of this group for the various dimensions with Cattell's published mean scores are presented in Table 5 on page 42. This normative data further supports the fact that the personality dimensions of the individual group members, as measured by Cattell's P.F. Questionnaire, indicate that this group can reasonably be thought to have come from a population which fits the established norms.

General Group Dimensions. After obtaining the raw scores for the thirteen dimensions of this questionnaire, this writer used the Kolmogorov-Smirnov One-Sample Test to determine whether the scores for this particular group could reasonably be thought to have come from a population having the theore-

TABLE 4  
PERSONALITY DIMENSIONS

Personality Factors	Observed value of D	Critical value of D
A: reserved - outgoing	.453	.457
B: less intelligent - more intelligent	.189	.457
C: affected by feelings - emotionally stable	.291	.457
E: humble - assertive	.159	.457
F: sober - happy-go-lucky	.220	.457
G: expedient - conscientious	.137	.457
H: shy - venturesome	.171	.457
I: tough-minded - tender-minded	.140	.457
L: trusting - suspicious	.260	.457
M: practical - imaginative	.260	.457
N: forthright - shrewd	.453	.457
O: placid - apprehensive	.269	.457
Q <sub>1</sub> : conservative - experimenting	.291	.457
Q <sub>2</sub> : group-dependent - self-sufficient	.173	.457
Q <sub>3</sub> : undisciplined self- conflict - controlled	.121	.457
Q <sub>4</sub> : relaxed - tense	.119	.457

tical distribution. The point of greatest divergence (D) between these two distributions was determined and compared

TABLE 5  
MEAN SCORES OF PERSONALITY DIMENSIONS  
COMPARED WITH PUBLISHED NORMS

Personality Factors	Norms	0	5	10	15	20	Mean Scores of group
A: reserved - outgoing	9.67						12.75
B: less intelligent - more intelligent	5.92						9.25
C: affected by feelings - emotionally stable	16.08						13.38
E: humble - assertive	13.51						12.25
F: sober - happy-go- lucky	13.38						10.88
G: expedient - conscientious	13.84						13.13
H: shy - venturesome	13.76						11.88
I: tough-minded - tender-minded	8.39						10.00
L: trusting - suspicious	8.83						8.75
M: practical - imaginative	12.25						11.75
N: forthright - shrewd	11.70						12.00
O: placid - apprehensive	7.33						9.63
Q <sub>1</sub> : conservative - experimenting	10.36						7.75
Q <sub>2</sub> : group-dependent - self-sufficient	10.12						9.50
Q <sub>3</sub> : undisciplined self- conflict - controlled	11.13						10.50
Q <sub>4</sub> : relaxed - tense	10.98						12.25

----- published norms      ————— this study

with the critical value of D at the .05 level for the theoretical distribution. Table 6 supplies this information.

TABLE 6  
GENERAL GROUP DIMENSIONS

Group Dimensions	Observed value of D	Critical value of D
1: Autonomy	.280	.432
2: Control	.230	.432
3: Flexibility	.330	.432
4: Hedonic Tone	.290	.432
5: Homogeneity	.660*	.432
6: Intimacy	.600*	.432
7: Participation	.290	.432
8: Permeability	.390	.432
9: Polarization	.220	.432
10: Potency	.380	.432
11: Stability	.600*	.432
12: Stratification	.170	.432
13: Viscidity	.400	.432
*Difference significant at .05 level of confidence		

In order for this research group to be one of a population from a theoretical distribution at the .05 level of confidence, the observed value of D for the group dimensions, as figured by means of the kolmogorov-Smirnov One-Sample Test,



needs to be smaller than .432. As is evident in Table 6, this group was representative except for the dimensions of homogeneity, intimacy, and stability. Profiles comparing Hemphill's norms for each dimension with the raw score mean of this group are presented in Table 7. For the most part,

TABLE 7  
MEAN SCORES OF GENERAL GROUP DIMENSIONS  
COMPARED WITH PUBLISHED NORMS

Dimensions	Norms 0 10 20 30 40 50 60	Mean Scores of group
1: Autonomy	31.90	32.66
2: Control	31.46	33.22
3: Flexibility	29.80	40.11
4: Hedonic Tone	17.72	18.77
5: Homogeneity	36.60	44.44
6: Intimacy	51.18	57.73
7: Participation	33.95	38.66
8: Permeability	35.00	28.33
9: Polarization	38.02	36.77
10: Potency	47.90	53.22
11: Stability	12.68	19.11
12: Stratification	36.02	34.66
13: Viscidity	38.90	44.55

----- published norms

————— this study

then, the dimensions identified by Hemphill (1956) indicate that this group can reasonably be thought to be representative of small task-oriented groups.

#### Data for Group Communication and Related Variables

Trust Dimensions. With the data collected by means of Giffin and Wilson's scales of interpersonal trust, this writer first wanted to see if any association existed between the two trust dimensions themselves, namely, (1) the amount of trust that each member of the group displayed for every other member, and (2) the degree that each group member was trusted by the other group members. For obtaining this, he ran a rank correlation between these two factors and found the value of  $r_s$  to be .57 . He then tested whether this observed value indicated a significant correlation between these two variables by comparing it with the critical value of  $r_s$  at the .05 level of significance. This latter value for a group of nine members is .600. From this it can be concluded that within this group there is no significant association between (1) the amount of trust that each member of the group displayed for every other member, and (2) the degree that each group member was trusted by the other group members.

Trust Dimensions Versus Communication Categories. This writer also ran rank correlations between each of the two trust dimensions and Bales' twelve communication categories, seeking statistical significance at the .05 level. Correlations between trust given to others and these communication behaviors

are presented in Table 8. From this data it is evident that within this particular group, at the .05 level of confidence, there was a significant relationship between trust for others and the communication behavior defined by Bales (1950) as "disagreeing." Table 8 is on the following page. Table 9, on page 48, indicates correlations between trust received from others and these communication behaviors. From this table it becomes evident that, at the .05 level of confidence, there was a significant relationship between being trusted by others of this particular group and giving suggestions, giving opinions, and giving orientation, as defined by Bales (1950).

Leadership Dimensions Versus Communication Categories. This writer ran rank correlations between each of the two leadership dimensions and Bales' twelve communication categories, seeking statistical significance at the .05 level. The correlations between the leadership dimension of initiating structure and these communication behaviors are found in Table 10 on page 49. As is evident from this data, there were no significant correlations between this leadership dimension and any of these communication behaviors. Table 11, found on page 50, presents the correlations between the leadership dimension of consideration and these same communication behaviors.

