THE EFFECTS OF COHESIVENESS AND STATUS AS GROUP PROPERTIES ON THE CHOICE SHIFT PHENOMENA

By

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CHAPTER I

LITERATURE REVIEW

Introduction

During the 1950's, workers in the area of group decision-making contended that group decisions tend to be more conservative than the decisions made by individuals acting alone. The main factor identified behind the conservativeness of group decisions was social pressures, brought upon deviates during group discussion, to conform to the desires of the majority. Whyte (1956), a noted critic of the bureaucratic system, felt that social pressures aimed at nonconforming members served to inhibit the boldness of the creative individual, reducing him to the common level of the group, and leading to decisions which were noncreative and cautious. Whyte's contention had been well supported by research in the area of conformity. For example, Schacter (1951) found that when groups were forced to reach consensus, then influence attempts were directed toward deviates to yield to the majority's decision. The influence attempts tended to reduce variability among members and gave rise to an averaging effect, which caused a decrement in group risk taking.

However, Stoner (1961) found that group consensus on hypothetical life dilemma problems tended to be more risky than the decisions of individual members, acting alone prior to group discussion. Stoner's

contradictory findings served as a strong research impetus for others, and since his original work a voluminous amount of research has attempted to identify the factors that underlie the shift phenomenon. Unfortunately, research into the choice shift phenomenon has become remote from the initial purpose of the area, which was to identify the factors that were influential in the decisions generated by important, higher-order policy making groups. Instead, research has treated the choice shift as an isolated laboratory phenomenon, with little concern as to how the choice shift relates to the real world. The same criticism may be given for the theories that have been developed from choice shift research. For the empirical results to be useful beyond explaining an artificial laboratory situation, then it will be necessary to tie the findings to a broad theoretical framework.

As several writers have noted (Cartwright, 1971; Jones & Gerard, 1967; Wallach, Kogan & Bem, 1964), the study of group dynamics would seem a useful framework within which to examine the choice shift findings. Yet, group properties have been almost totally ignored by research in the area. The present chapter reviews the choice shift literature in relation to group properties and their effects on the resulting shift. The review begins by briefly discussing the instruments and research paradigm that have traditionally been employed to investigate shifts in group preferences. The presentation provides a comparison base in which theories of the choice shift are discussed. The review is also concerned with how group properties have been used in the research, and how small group research on group properties could be used to increase the predictability of shifts in risk preference.

Instruments

The most common instrument for measuring shift is Kogan and Wallach's (1964) Choice Dilemma Questionnaire (CDQ), which consists of twelve hypothetical "life dilemma" situations. Each story presents a dilemma, plus the favorable and unfavorable potential outcomes of the situation. The subject's task is to choose an alternative with the lowest probability for success he would consider acceptable to advise the protagonist of the story to take a particular action. The odds for a successful outcome decrease from 9-in-10 to 1-in-10, with one alternative available for those who would not advise taking a risk regardless of the odds.

The popularity of the CDQ is partly due to its consistency in producing shift. Ten of the items give shifts toward risk, while two items produce shifts toward caution (Cartwright, 1971). A major advantage of such frequent use of the same instrument is that one can make comparisons across studies. However, an offsetting potential disadvantage has been found by Clark and Williams (1969). Using the CDQ items and two different sets of instructions, the traditional set and a neutral set, they found a shift only with the traditional set. No shift occurred in the neutral instruction condition.

Clark and Williams suggest that the reliability of the shift found when CDQ items are used may be due to the demand characteristics built into the instructions. They postulate that the demand characteristics consist of two components: 1) the subjective directional expectations generated by the instructions, and 2) the social process in the group discussion which allows each subject to conform to his directional expectations.

The problem facing the investigator is the lack of a reliable alternative task. The most popular alternative has been gambling situations, but the results from such tasks are mixed, sometimes producing shifts, frequently showing no shift (Dion, Baron, & Miller, 1970). Another limitation is the simplicity of many gambling situations. For example, Blasovich, Veach, and Ginsburg (1973) used a realistic casino blackjack game to measure shifts in betting preference. The group situation consisted of each player stating his betting preference without discussion. The simplicity of the task used by Blasovich does not allow one to study the processes occurring during a group discussion, and such discussion processes must be understood if social psychology is to understand the mechanisms that influence group decision-making.

It appears that research will continue to employ the CDQ until a reliable alternative instrument is developed. Work by Higbee (1971), who has created a complex, military decision game, suggests that alternatives may soon be available.

Traditional Research Paradigm

The majority of the studies in the choice shift employ some type of a repeated measures design (Dion et al., 1970). Subjects are pretested individually, then placed into a group, where they are instructed to discuss each item until consensus is reached as to which alternative is most acceptable. Shift is measured by comparing the mean pretest score of the individuals who comprise the group against the mean of the group score. An additional posttest measure is sometimes employed by having subjects respond individually after the group situation

(e.g., Bem, Wallach & Kogan, 1965; Marquis, 1962). Subjects have been found to adhere to the group decision for as long as six weeks after group discussion.

Cartwright (1971) has criticized the rigid adherence to the repeated measure design. He points out that shift "refers to shifts in choices and not differences between the choices of individuals and groups who are considering the items for the first time" (p. 373). That is, groups cannot be said to be more risky than individuals until it has been shown that the initial choice of groups is more risky than the initial choices of individuals.

Two studies have employed a between-subject design (Carlson & Davis, 1971; McCauley, Kogan & Teger, 1971). Both failed to find a significant shift, although the shift sizes were roughly equivalent to the sizes found when a repeated measure design has been used. The authors of the two articles blamed the decreased sensitivity of between-subject designs for the lack of a significant effect.

Recently, Gaskell, Thomas and Farr (1973), using a modified Solomon's four group design, have found groups to be more risky. They obtained the following results: 1) Pretesting, in anticipation of group discussion, reduced the extremity of pretest scores but did not alter the mean, and 2) subjects who engaged in group discussion, but had not been pretested, were more risky than the pretest scores of individuals. These results suggest that groups are more risky.

Group Dynamics in the Choice Shift

To date, research on the choice shift has almost completely ignored the potential effects various group properties may have on the shift.

If results are to be generalized to the real world, it would seem important to consider group properties in relation to choice shifts. The present section will review investigations that have considered two essential properties of groups, leadership and cohesiveness.

Leadership Theories

Since natural groups have not been employed, the main use of leadership has been to postulate the effects which initially extreme risk takers have on the group decision. Leadership theories share the basic tenet that high initial risk takers are more influential in the group discussion, thereby inducing others to shift toward more risky alternatives (Marquis, 1962). A similar explanation is offered for items that give shifts toward caution. The individuals who select extremely cautious choices tend to be more persuasive and produce a shift to caution.

The main support for the leadership postulate is from studies where group members were asked to list the most influential member during discussion. On risk items, the initial high risk taker is consistently seen as the most influential (Wallach, Kogan & Bem, 1962; Wallach, Kogan & Burt, 1965), while for cautious items, those initially choosing cautious alternatives are selected as being most influential (Rabow, Fowler, Bradford, Hofeller & Shibuya, 1966). Although such evidence gives strong support to the various leadership theories, a counter-explanation still remains; that is, subjects view the initial extreme member as most influential because they have shifted toward his position, rather than because he actually exercised the most influence during the discussion (Hoyt & Stoner, 1968).

To date, four versions of leadership theory have been advanced as explanations for the risk phenomenon. These are personality hypotheses, "rhetoric-of-risk" and "persuasive-arguments" hypotheses, leadership-confidence theory, and release theory. The first maintains that individuals who are high risk takers are inherently more persuasive, and naturally evolve into a leadership role. This version has received virtually no support, as a large number of studies have shown that leadership is not a strong personality trait, but is situationally determined (Gibbs, 1969).

A second version asserts that the structure of language makes arguments favoring risk more persuasive than those favoring caution (Pruitt, 1971). Direct support for this version, known as the "rhetoric-of-risk" hypothesis, is lacking; however, indirect support is available. Earlier, it was mentioned that gambling situations have produced mixed results. Kelley and Thibaut (1969) have suggested that a central cause for lack of shift in several of the situations is due to the void of rhetoric in discussing the bets. When Pruitt and Teger (1969) created a gambling task which allowed rich discussion, a sizable shift occurred.

Vinokur's persuasive-arguments theory relies heavily on the rhetoric-of-risk hypothesis. His theory states that each item generates a pool of persuasive arguments supporting each of the alternatives for that item. A subject's initial choice is determined by the pool of arguments he has available. In the group situation, the shift occurs because a greater variety of arguments are presented by other members, increasing the likelihood that a different alternative will be found to be attractive. Vinokur and his associates have provided a considerable amount of support for this theory (Burnstein & Vinokur, 1973; Burnstein, Vinokur & Trope, 1973; Vinokur & Burnstein, 1974).

