

GENERAL PERSUASIBILITY AS RELATED TO
STATUS POSITIONS IN SMALL
NATURAL GROUPS

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CHAPTER I

STATEMENT OF PURPOSE

The rationale behind the presented research hinges on observations made in two different areas of social psychology: norm formation in natural groups, and communication theory. MacNeil and Pace (1973), in their study of the experimental formation of social norms by natural groups, observed that high status members conformed much more readily to the arbitrary norm than did low status members. They attributed this finding to the fact that high status members must necessarily be more sensitive to social cues than low status members.

In communication theory, Hovland, Janis, and Kelley (1953) and Hovland and Janis (1959) observed that a certain segment of their experimental population was more susceptible to persuasive communications regardless of topic, communicator, or approach. They titled this phenomenon the communication-free or general persuasibility factor. It would follow that this set of more persuasible individuals would also be more sensitive to cues in the social environment.

Communication-Free Persuasibility

Communication theorists are generally interested in the variables inherent in the following paradigm: Who said What to Whom with what Effect? According to this model, the important forces in communication

are the communicator, the message, the media, the audience, and the effects which each of these four factors have on behavior.

However, Hovland, Janis and Kelley (1953) and Hovland and Janis (1959) discovered a variable which showed no direct relation to the communicator, message, media or the audience. This variable, named the communication-free or general persuasibility factor, was formulated to account for the fact that some individuals are more suggestible to communications regardless of variations in the four-part model described above. The idea of general persuasibility is supported by observations in the advertising field, the political field, and the academic field, where it is a frequent observation that some individuals react favorably to any communication set before them.

Research has provided evidence supporting the existence of a general persuasibility factor. Janis and Field (1956) found that individuals remained persuasible to the same degree on five different types of appeals. Furthermore, persons who were more suggestible to an initial communication were also more susceptible to a later communication advocating the position opposite to the first. The five different approaches used in this study were the logical approach, fear-arousing statement, idealized heroes or exaggerated villains, the desire for social approval and the prediction of a pleasant outcome. However, there was some difference in individual reactions for each type of appeal, supporting the observation that, although there is a general persuasibility factor, there are individual differences dependent on other variables within the communication model.

Abelson and Lesser (1959) studied the persuasibility of first-grade children and found that those children who were willing to accept the attitudes of their mother and other authority figures also accepted the attitudes of the experimenter (In Hovland and Janis, 1959).

According to the above evidence, it would seem that a general persuasibility factor exists within each population studied which extends over different topics, different types of appeals, and over countercommunication techniques as well.

Cartwright and Zander (1960) noted five situations where the degree of general persuasibility would be increased: (1) when there is agreement of opinion among those postulating the necessary change; and (2) where the discrepancy of initial opinion between the individual to be persuaded and those doing the persuading is neither too small nor too large; (3) when the individual to be persuaded has relatively low self confidence; (4) when the person to be persuaded realizes that the persuaders know that his opinion is different from theirs; and (5) when the message to be judged is unclear or without adequate distinctions.

McDavid (1959), while attempting to distinguish between the more or less suggestible individuals found in a population, reported that individuals who were more concerned with the source of the message were more suggestible than those more concerned with the content of the message. He concluded that, "In general, those who are more concerned with others may be expected more often to resolve their conflicts by conforming to others than by sticking to their beliefs" [McDavid, 1959, p. 245].

Experimenters have tried to discover personality traits which could account for this difference in suggestibility (CF. Secord &

Backman, 1964, 1973). Secord and Backman (1964) have pointed out that either only one study was done in the area, or that the results gleaned from the studies were conflicting, or the correlations between various personality traits and persuasibility were too low to account for much of the variance. In summary, it seems that the attribution of topic-free persuasibility to certain personality traits has yet to be supported by any substantial experimental evidence.

Hovland and Janis (1959) proposed three reasons for the disturbing lack of evidence supporting the idea that persuasibility is related to certain personality traits. It was noted that persuasibility could have produced the behavior which has been considered a manifestation of the personality trait or that the behavior representing the personality trait may, in turn, have produced the certain level of persuasibility. Another possibility is that persuasibility and the behavior indicative of the personality trait could have been produced by some third variable. If so, the identity of the third variable would be of considerable interest. It is possible that this third factor, which may produce both suggestibility and behavior distinctive of certain personality traits, is embedded in the behavior relevant to a certain status within a group hierarchy of status positions.

Properties of Natural Groups with Emphasis on Status

The present paper is interested in a particular property of natural groups, the status hierarchy, which can be understood only when it is related to other essential group properties. For this reason it is necessary to discuss the concept of the natural group

with its pertinent specifications to allow for a more practical understanding of the status concept.

The first problem to be considered is the reason behind the study of groups in social psychology or any science interested in human behavior. (1) Groups exist in every aspect of society. (2) Groups influence individuals through the utilization of power forces which affect every segment of human behavior. (3) Actions which the group promotes have either a good or bad effect with relation to the desires of the individual and the expectations of society. (4) The importance and influence of groups can be used to encourage positive aspects of behavior (Cartwright & Zander, 1960).

Sherif and Sherif (1969) have emphasized that the method used to define the group has important consequences for both further research and an initial understanding of what properties need to be included in the group concept. They note that collections of individuals are considered groups

to the degree (1) that is organization (role and status relationships) are stable and (2) that its particular set of values and norms for behavior are shared by the membership and binding for them (in the sense that members voluntarily regulate their behavior within certain bounds) /Sherif & Sherif, 1969, p. 132_7.

Only those individuals who are capable of functioning at the conceptual level are able to form groups. Groups interact in definite settings and are formed to attain certain goals which cannot be insured through individual action. Sherif and Sherif cite four properties necessary for group formation and functioning: (1) a motivational base which is shared by individuals, and which increases need for interaction over time; (2) formation of a role and status hierarchy;

(3) formation of norms relevant to the goals designated by the group;
(4) differential effects on attitudes and subsequent behavior of group members which can be attributed to their membership within the group.

Norms regulate activities necessary either to the maintenance of the group or to the very survival of the group (Cartwright & Zander, 1960). Sherif and Sherif (1969) mention that norms regulate behavior so as to attain those goals which group members consider the essential purpose of the existence of the group. The goals themselves may be either definite, conscious foci to be satisfied through group activity; or as Allport has pointed out, certain behavior which had first been elicited merely to attain some goal, may become instrumental for its own sake and thus serve as a means for keeping the group intact (In Cartwright & Zander, 1960).

Another aspect of the group situation, which must be taken into account in any discussion of group behavior, is the relative solidarity of the group in question. Sherif (1967) states that the extent of solidarity within the group can be measured by: (1) whether there is a discrepancy in behavior when the leader is present as compared to when the leader is absent; (2) whether there is an attempt at exclusiveness and secrecy when activity brings the group into relationships with outsiders; and (3) what action is taken by group members in the case of anti-normative deviant behavior. "The degree of consensus among members on what constitutes propriety, decency, and loyalty is one of the indicators of the relative stability of the group" (Sherif & Sherif, 1969, p. 141⁷).

Status, as mentioned above, is one of the primary properties of the group and a focal issue in this study. A person's position in the

power structure of the group is his status position, with relative status within the group measured by the amount of effective initiative prescribed to each group member across interaction situations. Effective initiative is described as the ability to define actions regulating the making of, approval of, or modification of decisions; the coordination of interaction; and the rendering of punishment appropriate to normative deviation. Status is not defined solely in terms of popularity, prominence, or expertise (Sherif & Sherif, 1969).

The highest status position (most effective initiative) is occupied by the leader of the group. But it must be cautioned that the leader position, as well as the entire status hierarchy, can be adequately understood only by emphasizing its relation not only with intragroup processes but also with environmental characteristics.

Generalizations about membership attributes and behavior as a function of group membership have to specify the contributions of the group's environment, both through its more encompassing social arrangement, the values of norms prevailing within them and the facilities available to the group on its important activities /Sherif & Sherif, 1969, p. 154_/.

Cartwright and Zander (1960) mention two approaches to the study of leadership: leadership as a property of the group or as an individual personality trait. They also assert that there has been little experimental success connected with the second approach; few, if any traits are found only in leaders and never in followers (none have been reported unambiguously to do so).

A survey of the literature concerning leadership personality traits by Stodgill (1948) agreed with the above position. Mann (1959), in another study dealing with personality traits which have been empirically associated with leadership, found that most of the

correlations were so low that much of the variance was left unaccounted for. Sherif and Sherif (1969) concluded that personality traits of leaders cannot be studied apart from other factors which enter into the leader-follower distinction.

Empirical support was evidenced in research done by Merei (1949) [In Sherif & Sherif, 1969] who studied children aged five to seven in natural group situations. The groups of children were studied until it was observed that each group had established norms. Experimenters then introduced a new child into the group who had been designated as a leader in other circumstances. The new child was usually absorbed into the structure of the group and assimilated that group's norms... only in a very few cases was there any modification of group norms (p. 171).

Perhaps then, the most successful means of studying leadership would be to emphasize the functions the leader performs rather than the personality traits ascribed to individual leaders. The leadership role necessitates control over the formulation of policy, decision-making, and behavior, with regard to both intra- and inter-group behavior. The leader must also preside during the execution of these policies, and must be able to direct sanctions to those deviating from the prescribed norms (Sherif & Sherif, 1969). In this case, a leader seems to have two conflicting demands placed upon him... the pressure of the group to conform to established norms, and the pressure of the group to facilitate success in intra- and inter-group goals. To succeed in both areas it seems essential that the high status member be extremely sensitive to social cues given him both by group members and by the external environment. In order to maintain his leadership within

the group he must be sensitive enough to guide relations between group members and outsiders which will facilitate the survival of his group and will allow realization of goals important to group members.

External versus Internal Reality

Internal and external factors jointly interact to determine an individual's psychological structure, which, in turn, determines his behavior in a specific situation. Both social and physical factors are external to the individual. The social factors, however, are extremely difficult to control and vary from person to person according to his existing attitudes and values with regard to specific topics. The physical stimuli are much simpler to control in an experimental situation and are more likely to be free of specific topic reactions. What was needed then was a task which would combine the use of physical stimuli representing external factors with task novelty. In this manner, control would be achieved when comparing the effects of internal versus external factors on behavior and the individual S's responses would be unaffected by preconceived attitudes and affect. The Witkin rod and frame task fulfilled both of the above since it is a novel situation in which external factors are presented using physical rather than social stimuli.

In summary, what the present paper is interested in is the relationship between status and general persuasibility -- the fact that, in both situations, a subdivision of individuals seems to react in a manner distinguishable from other individuals. It is the present hypothesis that in both cases the high status individual is particularly sensitive to social cues and finds it more adaptive to conform to the

evidence he gathers from these external cues than to depend upon the internal physical reality of the situation. In other words, the individual has two choices -- to focus his awareness on the external reality in the stimulus situation or to depend on the internal reality which is also a part of the situation. High status individuals have found it necessary, in order to retain their position of power in the group, to be especially sensitive to social truths around them. Low status persons, on the other hand, have little need for the development of increased sensitivity to social cues, since their external and internal realities are merged for them by the high status member.

Sherif has most adequately stated the research position of this paper:

Which individual will occupy what status position, and which individual will succeed in changing his position, rests on unique personal characteristics of individual members -- their contribution relative to the demands of group activities in which certain personal characteristics matter /Sherif & Sherif, 1969, p. 273_7.

CHAPTER II

STATEMENT OF PROBLEM

As stated previously, the major purpose of this study was to indicate a relationship between status position in small natural groups and individual sensitivity to social situations as a function of status position. The major problem, then, was to determine appropriate measurement techniques for indicating status position, sensitivity to social cues and the relationship between them.

Status Positions in Small Natural Groups

Status is operationally defined as the relative amount of effective initiative attributed to each member of a natural group, with the high status member exhibiting more effective initiative than the low status member (Sherif & Sherif, 1964). Sherif recommended that status be identified through the use of non-participant observation, sociometric devices and behavioral indicants. However, non-participant observation entails vast amounts of time and monetary investment (due to the number of observations over time necessary to establish standard peer-rank orders). In addition, considering that the population to be specified is composed of females, it is extremely difficult to place an observer in a position where she would be able to scrutinize group behavior, since female groups are not overtly visible as compared to male groups (street gangs, motorcycle gangs, etc.). Therefore, a sociometric method

(sociogram) was investigated and selected as an adequate tool for the location of groups, based on previous evidence (Davis, 1970; Pace & Davis, 1969; MacNeil, Pace, & Davis, 1968), indicating its reliability in terms of agreement with observers' ratings of group membership and status position.

The sociogram was originally formulated to apply to lower class males overtly asking for skills and availability in a national emergency, either natural (floods, etc.) or unnatural (invasion by the "enemy") 7. Embedded within it were questions designed to advance information concerning group membership and status position (See Appendix A). This form of the questionnaire or sociogram had been pretested on a high-school sample and was used in distinguishing group membership with teenage American Indian males (Davis, 1970; Pace & Davis, 1969; MacNeil, Pace, & Davis, 1968).

Due to the (1) differences between the nature of the population for whom the sociogram was designed and the present population (female college freshmen); and (2) change in general attitudes concerning such terms as "sabotage units" and "underground units" contained in the original sociogram, it was considered essential to revise and update the sociogram (See Appendix B). The revised form plus an evaluation form (See Appendix C) was, in turn, administered to 30 college females enrolled in an upper division social psychology course. The evaluation was generally directed toward investigating the ability of students to comprehend terminology prevalent in the sociogram and pinpointing and subsequently removing any negative connotations inherent in various concepts mentioned in the sociogram ("disaster unit," "weakening of the government," etc.). Subjects were informed that the sociogram was to

be completed, ultimately, by all college females in Oklahoma and that the Experimenters (referred to as the Disaster Planning Committee) were interested in the Subjects' comments as to how female college students, in general, would react to the questionnaire. Results from the evaluation led to changes adopted in the final form of the sociogram (See Appendix D). A serendipitous finding, obtained in the evaluations, indicated that sociograms completed by both married students and sorority members should be incorporated with some hesitation; married students seemed to have few close female friends and sorority members tended to embed the members of their group within "big sisters," "little sisters," sorority presidents, etc., many feeling that their "group" was constituted of all sorority sisters.

Subject Population Identification

Since the Experimenter was interested in assessing status position in female groups, it was theorized that such groups existed among freshmen college females. This view was espoused based on findings that, when individuals find themselves in a novel and relatively unstructured situation, they will be subjected to increasing amounts of tension arising from lack of structure. Therefore, attempts are made to reduce undesirable tension through formation of membership groups (Sherif & Sherif, 1969). Females, arriving for the first time on a college campus, will face the same sort of situation as typified above; they will form groups in order to increase structure and, thereby, reduce tension.

If the above is accepted as a plausible rationale for the existence of small natural groups among female college freshmen, the next step

would be to discover a means of reaching the groups within the population.

Since a disguised sociogram was being employed, the Experimenters felt that the project should remain as divorced as possible from the Department of Psychology, due to evidenced mistrust and fear of deception indicated by students toward psychology in general (Rotter, 1971). Therefore, a National Disaster Planning Committee was established on paper with a state office in Stillwater, Oklahoma. A confederate was selected (an undergraduate female with some experience in experimentation but limited affiliation with the Department of Psychology) to act as Representative of the Committee.