From the data in Table 11, then, it becomes evident that there was a significant negative correlation, at the .05 level of confidence, between the leadership dimension

TABLE 8  
CORRELATIONS BETWEEN TRUST GIVEN TO OTHERS  
AND COMMUNICATION BEHAVIOR

	Observed value of rs	Critical value of rs
1. Trust for others - shows solidarity	.044	.600
2. Trust for others - tension release	.019	.600
3. Trust for others - agrees	.400	.600
4. Trust for others - gives suggestion	.490	.600
5. Trust for others - gives opinion	.520	.600
6. Trust for others - gives orientation	.370	.600
7. Trust for others - asks for orientation	.370	.600
8. Trust for others - asks for opinion	.480	.600
9. Trust for others - asks for suggestion	.590	.600
10. Trust for others - disagrees	.650*	.600
11. Trust for others - shows tension	.000	.600
12. Trust for others - shows antagonism	.034	.600

\*Significant relationship at .05 level of confidence

TABLE 9  
CORRELATIONS BETWEEN TRUST RECEIVED FROM OTHERS  
AND COMMUNICATION BEHAVIOR

	Observed value of rs	Critical value of rs
1. Trusted by others - shows solidarity	.317	.600
2. Trusted by others - tension release	.380	.600
3. Trusted by others - agrees	.530	.600
4. Trusted by others - gives suggestions	.720*	.600
5. Trusted by others - gives opinion	.680*	.600
6. Trusted by others - gives orientation	.720*	.600
7. Trusted by others - asks for orientation	.230	.600
8. Trusted by others - asks for opinion	.520	.600
9. Trusted by others - asks for suggestion	.430	.600
10. Trusted by others - disagrees	.320	.600
11. Trusted by others - shows tension	.000	.600
12. Trusted by others - shows antagonism	.051	.600
*Significant relationship at .05 level of confidence		

TABLE 10  
CORRELATIONS BETWEEN INITIATING STRUCTURE  
AND COMMUNICATION BEHAVIOR

	Observed value of rs	Critical value of rs
1. Initiating structure - shows solidarity	.474	.600
2. Initiating structure - tension release	.330	.600
3. Initiating structure - agrees	-.040	.600
4. Initiating structure - gives suggestion	.020	.600
5. Initiating structure - gives opinion	.120	.600
6. Initiating structure - gives orientation	.080	.600
7. Initiating structure - asks for orientation	.270	.600
8. Initiating structure - asks for opinion	.120	.600
9. Initiating structure - asks for suggestion	-.060	.600
10. Initiating structure - disagrees	-.380	.600
11. Initiating structure - shows tension	.000	.600
12. Initiating structure - shows antagonism	.598	.600

\*Significant relationship at .05 level of confidence  
(there were no significant correlations on this table)

TABLE 11  
CORRELATIONS BETWEEN CONSIDERATION AND  
COMMUNICATION BEHAVIOR

	Observed value of rs	Critical value of rs
1. Consideration - shows solidarity	-.660*	.600
2. Consideration - tension release	-.563	.600
3. Consideration - agrees	-.800*	.600
4. Consideration - gives suggestions	-.340	.600
5. Consideration - gives opinion	-.270	.600
6. Consideration - gives orientation	-.350	.600
7. Consideration - asks for orientation	-.120	.600
8. Consideration - asks for opinion	-.320	.600
9. Consideration - asks for suggestion	-.780*	.600
10. Consideration - disagrees	.220	.600
11. Consideration - shows tension	.000	.600
12. Consideration - shows antagonism	-.484	.600

\*Significant relationship at .05 level of confidence

of consideration and the communication behaviors of showing solidarity, agreeing, and asking for suggestions.

Trust-Leadership Dimensions. Finally, this writer ran rank correlations between each of the two trust dimensions and each of the two leadership dimensions, seeking any statistical significance at the .05 level. This data is in Table 12.

TABLE 12  
CORRELATIONS BETWEEN TRUST AND  
LEADERSHIP DIMENSIONS

	Observed value of rs	Critical value of rs
1. Trust of others and consideration of others	.350	.600
2. Trust of others and initiating structure	.450	.600
3. Trusted by others and consideration of others	.200	.600
4. Trusted by others and initiating structure	.270	.600

\*Significant relationship at .05 level of confidence  
(there were no significant correlations on this table)

As is evident from this data, there was no significant relationship between any of these dimensions.



## CHAPTER IV

### CONCLUSION

#### Summary

Within research on the process of communication within small groups, the importance of the factor of interpersonal trust has become more and more evident. Two men who have given their attention to this area of study are Morton Deutsch and Jack Gibb. In view of the research of these two men, Kim Giffin (1967b, p. 224) has defined interpersonal trust within the communication process as: reliance upon the communication behavior of another person in order to achieve a desired but uncertain objective in a risky situation. This writer has accepted this definition for the purpose of this paper in which he posited the hypothesis that the amount of interpersonal trust in a group will be related to the amount and type of communication which occurs, and the leadership-role behavior.

Interpersonal trust must be viewed as one possible variable within this communication process. As such, there are other factors which can influence it, namely, interpersonal perceptions, situational conditions, and personality characteristics of the person doing the trusting. At the same time, changes in interpersonal trust can influence other factors such as interpersonal relationships and personality dimensions.

In turning his attention to interpersonal trust, much of Deutsch's research centered around the relationships of 'trust and cooperation' (1962) and 'trust and suspicion' (1958). Solomon (1960), one of Deutsch's students, furthered research by studying the influence of power relationships and motivational strategies upon the development of trust. Another of Deutsch's students, Farr (1957), concluded from his research that the introduction of a disliked third person increases trust between two persons.

Gibb's (1961) research led him to the conclusion that interpersonal trust is facilitated in the communication process within a climate of supportiveness more than in a climate of defensiveness.

Solomon (1960) furthered Deutsch's work on trust by studying the influence of power relationships upon the development of trust. Earlier research (Stogdill, 1948) had emphasized situation-oriented leadership behavior as part of power relationships. Such leadership has been defined (Hemphill & Coons, 1957, p. 7) as the behavior of an individual when he is directing the activities of a group toward a shared goal.

Deutsch's laboratory studies and Gibb's clinical studies have contributed much to the study of the factor of trust within the communication process. But the need to study this factor in an on-going, real-life situation has led to the present project headed by Dr. Kin Giffin of the

Communication Research Center at the University of Kansas. The members of this project have been researching interpersonal trust in task-oriented small groups.

