THE REJECTION OF DEVIATES AS A FUNCTION OF THREAT*

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Chapter I

INTRODUCTION

Since Schachter's (1951) classic study of deviation and rejection, numerous investigators have dealt with the effect of a deviate's behavior on interpersonal relations and on performance in the small group. Research interests have ranged from the experimental replication of the original study (Emerson, 1954) and cross-cultural validation of the rejection phenomenon (Schachter, Nuttin, De Monchauz, Maucorps, Osmer, Duijker, Rommetveit, & Israel, 1954) to the treatment of deviates by therapy groups (Stock, Whitman, & Lieberman, 1958) and reactions to non-conformists in the Navy (Grant & Grant, 1959). Consistently, results have indicated that a deviate is rejected by other group members. While the tendency to reject deviates seems to be generally characteristic of groups, there is an indication that the strength of the rejection-tendency varies as a function of other variables. Schachter (1951), Emerson (1954), and Festinger, Gerard, Hymovitch, and Kelley (1952), for example, found that groups possessing a high degree of cohesion were more rejecting of deviates than groups characterized by low cohesion. Schachter, et al. (1954) were able to vary the strength of the rejection-tendency by varying the desirability and probability of attainment of the group goal. By the same token, Berkowitz and Howard (1959) found that individuals who exhibited a high need for affiliation, as determined by French's (1956) method, were more rejecting of the deviate than were those persons who scored low on the need for affiliation. Thus, it appears that, while rejection is

uniformly selected as the mechanism for coping with deviates in groups, the strength of this tendency is not uniform from group to group, situation to situation, nor from individual to individual.

Just why this should be so is not completely understood, since the motivational factor which leads to rejection has never been fully identified. Festinger (1950, 1954) has offered the concept of pressures toward uniformity of behavior as the motivating force and Newcomb (1953) has postulated that a strain toward symmetry causes people to seek out those who agree with them and to reject those who do not. Similarly, Heider (1946) has pointed to the imbalance of systems which disagreement can cause and the need of individuals to maintain balance in relating to others. These seem to be ad hoc hypotheses, however, and while they provide frameworks within which rejection phenomena can be studied, they offer little information about the motivational conditions under which such phenomena occur. The fact that groups of varying cohesion or individuals of varying needs for affiliation react differently to deviates when working on relevant tasks or for attractive goals suggests that the reaction to deviant behavior depends on the properties of the situation as well as on attributes of the individuals involved.

The purpose of this study is to investigate the rejection of deviates within the framework of a threat-model of rejection. By postulating reduction of threat as the motivational factor leading to the rejection of others, it becomes possible to make predictions

concerning differential responses in terms of the amount of threat experienced by individuals and groups confronted with deviant behavior.

Chapter II

A THREAT MODEL OF REJECTION

The interdependent activity which most people find necessary for goal attainment also provides the arena for less rewarding forms of interpersonal relations. Coercion, conflict, and deprivation of needs frequently characterize relations between people. The way in which threat arising from contacts of this sort can affect the individual is the subject of this section.

The threat concept

Just what constitutes threat to the individual or what form the threatening behavior of others can take has not been subjected to a systematic analysis. Threat phenomena have been subsumed under the headings of stress, conflict, crisis, and frustration. As Maslow (1941, 1954) has observed, however, it is not a particular situation per se which constitutes threat for an individual, but rather a psychopathogenic characteristic of that situation; namely, the actual or potential thwarting of the basic physiological or social needs. Threat at the interpersonal level primarily concerns the social needs of people, for it is only through others that one may satisfy the need for esteem, affection, or status. These attributes of the self-concept are products of past social interaction, and, as such, are subject to the limitations that significant others may place on them.