It was decided to approach the English Department for administration of the sociogram, since any material presented to a psychology class is suspect and all freshmen students are required to enroll in at least the introductory English class (guaranteeing a relatively random sample). The Committee Representative, armed with a letter from the Research Foundation (See Appendix E), introducing her and asking for cooperation, contacted the English department and was given permission to administer the sociogram or "Disaster Planning Questionnaire." In this manner, the only administrative personages briefed as to the real nature of the sociogram was the Research Foundation. This procedure was considered essential to insure that biasing during administration would not take place and that no information release concerning the nature of the research would be possible. Sociograms were administered to females in 20 sections of Introductory English within one week by the same confederate who had posed as (and continued to do so) the Representative of the Disaster Planning Committee.

Rationale behind the Use of the Witkin Measures
of Field-Dependence, Field-Independence
as a Measure of Persuasibility

Witkin, Lewis, Hertzman, Machover, Meissner, and Wapner (1954) devised three orientation tests to determine whether individuals could be delineated as to the type of perception they used in their assessment of the world around them. The three tests were the rod-and-frame test, the tilting-room-tilting-chair test, and the rotating-room test. In each of these situations, Witkin found a wide discrepancy in judgments of true vertical. It was discovered that some Subjects used the social cues presented as an indication of true vertical field-dependent (FD) while others used the perception of their own body position as an indication of true vertical field-independent (FID). From this data, Witkin postulated that he was tapping two different modes of perception, each of which could be equated with a general personality organization. The embedded-figures test was initiated by Witkin as a further measure of the dichotomy between field-dependence and field-independence; it requires a subject to extract a simple geometrical figure from its context. The embedded-figures test is a paper-and-pencil test and is in no way a measure of body orientation. Other tests were also described by Witkin as having some relation to field-dependence and field-independence, but subsequent research has depended on the aforementioned techniques as those essential in forming a distinction between field-dependent and field-independent individuals.

Witkin correlated these various measures of field-dependence, field-independence and in some cases found significant coefficients between them. But his coefficients were often too low, especially between the rod-and-frame test and the embedded-figures test to account for a significant relationship. This fact led to methodological difficulties in studies attempting to use these measurements in further analyses of problems which could be related to field-dependence, field-independence. In many cases, the independent variable used in a study would correlate with one test of field-dependence, but fail to correlate with the other measurements used. This required many researchers to hypothesize that the different mechanisms Witkin used to measure the field-dependence, field-independence continuum in truth tapped different variables.

For example, Vaught (1969) measured the field-dependence of 27 males and 25 females using the portable rod-and-frame apparatus in eight trials and the stationary rod-and-frame apparatus in the other eight trials. The starting point of the rod in every case was random and the order of presentation was counterbalanced. The correlation between the two measurements yielded a coefficient of .46 which accounted for only 21 percent of the variance.

Gene Lester (1968, 1969) discussed the methodology typically used when measuring field-dependence and field-independence, and considered some factors which could be held responsible for the discrepancy in outcomes under different experimenters. Lester cited four factors which were not controlled for in most studies: (1) He stated that random tilting of the head during trials could cause a difference in the displacement of the true vertical, and suggested that a bite-

bar be used to control for any individual differences in head placement; (2) Especially in the rod-and-frame test, the starting point of the rod and the initial position of the frame could make a great deal of difference in outcome since experimenters failed to provide adequate variation in starting position; (3) In very few cases were control readings taken as to the individual's subjective impression of the true vertical -- it was merely assumed that subjective vertical was equal to true vertical in all experimental cases; (4) Different experimental instructions could lead to a difference in results. This held not only for explicit instructions but also for implicit instructions. The author also pointed out the difference in criterion used by experimenters to differentiate field-dependent from field-independent persons. Sometimes the cut-off-point was given as the mean, in other studies as the median or as different standard deviations from the mean. Often this distinction was not brought out in the methodology of each experiment.

Trite (1969) brought up another difference in measurement when he pointed to the fact that, in most cases, the score for the individual on the rod-and-frame test and other orientation tests was the average error from the true vertical, with field-independent Subjects having a lower average error than field-dependent Subjects. Trite noted that a measurement which would shed more light on the differentiation between field-dependence and field-independence was the side favored by each type of Subject. His conclusions asserted that those who make more response sets (choose one side over the other) are more field-independent than those who make less response sets (field-dependent).

In the light of the above findings, the first step in attempting to use the rod-and-frame test or the other orientation tests would be to standardize the various techniques in a manner which would allow for the greatest differentiation between field-dependence and at the same time control for factors which might invalidate the results. The above was investigated and a new method formulated which will be used in conducting the present research (Shank, 1973).

Witkin, et al. (1954) and Witkin, Dyke, Faterson, Goodenough, and Karp (1962) correlated their measurements of field-dependence, field-independence with various personality traits, but in most cases, even when there was a significant correlation, little of the variance was accounted for. Experimenters in the field have agreed only that individuals differ in their reactions to orientation tests with scores that could be ranged along a continuum. The field-dependent person is conceptualized as being socially-oriented and the field-independent person task-oriented (Fitzgibbons, 1969). McFall and Schenkein (1970) have pointed directly to the reason why field-dependence could be equated with a greater sensitivity to social cues: "The individual with a cognitive style characterized by field-dependency will also tend to be more susceptible to social influence" [p. 123].

Some studies have related the field-dependence measures and various personality traits. For example, Bell (1955) proposed four related clusters of attitudes, each with a field-dependent and a field-independent pole. The clusters she considered were: inner directed (ID) [associated with field-independence] and outer directed (OD) [associated with field dependence].

- A. Hardheaded practical orientation (ID) vs. a rather global interest in warmth and sincerity (OD).
- B. Work-oriented values such as efficiency, control, competence, and especially excelling over others (IC) vs. needs for friendship, popularity, intimacy, group adjustment and cooperation, and responsiveness to social pressures for conformity on the basis of these needs (OD).
- C. Concern for the self, inner drives and preferences which may be unconventional, with strivings toward creative achievement and personal recognition and with independence from social restrictions (ID) vs. Needs for security, social approval, participation in the community, and a responsiveness toward conformity pressures on the basis of these needs (OD).
- D. Concern with ideas and principles rather than people, and an intellectual approach to human problems (ID) vs. concern for people and for adjustment in concrete, short-run situations (OD) [In Witkin, et al., 1962, p. 145].

These attitude scales plus the embedded-figures test, the rod-and-frame test and the body-orienting test were given to a group of college students. Bell found that the correlation between the measure of field-dependence and the attitude scales was .49 ($p < .01$). The three measures of field dependence were also significantly related to the first three attitude clusters.

Witkin, et al. (1962) were interested in the ability of their measures of field-dependence to differentiate between those considered not persuasive. As evidence for their hypothesis that field-dependent individuals were more persuasive, they cited various experimenters and their findings. Linton (1962) gave the body-orienting task, the rod-and-frame task and the embedded-figures task to a group of college males. He also tested the judgments of each individual Subject when he was placed in the autokinetic situation in the presence of a confederate. He found that those Subjects who were classified as field-dependent according to the orientation measures and the embedded-

figures test changed their judgments more in conformity with those of the confederate in the autokinetic situation than those who were classified as field-independent (In Witkin, et al., 1962).

A study by Sanguiliano (1951) used 85 female psychiatric patients as Subjects. The degree of field-dependence was rated through the use of the rod-and-frame and the body-orientation task, and the inkblot suggestion test, the odor suggestion test, and Binet's progressive weights test were administered. The findings confirmed the fact that field-dependent Subjects were more suggestible than field-independent Subjects.

Solar, Davenport, and Brushl (1969) formed dyads containing one field-dependent and one field-independent female as measured by the embedded-figures test and later by the rod-and-frame test. Each dyad was placed in the rod-and-frame situation and told to adjust the rod to the true vertical. After six trials together six trials were given alone. Displacement of those working together was always in the direction of greater field-independence. However, it was observed that compliance rather than conformity took place since there was no significant difference between pre- and post-test alone situations.

The above authors concluded that field-dependent Subjects are more attentive to others than are field-independent Subjects -- they are more likely to be distracted by social cues. A questionnaire administered after testing in the dyad situation, revealed that eight out of ten field-dependent Subjects were responding to the instructions to cooperate in the togetherness situation while only one out of ten field-independent Subjects felt a similar urge.

The hypothesis presented in this study is that a positive relationship exists between the general persuasibility of an individual and his status in a small natural group. The method used to link these two variables experimentally was the Witkin, et al. (1954) rod-and-frame device.

CHAPTER III

METHODOLOGY

Subjects

Six groups of female college students (one group with seven members, two groups with four members, three groups with five members) were chosen by (1) analysis of choices made on the four sociometric questionnaires contained in the sociogram; and (2) independent assessment made concerning group membership by individuals able to observe the chosen groups.

Initial analysis consisted of examining choices on the key questions, using a computer analysis formulated by Shoemaker and Pace (1968), and revised by the experimenters (with much consultation with Mr. Joseph Grey of the Oklahoma State University Computer Center) to be used in conjunction with the present 360 IBM computer. The population consisted of approximately 129 questionnaires naming approximately 800 females. (The population differed to some extent for each question since not all Ss filling out a sociogram filled out each question and unequal numbers of females were often selected in the four questions for each S.)

Data were initially coded so that the choices of each S filling out a sociogram (SS) were weighted, with the first choice given a weight of 4, second choice, 3, third choice, 2, and all other choices, 1.

The program was devised so that (1) reciprocal choices were unnecessary for inclusion in the group and that (2) each SS was considered the starting point for her group which also included the choices of any other SS the first SS named. Weights for each SS were combined so that an overall ranking specifying the status hierarchy for the entire group was formed (See Appendix F). Also included within the computer read-out were concatenations by key man level whereby groups were sorted according to leader and then clustered (See Appendix G). Label cards were also read into the program, providing names and addresses for each member of each group.

In some cases it was noted that all group members in a particular group who had been selected as a group on all four sociometric questions were located in the same living unit. Therefore, a student assistant was contacted and agreed to act as observer to corroborate behaviorally the findings concerning group membership and status hierarchy obtained from the disguised sociogram.

Apparatus

The measuring device was the Witkin rod-and-frame apparatus, permanently mounted in a sound-reduced and light proofed room. A chair (See Appendix H), designed to eliminate all variable head movements and most gross body movements, was placed so that the head of each S was 10 feet directly in front of the rod-and-frame apparatus. Three positions of the rod and three positions of the frame were matched so that all combinations were presented at least once to every S. The positions were as follows: frame = 5 degrees left, 5 degrees right, and 0 degrees; rod = 5 degrees left, 5 degrees right, and 0

degrees. Luminance of the rod and frame was held constant through the entire experiment. There was no luminance of the rod and frame visible to the S during times when the E was setting the initial positions of the rod and frame. Black opaque goggles were worn by the S during the initial dark-adaption interval.

Procedure

Subject Solicitation

Each group was contacted by the observer connected with the particular group. The group was informed that the Disaster Planning Committee had found that it required more information concerning how task units would function in an emergency situation and had decided to do some research at Oklahoma State University; pay was set at approximately \$150.00 to \$275.00 for the group (dependent upon the group size). However, it was emphasized that all group members must participate in order for any group member to collect her money.

A meeting was set up between the Representatives of the Disaster Planning Committee and the group, where details concerning time and place of experimental participation was explained (See Appendix I).

Laboratory Procedure

Each group member participated separately in the testing session. Since the E would previously be acquainted with the status positions of each group member, it was decided that the testing proper be in charge of three assistants selected from an introductory social psychology class taught by the E. All three research assistants (RA's) participated as Ss with the procedure administered by the E. Subsequently, the E

observed each RA during seven experimental sessions in a pilot study. designed to acquaint the RA's with the experimental procedure and insure, through observation, inter- and intra-reliability of the RA's with regard to equipment operation, voice tone, instructions, handling of Ss in general, etc. Each RA was trained to refer to herself as hired by the Disaster Planning Committee to aid in conducting research dealing with the problem of the formation of task units. Information from the pilot study was also used to set up standards for parameters concerning luminance and tilt of the apparatus used in the subsequent study. Students (12 males and 10 females, enrolled in introductory social psychology classes at Oklahoma State University) participated in the pilot study. Comparisons of degrees of tilt of the rod and the frame (5 or 10 degrees from vertical) indicated that Ss were able to discriminate vertical from nonvertical at either discrimination level. It was decided that five degrees from vertical was the more subtle of the two tilts and would be used as the only degree of tilt in the major experiment.

The room, in order to eliminate an afterglow from fluorescent lights, was left dark for at least three hours prior to experimental use. Each S was dark-adapted for at least ten minutes before entering the laboratory: a pair of opaque goggles, painted black, was used for that purpose. An E of the same sex as the S remained in the dark-adaptation room with the S for the period of time.

Each S entered the laboratory and was seated in the chair by the same E who was with her in the dark-adaptation room; the S remained seated in the chair during presentation of instructions, allowing further time

for dark-adaption. During the instruction period, the rod-and-frame apparatus was visible and set at the vertical position.

The instructions were given as follows:

Your task in this experiment is to decide whether the rod you see in the box is pointing straight up to the ceiling in the same direction as the walls of this building. You will be shown the rod in the box, and when I say "now" you are to answer with "yes" if the rod points straight up to the ceiling in the same direction as the walls of this building and "no" if it does not. A screen will be drawn in front of the rod in the box after each trial and when the screen is removed, you will again give the answer "yes" or "no" after I say "now." Do you have any questions?

According to previous research (Shank, 1973), FD and FID Ss would differ in only two positions: when the frame and the rod were both tilted in the same direction (R-R, L-L); or when the frame was tilted in either direction and the rod was set at vertical (R-O, L-O). Therefore, a total of eighteen trials were given for the three basic positions where all Ss would be expected to score in the same manner (O-O; R-L; L-R; O-R, O-L), and thirty trials were given for each of those positions where FD and FID Ss would be expected to differ (R-R, L-L; R-O, L-O) (See Table 1). A total of 78 trials was given.

In order to control for sequence variables, each S began at a different position on the list of initial sets of the rod and frame. The sequence of the list itself was computed through the use of a random number table.

In order to insure reliable results, data from Ss who gave incorrect responses in conjunction with those positions of the rod and frame where all Ss would be expected to score in the same manner (O-O; R-L, L-R; O-R, O-L), on more than 10 out of 18 trials were excluded from analysis.

TABLE 1

Hypothesized General Response Styles / "Yes,
it (the rod) is vertical." "No, it
(the rod) is not vertical." /
for FD versus FID Ss

| Positions of the rod and frame | | Categorization of <u>Ss</u> | |
|-----------------------------------|---|--------------------------------|-----|
| frame-rod | | FD | FID |
| R | L | N | N |
| L | R | | |
| R | O | N | Y |
| L | O | | |
| O | R | N | N |
| O | L | | |
| R | R | Y | N |
| L | L | | |
| O | O | Y | Y |

Post-Laboratory Procedure

In order to arrive at a quantitative measurement of leadership level, group members were asked to participate in a final session where they were required to fill out a set of scales (See Appendix J) and complete the Disaster Planning Questionnaire. During this session, Ss were seated in individual cubicles so as to insure that peer pressure would not be a factor in the ranking of group members.

The first scale, asking for ranking according to who in the group made the most suggestions that were carried out, was used as a measure

of status. The second scale, asking for rankings of who in the group did the most work in group activities, was included in order to allow the Ss filling out the scales to reduce tension or guilt caused by ranking their peers in the first question. It was felt that the second scale would allow individual Ss the opportunity to increase the rankings of those members who had been ranked low in the previous question.