The persuasive-arguments theory can be construed as an alternative to the rhetoric-of-risk hypothesis. If one adopts the position that the initial extreme risk takers possess a more complete pool of arguments favoring their choice, then these individuals should be able to exercise influence during the group situation through the presentation of new arguments for consideration. An indirect test of this position was provided by Ellis, Spencer, and Oldfield-Box (1969). In their experimental groups, subjects were carefully matched for initial extremity on specific items, while the control groups were composed of randomly chosen members. As expected, a significant shift occurred in the control groups, but not in the experimental groups. Since each member of the experimental groups should have based his initial choice on a similar but limited set of arguments, persuasive-arguments theory would have predicted no shift for these groups.

Several studies have produced evidence against the persuasive-arguments theory. First, studies have been reported where shifts occurred in an information only condition; that is, members merely revealed their choices without discussing the items (Pruitt & Teger, 1969; Stokes, 1971; Teger & Pruitt, 1967). Secondly, Graham and Harris (1969) found that when groups discussed half the items, but not the other half, a full shift occurred to both sets of items. Without discussion, it would be impossible for high risk takers to expose other members to their unique arguments. Obviously, other mechanisms beside persuasive-arguments affect the group shift.

A third version of leadership theory was developed by Burnstein (1969), who asserts that initial high risk takers are more confident of their selections, and their confidence gives them greater assertive-

ness and influence during the group discussion. For cautious shifts, the explanation is simply reversed, so that individuals choosing low risk alternatives are accredited with greater confidence and influence.

The strongest support for the leadership-confidence theory comes from Burnstein (1969) and Calusen (1965), both using gambling situations. Clausen found no significant shift in groups whose high risk taker was low in confidence, but a risky shift did occur in groups with a high confidence, high risk taker. Burnstein likewise found a positive correlation between initial risk taking and confidence. Furthermore, Castore, Peterson and Goodrich (1971) obtained a radical shift toward risk in groups with a high confidence, individual high risk taker. This theory certainly appears to deserve more investigation.

The final leadership theory was devised by Pruitt (1969) and more completely stated by Pruitt (1971). This theory, called release theory, is conceptually similar to the phenomenon known as "social contagion" (Wheeler, 1970). In social contagion, a person who has strong motivation to behave in a certain manner, yet feels constrained by social norms, is released from the constraining forces when he observes one other individual behaving in the desired manner. The observed individual serves as a model and is imitated.

Release theory postulates a similar sequence of events to be occurring in a choice shift paradigm. In the individual condition, subjects are seen as being in a state of conflict, attracted to the extremes, yet wanting to conform to a perceived social norm of moderation. The resulting initial choice is a compromise between the moderation norm and the attraction toward the extremes.

In the group situation, if there is a single member who did not compromise his initial choice, but instead chose an extreme, then he will serve as a model for the other members. The observed model will release the others from the constraining forces and a shift toward the extremes will occur. It can be seen that release theory is stated so as to include shifts toward risk and caution.

That the initial choice is made under a state of conflict is supported by research on the "Walter Mitty" effect (Pruitt, 1969). Walter Mitty was Thurber's fictitious character, who in fantasy saw himself as brave and courageous, but in real life was meek and passive. Pruitt (1969) found this "syndrome" when lone subjects were faced with the CDQ items. He had the following two conditions: 1) subjects rated the riskiness of each option, then made their selections, or 2) subjects made their selections, then rated the riskiness of each option. Results showed that subjects in the first condition made choices they had previously rated as cautious, while subjects in condition two rated their selections as risky. The actual choice of the two conditions did not differ significantly. Higbee (1971) received similar results using actual behavior in a complex game as a criterion.

Unlike the other three versions of leadership theory, release theory does not associate the influence process with the high risk person's behavior during group discussion. Instead, the influence process is attributed to his mere presence in the group. However, release theory is supported by the studies mentioned earlier which reported the high risk taker as being seen as most influential, if this high risk taker is seen to be the model for release of others' inhibitions. Furthermore, Hoyt and Stoner's (1968) alternative expla-

nation for these results, that the high risk person is seen as most influential because the others shifted toward him, can also be accommodated by release theory.

It should be noted that release theory cannot fully explain the partial shfits reported by studies which employed an information exchange only condition. In fact Dion, Baron, and Miller (1970) have suggested that the partial shifts are evidence against all leadership theories. Release theory is unique since it would predict a shift to occur, although it cannot explain why a full shift was not achieved. Persuasive-arguments theory is pressed to explain why any shift was found, since the members were not able to present new information to support the various alternatives. And, since Stokes (1971) found a partial shift when members could not see each other, so that non-verbal communication was eliminated, leadership-confidence theory would also be strained to explain why a shift occurred.

The phenomenon of partial shifts may imply a two-stage process, a combination of release theory and persuasive-arguments theory. The release mechanism may work to accentuate the arguments of the extreme risk member, in that this member represents a choice that was attractive to the others before they compromised to a position favoring the moderation value. The extreme risk individual's choice will be fully adopted by the other members if new information is presented so that the pool of arguments supporting the alternative is increased. Note that it does not have to be the extreme risk member who presents the arguments, rather it is left open to any member of the group.

Silverthorne (1971) found that on items in which a risky shift occurred the ratio of arguments favoring risk to caution was 12.5 to 1.

On caution producing items, the proportion was 6 to 1 in support of cautious alternatives. These observations support the persuasive-arguments theory. Similar results have been reported by Myers and Bishop (1971). Supporting the two-stage process argument, Myers and Bishop also found a positive correlation ($r = .37$) between the proportion of arguments favoring the preferred direction and the size of the resulting shift.

Leadership as a Status Position

It will be noted that the various versions of leadership theory do not involve a status position within a group, but rather describe a particular attribute or situation that allows an individual to influence other members. There is evidence that a social influence process does occur during group discussion. Gordon, Flanders, and Cranny (1973) employed observers, trained to use a behavioral coding instrument, to investigate the influence processes occurring during group discussion. The experimental groups were composed of two members with identical scores (the coalition), and one member who was either more or less risky than the coalition (the deviate).

During the first half of the group discussion, the coalition directed their arguments toward the deviate, and these arguments uniformly supported the coalition's position. The deviate countered with supporting arguments for his position. However, during the latter part of the discussion, the deviates changed their arguments so that they would conform to the coalition's position, resulting in a group consensus which resembled the coalition's initial choice. Apparently, an influence process occurs during group discussion; and, as also

occurred in Schacter's (1951) study, the influence attempts are directed at the deviate, who eventually conforms to the group's desires.

The Gordon, et al., (1973) findings suggest that groups possessing a status structure, in which influence attempts would be supported by social power within the group, would be able to assert strong influence over opinion deviates to conform. Research performed using small groups have found that status structure provides a means to bring pressure on members to conform (Sherif, Harvey, White, Hood & Sherif, 1961; Sherif & Sherif, 1964). Yet, as Cartwright (1971) noted, status structure has not been examined within the framework of the choice shift. Instead, research which used status as an independent variable has done so by employing members who bring into the laboratory a status position that is in relation to a formal organization, rather than in relation to the group in which they participate.

For example, MacKenzie (1970) used as group members businessmen who were attending a company sponsored leadership workshop. Each subject possessed a certain status position within the formal structure of the company, but when placed into a group of strangers to make decisions, each member was of equal status. The results revealed no effect for status. Similar results were reported by Siegal and Zajonc (1967), who used as group members professionals from a psychiatric clinic. Although the results from both studies argue against status being a determinant of the choice shift, it is not possible to draw a conclusion until groups are used which possess a status within the group.

Another means of assessing the effects of status has been to designate one member as group leader, giving him authority for conduct

of the group discussion and sole responsibility for the group decision (Marquis, 1962). One would expect a decrease in risk taking due to the responsibility placed upon the leader. Significant shifts were found in spite of the increased responsibility on an individual member. However, Marquis' study is subject to the same cirticism given above to MacKenzie's and Siegal and Zajonc's studies.

Even though research has ignored status as a potential determinant of shift, theorists have not. Janis (1972) has noted that status may have a pervasive influence on decision-making within higher-order groups, particularly when discussion of a problem stalls without a consensus being reached. Wallach et al. (1964) suggested that status inequities should lead to a decrement in risk taking, since decision responsibility would fall on the high status members. That is, responsibility would not be placed evenly throughout the group, but instead would fall on the high status member's shoulders. Due to the resulting blame for decision failures, high status members may be unwilling to accept a risky alternative. And, if the high status member is able to successfully influence other members, then one would not expect groups with an established status structure to shift toward risk.