The subjects of this writer's research were nine counselors in a Catholic seminary. In order to substantiate the fact that this group was representative of small task-oriented groups, and that the results could be generalized to other groups, he used the following measurement tools:

1. Bales' (1950) Interaction Process Analysis
2. Cattell's (1957) 16 P.F. (Personality Factor) Questionnaire
3. Hemphill's (1956) Group Dimensions Description Questionnaire

The data from Bales' Interaction Process Analysis was compared with published generalizations (Bales, 1965, p. 447). The data from the questionnaires of Cattell and Hemphill was used to make comparisons with the Kolmogorov-Smirnov One-Sample Test.

To study the relationship of interpersonal trust in group communication to selected possibly related variables, the writer used the following measurement tools:

1. Bales' (1950) Interaction Process Analysis
2. Giffin & Wilson's (1967) Scales of Interpersonal Trust
3. Halpin & Winer's (1957) Leadership Behavior Questionnaire

The relationship between trust and these variables was tested by Spearman Rank Correlation Coefficient.

The results from the data collected to study the relationship of interpersonal trust in the communication process to selected possibly related variables made it necessary for the writer to reject the major hypothesis of his study, namely, that the amount of interpersonal trust in a group will be related to the amount and type of communication which occurs, and leadership-role behavior. Nevertheless, elements of the hypothesis were supported by four significant positive correlations found between (1) trust for others and the communication behavior of disagreeing ( $r = .650$ ): when group members trusted others, they tended to disagree with one another; (2) being trusted by others and the communication behaviors of giving suggestion ( $r = .720$ ), giving opinion ( $r = .680$ ), and giving orientation ( $r = .720$ ): when group members felt trusted by others, they made suggestions, offered opinions, and explained them.

### Interpretations

This writer feels that, despite the four above-mentioned supporting relationships, the data failed to support his major hypothesis for at least three reasons. (First, it is possible that there is no relationship between the amount of interpersonal trust in a group and the amount and type of communication and leadership-role behavior. This must be considered as a possibility because the measurement tools used, namely, Bales' (1950) Interaction Process Analysis Scales, Cattell's (1957) Sixteen Personality Factor Questionnaire, and Hemphill's (1957) General Group Dimensions Ques-

tionnaire, indicated that this group was representative of small task-oriented groups; and the data collected for this group made it necessary to reject this relationship as being significant.

Secondly, it is possible that the rejection of the major hypothesis is due to the definition of terms used by this author. In other words, if interpersonal trust is one variable within the communication process which can be influenced by other factors (e.g. interpersonal perceptions, situational conditions, and personality characteristics of the trusting person), and influence other factors (e.g. interpersonal relationships and personality dimensions), changing the concept of trust could change these relationships. Further refinements of the definition of trust could possibly indicate that there is a significant relationship between the amount of interpersonal trust in a group and the amount and type of communication and leadership-role behavior.

Thirdly, although the measurement tools used indicated that the group was representative of small task-oriented groups, participant observation by the writer has led him to question this. Neither the method of scoring for nor the method of presenting a group profile indicated serious personality conflicts which, in fact, did exist between some of the group members. Furthermore, the measurement tools did not indicate that one group member was suffering from serious personality problems. These unaccounted-for factors might tend to (1) make this research group less representa-

tive of small task-oriented groups than was indicated by the measurement tools; (2) destroy any significant relationship between the communication within the group and the interpersonal trust as defined by Giffin (1967b, p. 224); and, (3) cause a lack of significant positive relationships between interpersonal trust and the leadership-role behavior as defined by Hemphill & Coons (1957, p. 7). This seems to be suggested by the negative correlation found between the leadership dimension of consideration for others and the communication behaviors of agreeing ( $r = -.800$ ), and asking for suggestion ( $r = -.780$ ).

That this group manifested a significant difference at the .05 level of confidence in the group dimensions of homogeneity (.660), intimacy (.600), and stability (.600), was probably due to the nature of this group: members of a religious community, with similar living conditions, and with common goals and interests.

Thus, the writer concludes that, although the major hypothesis of a relationship between interpersonal trust and the amount and type of communication, and leadership-role behavior, had to be rejected, perhaps because of those unaccounted-for factors of limitation, some elements of the hypothesis were supported. In the future, by using a different method of scoring or of presenting a group profile which would indicate the factors mentioned here as limitations, support for this hypothesis may be yielded.

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## APPENDIX

## APPENDIX

### Bales' Interaction Process Analysis

Bales (1950) developed a set of categories into which all communication behavior of a group can be analyzed. There are twelve paired categories: (1) shows solidarity, (2) shows tension release, (3) agrees, (4) gives suggestion, (5) gives opinion, (6) gives orientation, (7) asks for orientation, (8) asks for opinion, (9) asks for suggestion, (10) disagrees, (11) shows tension, and (12) shows antagonism.

The duty of the observer calls for an understanding of the whole system. His task is to classify the communication behavior in terms of its significance to a receiver. Bales' work is one of the best known and most widely used category systems for the study of group communication. On the next page is a sample scoring sheet which illustrates the way in which this data is tabulated.

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[illegible]

### Cattell's Sixteen Personality Factor Questionnaire

Cattell's 16 P.F. Questionnaire was constructed to measure or determine the different factors of personality. No other such test covers such a wide range of personality dimensions. The test itself consists of 187 questions which are grouped into the following factors:

- Factor A - reserved vs. outgoing
- Factor B - less intelligent vs. more intelligent
- Factor C - affected by feelings vs. emotionally stable
- Factor E - humble vs. assertive
- Factor F - sober vs. happy-go-lucky
- Factor G - expedient vs. conscientious
- Factor H - shy vs. venturesome
- Factor I - tough-minded vs. tender-minded
- Factor M - practical vs. imaginative
- Factor N - forthright vs. shrewd
- Factor O - placid vs. apprehensive
- Factor Q<sub>1</sub> - conservative vs. experimenting
- Factor Q<sub>2</sub> - group-dependent vs. self-sufficient
- Factor Q<sub>3</sub> - undisciplined self-conflict vs. controlled
- Factor Q<sub>4</sub> - relaxed vs. tense

Following are the questions which constitute this questionnaire.

1. I have the instructions of this test clearly in mind  
(a) yes, (b) uncertain, (c) no.
2. I am ready to answer each question as truthfully as possible. (a) yes, (b) uncertain, (c) no.