That the need for self-esteem, love, or status can serve as a powerful motivator of behavior is a belief held by many theorists

(Adler, 1929, 1939; Horwitz, 1956; Kardiner, 1941; Maslow, 1954; Rogers, 1951; and Worchel, 1960). As a source of motivation, social needs may be viewed as possessing the usual properties of acquired drives. Thus, both the instrumental behavior leading to need-satisfaction and the source of reinforcement become valued. Frustration or deprivation of needs frequently results in a number of coping behaviors designed to protect the individual from further threats to his self-esteem or power. Hostility, aggression, rejection, and a whole battery of other defensive reactions may be called into play as a means of increasing the social distance between the individual and threatening persons or in an attempt to distort the meaning of the situation so that it becomes less threatening. While not all relationships between people can be considered relevant to the maintenance or protection of one's self-esteem, to the extent that interpersonal relations provide the background for establishing an individual's social-worth, he will be concerned with the meaning of the behavior which significant others display toward him.

A review of the literature reveals that behavior interpreted as thwarting social needs, i.e., as reducing personal power, esteem, or status, produces hostility and aggression. Conversely, behavior which results in feelings of increased esteem or power produces more positive affect toward those responsible. Thibaut and Coules (1952) found that when a professor acted in an arbitrary manner so as to frustrate the power needs of his students, he provoked hostility and dissatisfaction. Given the opportunity to aggress toward the professor

through criticism, the students became less hostile. Since criticism has value as an index of latent control over the elements in one's environment, such behavior was instrumental in restoring status and esteem. Horwitz (1958) reported similar results and suggested that the veridicality of attitudes toward a threatening person influences the effectiveness of communicated aggression in restoring self-esteem. Thus, nonveridical or suppressed hostility seemed to have little value in raising an individual's esteem since it only served to further emphasize that person's inability to cope with the situation created by Horwitz. Similarly, Thibaut and Riecken (1955) found that as perceived control over a frustrating confederate decreased for their Ss, the Ss became more self-rejecting, reflecting a loss of confidence and self-adequacy. Worchel (1961) reported negative results in terms of the effect of ego-involvement on reactions to taking intelligence tests. Neutral or low ego-involvement conditions produced more liking for the experimenter than did the high ego-involvement conditions. While the experimenter did nothing more than provide the instructions for the test under both conditions of involvement, he was seen as responsible for the requirement of taking the test by Ss. If the high involvement condition can be interpreted as having more consequences for the self-esteem and status of Ss and, therefore, as being potentially more threatening, it would be expected that Ss for whom these meanings of the test were emphasized should feel more hostile toward the person responsible for their predicament. This is especially true when no reduction in threat is provided, i.e., no feedback on individual performance, as was the case in the study. Worchel (1960) was also able

to generate hostility and aggression in Ss taking intelligence tests by behavior which was designed to emphasize the inferior intellectual capacities of the Ss. He found that by restoring the self-esteem of Ss, specifically by telling them they had been given too little time to complete the tests and that their performance was the E's fault and not their own, he was able to reduce threat and, consequently, the hostility of his Ss. The effect of a potential loss of prestige has been demonstrated by Lott and Lott (1960) who caused some Ss to fail and others to succeed on a task in the presence of other group members. Those Ss experiencing failure were significantly less attracted to their groups at the conclusion of the experiment than were those who had success experiences. Apparently the possibility of a loss of status in the eyes of one's onlooking peers can result in decreased attraction and withdrawal tendencies. The possibility of increased or more stable prestige, however, produces increased attraction. Self-esteem, status, and power may accrue from various socially valued attributes, ranging from task competency to intellectual skill. McDonald (1962), in a doctoral thesis, demonstrated that disparagement by confederates of a S's capacity for creativity could produce threat reactions of the rejecting sort. Blake and Mouton (1961) have demonstrated repeatedly that the satisfaction and feelings of responsibility for group work can be varied by increasing or decreasing the power of the individuals involved. Finally, Bales (1958) has observed that the person who does most in a group to reduce tension and

maintain the esteem of others, i.e., the social-emotional leader, is better liked than the task leader whose behavior serves to emphasize the dependence of member status in the group on task contributions. Thus, behavior which is seen as coercive, disparaging, frustrating, or as a source of need deprivation may assume significance for the self-esteem of the individuals toward whom it is directed.