The third scale (formation of an ideal group) and the Disaster Planning Questionnaire were used in conjunction with a diary filled out by each individual group member over a seven day interval (See Appendix K) to arrive at a rating of solidarity for the specific group. This rating was accomplished by giving all of the above material (plus observer reports) to two raters (working separately) who had been kept completely unaware of the laboratory functioning of the group. The raters were advised as to the type of behavior to be incorporated in assessment of group solidarity (See Appendix L) and then rated the group on a scale expressing their consensus as to the extent of solidarity characterizing each group (See Appendix M). The use of two raters allowed a reliability check to be taken and the median of the two ratings was used to indicate the amount of solidarity for each group.

CHAPTER IV

RESULTS

Specific Group Statistics

Pearson Product Moment Correlation Coefficients were computed comparing scores on the rod-and-frame apparatus \bar{X} high score = FID, low score = FD \bar{X} to: (1) mean and median scores on the leadership scale (Who suggested activities carried out by the group) (See Appendix J); and (2) mean and median scores on the work scale (Who did the most work in group activities) (See Appendix J). Results (See Table 2) indicated that correlations using either mean or median leadership scores were significant at the .025 level for Group 3 and approaching significance for Groups 1 and 6; the coefficient for Group 4 was in the predicted (negative) direction. Coefficients for Groups 2 and 5 were in the positive direction, but were nonsignificant. Correlations between mean and median scores on the work scale and the FD-FID data were insignificant although those computed using mean work scores for Groups 1, 2, 3, and 6 were in the negative direction, while those for Groups 4 and 5 were in the positive direction. Coefficients comparing median scores on the work scales to the FD-FID data were negative for Groups 1, 2, and 6 and positive for Groups 3, 4, and 5.

Scatterplots between leadership and the FD-FID data for each group (See Figures 1, 2, 3, 4, 5, and 6) and between work done in the group and the FD-FID data (See Figures 7, 8, 9, 10, 11, and 12) for

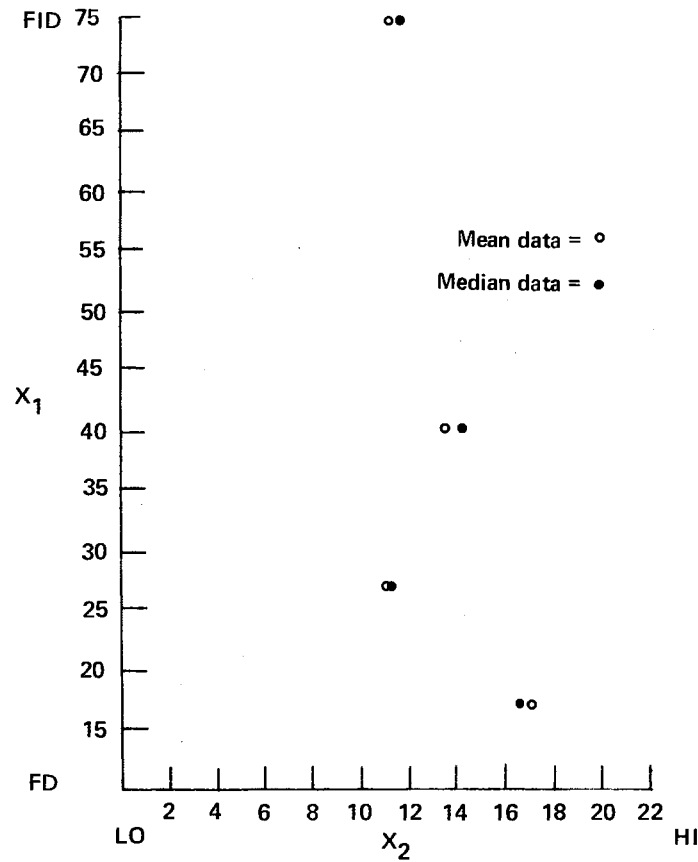


Fig. 1. Scatterplot between X_1 (total scores on rod and frame) and X_2 (mean and median leadership scores) for Group 1.

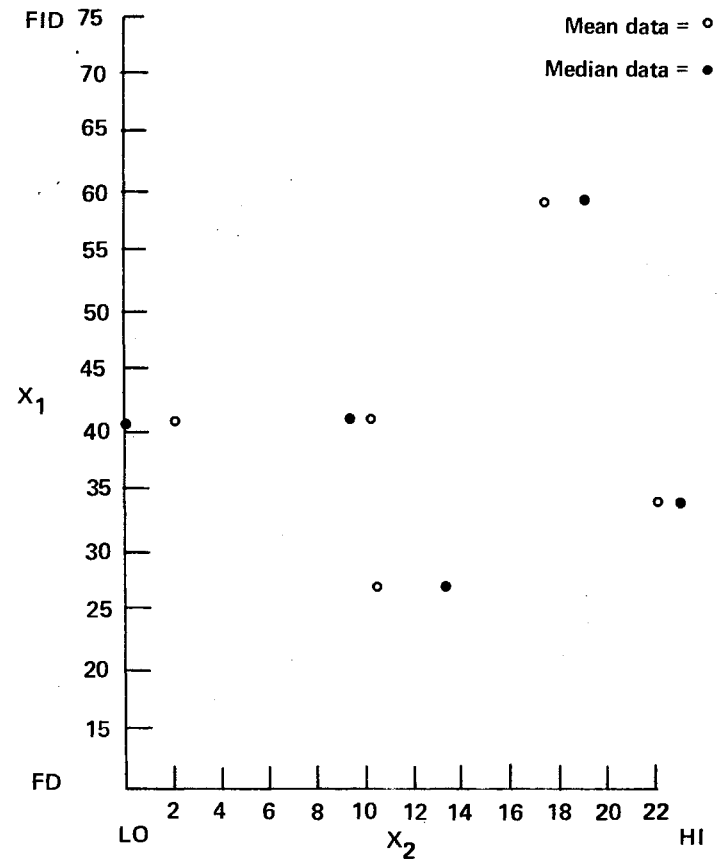


Fig. 2. Scatterplot showing the relationship between X_1 (total scores on rod and frame) and X_2 (mean and median leadership scores) for Group 2.

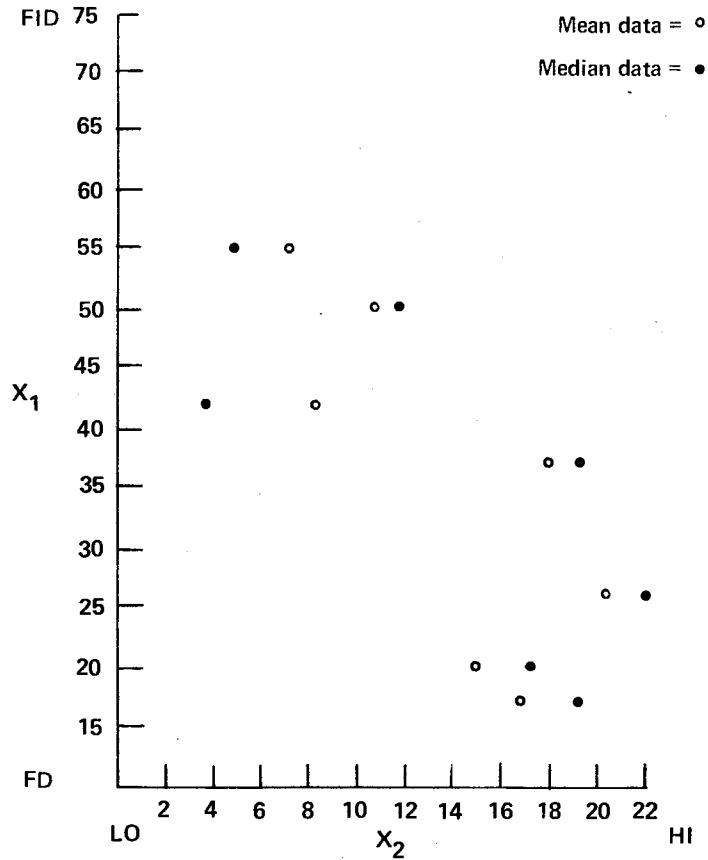


Fig. 3. Scatterplot showing the relationship between X_1 (total scores on the rod and frame) and X_2 (mean and median leadership scores) for Group 3.

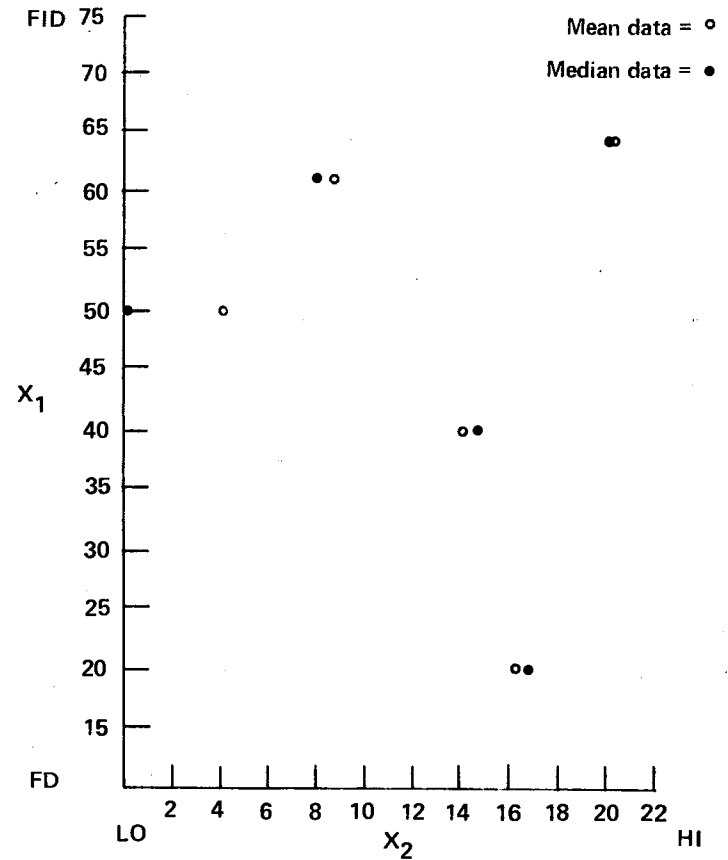


Fig. 4. Scatterplot showing the relationship between X_1 (total scores on the rod and frame) and X_2 (mean and median leadership scores) for Group 4.

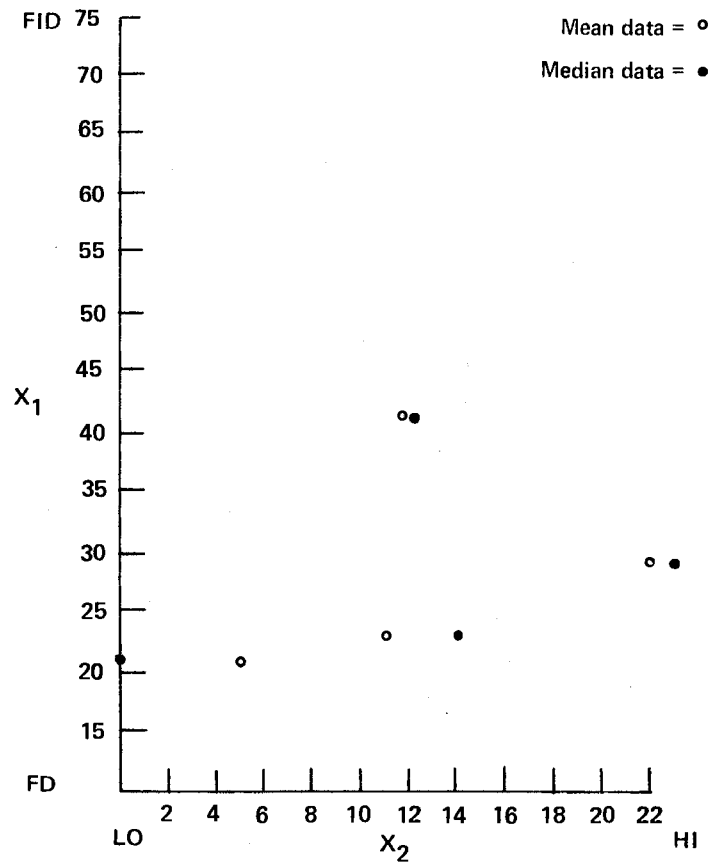


Fig. 5. Scatterplot showing the relationship between X_1 (total scores on the rod and frame) and X_2 (mean and median leadership scores) for Group 5.

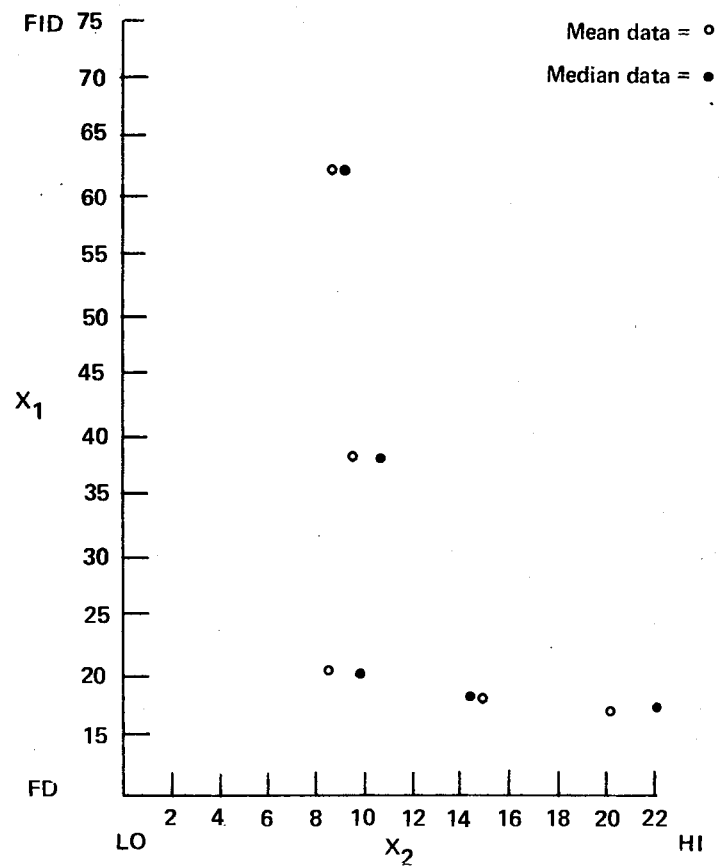


Fig. 6. Scatterplot showing the relationship between X_1 (total scores on the rod and frame) and X_2 (mean and median leadership scores) for Group 6.

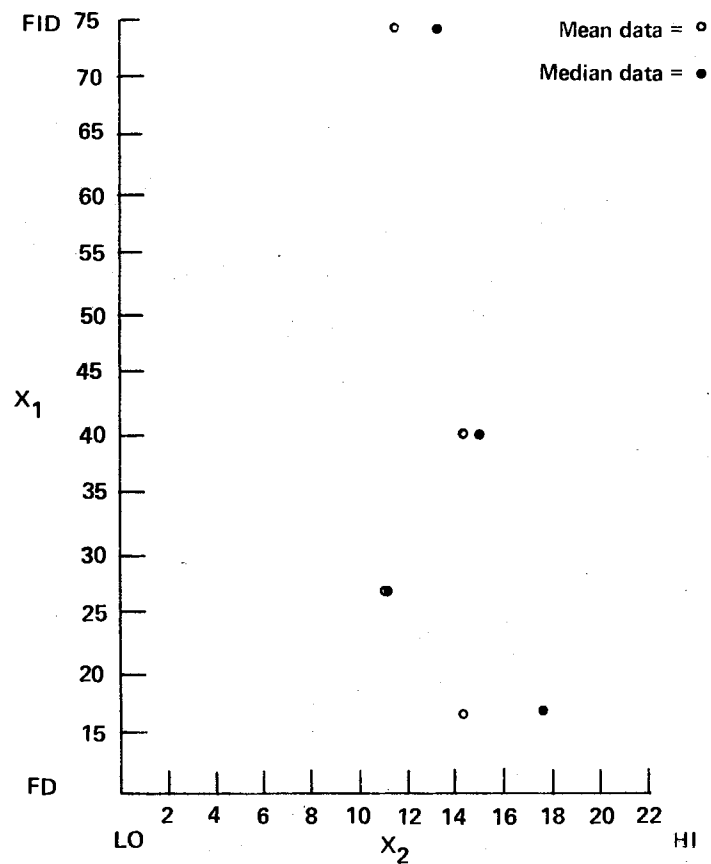


Fig. 7. Scatterplot showing the relationship between X_1 (total scores on the rod and frame) and X_2 (mean and median work scores) for Group 1.