A leader's ability to influence the group's decision is dependent upon several interrelated factors. One such factor is familiarity with the problem. Sherif and Sherif (1969) point out that a leader's influence is increased when the group is facing a new problem for which guidelines do not exist. A group facing the CDQ items, then, should be heavily influenced by their leader, as the items would provide a unique problem for the group. His influence ability would

depend on other properties of his group as well, such as the degree of cohesiveness, solidarity and the normative structure in relation to the role system.

Group Cohesiveness and the Choice Shift

Group cohesiveness is a multidimensional property that has come to hold a place of central importance to workers in the area of group dynamics. In general, cohesiveness is defined as the degree to which group members are motivated to remain in the group (Cartwright & Zander, 1968). The identified components of cohesiveness include interpersonal attraction among members (Bovard, 1951), attraction toward the group as a whole (Jackson, 1959), identification with the group (Indik, 1965) and members' expressed desire to remain in the group (Libo, 1953).

Cohesiveness has been of interest to workers in the choice shift. Kogan and Wallach's diffusion of responsibility theory depended heavily on the effects members' interpersonal attraction had on shifts. Briefly, diffusion theory postulates that for a shift to occur, felt repsonsibility for the decisional outcome has to be diffused among group members (Wallach, Kogan & Bem, 1962). The diffusion process was thought to be aided by attraction among members, a process which was labeled the affective bonds hypothesis.

In light of the experimental evidence, the original formulation of the affective bonds hypothesis is no longer considered tenable (Pruitt, 1971); however, cohesiveness has been shown to affect the shift. Dion, Miller and Magnan (1971) found that high levels of cohesiveness suppressed the shift toward risk, while low cohesiveness produced the typical shift. These investigators attributed the suppressed shift

for high cohesiveness as being caused by members' unwillingness to diffuse responsibility onto other group members.

Janis (1972), in a thorough study of four important national decisions, identified cohesiveness as a major source of faulty decisions. He noted that while high levels of cohesiveness reduced the amount of self-censorship members placed on their opinions due to fear of being rebuked by other members, self-censorship still occurred. Members of high cohesive groups seemed to unwittingly censor their thoughts and opinions due to a strong motivation to preserve the unity of the group. Janis felt that such concurrency tendencies contributed to unquestioned acceptance of group decisions, and greatly reduced the critical consideration of all potential alternatives and their accompanying outcomes.

Beyond uncritical acceptance of group decisions, cohesiveness also seems to increase adherence to group standards (Festinger, Schacter & Back, 1950). Furthermore, the power of a group to exert influence over its members has been hypothesized to be determined by the degree of cohesiveness possessed by the group (Cartwright & Zander, 1968). And research by Berkowitz (1954) suggests that high cohesiveness enhances the directional tendencies of the group, so that in decision-making one would expect the effects of high cohesiveness to vary depending upon the norm developed during group discussions. Extending this line of thought, one would expect high cohesive groups to adhere to the group decision more closely in the posttest condition than low cohesive groups, particularly if the resulting decision represents an emergent group norm.

Norms are defined as expected modes of behavior and beliefs that are established by a group, and for which positive or negative sanctions are applied to normative obedience and disobedience, respectively (Jones & Gerard, 1967). Within the choice shift, the issue of norms arising from group discussion is unsettled. Cartwright (1971) has argued that the CDQ items are too complex to determine whether or not a norm arises from the group discussion. Blascovich, Veach, and Ginsburg (1973) and Blascovich and Ginsburg (1974) have attempted to show that norms do emerge from a risk taking situation. A realistic casino blackjack game was used. Subjects were tested individually, then placed in the betting situation with two experimental confederates who placed their bets according to a pre-arranged schedule. Results indicated that the mean bets placed by the subjects resembled those placed by the confederates. In other words, subjects conformed to the norm imposed by the confederates. However, the study did not include a post-test condition where the subjects were tested alone after the group session. Without the posttest, one cannot say if the individuals adopted a group norm.

Evidence that a norm emerges from group discussion is scarce. Korger and Briedis (1970) varied the instructional set given to the subjects, which presumably varied the relevant social norms elicited by the items. The manipulations produced differential results, dependent on the directional tendencies generated by the instructions. Others have successfully changed the content of the items (Rabow et al., 1966). The two studies just cited dealt with societal norms influencing the group decision. The Dion et al. (1971) study attempted to determine if a group norm emerged from discussion. They compared the pretest and

posttest variance of groups to test the hypothesis that a group norm would decrease the variance of members' scores during the posttest condition. For high cohesive groups, the posttest variance was significantly reduced, which suggested a norm had emerged and group members had adhered to the norm. These results also concurred with the findings of Festinger, Schacter and Back (1950). The question of group discussion generating emergent norms needs further investigation.

Purpose of the Study

Cartwright (1971) has criticized work on the choice shift for exclusively using experimental groups to study the underlying causes of shifts. He points out:

> that the groups studied have certain 'unnatural' properties. They are created for experimental purposes and consequently have no history, future, established structure, or significant enduring relationships with a surrounding social system. Results derived from such groups can be extended to groups in general only if it is assumed that they are not dependent upon these unusual properties. Unfortunately almost nothing is known about the effects on group properties on the basic findings (p. 373).

As was mentioned in the review section, only three studies have attempted to assess the effects group properties would have on the choice shift. The two studies that were concerned with the effects of status (MacKenzie, 1970; Siegal & Zajonc, 1967) found no effects for status. However, status in both studies was in relation to a larger, formal organization, rather than in relation to the status hierarchy within a given group structure. After the experimental sessions, the group members did not have to concern themselves with future interaction as would members of groups in a natural setting.

Dion, Miller and Magnan's (1971) study of the effects of cohesiveness on the choice shift used instructions to vary the degree of cohesiveness. For high cohesive groups, members were told they had been matched on the basis of their similarity in responding to various personality and interest questionnaires. Members of low cohesive groups were told that the experimental design was for members to be similar, but that there were not enough subjects who were similar; therefore, they had to use groups of dissimilar members. Checks on the manipulations showed them to be effective. However, the study is still open to Cartwright's criticism. The affect structure found in groups that have developed over time may lead to different results than generated by the groups in the Dion et al. study. For example, would members of such artificial groups censor their thoughts to preserve the unity of the group? Since future interaction would not necessarily be anticipated, members may not be concerned with protecting group unity.

The purpose of the present thesis was to assess the following four hypotheses derived from group dynamics concerning the effects which group properties have on the choice shift phenomenon.

Hypothesis 1

The restatement of the affective bonds hypothesis by Dion et al. (1971) implied that as members become more attracted to their group, they become less prone to blame others for any negative outcome of a risky decision. This reduced attribution of outcome responsibility was postulated to interfere with the diffusion of responsibility, a process that has been considered an essential aspect of producing risky decisions by groups. The present study afforded a means for indirectly

testing the Dion et al. formulation of the affective bonds hypothesis. The groups brought to the experiment a given level of felt cohesiveness. If cohesiveness does interfere with a diffusion of responsibility process, then the expectation would be for a suppressed shift to occur in high cohesive groups, and for a risky shift to be produced by low cohesive groups. However, an alternative hypothesis is that status, rather than cohesiveness, acts as the determinant of the choice shift, in that the status structure of a group creates clear lines of decisional responsibility which would interfere with the diffusion process (Jones & Gerard, 1967). The status structure, according to this alternative, would leave members in the high status position as the recipients of decisional responsibility and thereby induce a cautious set for these members. Therefore, the prediction from the status hypothesis would be for cautious shifts across both levels of cohesiveness.

Hypothesis 2

This hypothesis, which also concerned cohesiveness, was derived from Janis' (1972) contention concerning concurrence-seeking tendencies. According to Janis, members of high cohesive groups desire to maintain feelings of felt unity within the group, resulting in self-censorship of deviate opinions. Such self-censorship would in turn reduce the amount of consideration given to alternatives, so that the resulting decisions are the product of quick agreement and reduced consideration. Support of Janis' contention would be provided if high cohesive groups required less discussion time to reach consensus than low cohesive groups.

Hypothesis 3

This hypothesis predicted that a group norm would emerge from the discussion session. Support of the hypothesis would be indicated if posttest variance was significantly smaller than the pretest variance of the groups. The variance reduction would indicate that the group members had accepted a particular set of arguments presented in the group discussion, which favored a given alternative. When faced again with responding as individuals, the group experience would provide guidelines for the choice selection. Disconfirmation of the hypothesis would suggest that the shift process was due to individual member's ability to assert influence.