3. It would be good for everyone if vacations (holidays) were longer and everyone had to take them. (a) agree, (b) uncertain, (c) disagree.
4. I can find enough energy to face my difficulties. (a) always, (b) generally, (c) seldom.
5. I feel a bit nervous of wild animals even when they are in strong cages. (a) yes (true), (b) uncertain, (c) no (false).
6. I hold back from criticizing people and their ideas. (a) yes, (b) sometimes, (c) no.
7. I make smart, sarcastic remarks to people if I think they deserve it. (a) generally, (b) sometimes, (c) never.
8. I prefer semiclassical music to popular tunes. (a) true, (b) uncertain, (c) false.
9. If I saw two neighbors' children fighting, I would: (a) leave them to settle it, (b) uncertain, (c) reason with them.
10. On social occasions I: (a) readily come forward, (b) respond in between, (c) prefer to stay quietly in the background.
11. I would rather be: (a) a construction engineer, (b) uncertain, (c) a teacher of social studies.
12. I would rather spend a free evening: (a) with a good book, (b) uncertain, (c) working on a hobby with friends.
13. I can generally put up with conceited people, even though they brag or show they think too well of themselves. (a) yes, (b) in between, (c) no.
14. I'd rather that the person I marry be socially admired than gifted in art or literature. (a) true, (b) uncertain, (c) false.
15. I sometimes get an unreasonable dislike for a person: (a) but it is so slight I can hide it easily, (b) in between, (c) which is so definite that I tend to express it.
16. In a situation which may become dangerous I believe in making a fuss and speaking up even if calmness and politeness are lost. (a) yes, (b) in between, (c) no.



17. I am always keenly aware of attempts at propaganda in things I read. (a) yes, (b) uncertain, (c) no.
18. I wake up in the night and, through worry, have difficulty in sleeping again. (a) often, (b) sometimes, (c) never.
19. I don't feel guilty if scolded for something I did not do. (a) true, (b) uncertain, (c) false.
20. I am considered a liberal "dreamer" of new ways rather than a practical follower of well-tried ways. (a) true, (b) uncertain, (c) false.
21. I find that my interests in people and amusement tend to change fairly rapidly. (a) yes, (b) in between, (c) no.
22. In constructing something I would rather work: (a) with a committee, (b) uncertain, (c) on my own.
23. I find myself counting things, for no particular purpose. (a) often, (b) occasionally, (c) never.
24. When talking I like: (a) to say things, just as they occur to me, (b) in between, (c) to get my thoughts well organized first.
25. I never feel the urge to doodle and fidget when kept sitting still at a meeting. (a) true, (b) uncertain, (c) false.
26. With the same hours and pay, I would prefer the life of: (a) a carpenter or cook, (b) uncertain, (c) a waiter in a good restaurant.
27. With acquaintances I prefer: (a) to keep to matter-of-fact impersonal things, (b) in between, (c) to chat about people and their feelings.
28. "Spade" is to "dig" as "knife" is to: (a) sharp, (b) cut, (c) shovel.
29. I sometimes can't get to sleep because an idea keeps running through my mind. (a) true, (b) uncertain, (c) false.
30. In my personal life I reach the goals I set, almost all the time. (a) true, (b) uncertain, (c) false.
31. When telling a person a deliberate lie I have to look away, being ashamed to look him in the eye. (a) true, (b) uncertain, (c) false.
32. I am uncomfortable when I work on a project requiring quick action affecting others. (a) true, (b) uncertain, (c) false.

33. Most of the people I know would rate me as an amusing talker. (a) yes, (b) uncertain, (c) no.
34. Many ordinary people would be shocked if they knew my inner personal opinions. (a) yes, (b) uncertain, (c) no.
35. I get slightly embarrassed if I suddenly become the focus of attention in a social group. (a) yes, (b) in between, (c) no.
36. I am always glad to join a large gathering, for example, a party, dance, or public meeting. (a) yes, (b) in between, (c) no.
37. In school I preferred (or prefer): (a) music, (b) uncertain, (c) handwork and crafts.
38. I believe most people are a little "queer" mentally though they do not like to admit it. (a) yes, (b) in between, (c) no.
39. I like a friend (of my sex) who: (a) seriously thinks out his attitudes to life, (b) in between, (c) is efficient and practical in his interests.
40. "If at first you don't succeed, try, try, again," is a motto completely forgotten in the modern world. (a) yes, (b) uncertain, (c) no.
41. I feel a need every now and then to engage in a tough physical activity. (a) yes, (b) in between, (c) no.
42. I would rather mix with polite people than rough, rebellious individuals. (a) yes, (b) in between, (c) no.
43. In intellectual interests, my parents are (were): (a) a bit below average, (b) average, (c) above average.
44. When I am called in by my boss (or teacher), I: (a) see a chance to put in a good word for things I am concerned about, (b) in between, (c) fear something has gone wrong.
45. I feel a strong need for someone to lean on in times of sadness. (a) yes, (b) in between, (c) no.
46. I occasionally get puzzled when looking in a mirror, as to the meaning of right and left. (a) true, (b) uncertain, (c) false.
47. As a teenager, I joined in school sports: (a) occasionally, (b) fairly often, (c) a great deal.

48. I would rather stop in the street to watch an artist painting than listen to some people having a quarrel. (a) true, (b) uncertain, (c) false.
49. I sometimes get in a state of tension and turmoil as I think of the day's happenings. (a) yes, (b) in between, (c) no.
50. I sometimes doubt whether people I am talking to are really interested in what I am saying. (a) yes, (b) in between, (c) no.
51. I would like to be: (a) a forester, (b) uncertain, (c) a grammar or high school teacher.
52. For special holidays and birthdays, I, (a) like to give personal presents, (b) uncertain, (c) feel that buying presents is a bit of a nuisance.
53. "Tired" is to "work" as "proud" is to: (a) rest, (b) success, (c) exercise.
54. Which of the following items is different in kind from the others? (a) candle, (b) moon, (c) electric light.
55. I admire my parents in all important matters. (a) yes, (b) uncertain, (c) no.
56. I have some characteristics in which I feel definitely superior to most people. (a) yes, (b) uncertain, (c) no.
57. If it is useful to others, I don't mind taking a dirty job that others look down on. (a) true, (b) uncertain, (c) false.
58. I like to go out to a show or entertainment: (a) more than once a week (more than average), (b) about once a week (average), (c) less than once a week (less than average).
59. I think that plenty of freedom is more important than good manners and respect for the law. (a) true, (b) uncertain, (c) false.
60. I tend to keep quiet in the presence of senior persons (people of greater experience, age, or rank). (a) yes, (b) in between, (c) no.
61. I find it hard to address or recite to a large group. (a) yes, (b) in between, (c) no.