The reduction of threat. While reactions to threat may vary from individual to individual, a number of coping behaviors occur frequently enough to suggest, at least, a broad system of categories for viewing the attempt at threat-reduction relative to thwarted social needs. Festinger (1954) has enumerated several behavioral alternatives which individuals may employ to reduce cognitive dissonance arising from comparisons of themselves with other persons holding diverse opinions or possessing superior skills. To the extent that dissonance of this sort may be conceived of as one source of thwarted needs for esteem and power, and, therefore, as having some qualities in common with threat, Festinger's list provides a lucid overview of some of the ways in which a person might react to threat. To be sure, there are other alternatives which Festinger has not included in his analysis. Such alternatives as compulsion, hysteria, and other forms of perseverative behavior would seem to reflect a personally destructive approach to threat-reduction. Festinger, on the other hand, seems to be dealing with alternatives to a problem solving situation in which the constructive reduction of threat is the

main objective. According to Festinger (1954), the individual confronted with beliefs dissimilar to his own or attributes possessed by others which challenge his self-esteem may react in one or a combination of four ways. He may attempt to reduce the tension associated with cognitive dissonance--and those threat components which underly such tension--by: (a) attempting to influence the comparison person in a direction more congruent with his own position, (b) changing his own position to coincide with that of the comparison person, (c) strengthening the validity of his own position by recruiting additional social support, i.e., by reaffirming his perception of "social reality," or (d) by cessation of comparison with those most divergent from his own position.

The utility, and therefore the likelihood of each of these alternatives being employed, would seem to be governed by the degree to which each serves as a constructive means of reducing threat, while at the same time, protecting the individual from additional threat accruing from the alternative per se. If a preference exists for a particular behavior, as Steiner and Rogers (1963) have suggested, it should be based on a knowledge of the relative constructive and destructive merits of the behavior in question. Thus, an individual may have some ideas as to the feasibility of a given behavior before he employs it. Such considerations as the long range effect on interpersonal relations, as well as the immediate reduction of threat, would seem to influence the preference for a particular alternative. From the standpoint of maintaining esteem, and because of its sheer

parsimony, the alternative of attempted influence represents the most feasible means of reducing threat. If successful, this alternative reaffirms the individual's power in the situation and, thereby, diminishes existing threat. At the same time, however, the efficacy of this alternative may be limited by the individual's willingness to risk additional threat which may arise as a consequence of attempted influence, as well as by the degree of threat which an individual feels will be associated with such behavior. For example, Rokeach (1960) has described a personality dimension called dogmatism which seems to reflect a person's inability to tolerate belief dissimilarity, but which also serves as an index of authoritarianism. Thus, a dogmatic or closed-minded person may experience a strong need to ward off threat, as Rokeach says, but is reluctant to direct influence attempts toward persons of higher status than himself. This reluctance is a product of past experiences with authority figures and stems from a fear of arbitrary rewards or punishments from authority. The open-minded person, on the other hand, evaluates information on the basis of its own merits and may openly reject the source regardless of status if that information does not fit logically into his belief system. It might be expected, therefore, that the dogmatic person would be apprehensive about using the alternative of attempted influence should the comparison person be of higher status, while the low dogmatic person might view this behavior as the most effective means of exploring the relative logic of the positions expressed. Schachter (1951) and Emerson (1954), in reporting the effects of deviant behavior on communication patterns in

groups, cite a strong tendency on the part of group members to utilize attempted influence during the early phases of group activity. Given the presence of an expert in such a group, however, Festinger, Gerard, et al. (1951) reported a reduction in the tendency to attempt influence. Similarly, Back (1951) reported that individuals who were members of groups created as sources of prestige avoided attempts at influence and, consequently, exhibited little departure from their own original positions after discussion. Thus, attempted influence may reduce existing threat effectively, but may not always provide satisfactory protection from potential threat accruing from the influence attempt.