Hypothesis 4

The present thesis employed Bales' (1970) Interpersonal Process Analysis (IPA). According to Bales, the IPA provides an indication of the amount of power each member has shown during a given interaction. The IPA system was used to derive a leader from the group session, making it possible to test Sherif and Sherif's (1969) hypothesis that in novel situations the leader possesses the greatest amount of influence over the group. Furthermore, the present study also allowed a direct test of release theory. By subtracting the group choices from the choices of the extreme risk member and from the leader's initial choices, it was possible to determine if either approach significantly increased prediction accuracy. Support for Sherif and Sherif's hypothesis would result from the leader and group decisions being similar. Release theory would be supported if the group decisions resembled the extreme risk member's initial choices.

CHAPTER II

METHODOLOGY

Subjects

Ten class-project-work-groups, consisting of 27 female and 28 male Oklahoma State University students enrolled in two sections of Psychology 3743, served as subjects. Subjects received course credit for participating. At the beginning of the spring semester the students were formed into groups for work on class projects. The projects consisted of two group research papers, both of which were important to the individual member's final grade, plus several assignments concerned with summarizing text material and preparing for course tests. The groups met in class at least once per week, with the total number of meetings, prior to the group session, ranging between 18 and 24 depending upon the class section. The groups also met outside the class to work on projects or to socialize. The number of such meetings varied widely among the groups. During the semester, neither the instructor nor the text mentioned the choice shift phenomenon; therefore, it seemed safe to conclude the subjects were naive as to the purpose of the study.

Instruments

CDQ Items

Items 4, 5, 6, and 12 from the original 12 CDQ items (see Appendix) were selected for the present study. The "typical" shift for these items, expressed as the median of the mean shifts in odds, are for item 4, 1.6, for item 6, .8, for item 5, -.1, and for item 12, -.6 (Cartwright, 1971). Items 4 and 6 are labeled risky items, and were selected on the basis of their previous use when the full set is not employed (Burnstein & Vinokur, 1973; Burnstein, Vinokur & Trope, 1973; Vinokur & Burnstein, 1974). Items 5 and 12, which are the cautious items, are the only two in the original set that yield reliable shifts toward caution (Cartwright, 1971). A reduced set was employed due to time limitations and expenses.

Status Measures

Two measures were used to determine the group's status hierarchy. The first consisted of members' responses to the question, "Who shows most effective initiative in the group?" The members were asked to rank all members of the group, including themselves. The rankings from group members were combined, so that an individual's status position was determined by the summation of the entire group's ranking of that individual. Responses to the question were taken twice, first at one week prior to the group session, and second at one week after the group session. Both measures were taken during a regular class meeting, and discussion was not allowed.

Effective initiative was chosen as the status criterion for the following reasons: (a) In the course, both the instructor and the text (Sherif & Sherif, 1969) define status in terms of effective initiative, and (b) effective initiative, defined as a member's ability to initiate policy, decisions and activities (Sherif & Sherif, 1969; p. 170), was the main concern in relation to the study.

The second measure of status was derived from the use of Bales' Interaction Process Analysis (IPA). The IPA consists of twelve categories concerned with how individuals communicate to one another. The categories are labeled: seems friendly, dramatizes, agrees, gives suggestions, gives opinion, gives information, asks for information, asks for opinion, asks for suggestions, disagrees, shows tension, and seems unfriendly. The IPA does not classify what is said, as do methods concerned with content analysis, but rather breaks interaction down into "who does what to whom in the process (time order) of the interaction" (Bales, 1970; p. 92). Furthermore, the use of the IPA is not restricted to verbal statements, but also includes nonverbal behavior. For example, "shows tension" may be extracted from facial expressions, as may several of the other categories.

Two judges were trained in the use of the IPA. Training consisted of six sessions which were conducted as follows: (a) The first session consisted of the two judges discussing the definitions of each category with the investigator. The purpose of this session was to clarify definitions so that the judges had a common framework from which to draw. (b) The second meeting involved the judges categorizing interactions among three individuals. After the interaction, the judges discussed their uses of the categories, in an attempt to further clarify

definitions. (c) This session was the same as the second. (d) The interactions of four individuals were judged, and discussion of category usages followed. (e) The actors were instructed to use nonverbal behavior as much as possible, so that the judges could be tested in their ability to detect such communications. Interrater agreement after this session reached only .67 (67%). At conclusion of the interaction, the judges and investigator discussed the scoring of nonverbal behavior. (f) The interaction between five individuals was scored by the judges. Actors were again instructed to use nonverbal behavior. Interrater agreement on the session reached .84, a level which seemed acceptable since .80 was the desired level prior to the start of training.

After training was completed, judges made independent ratings of the group sessions from videotape replays. Ratings were recorded on score pads that were taken from Bales (1970; p. 93). Interrater reliability for scoring of the group session based on rankings of total initiative gave a Spearman's r_s of .97.

Status rankings were derived from the IPA in the following manner: The total of all acts each member initiated was summed for that individual. Then the group members were rank-ordered by the total acts initiated. According to Bales (1970), "This total is closely related both to the amount of time consumed by the person, and to the amount of power he has tried to exercise in the given session" (p. 73). Furthermore, this rank-ordering tends to approximate the status hierarchy the group brings into the lab.

Cohesive Measures

Two measures of cohesiveness were used. The first was concerned with interpersonal attraction among members (Bovard, 1951), while the second measured attraction toward the group as a whole (Jackson, 1959). Members' attraction toward one another was measured by an eleven point rating scale, a method previously employed by Bovard (1951). An example of the instructions and the scale follows:

> On the following scale, please place a check on the line that most accurately describes the degree of liking you have for each member of your group. In the space to the right of each scale, please write the name of the member you are rating. For example, if you like a member a great deal, then you would place a check as follows:
>
> ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ X
> Strongly Dislike — Strongly Like
>
> If you do not like a member, then you would check as follows:
>
> X ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
> Strongly Dislike — Strongly Like
>
> If you do not particularly like or dislike a member, then you would check as follows:
>
> ___ ___ ___ ___ ___ X ___ ___ ___ ___ ___
> Strongly Dislike — Strongly Like
>
> Your true degree of liking for each member is of major concern. Please complete the scales as accurately as possible.

The second measure consisted of responses on a six inch line to the question, "How much do you like your group?" Subjects were instructed to make a slash on the line to reflect their degree of attraction to the group. An example follows:

> How much do you like your group?
>
> Not at All ——— Very, Very Much

The measure was taken twice, one week before and one week after the group session. The question was administered during the same class session as the status measure. To check the reliability of Bovard's method against the attraction to the group, a Spearman's r_s was computed based on the rankings of total scores for the two methods. Spearman's r_s was .93, lending support to the assumption that the two levels of cohesiveness had been accurately determined. Further support was provided by the finding that the two levels differed significantly on Bovard's method, t (8) = 2.83, $p < .025$.

Procedure

Pretesting

Pretesting occurred during a regular class meeting for both sections, 10 days prior to the group session. The subjects were told that their professor was investigating the adequacy of the Student Opinion Questionnaire; however, the initial sample size was too small for any firm conclusions to be drawn. Therefore, the professor wished for each student to complete a sample of items from the questionnaire. They were then given two booklets, one containing the four items, while the other contained the choices. After completing the questionnaire, the class continued in the regular manner.

Group Session

The group session took two class days. After roll had been called, the students were asked to gather into their groups. The experimenter went to the classroom and called a group number. That group was then

taken to a large classroom and asked to take a seat. There were nine chairs arranged in a semi-circle, with the camera facing the front and a microphone located in the center of the semi-circle. After the question-and-answer booklet had been given to each subject, the following instructions were read:

> Dr. MacNeil (the course professor) and I are currently training several observers in methods of analyzing group interactions. To aide in the training, we have decided to make films of group interaction during decision-making on various problems. The films will be shown to the observers so that we may train them to recognize various group properties.
>
> The problems you will be discussing are items from the Student Opinion Questionnaire that you completed earlier this semester. These items were selected since your previous exposure to them should allow the discussion to occur more completely. You will recall that the items dealt with the probabilities associated with certain behavioral outcomes. The group's task is to read each item, then discuss the problem until the group reaches agreement on the lowest probability level acceptable before the group would advise the individual in the problem to take a particular action. That is, the group as a whole must reach consensus on the lowest acceptable probability level for that problem. Once consensus has been reached, each of you are to record the group's decision for that problem in your answer booklet. Please be sure to mark the level which the group has chosen. Are there any questions?
>
> To help you adjust to being filmed, I would like each person to state his name, hometown, major in college, and college class level. Begin with the person on the far left, and continue clockwise. Please begin.
>
> (After completion of the above.) You may now start your task. Please consider the problems in the order they appear in your booklet.

While the subjects discussed the items, the experimenter, using a stopwatch, timed the discussion for each problem. The timing began with the first word spoken concerning the problem, and ended when agreement was reached.

When the subjects had completed the four items, they were taken back to the classroom after being asked not to discuss the procedure with members of other groups. Then the next group was taken to the experimental room, and the procedure continued until all ten groups had participated.