62. I would rather live in a town: (a) which is rough, prosperous, and booming, (b) uncertain, (c) artistically laid out, but relatively poor.
63. If I make an awkward social mistake, I can soon forget it. (a) yes, (b) in between, (c) no.
64. When I read an unfair magazine article, I am more inclined to forget it than to feel like "hitting back". (a) true, (b) uncertain, (c) false.
65. My memory tends to drop a lot of unimportant trivial things, for example, names of streets or stores in town. (a) yes, (b) in between, (c) no.
66. I am considered a person easily swayed by appeals to my feelings (a) yes, (b) in between, (c) no.
67. I eat my food with gusto, not always so carefully and properly as some people. (a) true, (b) uncertain, (c) false.
68. I generally keep up hope in ordinary difficulties. (a) yes, (b) uncertain, (c) no.
69. People sometimes warn me that I show my excitement in voice and manner too obviously. (a) yes, (b) in between, (c) no.
70. As a teenager, if I differed in opinion from my parents, I usually: (a) kept my own opinion, (b) in between, (c) accepted their authority.
71. I prefer to marry someone who can: (a) keep the family interested in its own activities, (b) in between, (c) make the family a part of the social life of the neighborhood.
72. I would rather enjoy life quietly in my own way than be admired for my achievements. (a) true, (b) uncertain, (c) false.
73. I can work carefully on most things without being bothered by people making a lot of noise around me. (a) yes, (b) in between, (c) no.
74. I feel that on one or two occasions recently I have been blamed more than I really deserve. (a) yes, (b) in between, (c) no.
75. I am always able to keep the expressions of my feelings under exact control. (a) yes, (b) in between, (c) no.

76. In starting a useful invention, I would prefer: (a) working on it in the laboratory, (b) uncertain, (c) selling it to people.
77. "Surprise" is to "strange" as "fear" is to: (a) brave, (b) anxious, (c) terrible.
78. Which of the following fractions is not in the same class as the others? (a)  $\frac{3}{7}$ , (b)  $\frac{3}{9}$ , (c)  $\frac{3}{11}$ .
79. Some people seem to ignore or avoid me although I don't know why. (a) true, (b) uncertain, (c) false.
80. People treat me less reasonably than my good intentions deserve. (a) often, (b) occasionally, (c) never.
81. The use of foul language, even when it is not in a mixed group of men and women, still disgusts me. (a) yes, (b) in between, (c) no.
82. I have decidedly fewer friends than most people. (a) yes, (b) in between, (c) no.
83. I would hate to be where there wouldn't a lot of people to talk to. (a) true, (b) uncertain, (c) false.
84. People sometimes call me careless, even though they think me an attractive person. (a) yes, (b) in between, (c) no.
85. My reserve always stands in the way when I want to speak to an attractive stranger of the opposite sex, (a) yes, (b) in between, (c) no.
86. I would rather have a job with: (a) a fixed, certain salary, (b) in between, (c) a larger salary, but dependent on my constantly persuading people I am worth it.
87. I prefer reading: (a) a realistic account of military or political battles, (b) uncertain, (c) a sensitive, imaginative novel.
88. When bossy people try to "push me around", I do just the opposite of what they wish. (a) yes, (b) in between, (c) no.
89. Most people would be "better off" if given more praise instead of more criticism. (a) true, (b) uncertain, (c) false.
90. In discussing art, religion, or politics, I seldom get so involved or excited I forget politeness and human relations. (a) true, (b) uncertain, (c) false.

91. If someone got mad at me, I would: (a) try to calm him down, (b) uncertain, (c) get irritated.
92. I would like to see a move toward: (a) eating more vegetable foods, to avoid killing so many animals, (b) uncertain, (c) getting better poisons to kill the animals which ruin farmers' crops (such as squirrels, rabbits, and some kinds of birds).
93. If acquaintances treat me badly and show they dislike me: (a) it does not upset me a bit, (b) in between, (c) I tend to get downhearted.
94. Careless folks who say "the best things in life are free" usually haven't worked to get much. (a) true, (b) in between, (c) false.
95. Because it is not always possible to get things done by gradual, reasonable methods, it is sometimes necessary to use force. (a) true, (b) in between, (c) false.
96. At fifteen or sixteen I went about with the opposite sex: (a) a lot, (b) as much as most people, (c) less than most people.
97. I like to take an active part in social affairs, committee work, etc. (a) yes, (b) in between, (c) no.
98. The idea that sickness comes as much from mental as physical causes is much exaggerated. (a) yes, (b) in between, (c) no.
99. Quite small setbacks occasionally irritate me too much. (a) yes, (b) in between, (c) no.
100. I very rarely blurt out annoying remarks that hurt people's feelings. (a) true, (b) uncertain, (c) false.
101. I would prefer to work in a business: (a) talking to customers, (b) in between, (c) keeping office accounts and records.
102. "Size" is to "length" as "dishonest" is to: (a) prison, (b) sin, (c) stealing.
103. AB is to dc as SR is to: (a) qp, (b) pq, (c) tu.
104. When people are unreasonable, I just: (a) keep quiet, (b) in between, (c) despise them.

105. If people talk loudly while I am listening to music, I:  
(a) can keep my mind of the music and not be bothered,  
(b) in between, (c) find it spoils my enjoyment and annoys me.
106. I think I am better described as: (a) polite and quiet,  
(b) in between, (c) forceful.
107. I attend social functions only when I have to, and stay away any other time. (a) yes, (b) uncertain, (c) no.
108. To be cautious and expect little is better than to be happy at heart, always expecting success. (a) true,  
(b) uncertain, (c) false.
109. In thinking of difficulties in my work, I: (a) try to plan ahead, before I meet them, (b) in between, (c) assume I can handle them when they come.
110. I have at least as many friends of the opposite sex as of my own. (a) yes, (b) in between, (c) no.
111. Even in an important game I am more concerned to enjoy it than to win. (a) always, (b) generally, (c) occasionally.
112. I would rather be: (a) a guidance worker with young people seeking careers, (b) uncertain, (c) a manager in a technical manufacturing concern.
113. If I am quite sure that a person is unjust or behaving selfishly, I show him up, even if it takes some trouble.  
(a) yes, (b) in between, (c) no.
114. Some people criticize my sense of responsibility. (a) yes, (b) uncertain, (c) no.
115. I would enjoy being a newspaper writer on drama, concerts, opera, etc. (a) yes, (b) uncertain, (c) no.
116. I find it embarrassing to have praise or compliments bestowed on me. (a) yes, (b) in between, (c) no.
117. I think it is more important in the modern world to solve:  
(a) the political difficulties, (b) uncertain, (c) the question of moral purpose.
118. I occasionally have a sense of vague danger or sudden dread for no sufficient reason. (a) yes, (b) in between, (c) no.
119. As a child I feared the dark. (a) often, (b) sometimes, (c) never.