An alternative which seems to provide the means for a more constructive reduction of threat is that of attaining additional social support for one's position. To the extent that an individual is able to validate his own position through the support of others, he experiences less threat in the face of divergent opinions or attributes held by others. The limitations placed on the effectiveness of this alternative stem primarily from the sheer availability and opportunity for recruitment of others, on one hand, and the willingness of other individuals to support one's position on the other. The fewer the number of people to whom one can turn for support, the less likely--and possibly the less valuable--becomes the social support alternative as an effective means of reducing threat. In addition, a certain amount of additional threat is risked by employing the alternative since individuals may be reluctant to support a position due to their own ego-defensive needs or because they too hold divergent

opinions. Thus, should the attempt to recruit support fail, threat may actually in increased. For this reason, it seems unlikely that this alternative is employed by an individual unless he has first established some expectation that he will, in fact, be supported should he solicit validating opinions.

While the alternatives of attempted influence and the recruiting of social support both seem to reflect some constructive motivations and considerations, the two remaining alternatives of opinion change and cessation of comparison seem symptomatic of less constructive defense mechanisms, rationalization and withdrawal respectively. Opinion change, by definition, denotes a capitulation to the position of the comparison person. In terms of maintaining one's own self-esteem, it would seem that opinion change is only effective in reducing threat if the changing individual can convince himself that to change constitutes the most logical and intelligent course of action. Thus, it is more than token change which is being discussed here. Opinion change which is fairly permanent and the motivation for which seems logical may afford a means of reducing existing threat and escaping from potential threat, as well. This reversal of position, however, can seem to occur confortably only when the changing person has successfully rationalized the need for change so that his self-esteem remains intact and unimpaired. A change of opinion which constitutes merely a protective facade may provide an effective defense against potential threat, but it can hardly insure the social worth of the individual's opinions at the same time. Thus, opinion change may serve two somewhat different instrumental functions: that of

minimizing the possibility of additional threat associated with failure to change, i.e., a function reflecting the need to ward off the risk of additional threat immediately with transient loss of esteem, or that of salvaging esteem in the present situation without risking additional threat by rationalizing the logic for opinion change. Conformity behavior would seem to be an example of this type of response to threat. Asch (1952), for example, in his classic studies of conformity behavior, reported that of those Ss who conformed, the majority fell into the category of persons experiencing "distorted judgments"; that is, the majority of the individuals who yielded to conformity pressures did so because they became convinced that their own judgments were somehow inaccurate. Behavior of this sort, if viewed as an attempt to reduce threat, represents a case of unconstructive rationalization of the need for opinion change, albeit preserving the image of one's ability to function competently. On the other hand, Asch reported that still another group of yielding Ss did so because they simply did not want to appear different from other Ss. This behavior reflects a conscious attempt to avoid threat immediately, while sacrificing one's esteem by adopting a protective facade. Thus, opinion change may be a conscious attempt to reduce threat by terminating the cause for threat, i.e., belief dissimilarity, or it may be symptomatic of an unconscious motivation to deal effectively with both the need to reduce threat and the need to preserve one's self-esteem.

Of those Ss who refused to yield to conformity pressures, Asch reported that a number acted on the basis of explicit principles

concerning the necessity of being an individual and, consequently, withdrew from active participation. Behavior of this type seems similar to Festinger's alternative of cessation of comparison. Similarly, cessation of comparison denotes a rejection of the comparison person as worthwhile. Once again, withdrawal or rejection as a means of reducing threat seems to smack of an unconscious need to protect oneself from immediate and potential injury to the self-concept. To the extent that there is no explicit need for continued comparison with threatening persons, rejection of them would seem to serve the two functions of threat reduction effectively. Schachter (1951) and others have demonstrated that it is this course of action which is most frequently taken by group members confronted with a deviate. By redefining the psychological boundaries of the group so that the deviate is excluded, the group members reduce the threat to their collective social needs effectively enough that they can continue to work. It should be pointed out, however, that the classical conformity-deviation situation is so contrived that the alternatives of attempted influence and social support are rendered less effective alternatives from the start. In most cases, the group is told to reach a unanimous decision; an impossible task in view of the instructions given to the deviate. Thus, where there is no requirement for unanimity, it would be expected that each alternative might be used to reduce threat, but that the ultimate means of threat-reduction will depend upon irrelevant factors in the situation, personality attributes of group members, and the degree of belief dis-

similarity represented by the deviate's position. By and large, evidence points to rejection as the most frequently used alternative.