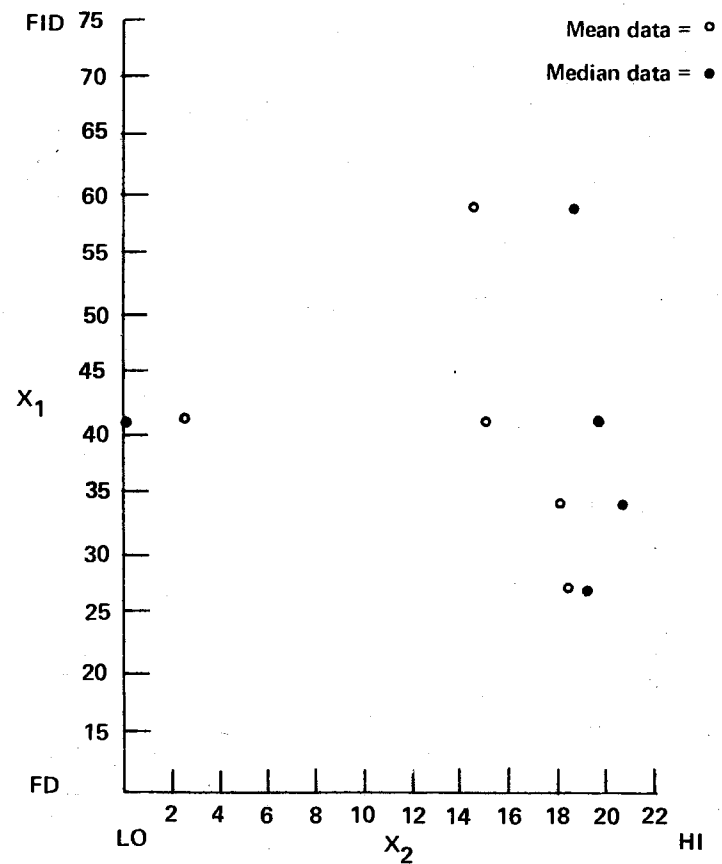


Fig. 8. Scatterplot showing the relationship between X_1 (total scores on the rod and frame) and X_2 (mean and median work scores) for Group 2.

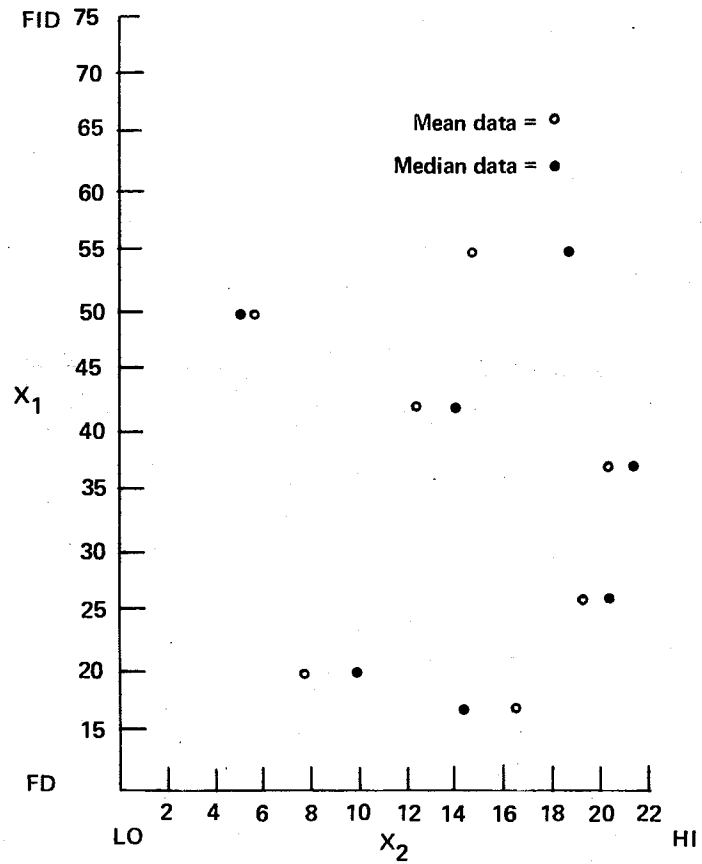


Fig. 9. Scatterplot showing the relationship between X_1 (total scores on the rod and frame) and X_2 (mean and median work scores) for Group 3.

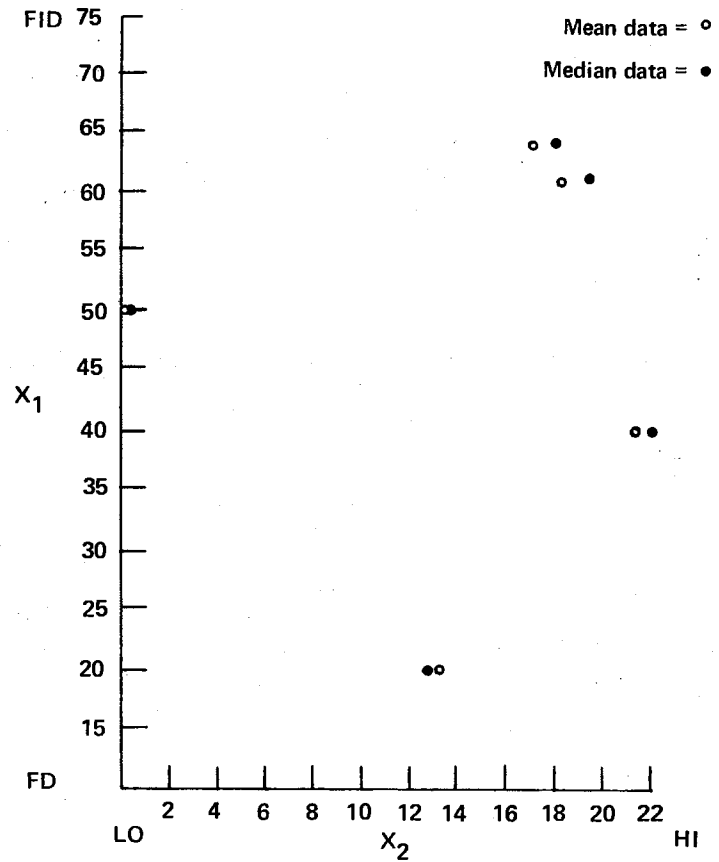


Fig. 10. Scatterplot showing the relationship between X_1 (total scores on the rod and frame) and X_2 (mean and median work scores) for Group 4.

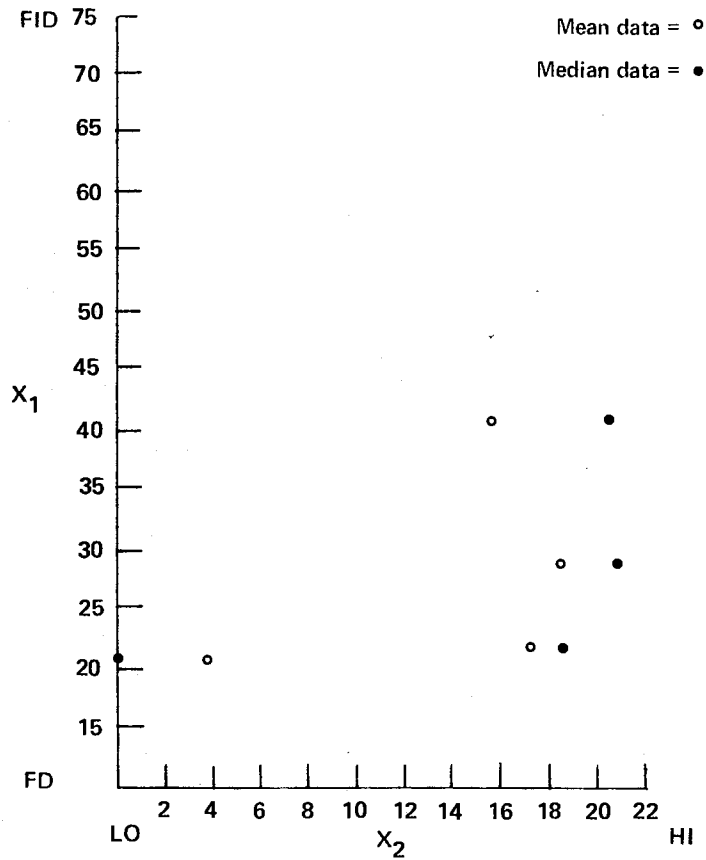


Fig. 11. Scatterplot showing the relationship between X_1 (total scores on the rod and frame) and X_2 (mean and median work scores) for Group 5.

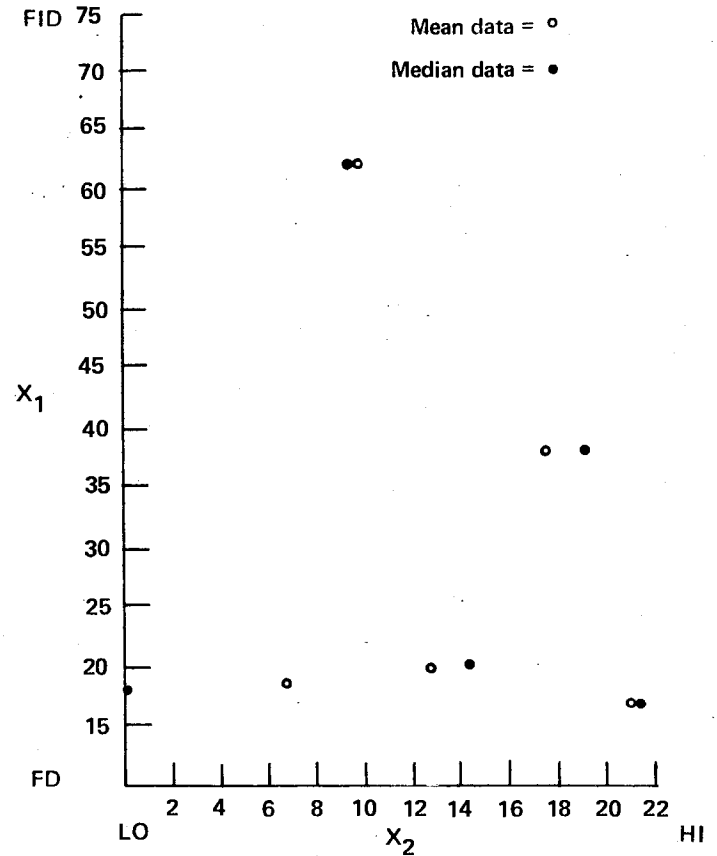


Fig. 12. Scatterplot showing the relationship between X_1 (total scores on the rod and frame) and X_2 (mean and median work scores) for Group 6.

each group were plotted to assess any repeated curvilinear function. No standard curvilinearity was indicated across groups.

Table 2
Correlation Table Comparing Mean and Median
(1) Leadership and (2) Work Scales to
Total Scores on the Witkin Rod-
and-Frame Apparatus for Each
Specific Group

| Group | Leadership Scale | | Work Scale | |
|-------|-------------------|---------------------|-------------------|---------------------|
| | r_{mean} | r_{median} | r_{mean} | r_{median} |
| 1 | -.586 | -.519 | -.473 | -.339 |
| 2 | .144 | .097 | -.278 | -.071 |
| 3 | -.756 | -.756 | -.215 | .044 |
| 4 | -.110 | -.055 | .059 | .125 |
| 5 | .315 | .331 | .426 | .579 |
| 6 | -.583 | -.631 | -.212 | -.329 |

Total Sample Statistics

Pooled Over All Groups

When data was pooled over all groups and the Pearson Product Moment Correlation Coefficient computed between FD-FID data and mean and median ratings for (1) leadership scales and (2) work scales, the

coefficients yielded values of $-.238$ (mean ratings) and $-.271$ (median ratings) for leadership versus FD-FID, indicating no significant linear relationship. In addition, scatter-plots consisting of mean and median leadership ratings and total scores FD-FID indicated no discernable curvilinear relationship (See Figures 13 and 14).

When the correlation between mean and median scores on the work scales and FD-FID scores were computed, the coefficient between mean ratings and the FD-FID scores equaled $-.467$ (significant at the $.05$ level). However, the correlation between median scores on the work scale and FD-FID measure yielded a coefficient of $-.271$ which was not significant at the $.10$ level. Scatter-plots for both mean and median data on the work scales versus scores on FD-FID (See Figures 15 and 16) expressed no definitive curvilinear relationship.

High Solidarity Groups

Due to the large differences in individual group correlations between leadership ratings and scores on FD-FID, it was decided to use observer ratings to ascertain the degree of solidarity for each group. A Pearson Product Moment Correlation Coefficient was computed between ratings to arrive at a reliability estimate for the two ratings and yielded a coefficient of $.784$. The ratings were then pooled and mean ratings computed. In order to dichotomize the groups into high solidarity (HS) and low solidarity (LS) groups, those groups with solidarity scores greater than one-half standard deviation ($SD = 7.44$) from the mean ($\bar{X} = 11.33$) were labeled as HS groups. Ratings for Group 3 (\bar{X} rating = 21.00) and Group 1 (\bar{X} rating = 19.20) satisfied this criterion (See Table 3).