120. On a free evening I like to: (a) see an historical film about past adventures, (b) uncertain, (c) read science fiction or an essay on "The Future of Science".
121. It bothers me if people think I am being too unconventional or odd. (a) a lot, (b) somewhat, (c) not at all.
122. Most people would be happier if they lived more with their fellows and did the same things as others. (a) yes, (b) in between, (c) no.
123. I like to go my own way instead of acting on approved rules. (a) true, (b) uncertain, (c) false.
124. Often I get angry with people too quickly. (a) yes, (b) in between, (c) no.
125. When something really upsets me, I generally calm down again quite quickly. (a) yes, (b) in between, (c) no.
126. If the earnings were the same, I would rather be: (a) a lawyer, (b) uncertain, (c) a navigator or pilot.
127. "Better" is to "worst" as "slower" is to: (a) first, (b) best, (c) quickest.
128. Which of the following should come next at the end of this row of letters: xooooxxooooxxx? (a) xox, (b) oox, (c) oxx.
129. When the time comes for something I have planned and looked forward to, I occasionally do not feel up to going. (a) true, (b) in between, (c) false.
130. I could enjoy the life of an animal doctor, handling disease and surgery of animals. (a) yes, (b) in between, (c) no.
131. I occasionally tell strangers things that seem to me important, regardless of whether they ask about them. (a) yes, (b) in between, (c) no.
132. I spend much of my spare time talking with friends over social events enjoyed in the past. (a) yes, (b) in between, (c) no.
133. I enjoy doing "daring", foolhardy things "just for fun". (a) yes, (b) in between, (c) no.
134. I think the police can be trusted not to ill-treat innocent people. (a) yes, (b) in between, (c) no.



135. I consider myself a very sociable, outgoing person.  
(a) yes, (b) in between, (c) no.
136. In social contacts I: (a) show my emotions as I wish,  
(b) in between, (c) keep my emotions to myself.
137. I enjoy music that is: (a) light, dry, and brisk, (b) in  
between, (c) emotional and sentimental.
138. I try to make my laughter at jokes quieter than most  
people's. (a) yes, (b) in between, (c) no.
139. I admire the beauty of a fairy tale more than that of a  
well made gun. (a) yes, (b) uncertain, (c) no.
140. Hearing different beliefs about right and wrong is:  
(a) always interesting, (b) something we cannot avoid,  
(c) bad for most people.
141. I am always interested in mechanical matters, for exam-  
ple, in cars and airplanes. (a) yes, (b) in between,  
(c) no.
142. I like to tackle problems that other people have made  
a mess of. (a) yes, (b) in between, (c) no.
143. I am properly regarded as only a plodding, half-success-  
ful person. (a) yes, (b) uncertain, (c) no.
144. If people take advantage of my friendliness, I do not  
resent it and I soon forget. (a) true, (b) uncertain,  
(c) false.
145. I think the spread of birth control is essential to  
solving the world's economic and peace problems.  
(a) yes, (b) uncertain, (c) no.
146. I like to do my planning alone, without interruptions  
and suggestions from others. (a) yes, (b) uncertain,  
(c) no.
147. I sometimes let my actions get swayed by feelings of  
jealousy. (a) yes, (b) in between, (c) no.
148. I believe firmly "the boss may not always be right, but  
he always has the right to be boss." (a) yes, (b) un-  
certain, (c) no.
149. I tend to tremble or perspire when I think of a difficult  
task ahead. (a) generally, (b) occasionally, (c) never.

150. If people shout suggestions when I'm playing a game, it does not upset me. (a) true, (b) uncertain, (c) false.
151. I would prefer the life of: (a) an artist, (b) uncertain, (c) a secretary running a social club.
152. Which of the following words does not properly belong with the others? (a) any, (b) some, (c) most.
153. "Flame" is to "heat" as "rose" is to: (a) thorn, (b) red petals, (c) sent.
154. I have vivid dreams, disturbing my sleep. (a) often, (b) occasionally, (c) practically never.
155. If the odds are really against something's being a success, I still believe in taking the risk. (a) yes, (b) in between, (c) no.
156. I like it when I know so well what the group has to do that I naturally become the one in command. (a) yes, (b) in between, (c) no.
157. I would rather dress with quiet correctness than with eye-catching personal style. (a) true, (b) uncertain, (c) false.
158. An evening with a quiet hobby appeals more than a lively party. (a) true, (b) uncertain, (c) false.
159. I close my mind to well-meant suggestions of others, even though I know I shouldn't. (a) occasionally, (b) hardly ever, (c) never.
160. I always make a point, in deciding anything, to refer to basic rules of right and wrong. (a) yes, (b) in between, (c) no.
161. I somewhat dislike having a group watch me at work. (a) yes, (b) in between, (c) no.
162. I keep my room smartly organized, with things in known places almost all the time. (a) yes, (b) in between, (c) no.
163. In school I preferred: (a) English, (b) uncertain, (c) mathematics or arithmetic.
164. I have sometimes been troubled by people's saying bad things about me behind my back, with no grounds at all. (a) yes, (b) uncertain, (c) no.