The rejection-tendency

Rokeach (1960) has suggested that an individual's rejection-tendency may be traced to at least two sources. A belief similarity-dissimilarity continuum, the first of these, is seen as the most important determinant of the strength of the rejection-tendency since the more dissimilar a belief is from one's own beliefs the more it will be rejected. The second source of rejection is the dogmatism dimension already described. Rokeach has found that belief dissimilarity, as a source of threat, results in the closing of an individual's belief system. The degree to which a system is closed or dogmatic determines what impact dissimilarities of belief will have on the individual's behavior. Thus, the dogmatism dimension tends to define both the amount of threat which will be generated by dissimilar beliefs and the direction rejection will take. While Rokeach says that all individuals tend to reject information to the extent that it is dissimilar to their own beliefs or knowledge, he further suggests that the individual's ability to perceive such dissimilarities objectively is a function of the person's level of dogmatism. The perception of a deviate is affected by the amount of threat his disagreement generates, therefore, and by the level of dogmatism possessed by the individuals confronted with deviant behavior.

The belief similarity-dissimilarity continuum. A review of the literature indicates that Ss consistently respond more favorably to those who agree with them or hold similar beliefs than they do to those holding dissimilar opinions. Schachter (1951) and Emerson (1954) demonstrated that those Ss who conformed initially or those who eventually shifted to the group position were significantly less rejected by the group than were instructed Ss who maintained a position dissimilar to the group's. Fiedler, Warrington, & Blaisdell (1952) report that persons who were liked by Ss in their study were rated as considerably more like themselves by Ss than were disliked persons. In a similar vein, agreement with expressed opinions has been shown to elicit a greater frequency of opinion-giving than disagreement or witholding of comment (Verplanck, 1955).

More recently, the effect of attitude similarity-dissimilarity on interpersonal attraction has been investigated by Byrne (1961a, 1961b) and Byrne and Wong (1961). These investigators found that, while similarities of attitudes lead to increased attraction, dissimilarities of these perceived attributes produce rejection. Byrne interprets his results in terms of a learned drive to be logical, as postulated by Dollard and Miller (1950). According to Byrne, the frustration of this drive is punishing since it carries with it an implication that one is no longer in touch with reality. Similar notions have been advanced by Festinger (1950, 1954), Newcomb (1956), and Heider (1958). Dollard and Miller (1950) and Festinger (1950, 1954) have pointed out that people rely primarily on what others think in establishing social reality or in assessing logic. Thus, belief

dissimilarity constitutes a witholding of the consensual validation necessary, in the absence of more concrete physical reality, to structure an individual's conception of his environment. Whether the desire for logic can be said to constitute a need with drive properties seems less important than the fact that there is social value attached to logical thinking and cultural censure associated with illogical thought. Within the framework of the present model, the latent meaning of belief dissimilarity, i.e., an implication of lack of intelligence, immorality, and maladjustment (Byrne, 1961a), holds enough significance for the self-esteem and social worth of those persons faced with a set of deviant opinions that a threat effect can be safely assumed.

The relative importance of belief similarity to the individual can be seen in the studies of prejudiced Ss by Rokeach, Smith, & Evans (1960) and Byrne & Wong (1961) in which belief congruence constituted a stronger basis for accepting and rejecting hypothetical others than did race. While Triandis (1961) found ethnic origin to be a more important determinant of prejudice, he also found that belief congruence and race interact to determine the social distance maintained between people. Thus, a great deal of evidence exists for Rokeach's contention that belief similarity-dissimilarity serves as a most important factor in the rejection or acceptance of others. To summarize, belief dissimilarity may be interpreted as possessing an inherent latent meaning of illogical thinking. To the extent that logic is valued as a criterion of self-esteem and status, such an implication will serve as a threat to individuals and the dissimilar

person will be rejected.