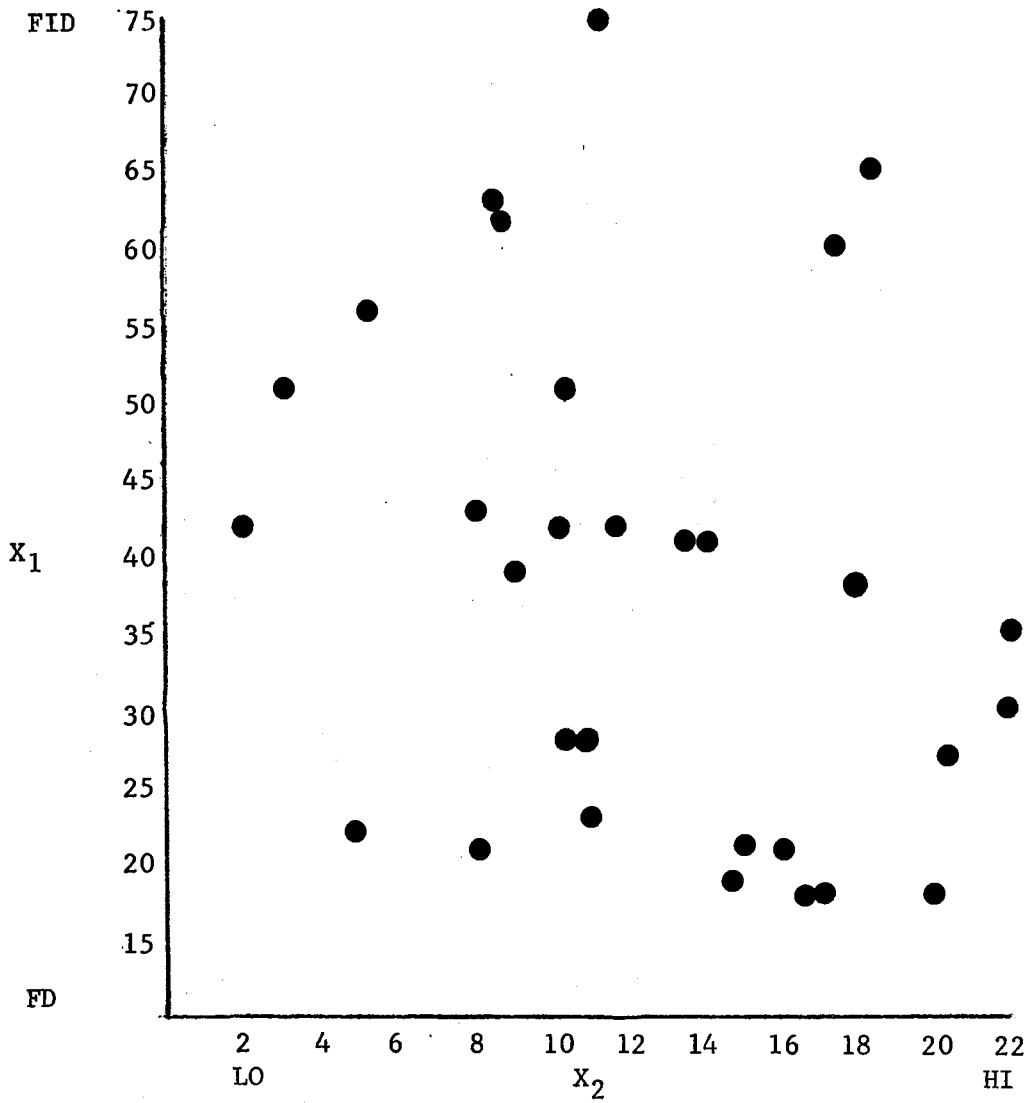


Fig. 13. Scatterplot of association between X_1 (rod and frame scores) and X_2 (mean leadership scores) for total data (all groups).

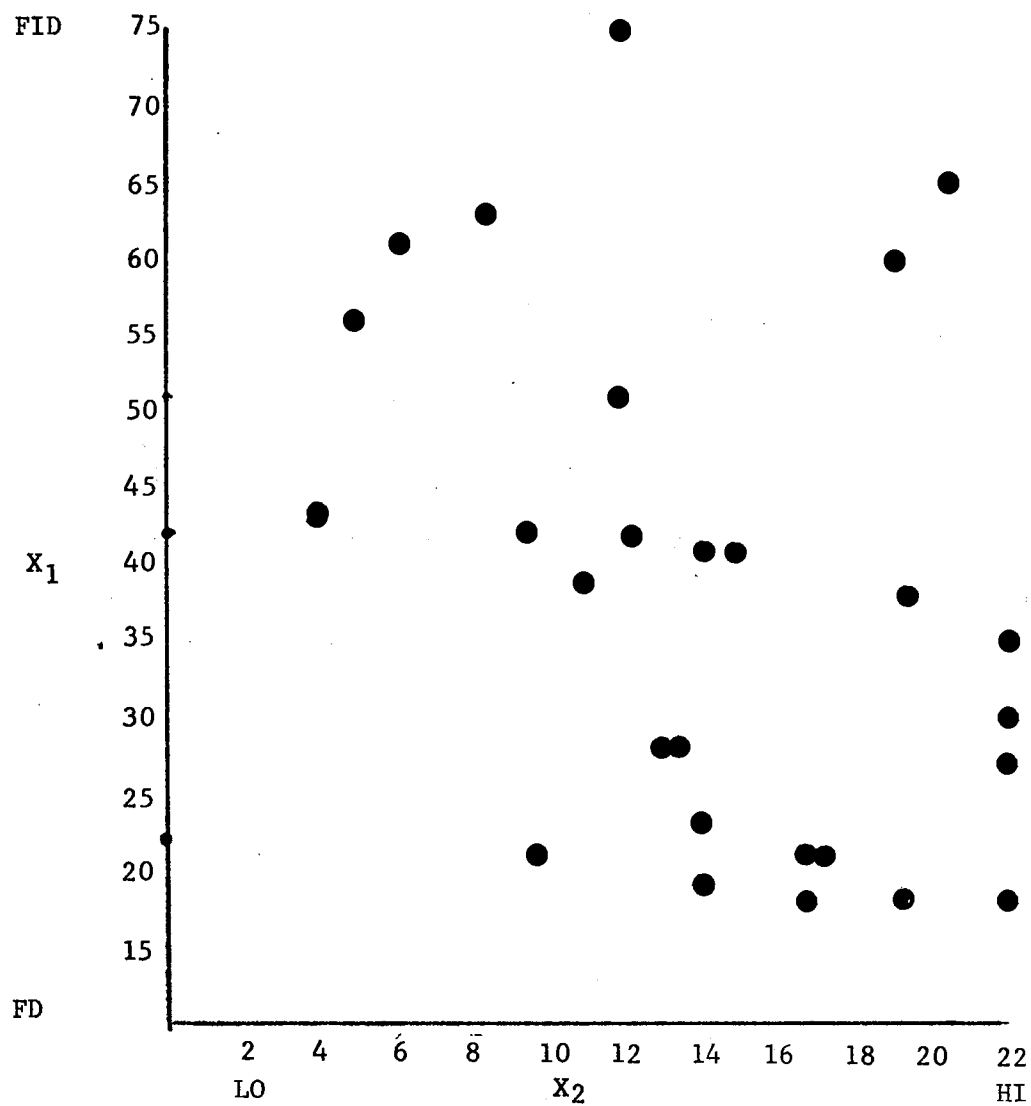


Fig. 14. Scatterplot of association between X_1 (rod and frame scores) and X_2 (median leadership scores) for total data (all groups).

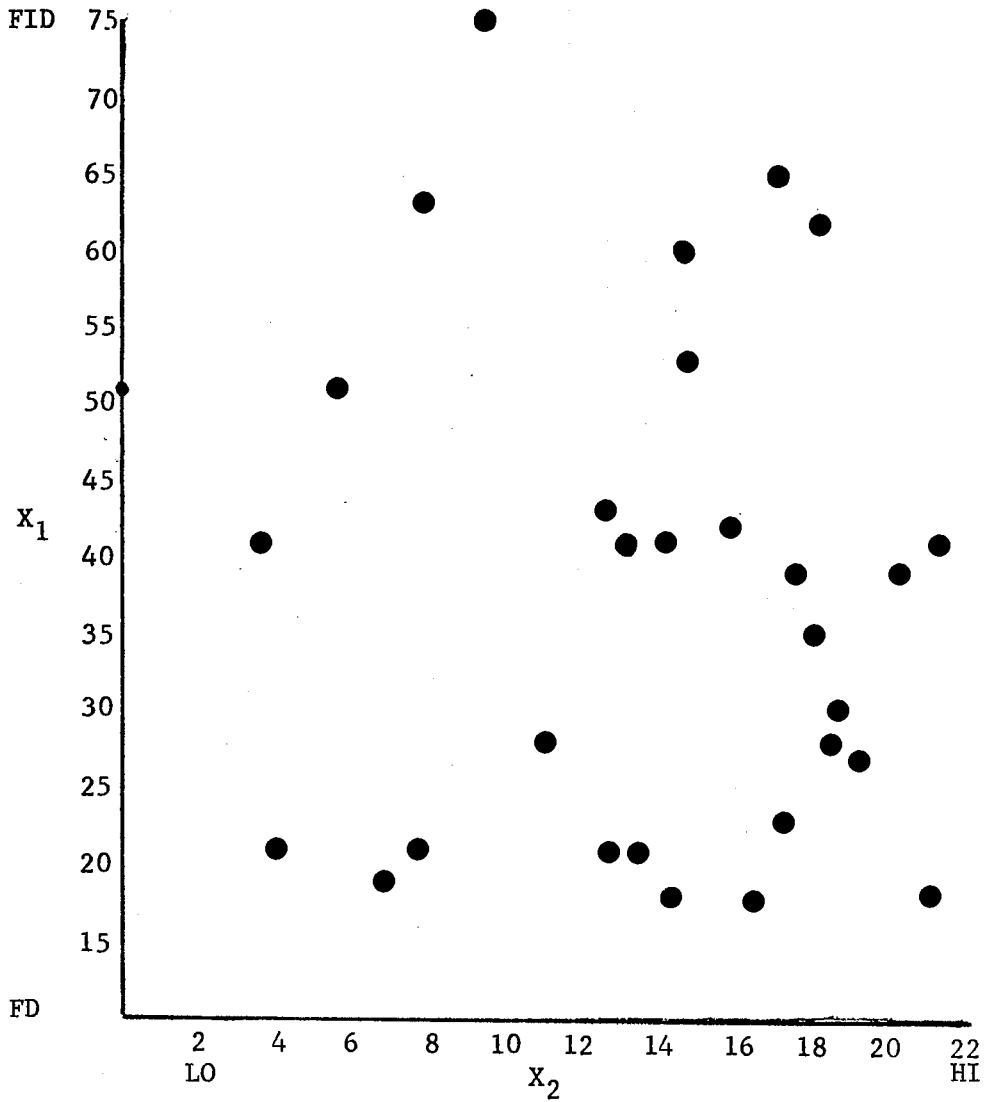


Fig. 15. Scatterplot of association between X_1 (rod and frame scores) and X_2 (mean work done in group activities) for total data (all groups).

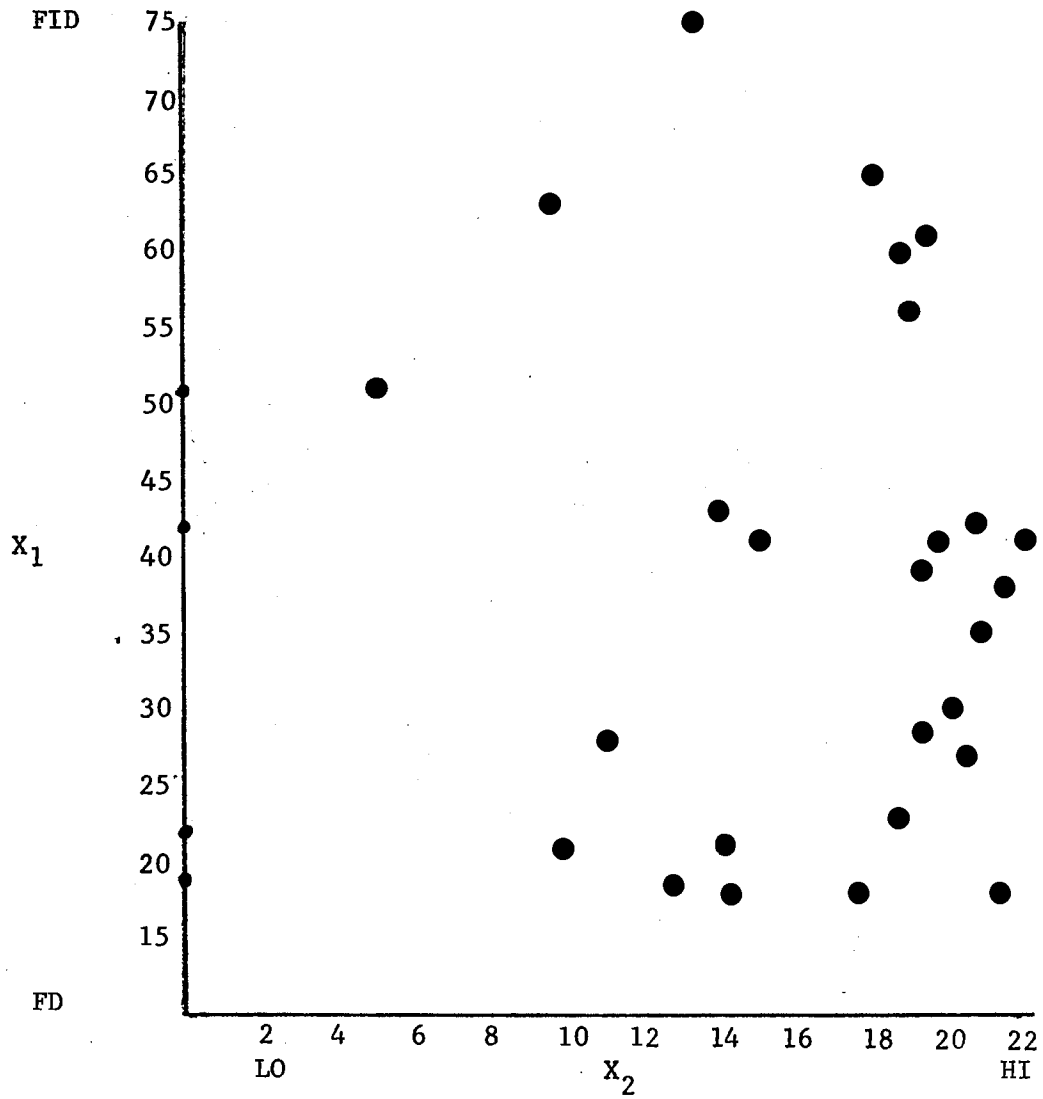


Fig. 16. Scatterplot of association between X_1 (rod and frame scores) and X_2 (median work done in group activities) for total data (all groups).

Table 3
Overall Estimation of Solidarity for
Individual Raters and Mean
Ratings for Each Group

| Group | Rater ₁ | Rater ₂ | Mean Ratings |
|-------|--------------------|--------------------|-----------------|
| 1 | 18.6 | 19.8 | 19.2* |
| 2 | 10.8 | 16.4 | 13.6 |
| 3 | 21.0 | 21.0 | 21.0* |
| 4 | 0.0 | 11.3 | 5.7 |
| 5 | 6.0 | 6.4 | 6.2 |
| 6 | 4.7 | 0.0 | 2.4 |

* HS groups (15.05)

The correlation computed between the rod and frame data and mean leadership scale scores yielded a coefficient of $-.615$, which was significant at the $.025$ significance level. The correlation between median leadership scale scores and rod and frame scores, equaled $-.569$ which was significant at the $.05$ level. When rod and frame scores were compared with ratings on the work scale, the values were $-.226$ for mean work ratings and $-.120$ for median work ratings, both of which did not reach significance at the $.10$ level.

Scatterplots indicating the amount of association between scores on FD-FID and mean and median (1) leadership and (2) work scales (See Figures 17, 18, 19, and 20) exhibited no meaningful curvilinear relationships.