165. Talk with ordinary, habit-bound, conventional people:  
(a) is often quite interesting and has a lot to it,  
(b) in between, (c) annoys me because it deals with  
trifles and lacks depth.
166. I like to: (a) have a circle of warm friendships, even  
if they are demanding, (b) in between, (c) be free of  
personal entanglements.
167. I think it is wiser to keep the nation's military forces  
strong than just to depend on international goodwill.  
(a) yes, (b) in between, (c) no.
168. People regard me as a solid, undisturbed person, unmoved  
by ups and downs in circumstances. (a) yes, (b) in be-  
tween, (c) no.
169. I think society should let reason lead it to new customs  
and throw aside old habits or mere traditions. (a) yes,  
(b) in between, (c) no.
170. My viewpoints change in an uncertain way because I trust  
my feelings more than logical reasoning. (a) true, (b) to  
some extent, (c) false.
171. I learn better by: (a) reading a well-written book, (b) in  
between, (c) joining a group discussion.
172. I have periods when it's hard to stop a mood of self-pity.  
(a) often, (b) occasionally, (c) never.
173. I like to wait till I am sure that what I am saying is  
correct, before I put forth an argument. (a) always,  
(b) generally, (c) only if it's practicable.
174. Small things sometimes "get on my nerves" unbearably  
though I realize them to be trivial. (a) yes, (b) in  
between, (c) no.
175. I don't often say things on the spur of the moment that  
I greatly regret. (a) true, (b) uncertain, (c) false.
176. If asked to work with a charity drive, I would: (a) ac-  
cept, (b) uncertain, (c) politely say I'm too busy.
177. Which of the following words does not belong with the  
others? (a) wide, (b) zigzag, (c) regular.
178. "Soon" is to "never" as "near" is to: (a) nowhere,  
(b) far, (c) next.

179. I have a good sense of direction (find it easy to tell which is North, South, East, or West) when in a strange place. (a) yes, (b) in between, (c) no.
180. I think I am better at showing: (a) nerve in meeting challenges, (b) uncertain, (c) tolerance of other people's wishes.
181. I am known as an "idea man" who almost always puts forward some ideas on a problem. (a) yes, (b) in between, (c) no.
182. I am considered a very enthusiastic person. (a) yes, (b) in between, (c) no.
183. I like a job that offers change, variety, and travel, even if it involves some danger. (a) yes, (b) in between, (c) no.
184. I am a fairly strict person, insisting on always doing things as correctly as possible. (a) true, (b) in between, (c) false.
185. I enjoy work that requires conscientious, exacting skill. (a) yes, (b) in between, (c) no.
186. I am the energetic type who keeps busy. (a) yes, (b) uncertain, (c) no.
187. I am sure there are no questions that I have skipped or failed to answer properly. (a) yes, (b) uncertain, (c) no.

Giffin & Wilson's Scales of Interpersonal Trust

These scales consist of a group of statements which are designed to indicate the amounts and kinds of trust one has for another person. For each item the respondent indicates on an answer sheet whether he strongly agrees (SA), agrees (A), is undecided (U), disagrees (D), or strongly disagrees (SD). There are twenty-six statements:

1. He (or she) usually achieves his goals in the group.
2. He (or she) has the best interests of the group at heart.
3. He (or she) is resourceful in solving group problems.
4. He (or she) is one of the most reliable members of the group.
5. He (or she) is a responsible person.
6. He (or she) makes few mistakes.
7. He (or she) will see a job through, even if the group is in trouble.
8. He (or she) tends to fumble when given a job.
9. He (or she) is biased against me.
10. He (or she) is a friend to all group members.
11. He (or she) has very few useful skills.
12. He (or she) respects the rights of group members.
13. I trust him (or her).
14. He (or she) lacks leadership ability in our group.
15. He (or she) is an important person in the group.
16. It is hard for him (or her) to put himself (or herself) in another person's place.
17. He (or she) is slow to "catch on" to ideas of members.
18. Group members respect his (or her) ability.

19. He (or she) is a sensitive and understanding person.
20. He (or she) often thinks illogically.
21. He (or she) works carefully.
22. He (or she) has a lot to learn about people in groups.
23. He (or she) is usually ineffective in the group.
24. He (or she) is selfish.
25. He (or she) often evaluates the situation poorly.
26. He (or she) is unstable.

Hemphill's Group Dimensions Description Questionnaire

Hemphill's questionnaire consists of 150 statements classified into thirteen dimensions: autonomy, control, flexibility, hedonic tone, homogeneity, intimacy, participation, permeability, polarization, potency, stability, stratification, and viscidty. Group members respond to these statements on scales from "definitely true" to "definitely false." The questions are as follows:

## GDDQ

The questions which follow make it possible to describe objectively certain characteristics of social groups. The items simply describe characteristics of groups they do not judge whether the characteristic is desirable or undesirable. Therefore, in no way are the questions to be considered a "test" either of the groups or of the person answering the questions. We simply want an objective description of what the group is like.

1. The group has well understood but unwritten rules concerning member conduct.
2. Members fear to express their real opinions.
3. The only way a member may leave the group is to be expelled.
4. No explanation need be given by a member wishing to be absent from the group.
5. An individual's membership can be dropped should he fail to live up to the standards of the group.
6. Members of the group work under close supervision.
7. Only certain kinds of ideas may be expressed freely within the group.
8. A member may leave the group by resigning at any time he wishes.
9. A request made by a member to leave the group can be refused.

10. A member has to think twice before speaking in the group's meetings.
11. Members are occasionally forced to resign.
12. The members of the group are subject to strict discipline.
13. The group is rapidly increasing in size.
14. Members are constantly leaving the group.
15. There is a large turnover of members within the group.
16. Members are constantly dropping out of the group but new members replace them.
17. During the entire time of the group's existence no member has left.
18. Each member's personal life is known to other members of the group.
19. Members of the group lend each other money.
20. A member has the chance to get to know all other members of the group.
21. Members are not in close enough contact to develop likes or dislikes for one another.
22. Members of the group do small favors for one another.
23. All members know each other very well.
24. Each member of the group knows all other members by their first names.
25. Members are in daily contact either outside or within the group.
26. Members of the group are personal friends.
27. Certain members discuss personal affairs among themselves.
28. Members of the group know the family backgrounds of other members of the group.
29. Members address each other by their first names.
30. The group is made up of individuals who do not know each other well.



31. The opinions of all members are considered as equal.
32. The group's officers hold a higher status in the group than other members.
33. The older members of the group are granted special privileges.
34. The group is controlled by the actions of a few members.
35. Every member of the group enjoys the same group privileges.
36. Experienced members are in charge of the group.
37. Certain problems are discussed only among the group's officers.
38. Certain members have more influence on the group than others.
39. Each member of the group has as much power as any other member.
40. An individual's standing in the group is determined only by how much he gets done.
41. Certain members of the group hold definite office in the group.
42. The original members of the group are given special privileges.
43. Personal dissatisfaction with the group is too small to be brought up.
44. Members continually grumble about the work they do for the group.
45. The group does its work with no great vim, vigor, or pleasure.
46. A feeling of failure prevails in the group.
47. There are frequent intervals of laughter during group meetings.
48. The group works independently of other groups.
49. The group has support from outside.
50. The group is an active representative of a larger group.