Since deviant behavior in groups most frequently takes the form of belief dissimilarity, it follows that the consequence of deviancy is to imply, encourage, or emphasize illogical thinking and, thereby, to threaten the status, power, and esteem of group members. The reactions to the deviate as they were observed by Schachter (1951, 1954) and others are certainly commensurate with the threat responses described by Byrne (1961a, 1961b), Rokeach et al. (1960), and others reporting studies on belief similarity-dissimilarity. While it is possible that the Ss in those studies concerned with deviation and rejection responded to the deviate on the basis of belief dissimilarity alone, the fact that such a threat to an individual's or group's belief system results in a closing of that system suggests that the rejection-tendency should be viewed as an interaction phenomenon which occurs primarily as a function of belief similarity-dissimilarity and is then modified in its execution by the degree to which individuals possess closed or dogmatic belief systems.

The dogmatism dimension. To the extent that the tendency to interpret events on the basis of their intrinsic merits is prepotent and the need to ward off threat absent, open or non-dogmatic belief systems should result. As the need to protect oneself from threat becomes stronger, however, the objective orientation weakens, resulting in a more closed or dogmatic belief system. Such openness or closedness of belief systems, as measured by Rokeach's Dogmatism Scale (1960), has a positive bearing on the manner in which incoming information is received and assessed by the individual or group. While

open-minded or low-dogmatic person is able to evaluate new information on the basis of its own merits, the closed-minded or high-dogmatic person lacks this capacity for objectivity. The dogmatic individual exhibits a high magnitude of rejection for all dissimilar beliefs and acceptance depends more on irrelevant internal drives and arbitrary rewards from external authority than on the correctness of information received.

To interpret the differential abilities of high and low dogmatic people to receive and assess new beliefs in terms of the present model, it might be that the differences are attributable on differential needs to ward off threat. Thus, the effect of the perceived behavior of others--and this includes beliefs, attitudes, and traits as well as observable cues such as status, sex, and attractiveness--will differ from individual to individual as a function of the opened-closed continuum of belief systems. Different percepts yield different reactions, and it is this which may be responsible for the variability of response strength observed in studies of deviation and rejection. The fact that deviant behavior may have quite different meanings for those confronted with it suggests that response variability of the type already noted should be expected. To the extent that an individual views deviant behavior as a threat to his personal status--either directly or indirectly--he should react more vigorously toward the deviate than one who views such behavior as irrelevant for his own well being.

Since the concept of dogmatic belief systems is relatively new, little work has been reported in the literature to date. Rokeach and

his associates, however, report a few studies which seem to hold interesting implications for a threat model of rejection. Bearing in mind the definition of threat utilized here, i.e., the actual or potential thwarting of an individual's social needs, and the postulated relationship between amount of threat experienced and the strength of the rejection-tendency elicited, several characteristics which discriminate between individuals with open or closed belief systems are of interest. In investigating behavioral differences between individuals scoring high on the Dogmatism Scale and those scoring low, Rokeach, Gladin, & Trumbo (1960) assumed that the scale was also a measure of general authoritarianism and described the dogmatic person as typically more sensitive to the presence of authority in his social environment. They suggested, therefore, that he would be more likely than the non-dogmatic person to adopt a respectful, acquiescent facade in the presence of authority figures while behaving differently among his peers. Low dogmatic people, on the other hand, were seen as assessing their environment on the basis of an equalitarian premise and as exhibiting less inhibition in their interactions with others, regardless of perceived authority. Coupled with the findings of Powell (1962) that open and closed Ss differ in their ability to distinguish between the source of information and the information content, the implication is that the tendency of open or closed persons to reject dissimilar beliefs is significantly influenced by the status or credibility of the source of the belief. Thus, while a high status person may elicit feelings of threat in either high or low dogmatic individuals, the high dogmatic person is less likely to

reject him than the low dogmatic person is. Thibaut & Riecken (1955) have indicated that, when faced with a high status person who disparages their behavior, high authoritarians tend to become self-rejecting. Thus, it may be that rejection still occurs in the high dogmatic paired with a high status person, but that its direction shifts to meet the requirements of the social situation. Apparently, a bit of paradoxical thinking occurs wherein the highly dogmatic person, if paired with a high status person, comes to view himself as the deviate in the situation. This probably is not experienced as a conscious process by the closed-minded person, but rather represents his adoption of the high status persons' stated belief as a proper frame of reference. Thus, the closed-minded person is prone to reject himself when he senses that he has deviated from what external authorities expect of him.