Posttesting

Posttesting also occurred during a regular class session, 10 days after the group session. The experimenter explained that the professor had decided to gather information related to the full Student Opinion Questionnaire, which consisted of 12 items. Therefore, he would like them to provide responses. The students were given the question and answer booklets and asked not to discuss the items. After they completed all items, the class continued with a regular session.

Debriefing

Debriefing occurred immediately after the posttest had been performed. Subjects were told a brief history of the choice shift, its meaning, and finally, each hypothesis and what was expected.

CHAPTER III

RESULTS

Hypothesis 1

A 2 x 2 x 2 split-plot analysis of variance, with testing period and items as the within variables, was used to determine the effect that cohesiveness has on the choice shift (Table I). The first testing period refers to the difference scores generated by subtracting the group decision from the pre-group mean of the individuals composing the group. Testing Period 2 is the difference scores produced by subtracting the post-group mean from the group condition.

Table I shows that a significant Cohesiveness main effect, F (1, 8) = 6.88, $p < .05$, a significant Cohesiveness X Testing Period interaction, F (1, 8) = 8.44, $p < .05$, and a significant Testing Period X Items interaction, F (1, 8) = 24.83, $p < .01$, was found for the shift data. Means for the Cohesiveness X Testing Period interaction are shown in Table II, and the simple effects tests (Winer, 1971) are listed in Table III. Cohesiveness was most influential during the first testing period, F (1, 14) = 12.46, $p < .01$. Since high cohesive groups showed cautious shifts, and low cohesive groups displayed risky shifts, the results replicated the findings of Dion, Miller and Magnan (1971). However, the finding that high cohesive groups differed significantly between testing periods, F (1, 8) =5.92, $p < .05$, was not expected.

This result suggested that high cohesive groups were dissatisfied with their group decisions, and moved away from the group during the post-test indivudual condition. Low cohesive groups did not differ significantly between testing period, $\underline{F}$ (1, 8) = 2.74, $p < .25$.

TABLE I

SUMMARY OF SPLIT-PLOT ANALYSIS OF VARIANCE FOR SHIFT

Source	df	MS	F
Between Groups			
Cohesiveness (A)	1	10.19	6.88*
Groups w. Levels	8	1.48	
Within Groups			
Testing Period (B)	1	.77	1
A X B	1	25.96	8.44*
B X Groups w. Levels	8	3.09	
Items (C)	1	8.07	5.21
A X C	1	5.06	3.26
C X Groups w. Levels	8	1.55	
B X C	1	49.42	24.83**
A X B X C	1	9.13	4.58

* $p < .05$

** $p < .01$

TABLE II

MEAN SHIFT AS A FUNCTION OF COHESIVENESS AND TESTING PERIOD

	Testing Period One	Testing Period Two
High Cohesive	-1.20	1.14
Low Cohesive	1.39	-.02

The significant Testing Period X Items interaction in Table I indicated that the items used for risk and caution did produce differences in the direction of the decisions. Reference to Table III shows that risk and caution items produced differences across both testing periods. Table IV lists the mean shift of each type of item during the two testing periods. During the testing periods, risk items produced risky shifts, F (1, 15) = 7.21, $p < .05$, and cautious items lead to cautious shifts, F (1, 15) = 12.55, $p < .01$. This finding supported the use of the different items to measure types of shift.

TABLE III

SUMMARY OF SIMPLE EFFECTS
TESTS ON SHIFT

Source	df	MS	F
A at B_1	1	34.75	12.46**
A at B_2	1	1.66	1
Pooled Error	14	2.79	
B at A_1	1	18.28	5.92*
B at A_2	1	8.46	2.74
B X Subj. w. Groups	8	3.09	
B at C_1	1	18.31	7.21*
B at C_2	1	31.88	12.55**
Pooled Error	15	2.54	
C at B_1	1	48.86	27.60**
C at B_2	1	8.62	4.87*
Pooled Error	16	1.77	

* $p < .05$

** $p < .01$

TABLE IV

MEAN SHIFT AS A FUNCTION OF
TESTING PERIOD AND ITEMS

	Risk Items	Caution Items
Testing Period One	1.79	-1.59
Testing Period Two	.04	1.08

Hypothesis 2

Janis' (1972) contention concerning the effects of cohesiveness on decision time was assessed by a 2 x 2 split-plot analysis of variance, with items serving as the within factor. Table V gives the summary for this analysis. The Cohesiveness main effect, F (1, 8) = 16.84, $p < .01$, indicated high cohesive groups required significantly less decision time (M = 2.38 minutes) to reach consensus than did low cohesive groups (M = 6.05). This result supported Janis' hypothesis that high cohesiveness leads to self-censorship by members of their divergent opinions, in order not to disrupt the felt unity of the group.

Further investigation of Janis' concurrence-seeking tendencies was performed by computing Spearman's r_s, for each group, using the group status ranking prior to group discussion and tha status rankings provided by Bales' IPA. The size of r_s for high cohesive groups ranged from .63 to 1.00. For low cohesive groups r_s ranged from .00 to .75. Also supporting Janis was the stability coefficient computed by deri-

ving Spearman's r_s for each group between the two sociogram sessions. Stability for high cohesive groups varied between .65 and 1.00, while for low cohesive groups the range was between .09 and .75. These r_s values suggested that high cohesive groups wasted little time in trying to establish power positions once the status hierarchy became structured. The members adhered to the structure not only between testing periods, but also during the group discussion. The status hierarchy may be one explanation for the reduced decision time found with high cohesive groups.

TABLE V

SUMMARY OF SPLIT-PLOT ANALYSIS OF VARIANCE FOR DECISION TIME

Source	df	MS	F
Between Subjects			
Cohesiveness (A)	1	59.79	16.84**
Subj. w. Groups	8	3.55	
Within Subjects			
Items (B)	1	26.55	7.67*
A X B	1	5.52	1.61
B X Subj. w. Groups	8	3.46	

* $p < .05$

** $p < .01$

Hypothesis 3

To determine if a group norm emerged from the discussion session a 2 x 2 x 2 split-plot analysis of variance was performed, using testing period and items as the repeated measures (Table VI). Pretest variance and posttest variance served as the dependent variables. As predicted, a significant Testing Period main effect occurred, F (1, 8) = 7.81, $p < .05$. The mean pretest variance was 2.67, and the mean posttest variance was 1.96.

Although the results suggested that a group norm did emerge from item discussion, the results were not necessarily supportive of the hypothesis. In Table II, the mean shift during testing period two for high cohesive groups was away from the group decisions (M = 1.14). Low cohesive groups showed greater adherence to the decisions generated by their groups (M = -.02). The implication was that low cohesive groups did produce a group norm which members followed. Since these groups required more decision time to reach consensus, it seemed likely that a more complete consideration was given to the various arguments favoring each attractive alternative. Apparently, by dealing with the arguments elicited by each alternative, low cohesive group members were provided with the arguments favored by co-members. When removed from the group situation, the members expressed the choices which received endorsement from others.

TABLE VI

SUMMARY OF SPLIT-PLOT ANALYSIS OF VARIANCE FOR GROUP VARIANCES

Source	df	MS	F
Between Groups			
Cohesiveness (A)	1	.99	3.41
Groups w. Levels	8	.29	
Within Groups			
Testing Period (B)	1	1.25	7.81*
A X B	1	.24	1.50
B X Groups w. Levels	8	.16	
Items (C)	1	.32	1.39
A X C	1	.26	1.13
C X Groups w. Levels	8	.23	
B X C	1	.11	3.67
A X B X C	1	.13	4.33
BC X Groups w. Levels	8	.03	

*$p < .05$

Hypothesis 4

A 2 x 2 analysis of variance was computed for risk and for caution items, to assess the accuracy of Sherif and Sherif's (1969) hypothesis that the group leader exerts the greatest influence in group decision-making, and to test release theory's contention that the group shifts toward the extreme risk member (Pruitt, 1971). Table VII gives the results for risk items and Table X provides the summary for caution items.