51. The group's activities are influenced by a larger group of which it is a part.
52. People outside the group decide on what work the group is to do.
53. The group is one of many similar groups which form one large organization.
54. The group follows the examples set by other groups.
55. The things the group does are approved by a group higher up.
56. The group joins with other groups in carrying out its activities.
57. The group is a small part of a larger group.
58. The group is under outside pressure.
59. Members are disciplined by an outside group.
60. Plans of the group are made by other groups above it.
61. The members allow nothing to interfere with the progress of the group.
62. Members gain a feeling of being honored by being recognized as one of the group.
63. Membership in the group is a way of acquiring general social status.
64. Failure of the group would mean little to individual members.
65. The activities of the group take up less than ten per cent of each member's waking time.
66. Members gain in prestige among outsiders by joining the group.
67. A mistake by one member of the group might result in hardship for all.
68. The activities of the group take up over ninety per cent of each member's waking time.
69. Membership in the group serves as an aid to vocational advancement.

70. Failure of the group would mean nothing to most members.
71. Each member would lose his self-respect if the group should fail.
72. Membership in the group gives members a feeling of superiority.
73. The activities of the group take up over half the time each member is awake.
74. Failure of the group would lead to embarrassment for members.
75. Members are not rewarded for effort put out for the group.
76. There are two or three members of the group who generally take the same side on any group issue.
77. Certain members are hostile to other members.
78. There is constant bickering among members of the group.
79. Members know that each one looks out for the other one as well as for himself.
80. Certain members of the group have no respect for other members.
81. Certain members of the group are considered uncooperative.
82. There is a constant tendency toward conniving against one another among parts of the group.
83. Members of the group work together as a team.
84. Certain members of the group are responsible for petty quarrels and some animosity among other members.
85. There are tensions between sub-groups which tend to interfere with the group's activities.
86. Certain members appear to be incapable of working as part of the group.
87. There is an undercurrent of feeling among members which tends to pull the group apart.
88. Anyone who has sufficient interest in the group to attend its meetings is considered a member.

89. The group engages in membership drives.
90. New members are welcomed to the group on the basis 'the more the merrier'.
91. A new member may join only after an old member resigns.
92. A college degree is required for membership in the group.
93. A person may enter the group by expressing a desire to join.
94. Anyone desiring to enter the group is welcome.
95. Membership is open to anyone willing to further the purpose of the group.
96. Prospective members are carefully examined before they enter the group.
97. No applicants for membership in the group are turned down.
98. No special training is required for membership in the group.
99. Membership depends upon the amount of education an individual has.
100. People interested in joining the group are asked to submit references which are checked.
101. There is a high degree of participation on the part of members.
102. If a member of the group is not productive he is not encouraged to remain.
103. Work of the group is left to those who are considered most capable for the job.
104. Members are interested in the group but not all of them want to work.
105. The group has a reputation for not getting much done.
106. Each member of the group is on one or more active committees.
107. The work of the group is well divided among members.

108. Every member of the group does not have a job to do.
109. The work of the group is frequently interrupted by having nothing to do.
110. There are long periods during which the group does nothing.
111. The group is directed toward one particular goal.
112. The group divides its efforts among several purposes.
113. The group operates with sets of conflicting plans.
114. The group has only one main purpose.
115. The group knows exactly what it is to get done.
116. The group is working toward many different goals.
117. The group does many things that are not directly related to its main purpose.
118. Each member of the group has a clear idea of the group's goals.
119. The objective of the group is specific.
120. Certain members meet for one thing and other for a different thing.
121. The group has major purposes which to some degree are in conflict.
122. The group is very informal.
123. The objectives of the group have never been clearly recognized.
124. A list of rules and regulations is given to each member.
125. The group has meetings at regularly scheduled times.
126. The group is organized along semi-military lines.
127. The group's meetings are not planned or organized.
128. The group has an organization chart.
129. The group has rules to guide its activities.
130. The group is staffed according to a table of organization.

131. The group keeps a list of names of members.
132. Group meetings are conducted according to "Robert's Rules of Order."
133. There is a recognized right and wrong way of going about group activities.
134. Most matters that come up before the group are voted upon.
135. The group meets any place that happens to be handy.
136. Members of the group are from the same social class.
137. The members of the group vary in amount of ambition.
138. Some members are interested in altogether different things than other members.
139. The group contains members with widely varying backgrounds.
140. The group contains whites and Negroes.
141. Members of the group are all about the same age.
142. A few members of the group have greater ability than others.
143. A number of religious beliefs are represented by members of the group.
144. Members of the group vary greatly in social background.
145. All members of the group are the same sex.
146. The ages of members range over a period of at least 20 years.
147. Members come into the group with quite different family backgrounds.
148. Members of the group vary widely in amount of experience.
149. Members vary in the number of years they have been in the group.
150. The group includes members of different races.

Halpin & Winer's Leadership Behavior Description Questionnaire

This questionnaire requires that group-members respond on scales from "always" to "never" to thirty statements making up two basic dimensions: 1) initiating structure and 2) showing consideration. The following are the thirty statements:

1. He makes his attitudes clear to the group.
2. He does personal favors for group members.
3. He tries out his new ideas in the group.
4. He tries to "rule with an iron hand."
5. He does little things to make it pleasant to be a member of the group.
6. He criticizes poor work.
7. He speaks in a manner not to be questioned.
8. He is easy to understand.
9. He works without a plan.
10. He asks that members perform particular tasks.
11. He asks that members follow organizational lines.
12. He finds time to listen to other members.
13. He sees to it that members are working up to capacity.
14. He maintains definite standards of performance.
15. He keeps to himself.
16. He looks out for the personal welfare of individual members.
17. He refuses to explain his actions.
18. He acts without consulting the group.
19. He is slow to accept new ideas.
20. He tries to see that the work of members is coordinated.

21. He treats all members as his equal.
22. He is willing to make changes.
23. He makes members feel at ease when talking with him.
24. He is friendly and approachable.
25. He tries to put suggestions by the group into operation.
26. He emphasizes meeting of deadlines.
27. He encourages the use of certain uniform procedures.
28. He gets group approval on important matters before going ahead.
29. He makes sure his part in the group is understood by members.
30. He lets members know what he expects of them.