Rokeach & Vidulich (1960) report additional data which lend support to the notion that dogmatic people may rely more on interpretations based on irrelevant cues in meeting problems than do open-minded persons. The authors found that, when faced with a problem-solving task requiring the integration of new ideas, the dogmatic Ss were actually less able to remember the elements which needed to be synthesized than were the non-dogmatic Ss. A limited memory span of this sort is precisely the mechanism to which Bruner (1958) has attributed the reliance of people on stereotypical perceptions and responses. The difficulty in retaining and assessing incoming information, according to Bruner (1958), predisposes some people to categorize certain behaviors or traits as having stereotyped

meanings. Thus, the closed-minded person may be more likely to adopt the tendency to categorize, or attend to a narrower range of cues than is the open-minded person. The closed-mind is unable to remember the essential elements of past situations, perhaps because of a pre-occupation with the ego-defensive aspects of such situations. MacKinnon (1962) has recently noted a similar point of discrimination between creative and non-creative individuals and reports that creative people are more open to a wide variety of experiences than are uncreative persons. Thus, a lack of flexibility and creativity in interpersonal relations may be indicated on the part of closed-minded individuals.

An indication that prior experience provides less positive transfer in dealing with new situations for dogmatic Ss than it does for non-dogmatic Ss is reported by Rokeach, Oram, Laffey, & Denny (1960). While both open and closed Ss exhibited some positive transfer effects in their performance on a problem-solving task, the closed Ss profited less from their prior experience with a similar task than open Ss did. A reduced ability to profit from experience may be an indication of frozen, habituated behavior on the part of dogmatic Ss and may explain their tendency to be generally more rejecting than non-dogmatic Ss.

Differences in the functioning of persons who are either high or low dogmatic, Rokeach says, extend beyond such cognitive processes as problem-solving, remembering, and perceiving to emotional experiences as well. Emotional differences are particularly relevant to a threat model of rejection since they lend insight into an individual's sus-

ceptibility to threat and consequently his propensity for rejecting threatening stimuli. Rokeach & Kemp (1960) suggest that a closed belief system represents a cognitive network of defenses against anxiety and they have demonstrated that dogmatic persons manifest more anxiety than those with open systems. Two earlier studies by Rokeach and Fruchter (1956) and Fruchter, Rokeach, & Novak (1958) produced factor loadings between anxiety and dogmatism which were significantly high enough to indicate that the two are part of the same psychological factor. High anxiety may well represent an enduring state of threat in the individual, as Rokeach (1960) has said, and as such should increase his propensity for perceiving threat as emanating from the contemporary social situation. While the open-minded person is able to approach social situations objectively and relatively free of anxiety, the closed-minded person carries his anxiety around with him and projects it into situations. His acceptance or rejection of others in the social field is balanced precariously on a fulcrum of belief similarity. Since he cannot distinguish ideas from sources, acceptance of his beliefs has the meaning of acceptance of him as well. Conversely, differences of opinion denote rejection and he responds in kind. This suggests that the dogmatic person encounters deviates wherever he goes and that the rejection-tendency, for him, serves the useful purpose of maintaining social distance between himself and others who would threaten his self-esteem.

Summary

Succinctly, the threat model of rejection which is outlined here is based on four basic premises: (a) threat at the interpersonal level is a product of thwarted social needs of individuals, such as the need for self-esteem, power, prestige, and love; (b) the behavior of others constitutes a source of threat to the extent that it is interpreted as having implications for the individual's social worth, i.e., to the extent it is perceived as implying, encouraging, or emphasizing the person's inability to function competently in a situation; (c) the predisposition to utilize irrelevant cues in assessing the beliefs and behavior of others is a characteristic of the dogmatic personality as defined by Rokeach (1960); and (d) the most important source of the rejection-tendency and, by inference, of interpersonal threat is belief dissimilarity. The behavior of deviates is viewed, therefore, as having implications for the self-esteem of other group members and as eliciting rejection to the extent that the members possess closed belief systems and to the degree that the deviate's position is dissimilar to the group's.