TABLE VII

SUMMARY ANALYSIS OF VARIANCE
FOR RISK ITEMS

Source	df	MS	F
Cohesiveness (A)	1	.45	1
Method (B)	1	.25	1
A X B	1	9.45	8.22*
W. Cell	16	1.15	

*$p < .05$

TABLE VIII

MEAN DIFFERENCES AS A FUNCTION OF COHESIVENESS AND METHOD

	Leader	High Risk
High Cohesive	.3	1.2
Low Cohesive	1.1	.7

TABLE IX

SUMMARY OF SIMPLE EFFECTS TESTS FOR DIFFERENCE SCORES

Source	df	MS	F
A at B_1	1	6.40	5.57*
A at B_2	1	3.50	3.04
B at A_1	1	8.46	7.36*
B at A_2	1	1.24	1.08
W. Cell	16	1.15	

* $p < .05$

TABLE X

SUMMARY OF ANALYSIS OF VARIANCE
FOR CAUTION ITEMS

Source	df	MS	F
Cohesiveness (A)	1	.20	1
Method (B)	1	.80	1
A X B	1	.20	1
W. Cell	16	2.43	

The significant Cohesiveness X Method interaction, F (1, 16) = 8.22, $p < .05$, in Table VII was broken into the simple effects shown in Table IX. Mean differences for cohesiveness across method are given in Table VIII. Simple effects tests indicated that leaders in high cohesive groups were more successful in influencing other members than were leaders of low cohesive groups, F (1, 16) = 5.57, $p < .05$. The high risk member's influence was similar for both levels of cohesiveness, F (1, 16) = 3.04, $p > .10$, and was not as great as the influence asserted by the leader in high cohesive groups, F (1, 16) = 7.26, $p < .05$. Neither the leader nor the high risk member improved prediction accuracy for low cohesive groups, F (1, 16) = 1.08, $p > .25$. For caution items, neither method improved prediction of the resultant group decision, as all F values were less than 1.

The results did not provide clear support for either method. For high cohesive groups, the leader did provide significantly more accurate prediction of the group choice on risk items. In low cohesive groups, there was a non-significant shift toward the high-risk member's position. Although these results suggested release theory may be applicable only for aggregate groups, such as the experimental groups traditionally employed, it should be noted that release theory postulates only that the extreme risk member serves as a release mechanism for the other group members. Therefore, advocates of release theory could argue that the extreme member did provide a release from the constraining forces of a percieved moderation value, and that the shift toward the leader resulted from the release. The implications the results have for release theory will not be clear until a means of resolving this issue is found.

For caution items, neither hypothesis was confirmed. Apparently some other mechanism was functioning during the duscussion of the caution items. Again, release theory can accommodate the findings by arguing that the extreme cautious member provided the release for moving toward caution. The fact that a cautious shift did occur on these items supports the contention. Furthermore, recall that Kelley and Thibaut (1969) suggested risk arguments may be more persuasive than arguments favoring caution. In relation to an extreme caution member, moderate arguments are in favor of more risky altermatives. Perhaps moderate choices were supported by more persuasive arguments, so that the resultant shift was toward the moderate group members.

CHAPTER IV

DISCUSSION

Cohesiveness

The results have indicated that cohesiveness plays an important role in group decision-making. Regardless of item type, high cohesive groups shifted toward caution, low cohesive groups moved toward risk. Combining these findings with those of Dion et al. (1971), strength was added to the assumption that inter-member attraction influences the amount and direction of group risk-taking. The explanation advanced by Dion et al., that high cohesive groups are not willing to diffuse decision responsibility away from themselves and onto other members, appears capable of partly accounting for the findings. However, the explanation does not explain why high cohesive groups shifted toward risk during the posttest condition, while low cohesive groups showed little shift during the posttest. The analysis for decision time sheds some light on this problem.

Decision time analysis revealed that high cohesive groups required significantly less time to reach consensus, than did low cohesive groups. This finding supports Janis' (1972) contention that high cohesiveness leads to self-censorship by members of their divergent opinions, in order not to disrupt the felt unity of the group. If this contention is accurate, then it would seem reasonable to assume that high cohesive

group members proposed alternatives with a high probability of success, so that consensus could be reached without lengthy and potentially disruptive discussion. The shift toward risk on the posttest supports the contention, as the shift suggests that although members yielded to the majority's desires during the group session, they were not satisfied with the group's decisions, and shifted toward risk once they were removed from the group condition.

Collectively, these results imply that cohesiveness affects the choice shift by reducing the number of arguments presented during group discussion. The reduced decision time for high cohesive groups implied that full consideration of the alternatives was not given. The shift to risk on the posttest suggests that the arguments which led the members to choose more risky alternatives during the pretest were not resolved by group discussion, even though more cautious decisions were produced by the groups. The risky choices remained attractive, and the arguments presented in the group discussion did not decrease the attraction of the risky pool of arguments. When removed from the group for the posttest condition, members' decisions were more influenced by the risky set than by the cautious set.

For low cohesive groups, more complete consideration was given to the alternatives. Through discussion, members were allowed to determine the value attached to each pool of arguments elicited by the alternatives. This more complete discussion provided the material necessary for members to resolve their attraction to alternatives other than the one favored by the group. In other words, members were provided with convincing support for the alternative favored by the group. Therefore, their selections during the posttest condition were similar to their group's decisions.

If the above contentions are supported by future research, then a note of qualification should be made concerning the effects of cohesiveness in decision-making for groups in general. Recall that in Chapter I research was presented which suggested that cohesiveness increased adherence to group decisions (Festinger, Schacter & Back, 1950). The present results imply that the effect of cohesiveness is to reduce the amount of consideration given to the various alternatives. Adherence to the group decision appears to be influenced by the amount of logical support the group is able to generate for its decisions. If the groups do not provide the support, then adherence to the decision is significantly reduced, regardless of the degree of felt cohesiveness.

It was also noted in Chapter I that cohesiveness seemed to increase the ability of the group to exert influence over its members (Cartwright & Zander, 1968). This hypothesis was indirectly supported by the decision time analysis, since high cohesive groups were able to reach consensus in significantly less time than low cohesive groups. The implication is that high cohesive groups were able to assert greater influence over deviant members. Future research needs to deal directly with this implication, as it suggests that faulty decision-making in policy-making groups may result partially from the ability of groups to influence their members. Furthermore, cohesiveness appears to be the variable which allows increased influence to be achieved (Janis, 1972).

A second issue which needs further consideration concerns the failure of high cohesive group members to adhere to the group decisions. One possible variable which may increase adherence is social responsibility for decisional outcomes. In the present study, the groups dealt

with an entirely hypothetical situation. Without concern for the feedback to the group, members may not concern themselves with the adequacy of their decisions. If decision responsibility were increased, then members may become more concerned with the outcome generated by their decisions. This could result in more complete discussion, less concern for felt unity, and closer adherence in the decisions. Janis' contention concerning concurrence-seeking tendencies may not hold when groups feel directly responsible for the outcomes. Future research needs to assess the effects of responsibility using groups with an interaction history.

Group Norm

The results indicated that a group norm emerged from discussion of the CDQ items. From the arguments presented in the preceeding section, one can speculate that discussion de-emphasizes the values elicited by most alternatives, and provides focus for the values generated by the favored alternative. In the posttest condition, the members apparently reacted to the questions by focusing on the values that led to the group's choices, particularly the members of low cohesive groups.

The above arguments are opposite to those presented by Cartwright (1971) and Blascovich and Ginsburg (1974). These authors contend that the CDQ items do not elicit one set of social values and norms, making it impossible for groups to generate a single norm from discussion. The present results imply that if discussion is adequate, the values supported by the group are used by members when forced to decide alone, indicating that a norm does emerge from discussion.

Status

Clear support was not provided for Sherif and Sherif's (1969) contention that in novel situations, the leader's influence over the group is increased. For risk items, the leader's initial choice did improve prediction accuracy for high cohesive groups, but not for low cohesive groups. Apparently, as indicated by the stability coefficients, cohesiveness increases the degree to which a group follows the status structure, which accounts for the failure of the hypothesis with low cohesive groups.

With cautious items, the leader's choices did not improve prediction. One could argue that Janis' concurrence-seeking tendencies can account for the failure with cautious items. If members do censor divergent opinions, then it is reasonable to assume that high status members are also subjected to the same tendency. Yet, this interpretation is contradictory to the one given for risk items. Again, a manipulation of perceived social responsibility may help to resolve the controversy. A firm conclusion concerning Sherif and Sherif's hypothesis, as applied to the choice shift, cannot be made at the present.

Conclusions

Overall, the results have shown that group dynamics do affect the resulting decisions of groups. High levels of cohesiveness generate close adherence to the status structure and concurrence-seeking tendencies are associated with an avoidance of risky alternatives during group discussion. Cohesive groups require less time to reach consensus,

and apparently do not give complete consideration to each alternative available. When removed from the group condition, members are less inclined to adhere to the group decisions than are members of low cohesive groups. The low cohesive groups appeared to give more complete consideration to the available alternatives, so that a common set of values are used by members when faced alone with the same items. In other words, when adequate discussion is given to the items, a group norm emerges from the group situation.

Unfortunately, the results do not provide a clear determination of the agent of social influences during group discussion. The leader does assert influence, but the contentions of release theory were not completely discredited. It was concluded that future research needs to further investigate the predictions of release theory.