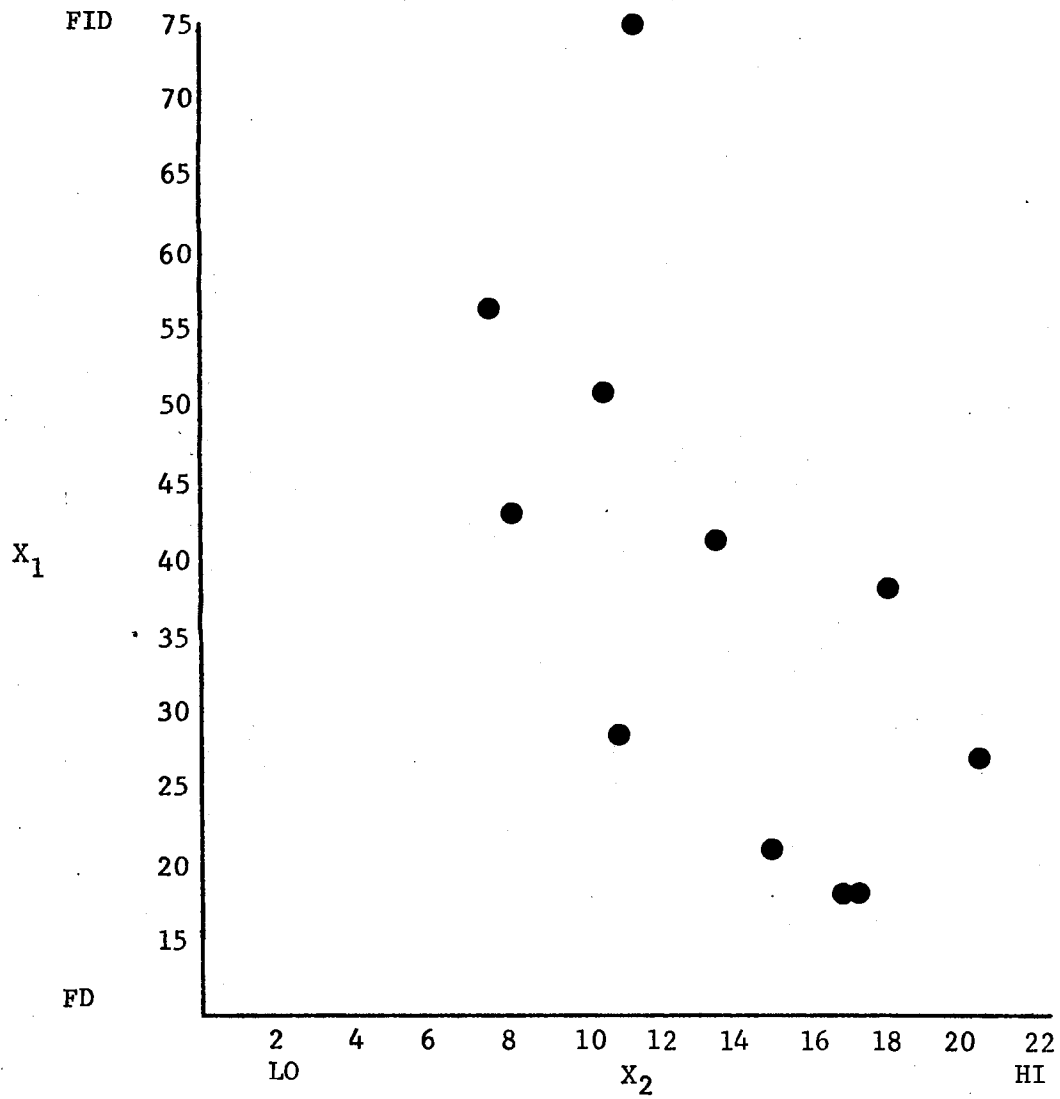


Fig. 17. Scatterplot of association between X_1 (rod and frame scores) and X_2 (mean leadership scores) for HS groups.

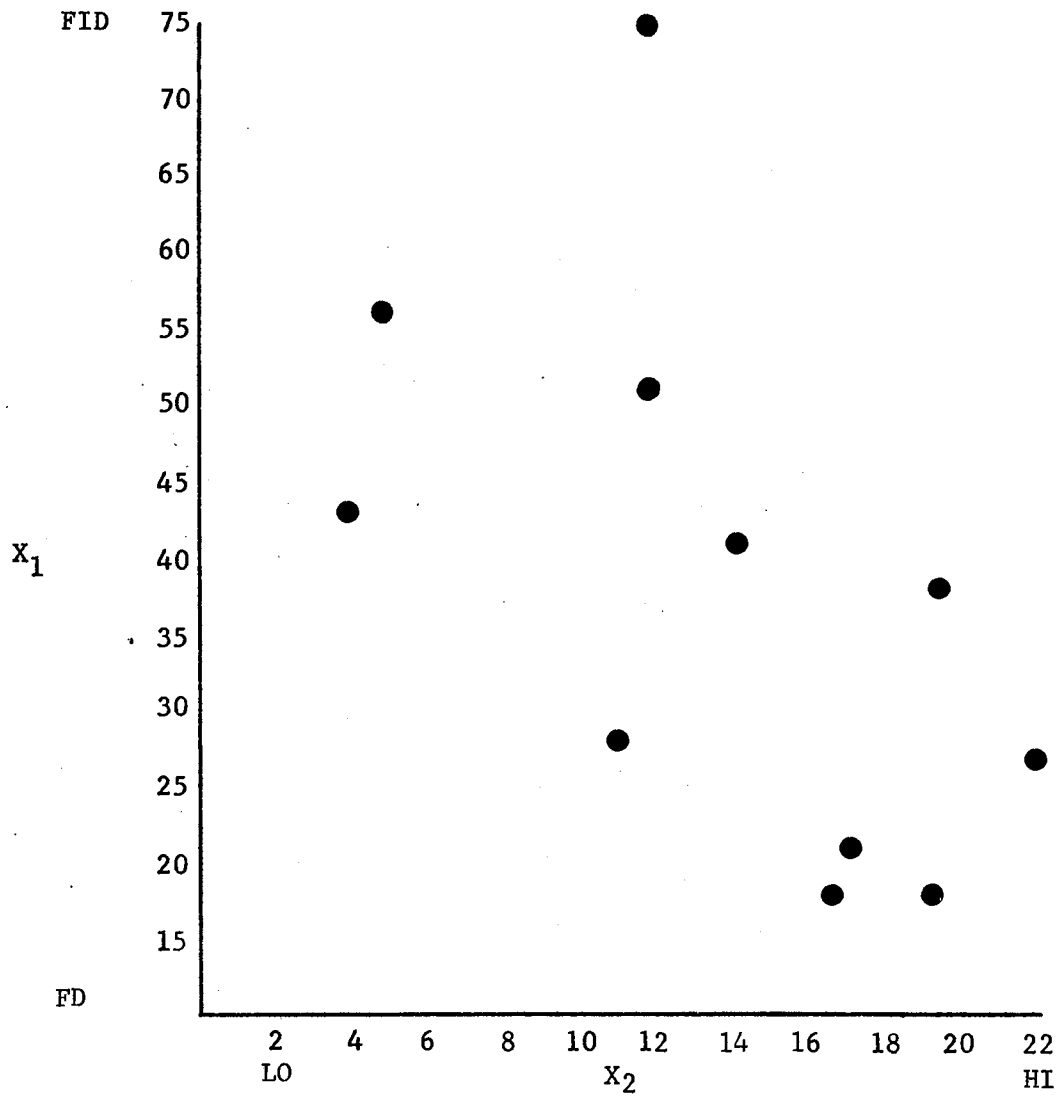


Fig. 18. Scatterplot of association between X_1 (rod and frame scores) and X_2 (median leadership scores) for HS groups.

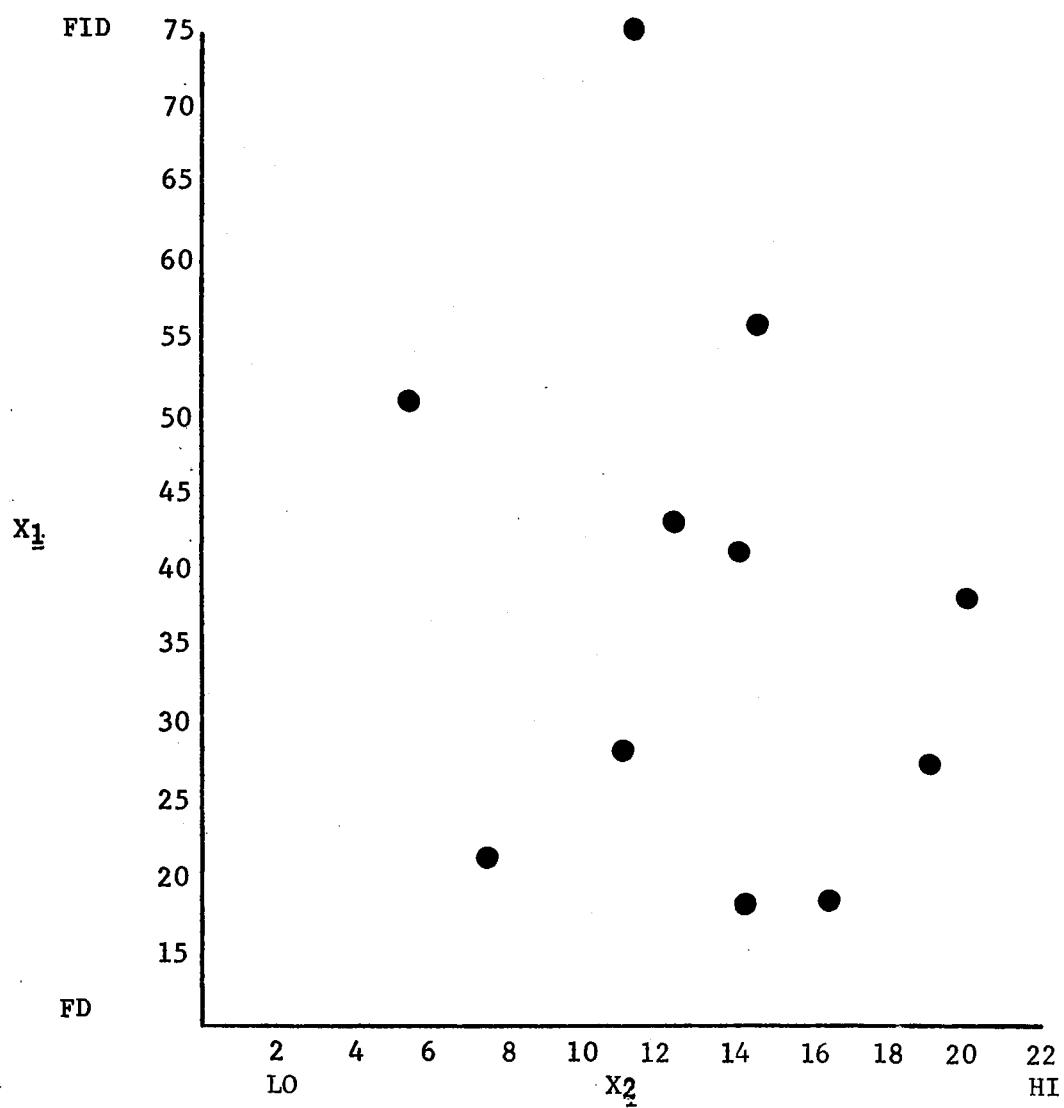


Fig. 19. Scatterplot of association between X_1 (rod and frame scores) and X_2 (mean work done in group activities) for HS groups.

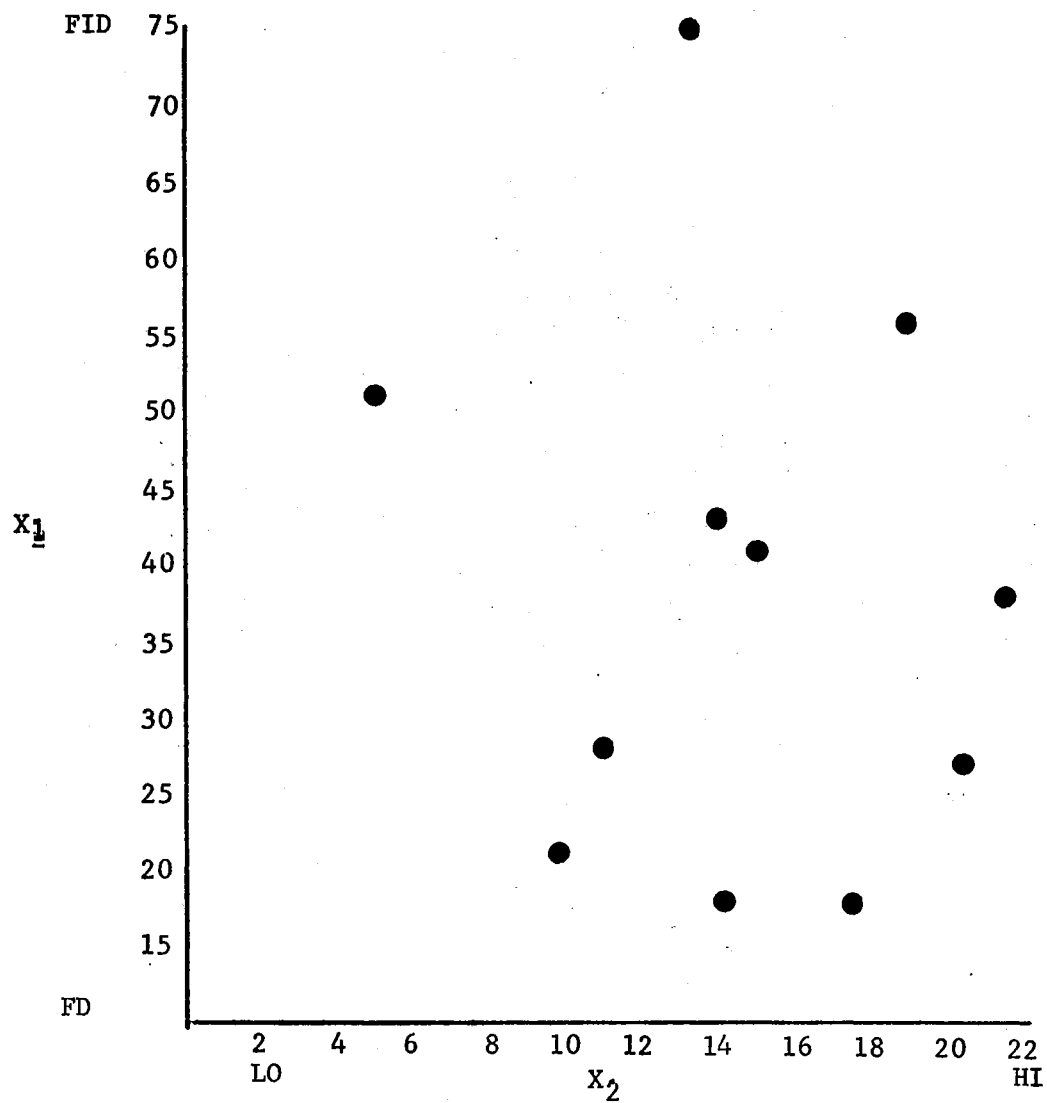


Fig. 20. Scatterplot of association between X_1 (rod and frame scores) and X_2 (median work done in group activities) for HS groups.

A t-test was computed to test the hypothesis that field-dependent Ss would have significantly higher leadership ratings than would field-independent Ss. Scores on FD-FID were ranked on a continuum and the mean ($\bar{X} = 37.82$) and standard deviation ($SD = 17.90$) were computed. Field-independent Ss were those classified as having scores greater than one-half S.D. from the mean; field-dependent Ss were classified as those having scores less than one-half S.D. from the mean. A t test was then computed for the mean leadership scores for field-dependent versus field-independent Ss. A value of $t = 2.84$ was found which confirmed the hypothesis at the .025 significance level. A t-test was also computed using median leadership scores for field-dependent versus field-independent Ss resulting in $t = 1.87$ which was significant at the .10 level and approaching significance at the .05 level (critical value = 1.94).

Association Between Work and Leadership Scales

A Pearson Product Moment Correlation Coefficient was computed to find the degree of relationship between mean and median ratings for work and leadership scales. Values of $+0.462$ (mean data) and $+0.469$ (median data) were computed using total pooled data (all groups), both of which were significant at the .01 level.

When mean and median scores for leadership and work scales were compared using a Pearson Product Moment Correlation Coefficient for HS groups, values of $+0.564$ (mean data) which was significant at the .10 level, and $+0.279$, which was not significant were found.

CHAPTER V

SUMMARY AND DISCUSSION

Leadership Versus the Rod and Frame

The major hypothesis in this study was that leadership in small natural female groups was positively related to general persuasibility as measured by scores on the Witkin rod-and-frame device $\bar{F}D$ (low scores on the rod-and-frame apparatus) being more persuasible than FID (high scores on the rod-and-frame apparatus) 7.

When groups were examined individually, it was found that the above hypothesis was supported by correlations for Groups 1, 3, and 6 but not for Groups 2, 4, and 5. Pooled data for all groups also failed to support the hypothesis.

The above results led to the consideration of four different explanatory possibilities: (1) that general persuasibility and leadership in small natural groups were not consistently related; (2) that the method used for selecting groups was inadequate to insure experimentation with real small natural groups; (3) that college females do not form small natural groups to the same extent as do teenage boys; or (4) that the groups differed in terms of their degree of groupness, and therefore, solidarity of group structure should be examined specific to individual groups. The first three possibilities mentioned might have been adopted if data for all groups had failed

to support the experimental hypothesis. However, due to the discrepancy between correlations between groups, it was decided to examine in greater detail the fourth position, that the group studied differed in the extent of solidarity each possessed.

Material had been gathered from the groups related to: (1) individuals each group member would want to be placed with in task units if a national emergency occurred (Disaster Planning Questionnaire--disguised sociometric device); (2) ideal group formation; and (3) actual group interaction over a seven day interval. This information was given to two raters who were briefed on the characteristics of a solid group and who discussed the criteria for group solidarity before rating the groups. It should be mentioned here that a relatively non-quantitative method was used due to the fact that there are no simple quantitative group solidarity measures. Two of the groups (Group 1 and Group 3), whose data had supported the present hypothesis, were rated by both raters as having the highest degree of solidarity.

Given this information, it was decided to pool the HS group data. When a correlation between leadership and data from the rod-and-frame scores were computed, it was found that the hypothesis was upheld -- that leaders tended to be more persuasible than did low status members. This hypothesis was also supported by the fact that leadership scores for those classified as FD Ss were significantly greater than for FID Ss.

Scatter-plots linking leadership and general persuasibility indicated no curvilinear function for specific group data, data pooled over all groups, or data pooled for HS groups.

Work Done In Group Activities Versus The Rod and Frame

As mentioned in the first chapters of this study, no specific hypotheses were postulated as to the nature of the relationship between work done in group activities and general persuasibility. With regard to specific group statistics, pooled total data and HS group data, no definitive relationship (either linear or curvilinear) was established.

Association Between Work and Leadership Scales

When the relationship between work and leadership data was pooled over all groups, a positive relationship was found to exist between them. This result did not seem to justify the rationale behind including the work scale in the scale battery -- that when filling out the scales, the work scale would allow Ss to alleviate any tension formed through previously ranking their peers on the leadership scale. It was felt that Ss would tend to rank group members they had ranked lower on the leadership scale higher on the work scale. This expected negative correlation between work done in group activities and leadership would have added additional support to the idea that leaders tend to designate actual work to lower status members. It would seem that, in reality, leaders are also those individuals who do much of the actual work in group activities.

The Solidarity Dimension

The question arises as to why the groups differed so greatly in degree of solidarity. This fact could be due to either: (1) that the

selection process was inadequate for selection of solid groups; or (2) that college students in general do not form extremely solid groups; or (3) that females, in general, form less solid groups. Since the examination of college groups as well as female groups is still relatively unexplored, no definitive statement can be made. This question can be answered only through further research with college groups and female groups in general.

Implications for Further Research

In general, the present experiment was an endeavor linking three previously unexplored research areas: (1) female small natural groups; (2) college aged small natural groups; and (3) general persuasibility as related to status (using the Witkin rod-and-frame device). It is essential that further data be gathered so as to delineate in greater detail the definitive qualities of college groups and of female groups. In addition, the relationship between general persuasibility as measured by the rod-and-frame apparatus and status should be studied with regard to divergent sex and age groups.

This research has also pointed out the extreme importance of taking group solidarity into consideration when working with small natural groups. A strong effort should be made to establish quantitative methods for arriving at solidarity ratings and solidarity should be more strongly recognized as playing an integral role in establishing parameters related to small group structure and interaction.

Summary

The purpose of the study was to establish a relationship between status hierarchy in small natural female groups and general persuasibility as measured by the Witkin rod-and-frame apparatus.

Six groups of college females were selected through non-participant observer reports and the administration of a disguised sociometric design (The Disaster Planning Questionnaire). Ss were told that the "Disaster Planning Committee" wished to accumulate further information concerning how people who are friends and know each other well work together, and were asked to participate in a number of experimental sessions for which they were paid according to the size of the group.

In individual sessions with research assistants kept unaware concerning the S's status in his group, Ss, after dark adaption, were exposed to different relative positions of the rod and frame and were asked to judge whether the rod was or was not in the vertical position. Field-independent (FID) Ss, who estimated verticality according to their own body positions and were, therefore, considered less persuasible (according to previous research) were hypothesized to be of lower status in their small natural groups than field-dependent (FD) Ss, who estimated verticality according to visual cues residing in the relationship between the rod and the frame.

Data relating to status was gathered by having Ss rate the members of their group in terms of effective initiative (who made the most suggestions that were carried out by the group). In the same session, data was compiled as to who did the most work in group activities.

Group solidarity was estimated through independent observer ratings of: (1) choices made on critical questions of the disguised sociogram; (2) formation by Ss of an ideal group; and (3) diary information collected from group members over a seven day interval.

It was hypothesized that for high solidarity groups, leaders (high status) would be more persuasible (more FD) than low status members.

When groups were examined separately, some groups exhibited the predicted relationship between FD and status. However, when group solidarity was taken into consideration, the hypothesis was confirmed, that high status group members would be more persuasible (more FD) than would low status members. It was concluded that general persuasibility is an important factor in distinguishing high status from low status individuals in small natural female groups which are highly solid.

Most work done in group activities was not significantly related to persuasibility. However, leadership and work done in group activities was significantly related, intimating that leaders are also those individuals contributing to the actual work done in group activities.

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APPENDIX A

DISASTER EMERGENCY PLANNING QUESTIONNAIRE

DISASTER EMERGENCY PLANNING QUESTIONNAIRE

NAME _____

ADDRESS _____

TELEPHONE # _____

When you are not in school or at home, where can you most likely be reached? _____

1. Would you be willing to help if you were needed in an emergency?
2. Do you have a driver's license?
3. If so, what types of vehicles have you driven (tractor, truck, car, motor scooter, etc.)?
4. Do you have your own (or share with brother or sister) car, motor scooter, etc.?
5. When you are out with friends, how often do you drive? ($\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ of the time?)
6. Do you know how to swim?
7. Do you hold any of the Red Cross life saving certificates? Which ones?
8. Have you had Red Cross training in first aid?

9. List Cub Scout, Boy Scout, or Explorer Scout merit awards you have earned which might be useful in a crisis.

10. List any other skills you may have which would be valuable in an emergency. (Carpenter work, driving a boat, ham radio operator, etc.)

11. Do you have camping equipment? Check which ones.
small tent _____
bed roll _____
cooking gear _____
flash light _____
lantern _____
battery radio _____

12. Do you often go hunting, camping, etc., with friends?

13. Are you skilled in the use of a gun, knife, or other weapon?
(List the weapons.)

14. Could you survive off the land, supplying your own food, water, and shelter?

15. a. Had you rather do so alone or with a group of friends?
b. Which friends? List them in the order you would choose them.

16. If the disaster were caused by atomic bombing followed by enemy invasion, would you want to serve in an underground resistance, spying, and sabotage unit?
17. Have you had judo, karate, or boxing training? List which ones.
18. Have you ever had to defend yourself with weapons? With fists?
19. Do you ever fight your friends? Just for fun? Serious fights?
20. If the disaster were caused by atomic bombing, followed by enemy invasion, who among your friends would you pick to work with you as a sabotage team? List them.
21. Who among your friends get your plans and activities started and see that things get done?
- First one _____
- Second one _____
- Others _____
- _____
22. Are there any of the fellows you run around with that you would not like to have in the resistance unit with you? If so, list them.

23. Which of your friends do you consider the bravest?
24. Who would you pick to be the leader of the small group of half a dozen or so boys you would be with?
25. Would he choose you if he picked two fellows to help with the planning?
26. Who would you pick to be the lieutenants? Name two.
-
-
27. In a situation of extreme secrecy, who would you trust among your friends? List in the order of the most trusted first, the next one second, etc.

APPENDIX B

DISASTER EMERGENCY PLANNING QUESTIONNAIRE

DISASTER EMERGENCY PLANNING QUESTIONNAIRE

Many kinds of disaster might strike towns around this area. Tornadoes, floods, fires, even governmental collapse. When disaster hits a city or town, the people living there are disorganized, many are injured, and the best help comes from places outside the damaged area.

Police, National Guard, and other agencies have many people in their services. There is, however, a largely unused source of emergency manpower--college students.

This questionnaire is to find out what emergency units might be available in this area if college students were used.

Please answer all questions carefully. No one will ever see your answers except the disaster planning director. It will not be seen by college administrators or anyone else.

DISASTER EMERGENCY PLANNING QUESTIONNAIRE

NAME _____

ADDRESS _____

TELEPHONE # _____

When you are not in class or at the dorm, where can you most likely be reached? _____

1. Would you be willing to help if you were needed in an emergency?
2. Do you have a driver's license?
3. If so, what types of vehicles have you driven (tractors, trucks, cars, motorcycles, etc.)?
4. Do you have a car or motorcycle?
5. When you are out with friends, how often do you drive?
($\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ of the time)
6. Do you own a bicycle?
7. Do you know how to swim?
8. Do you hold any of the Red Cross lifesaving certificates? Which ones?
9. Have you had Red Cross training in first aid?
10. Indicate which of the following service organizations you have participated in and give the numbers of years you were a member:

F. H. A. _____
 4 H _____
 Girl Scouts _____
 Camp Fire Girls _____
 Other (specify) _____

11. Have you acquired any skills from the above organizations which would be valuable in an emergency? List them.
12. Do you have camping equipment? Check which ones:
- | | |
|---------------|-------|
| small tent | _____ |
| bed roll | _____ |
| cooking gear | _____ |
| flashlight | _____ |
| lantern | _____ |
| battery radio | _____ |
13. Do you often go hunting, camping, etc. with friends?
14. Could you survive off the land, supplying your own food, water, and shelter?
15. a. Had you rather do so alone or with a group of college girlfriends?
- b. Which friends? List them in the order you would choose them.
16. If the disaster were caused by weakening of the government, would you want to serve in an underground resistance unit?
17. Have you had judo, karate, or self-defense training? List which ones.

18. Have you ever had to defend yourself?
19. If the disaster were caused by weakening of the government, who among your friends would you pick to work with you as a sabotage team? List them.
20. Who among your friends get your plans and activities started and see that things get done?
- first one _____
- second one _____
- others _____
- _____
21. Are there any of the women you run around with that you would not like to have in the resistance unit with you? If so, list them.
22. Who would you pick to be the leader of the small group of half a dozen or so women you'd be with?
23. Would she choose you if she picked two women to help with the planning?
24. In a situation of extreme secrecy, who would you trust among your friends? List them in the order of the most trusted first, the next one second, etc.

APPENDIX C

EVALUATION FOR REVISED QUESTIONNAIRE

The questionnaire that you just completed will be administered to females in Oklahoma colleges. For this reason, it is essential that those receiving the questionnaire be able to understand the meanings of the various questions and reply accurately to them. Therefore, we are asking you to evaluate the questionnaire in the hope that we can remove any unclarities before actual use in the survey. When evaluating the questionnaire, it would be useful to keep the following points in mind:

- Are the questions worded in an understandable manner?
- Will the respondents find it easy to arrive at an answer for each question?
- Are there any questions or alternative answers which should be omitted or included?
- How will the average college woman react to each question specifically and the questionnaire in general?

DISASTER EMERGENCY PLANNING QUESTIONNAIRE EVALUATION

I. Question Clarity

1. In general, the questions are

2. The following questions should be deleted (give question number (s))

because explain why in each case

3. The following questions should be added (describe question). .

because explain why in each case

4. The words used in each question are.

II. Alternative Clarity: example - question no. 3 - alternatives are tractors, trucks, cars, motorcycles

1. The alternative responses are, in my opinion.

2. The following alternatives should be deleted (give question number(s) and alternatives(s)).

because explain why in each case.

3. The following alternatives should be added (give question number(s) and alternative(s)).

because explain why in each case.

4. The words used in the alternative responses are.

III. General Response:

1. College women will react to this questionnaire

2. College women will react to the formation of "sabotage
units"

3. College women will react to the idea of "defense units". . .

4. College women will react to the idea of a natural disaster. .

5. College women will react to the idea of the "weakening of the government".

IV. General Criticisms:

1. The questionnaire, in my opinion, is good in that.

2. I would criticize the questionnaire in that

APPENDIX D

FINAL REVISION OF QUESTIONNAIRE

DISASTER EMERGENCY PLANNING QUESTIONNAIRE

Many kinds of disasters might strike towns around this area. Tornadoes, floods, fires, even governmental collapse. When disaster hits a city or town, the people living there are disorganized, many are injured, and the best help comes from places outside the damaged area.

Police, National Guard, and other agencies have many people in their services. There is, however, a largely unused source of emergency manpower--college women.

This questionnaire is to find out what emergency units might be available in this area if college women were used.

Please answer all questions carefully. No one will ever see your answers except the disaster planning director. It will not be seen by college administrators or anyone else.

DISASTER EMERGENCY PLANNING QUESTIONNAIRE

NAME: _____

COLLEGE: _____ CLASSIFICATION: _____ MAJOR: _____

LOCAL ADDRESS: _____

LOCAL TELEPHONE: _____

MARITAL STATUS: _____

AGE: _____

ARE YOU EMPLOYED? _____ IF SO, WHERE? _____

When you are not in class or at the above address, where can you most likely be reached?

1. Would you be willing to help if you were needed in an emergency?
2. Do you have a driver's license?
3. If so, what types of vehicles have you driven (tractors, trucks, cars, motorcycles, heavy machinery, planes, boats, etc.)?
4. Can you operate a standard transmission (stick shift)?
5. Do you have a car or motorcycle?
6. When you are out with friends, how often do you drive (never, part, most, all of the time)?
7. Do you own a bicycle?
8. Do you know how to swim?
9. Do you hold any of the Red Cross lifesaving certificates?
Which ones?

10. Have you had Red Cross training in first aid?
11. Indicate which of the following service organizations you have participated in and give the number of years you were a member:

F. H. A. _____

4 H _____

Girl Scouts _____

Sorority _____

Camp Fire Girls _____

Other (specify) _____

12. Have you acquired any skills from the above organizations which would be valuable in an emergency? List them.

13. Would you participate in a class teaching such skills?

14. Do you have camping equipment? Check which ones:

small tent _____
 bed roll _____
 cooking gear _____
 flashlight _____
 lantern _____
 battery radio _____
 other (specify) _____

15. Do you often go hunting, camping, etc., with friends?

16. Could you survive off the land, supplying your own food, water, and shelter?

22. Who among your friends get your plans and activities started and see that things get done?

Most likely to _____

Next most likely to _____

" " " "

" " " "

" " " "

" " " "

" " " "

" " " "

23. Are there any of the women you run around with that you would not like to have in the task unit with you? If so, list them.