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APPENDIX

CHOICE DILEMMA QUESTIONNAIRE

1. Mr. A, an electrical engineer, who is married and has one child, has been working for a large electronics corporation since graduating from college five years ago. He is assured of a lifetime job with a modest, though adequate, salary, and liberal pension benefits upon retirement. On the other hand, it is very unlikely that his salary will increase much before he retires. While attending a convention, Mr. A is offered a job with a small, newly founded company which has a highly uncertain future. The new job would pay more to start and would offer the possibility of a share in the ownership if the company survived the competition of the larger firms.

   Imagine that you are advising Mr. A. Listed below are several probabilities or odds of the new company's proving financially sound.
   PLEASE CHECK THE LOWEST PROBABILITY THAT YOU WOULD CONSIDER ACCEPTABLE TO MAKE IT WORTHWHILE FOR MR. A TO TAKE THE NEW JOB.

_____The chances are 1 in 10 that the company will prove financially sound.

_____The chances are 2 in 10 that the company will prove financially sound.

_____The chances are 3 in 10 that the company will prove financially sound.

_____The chances are 4 in 10 that the company will prove financially sound.

_____The chances are 5 in 10 that the company will prove financially sound.

_____The chances are 6 in 10 that the company will prove financially sound.

_____The chances are 7 in 10 that the company will prove financially sound.

_____The chances are 8 in 10 that the company will prove financially sound.

_____The chances are 9 in 10 that the company will prove financially sound.

_____Place a check here if you think Mr. A should not take the new job no matter what the probabilities.

2. Mr. B, a 45-year old accountant, has recently been informed by his physician that he has developed a severe heart ailment. The disease would be sufficiently serious to force Mr. B to change many of his strongest life habits--reducing his work lead, drastically changing his diet, giving up favorite leisure time pursuits. The physician suggests that a delicate medical operation could be attempted which, if successful, would completely relieve the heart condition. But its success could not be assured, and in fact, the operation might prove fatal.

   Imagine that you are advising Mr. B. Listed below are several probabilities or odds that the operation will prove successful. PLEASE CHECK THE LOWEST PROBABILITY THAT YOU WOULD CONSIDER ACCEPTABLE FOR THE OPERATION TO BE PERFORMED.

_____Place a check here if you think Mr. B should not have the operation no matter what the probabilities.

_____The chances are 9 in 10 that the operation will be a success.

_____The chances are 8 in 10 that the operation will be a success.

_____The chances are 7 in 10 that the operation will be a success.

_____The chances are 6 in 10 that the operation will be a success.

_____The chances are 5 in 10 that the operation will be a success.

_____The chances are 4 in 10 that the operation will be a success.

_____The chances are 3 in 10 that the operation will be a success.

_____The chances are 2 in 10 that the operation will be a success.

_____The chances are 1 in 10 that the operation will be a success.

3. Mr. C, a married man with two children, has a steady job that pays him about $6000 per year. He can easily afford the necessities of life, but few of the luxuries. Mr. C's father, who died recently, carried a $4000 life insurance policy. Mr. C would like to invest this money in stocks. He is well aware of the secure "blue-chip" stocks and bonds that would pay approximately 6% on his investment. On the other hand, Mr. C has heard that the stocks of a relatively unknown Company X might double their present value if a new product currently in production is favorably received by the buying public. However, if the product is unfavorably received, the stocks would decline in value.

Imagine that you are advising Mr. C. Listed below are several probabilities or odds that Company X stocks will double their value.
PLEASE CHECK THE LOWEST PROBABILITY THAT YOU WOULD CONSIDER ACCEPTABLE FOR ME. C TO INVEST IN COMPANY X STOCKS.

_____The chances are 1 in 10 that the stocks will double their value.

_____The chances are 2 in 10 that the stocks will double their value.

_____The chances are 3 in 10 that the stocks will double their value.

_____The chances are 4 in 10 that the stocks will double their value.

_____The chances are 5 in 10 that the stocks will double their value.

_____The chances are 6 in 10 that the stocks will double their value.

_____The chances are 7 in 10 that the stocks will double their value.

_____The chances are 8 in 10 that the stocks will double their value.

_____The chances are 9 in 10 that the stocks will double their value.

_____Place a check here if you think Mr. C should not invest in Company X stocks no matter what the probabilities.

4. Mr. D is the captain of College X's football team. College X is playing its traditional rival, College Y, in the final game of the season. The game is in its final seconds, and Mr. D's team, College X, is behind in the score. College X has time to run one more play. Mr. D, the captain, must decide whether it would be best to settle for a tie score with a play which would be almost certain to work; or, on the other hand, should he try a more complicated and risky play which could bring victory if it succeeded, but defeat if not.

Imagine that you are advising Mr. D. Listed below are several probabilities or odds that the risky play will work.
PLEASE CHECK THE LOWEST PROBABILITY THAT YOU WOULD CONSIDER ACCEPTABLE FOR THE RISKY PLAY TO BE ATTEMPTED.

_____Place a check here if you think Mr. D should not attempt the risky play no matter what the probabilities.

_____The chances are 9 in 10 that the risky play will work.

_____The chances are 8 in 10 that the risky play will work.

_____The chances are 7 in 10 that the risky play will work.

_____The chances are 6 in 10 that the risky play will work.

_____The chances are 5 in 10 that the risky play will work.

_____The chances are 4 in 10 that the risky play will work.

_____The chances are 3 in 10 that the risky play will work.

_____The chances are 2 in 10 that the risky play will work.

_____The chances are 1 in 10 that the risky play will work.

5. Mr. E is president of a light metals corporation in the United States. The corporation is quite prosperous, and has strongly considered the possibilities of business expansion by building an additional plant in a new location. The choice is between building another plant in the U. S., where there would be a moderate return on the initial investment, or building a plant in a foreign country. Lower labor costs and easy access to raw materials in that country would mean a much higher return on the initial investment. On the other hand, there is a history of political instability and revolution in the foreign country under consideration. In fact, the leader of a small monority party is committed to nationalizing, that is, taking over, all foreign investments.

Imagine that you are advising Mr. E. Listed below are several probabilities or odds of continued political stability in the foreign country under consideration.
PLEASE CHECK THE LOWEST PROBABILITY THAT YOU WOULD CONSIDER ACCEPTABLE FOR MR. E'S CORPORATION TO BUILD A PLANT IN THAT COUNTRY.

_____The chances are 1 in 10 that the foreign country will remain politically stable.

_____The chances are 2 in 10 that the foreign country will remain politically stable.

_____The chances are 3 in 10 that the foreign country will remain politically stable.

_____The chances are 4 in 10 that the foreign country will remain politically stable.

_____The chances are 5 in 10 that the foreign country will remain politically stable.

_____The chances are 6 in 10 that the foreign country will remain politically stable.

_____The chances are 7 in 10 that the foreign country will remain politically stable.

_____The chances are 8 in 10 that the foreign country will remain politically stable.

_____The chances are 9 in 10 that the foreign country will remain politically stable.

_____Place a check here if you think Mr. E's corporation should not build a plant in the foreign country, no matter what the probabilities.

6. Mr. F is currently a college senior who is very eager to pursue graduate study in chemistry leading to the Doctor of Philosophy degree. He has been accepted by both University X and University Y. While a degree from University X would signify outstanding training in this field, the standards are so very rigorous that only a fraction of the degree candidates actually recieve the degree. University Y, on the other hand, has much less of a reputation in chemistry, but almost everyone admitted is awarded the Doctor of Philosophy degree, though the degree has much less prestige than the corresponding degree from University X.

Imagine that you are advising Mr. F. Listed below are several probabilities or odds that Mr. F would be awarded a degree at University X, the one with the greater prestige.
PLEASE CHECK THE LOWEST PROBABILITY THAT YOU WOULD CONSIDER ACCEPTABLE TO MAKE IT WORTHWHILE FOR MR. F TO ENROLL IN UNIVERSITY X RATHER THAN UNIVERSITY Y.

_____Place a check here if you think Mr. F should not enroll in University X, no matter what the probabilities.

_____The chances are 9 in 10 that Mr. F would receive a degree from University X.

_____The chances are 8 in 10 that Mr. F would receive a degree from University X.

_____The chances are 7 in 10 that Mr. F would receive a degree from University X.

_____The chances are 6 in 10 that Mr. F would receive a degree from University X.

_____The chances are 5 in 10 that Mr. F would receive a degree from University X.

_____The chances are 4 in 10 that Mr. F would receive a degree from University X.

_____The chances are 3 in 10 that Mr. F would receive a degree from University X.

_____The chances are 2 in 10 that Mr. F would receive a degree from University X.

_____The chances are 1 in 10 that Mr. F would receive a degree from University X.

7. Mr. G, a competent chess player, is participating in a national chess tournament. In an early match he draws the top-favored player in the tournament as his opponent. Mr. G has been given a relatively low ranking in view of his performance in previous tournaments. During the course of his play with the top-favored man, Mr. G notes the possibility of a deceptive though risky maneuver which might bring him a quick victory. At the same time, if the attempted maneuver should fail, then Mr G would be left in an exposed position and defeat would almost certainly follow.

Imagine that you are advising Mr. G. Listed below are several probabilities or odds that Mr. G's deceptive play would succeed. PLEASE CHECK THE LOWEST PROBABILITY THAT YOU WOULD CONSIDER ACCEPTABLE FOR THE RISKY PLAY IN QUESTION TO BE ATTEMPTED.

_____The chances are 1 in 10 that the play would succeed.

_____The chances are 2 in 10 that the play would succeed.

_____The chances are 3 in 10 that the play would succeed.

_____The chances are 4 in 10 that the play would succeed.

_____The chances are 5 in 10 that the play would succeed.

_____The chances are 6 in 10 that the play would succeed.

_____The chances are 7 in 10 that the play would succeed.

_____The chances are 8 in 10 that the play would succeed.

_____The chances are 9 in 10 that the play would succeed.

_____Place a check here if you think Mr. G should not attempt the risky play, no matter what the probabilities.

8. Mr. H, a college senior, has studied the piano since childhood. He has won amateur prizes and given small recitals, suggesting that Mr. H has considerable musical talent. As graduation approaches, Mr. H has the choice of going to medical school to become a physician, a profession which would bring certain prestige and financial rewards; or entering a conservatory of music for advanced training with a well-known pianist. Mr. H realizes that even upon completion of his piano studies, which would take many more years and a lot of money, success as a concert pianist would not be assured.

Imagine that you are advising Mr. H. Listed below are several probabilities or odds that Mr. H would succeed as a concert pianist.
PLEASE CHECK THE LOWEST PROBABILITY THAT YOU WOULD CONSIDER ACCEPTABLE FOR MR. H TO CONTINUE WITH HIS MUSICAL TRAINING.

_____Place a check here if you think Mr. H should not pursue his musical training, no matter what the probabilities.

_____The chances are 9 in 10 that Mr. H would succeed as a concert pianist.

_____The chances are 8 in 10 that Mr. H would succeed as a concert pianist.

_____The chances are 7 in 10 that Mr. H would succeed as a concert pianist.

_____The chances are 6 in 10 that Mr. H would succeed as a concert pianist.

_____The chances are 5 in 10 that Mr. H would succeed as a concert pianist.

_____The chances are 4 in 10 that Mr. H would succeed as a concert pianist.

_____The chances are 3 in 10 that Mr. H would succeed as a concert pianist.

_____The chances are 2 in 10 that Mr. H would succeed as a concert pianist.

_____The chances are 1 in 10 that Mr. H would succeed as a concert pianist.

9. Mr. J is an American captured by the enemy in World War II and placed in a prisoner-of-war camp. Conditions in the camp are quite bad, with long hours of hard physical labor and a barely sufficient diet. After spending several months in this camp, Mr. J notes the possibility of escape by concealing himself in a supply truck that shuttles in and out of the camp. Of course, there is no guarantee that the escape would prove successful. Recapture by the enemy could well mean execution.

Imagine that you are advising Mr. J. Listed below are several probabilities or odds of a successful escape from the prisoner-of-war camp.
PLEASE CHECK THE LOWEST PROBABILITY THAT YOU WOULD CONSIDER ACCEPTABLE FOR AN ESCAPE TO BE ATTEMPTED.

_____The chances are 1 in 10 that the escape would succeed.

_____The chances are 2 in 10 that the escape would succeed.

_____The chances are 3 in 10 that the escape would succeed.

_____The chances are 4 in 10 that the escape would succeed.

_____The chances are 5 in 10 that the escape would succeed.

_____The chances are 6 in 10 that the escape would succeed.

_____The chances are 7 in 10 that the escape would succeed.

_____The chances are 8 in 10 that the escape would succeed.

_____The chances are 9 in 10 that the escape would succeed.

_____Place a check here if you think Mr. J should not try to escape no matter what the probabilities.

10. Mr. K is a successful businessman who has participated in a number of civic activities of considerable value to the community. Mr. K has been approached by the leaders of his political party as a possible congressional candidate in the next election. Mr. K's party is a minority party in the district, though the party has won occassional elections in the past. Mr. K would like to hold political office, but to do so would involve a serious financial sacrifice, since the party has insufficient campaign funds. He would also have to endure the attacks of his political opponents in a hot campaign.

Imagine that you are advising Mr. K. Listed below are several probabilities or odds of Mr. K's winning the election in his district.
PLEASE CHECK THE LOWEST PROBABILITY THAT YOU WOULD CONSIDER ACCEPTABLE TO MAKE IT WORTHWHILE FOR MR. K TO RUN FOR POLITICAL OFFICE.

_____Place a check here if you think Mr. K should not run for political office no matter what the probabilities.

_____The chances are 9 in 10 that Mr. K would win the election.

_____The chances are 8 in 10 that Mr. K would win the election.

_____The chances are 7 in 10 that Mr. K would win the election.

_____The chances are 6 in 10 that Mr. K would win the election.

_____The chances are 5 in 10 that Mr. K would win the election.

_____The chances are 4 in 10 that Mr. K would win the election.

_____The chances are 3 in 10 that Mr. K would win the election.

_____The chances are 2 in 10 that Mr. K would win the election.

_____The chances are 1 in 10 that Mr. K would win the election.

11. Mr. L, a married 30-year old research physicist, has been given a five year appointment by a major university laboratory. As he contemplates the next five years, he realizes that he might work on a difficult long-term problem which, if a solution could be found, would resolve basic scientific issues in the field and bring high scientific honors. If no solution were found, however, Mr. L would have little to show for his five years in the laboratory, and this would make it hard for him to get a good job afterwards. On the other hand, he could, as most of his professional associates are doing, work on a series of short-term problems where solutions would be easier to find, but where the problems are of lesser scientific importance.

Imagine that you are advising Mr. L. Listed below are several probabilities or odds that a solution would be found to the difficult long-term problem that Mr. L has in mind.
PLEASE CHECK THE LOWEST PROBABILITY THAT YOU WOULD CONSIDER ACCEPTABLE TO MAKE IT WORTHWHILE FOR MR. L TO WORK ON THE MORE DIFFICULT LONG-TERM PROBLEM.

_____The chances are 1 in 10 that Mr. L would solve the long-term problem.

_____The chances are 2 in 10 that Mr. L would solve the long-term problem.

_____The chances are 3 in 10 that Mr. L would solve the long-term problem.

_____The chances are 4 in 10 that Mr. L would solve the long-term problem.

_____The chances are 5 in 10 that Mr. L would solve the long-term problem.

_____The chances are 6 in 10 that Mr. L would solve the long-term problem.

_____The chances are 7 in 10 that Mr. L would solve the long-term problem.

_____The chances are 8 in 10 that Mr. L would solve the long-term problem.

_____The chances are 9 in 10 that Mr. L would solve the long-term problem.

_____Place a check here if you think Mr. L should not choose the long-term, difficult problem, no matter what the probabilities.

12. Mr. M is contemplating marriage to Miss T, a girl whom he has known for a little more than a year. Recently, however, a number of arguments have occurred between them, suggesting some sharp differences of opinion in the way each views certain matters. Indeed, they decide to seek professional advise from a marriage counselor as to whether it would be wise for them to marry. On the basis of these meetings with a marriage counselor, they realize that a happy marriage, while possible, would not be assured.

Imagine that you are advising Mr. M and Miss T. Listed below are several probabilities or odds that their marriage would prove to be a happy and successful one.
PLEASE CHECK THE LOWEST PROBABILITY THAT YOU WOULD CONSIDER ACCEPTABLE FOR MR. M AND MISS T TO GET MARRIED.

_____Place a check here if you think Mr. M and Miss T should not marry, no matter what the probabilities.

_____The chances are 9 in 10 that the marriage would be happy and successful.

_____The chances are 8 in 10 that the marriage would be happy and successful.

_____The chances are 7 in 10 that the marriage would be happy and successful.

_____The chances are 6 in 10 that the marriage would be happy and successful.

_____The chances are 5 in 10 that the marriage would be happy and successful.

_____The chances are 4 in 10 that the marriage would be happy and successful.

_____The chances are 3 in 10 that the marriage would be happy and successful.

_____The chances are 2 in 10 that the marriage would be happy and successful.

____The chances are 1 in 10 that the marriage would be happy and successful.

VITA

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Thesis: THE EFFECTS OF COHESIVENESS AND STATUS AS GROUP PROPERTIES ON THE CHOICE SHIFT PHENOMENA

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