24. Who would you pick to be the leader of the small group of half a dozen or so women you'd be with?

25. Would she choose you if she picked two women to help with the planning?

26. In a situation of extreme secrecy, who would you trust among your friends? List them in the order of the most trusted first, the next one second, etc.

Most trusted _____

Next most trusted _____

" " "

" " "

" " "

" " "

" " "

" " "

APPENDIX E

LETTER OF RECOMMENDATION FOR
REPRESENTATIVE OF DISASTER
PLANNING COMMITTEE



OKLAHOMA STATE UNIVERSITY • STILLWATER

Research Foundation
(405) 372-6211, Ext. 271

74074

October 29, 1973

TO: Staff and Faculty
Oklahoma State University

Miss Dana Noe is representing the State Emergency Planning Commission. She is the field representative for the Commission in the development of methodology for assessment of statewide manpower reserves.

Miss Noe has clearance to conduct information surveys, and test information gathering techniques, appropriate for emergency planning on the campus.

Your cooperation will be appreciated.

APPENDIX F

COMPUTER READ-OUT OF GROUP FORMATION

STARTING POINT = PERSON 131

SIZE = 3

| CODE | RANK | |
|------|-------|-----------------------------|
| 844 | 4.000 | SPRAGUE, ANGE 932 WILLHAM N |
| 853 | 3.000 | STEVENS, NANCY 10 |
| 131 | 0.000 | ELLIOTT, JANET |

STARTING POINT = PERSON 132

SIZE = 4

| CODE | RANK | |
|------|-------|---------------------------------|
| 525 | 4.000 | HAMMOCK, LYNN |
| 752 | 3.000 | PHILLIPS, WENDYE 1003 WILLHAM N |
| 390 | 2.000 | COLBY, PAM 515 WILLHAM N |
| 132 | 0.000 | ESSNER, JAN 627 DRUMMOND |

APPENDIX G

COMPUTER READ-OUT OF CONCANTENATION

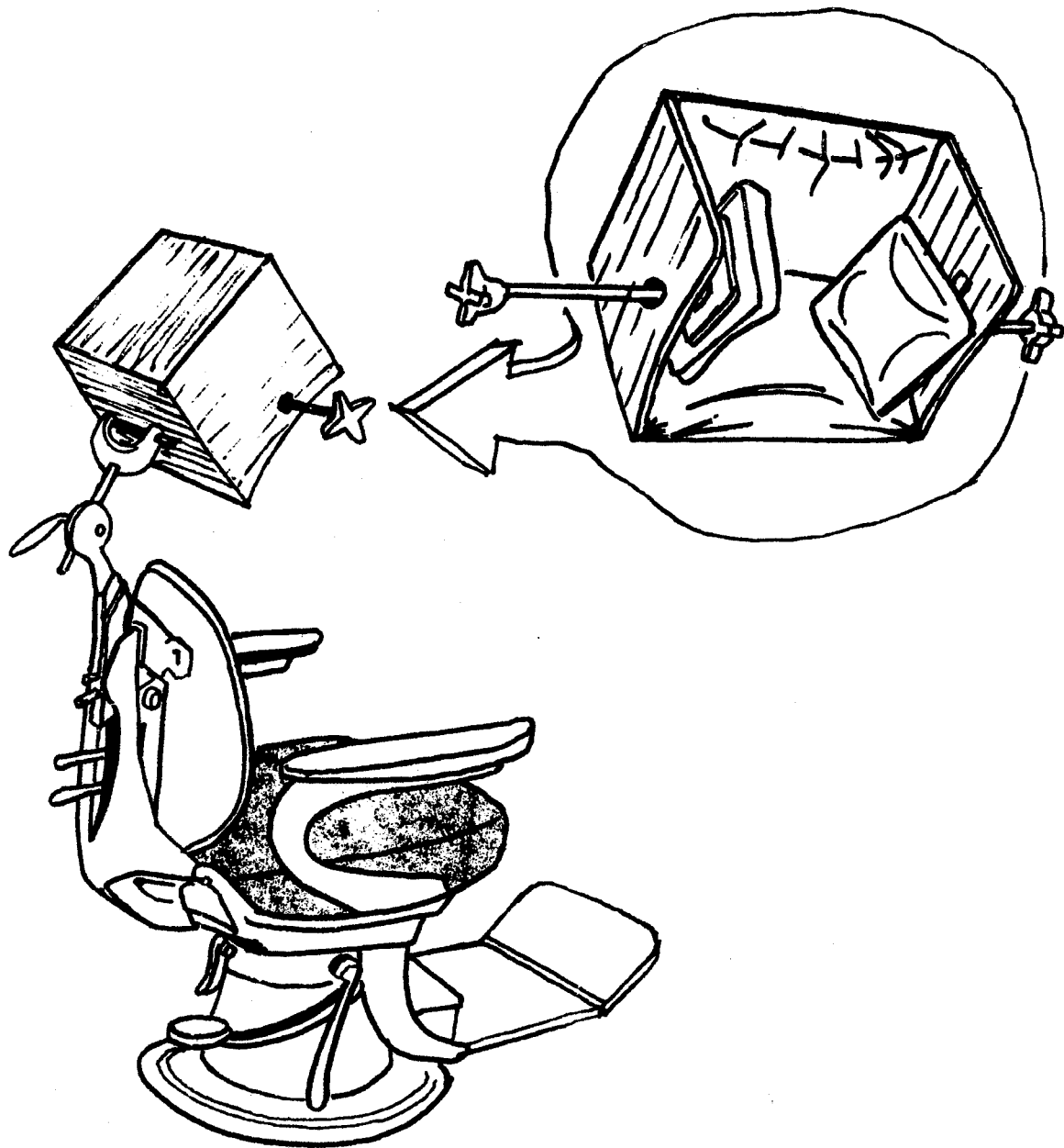
BY KEY MAN LEVEL

CONCATENATION OF KEY-MAN GROUPS BY TOP MAN

| | | | | | | |
|----|----|----|----|----|----|----|
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | 6 | 10 | 21 | 23 | 22 | 31 |
| 8 | 6 | 10 | 21 | 23 | 22 | 31 |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | 13 | 7 | 1 | 14 | 36 | |
| 15 | 13 | 7 | 1 | 14 | 36 | |
| 16 | 13 | 5 | | | | |
| 17 | 13 | 7 | 1 | 14 | 36 | |

APPENDIX H

SCHEMATIC ILLUSTRATION OF CHAIR DESIGN
USED IN CONJUNCTION WITH THE WITKIN
ROD-AND-FRAME APPARATUS



APPENDIX I

INSTRUCTIONS GIVEN AT INITIAL MEETING

We are representing the Disaster Planning Committee at Oklahoma State University. Our group is interested in the possibility of developing emergency units to help in disasters such as floods, fires, etc. using a previously untapped source of person-power---college females. Have any of you filled out the Disaster Planning Questionnaire? (If yes, say "That's probably how you were chosen;" if no, say "You were probably chosen by word of mouth.")

What the committee really needs at this stage of planning is information on how people who know each other, who are friends, work together. The committee contacted Dr. Mark MacNeil, who set up this team and the activities you will be doing, to aid in gathering this information. The funding for this project is from the National Institute of Health (NIH) and I think the reasons for their interest is obvious.

Some of the things we will be asking you to do may not make much sense to you but they will give us a great amount of the type of information we need. First of all, you will be asked to keep what we call an "Activity Record" for the next seven days. The Activity Record will tell us what types of activities college women engage in and where they can be reached if an emergency should occur. Each day, we want you to fill in the activities you engaged in such as "ate breakfast" or "went to class," who suggested it, who you did it with, when you did it and where you did it. We'd like you to turn this in at the end of the seven days. Are there any questions? (E paraphrases above if necessary.) We are also asking you to come in for three or four more sessions. Sometimes you will be with one or more of your friends and other times we will need to see you separately. In one

session each of you will sign up for a time to participate in a situation alone; in a second session you will be randomly selected to participate in one of several tasks; and you will all participate in 2 other sessions, involving several tasks, together. It is extremely important that you make it to all scheduled appointments, whether those scheduled for you alone or those scheduled for all of you together. If all of you don't show up it will not only mess up our project design but, in addition, we are not allowed to pay any of the team for the team sessions unless everyone of you participate in every session.

After you've been in all of the sessions and have turned in your activity sheets, we will pay your team \$_____. Remember that everyone must come to all sessions and must turn in all completed activity sheets in order for anyone to get their share of the \$_____.

Will _____ and _____ and _____ days (nights) at _____ A.M. (P.M.) be alright for the times we need to see all of you together? Good. Now, we'd like each of you to sign this sheet for a separate session. Are there any questions?

APPENDIX J

SCALES GIVEN IN FINAL GROUP SESSION

INSTRUCTIONS: DISASTER QUESTIONNAIRE

As we told you during our first session, this research is being directed by the Disaster Planning Committee. The committee has prepared a questionnaire which was given to a number of people late last fall. We would like you to fill out a form today whether or not you completed one before. Completing this form does not mean that you will be committing yourself to become a unit for the Disaster Planning Committee, but that you will be helping in gathering information to be used when units are really formed.

INSTRUCTIONS: FINAL SCALES

On the pages you will be given are four questions which we would like you to answer. In answering these questions you will be asked to perform ranking on a scale. On the sort of scale that we are using, both the order of rankings and the distances between them are important. It is very much like a thermometer, where we need to know not only that one temperature is hotter or colder than another but also by how much. You will indicate your rankings by putting slash marks across the line at appropriate places (E demonstrates temperature example on the blackboard.) For example, if we were to ask you what is the ideal temperature for swimming you might put a slash mark like this, across the line. Then if we asked you, using the same line, to indicate the temperature outside today, you would put a slash mark that was lower (or higher) than the swimming slash .

The first question that you will answer is concerned with ranking the people who are here with you, in terms of making suggestions that

are carried out by all of you. The second question is concerned with ranking the people who are here with you as to the amount of work that they put in, in your group's activities. Please remember to include yourself in both of these rankings. In the third question, you will simply be asked to indicate on the scale how much you like the group that is here with you. In the last question you'll be asked to create and rank an ideal group. In this group you may include those who are here with you today and also any other girls if you wish.

Please answer each of the four questions as quickly as possible, using your first impressions --- research has shown that more accurate and useful information can be obtained in this way. Keep in mind that each scale is concerned with ranking a specific aspect, so your rankings will not necessarily reflect your overall feelings about the people concerned. Your finished scales will be used by the Disaster Planning Committee only, and none of the other people here with you today, or anybody else, will ever see them.

As you finish each question, please indicate this to me and I will pick up that question. Then you can go on to the next one.

Are there any questions? Okay, here are your forms.

NAME _____

Relative Contribution Lines

1. Using the "contributions line" on the next page, we'd like you to tell us how much of the time each of your friends here with you (including yourself) makes suggestions that are carried out by all of you. The line runs from the bottom marked "makes the fewest suggestions that are carried out," to the top, marked "makes the most suggestions that are carried out." First, put the name of the person here with you (you must include yourself) who makes more suggestions that are carried out than anyone else on the dotted line at the top. Next put the name of the person who makes the least suggestions that are carried out on the dotted line at the bottom. Place the names of all of your other friends who are here along the vertical line according to how much they give suggestions and ideas that are carried out. Make a slash mark across the line to show just where you think each of their contribution of ideas would fall. Be sure to put a slash mark for each person here with you and their name next to it.



Makes the most suggestions that are carried out.

Makes the fewest suggestions that are carried out.

NAME _____

2. Using the "contribution line" on the next page, we'd like you to tell us how much of the time each of your friends here with you (including yourself) does work in group activities. For example, if someone suggests a party, who does the most to get the party set up? The line runs from the bottom marked "does the least work in group activities" to the top, marked "does the most work in group activities." First, put the name of the person here with you (you must include yourself) who does more work in group activities than anyone else, on the dotted line at the top. Next, put the name of the person who does the least work in group activities on the dotted line at the bottom. Place the names of all your other friends who are here along the vertical line according to how much work they do in group activities. Make a slash mark across the line to show just where you think their contribution of work in group activities would fall. Be sure to put a slash mark for each person here with you and their name next to it.

Does the most work in group activities.

Does the least work in group activities.

NAME _____

3. How well do you like your group here with you? Place a slash mark on the scale indicating how well you like the group here with you, anywhere from "very, very much" to "not at all."

Very, very much

Not at all

NAME _____

4. Make up an ideal group. You may include those present and any other girls you know. After you have decided which girls you would like to have in your ideal group, place the names of all the girls chosen along the vertical line according to how much you would like them in your ideal group. First, put the name of the person you would most like to have in your ideal group on the dotted line at the top. Next place the name of the person that is least important in your ideal group on the dotted line at the bottom. Be sure to put a slash mark for each person in your ideal group and their name next to it.



Most important in ideal group.



Least important in ideal group.

APPENDIX K

DIARY OR ACTIVITY RECORD

APPENDIX L

INSTRUCTIONS TO RATERS

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"The importance of groups and group interaction in shaping member attitude and behavior varies in degrees, depending upon how stabilized the members' role and status expectations are, and how binding the members regard the group's norms. The concepts used to refer to the relative grip of group properties upon its members and to the 'cement' binding members together have included such terms as solidarity, cohesiveness, and integration." (Sherif & Sherif, 1969, p. 182).

Sherif states that the extent of solidarity within the group can be measured by (1) whether there is a discrepancy in behavior when the leader is present as compared to when the leader is absent; (2) whether there is an attempt at exclusiveness and secrecy when activity brings the group into relationships with outsiders; and (3) what action is taken by group members in the case of anti-normative deviant behavior. "The degree of consensus among members on what constitutes propriety, decency, and loyalty is one of the indicators of the relative stability of the group." (Sherif & Sherif, 1969, p. 141).

You will be given different kinds of data pertaining to group function and activity. I would like to assess group solidarity for each type of information for each group by examining each set of data and then rating the extent of group solidarity on the following scales. In order to make this task somewhat easier, I have arranged the data into separate sets and have included some questions which may help you when considering how much group solidarity is evidenced by the data. You will repeat this process for each of the six groups.

(1) Disaster Planning Questionnaire

- (1) Are the groups formed in the key questions limited to group members only?
- (2) Are the same names given in all of the important questions in the same order?

(2) Ideal group scale

- (1) Are most group members included in the ideal group?
- (2) Do the group members rate higher than non members in the formation of the ideal group?

(3) Diaries

- (1) How much of the time do the group members spend together?
- (2) Are most group members included in most activities?
- (3) Are specific norms evident from group interaction?
- (4) Does the same individual suggest or approve most of the activities which are carried out by the group?
- (5) Are sanctions given by group members for not participating in group activities?

Remember that the above questions are merely suggestions as to the types of information which might relate to solidarity. If you use other indices in your estimation of solidarity, please report them to me. Remember that the ratings for each group for each area of information should be made relative to the other groups. Therefore, for each scale, all groups should be rated. Do you have any questions?

APPENDIX M

SCALES USED BY RATERS

SCALE 4

OVERALL ESTIMATION OF GROUP SOLIDARITY

GREATEST SOLIDARITY

LEAST SOLIDARITY

VITA

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Thesis: GENERAL PERSUASIBILITY AS RELATED TO STATUS POSITIONS IN
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