Chapter III

RESEARCH IMPLICATIONS OF THE MODEL

The most obvious test of a threat model of rejection would be to vary the amount of threat in an experimental situation and compare the strength of the rejection-tendencies which differential threat produces. While subjective reactions, as measured by questionnaires and verbal summaries, may serve to indicate the success or failure of experimental variations in producing differential threat, predictions from the model must be in terms of the strength of the rejection-tendencies exhibited by Ss in each condition. The criteria for evaluating the threat model of rejection lie primarily in the magnitude of the rejection-tendencies observed, therefore, and to the degree to which they coincide with predictions made under the model.

The manipulation of threat

In conformity-deviation situations it seems that threat can be effectively manipulated by employing (1) groups of different sizes; (2) deviates of varying status relative to that of the experimental Ss; and (3) group members varying in their degree of dogmatism.

A review of the literature reveals that each of these variables exerts significant influence on the way in which individuals relate to one another in face-to-face situations. To the extent that group size, status, or dogmatism can be interpreted as inhibiting or modifying the behavior of individuals in social situations, they may be said to constitute sources of threat for those individuals. A summary

of past research lending itself to a threat interpretation and the experimental variations which it suggests for producing differential threat should provide the information necessary for constructing an experimental design capable of testing the threat model.

Group size. As Krech & Crutchfield (1948) have observed, the size of a group is a limiting condition on the amount and quality of communication that can take place among members as individuals and, consequently, affects the character of the interpersonal relations which members develop with one another. Of particular relevance for threat theory is Simmel's (1955) suggestion that certain psychological properties of groups are related to group size independent of other considerations. Thus, feelings of satisfaction (Slater, 1958), cohesion (Seashore, 1954) or tension (Bales and Borgatta, 1955) have been shown to increase with a decreasing group size. Within a threat framework, the interpretation of the effect of group size is that it serves to regulate the probability of an individual satisfying his social needs through group membership. Consequently, the number of others to whom one may turn for need satisfaction influences the types and quality of interaction he will feel free in establishing with fellow members. For example, Becker & Useem (1942) have commented on the unique characteristics of the two-man group. As the smallest possible group size, two-man groups have been found to exhibit high rates of tension and a preoccupation with mutuality. Bales & Borgatta (1955) found that groups of two consistently avoid disagreement and antagonism, frequently ask for opinions, but rarely offer suggestions. The interaction patterns

change, however, as group size increases from two to seven members. Rates of showing tension decrease while the frequency of giving information, suggestions, and attempts to control others increases. Bales & Borgatta (1955) interpret the effects of group size on interaction patterns in terms of the distribution of power. Similarly, Simmel (1955) noted that two-man groups are characterized by a delicate balance of power such that members have to proceed within certain tolerable limits of behavior if the group is to endure. Members of larger groups, on the other hand, experience more freedom and can resort to majority pressures or coalitions, if necessary, in resolving disagreements. The restriction of acceptable behavior in the two-man group necessitates the formation of joint norms of behavior, according to Bales & Borgatta (1955), and this building of common standards is conducive to anxiety.

Slater (1958) reports that Ss in his study who were members of larger groups felt less inhibited in expressing disagreement or in defending their own points. Members of small groups, conversely, were constrained, tactful, passive, and unable to let themselves go. Slater (1955) interpreted the behavior of the small group members as reflecting the lack of de-individuation, i.e., individuals were unable to avoid being noticed and, consequently, behaved in a way designed to escape being singled out by other members for attention. Festinger, Pepitone, & Newcomb (1952) have demonstrated that the opportunity for de-individuation results in a reduction of inner restraint for individuals and that groups allowing de-individuation

of members become more attractive than groups in which this type of protection is denied. Thus, another function of group size would seem to be that of controlling the amount of de-individuation group members can experience. To the extent that de-individuation is denied, in contradiction of member needs, individuals should experience greater interpersonal threat than in groups where they are allowed a certain amount of anonymity.

Another reason for the differences observed in the behavior of large and small groups entails the need for social support. In a large group, the probability of finding some support for one's position is greater by virtue of the sheer increase of number of members. Hare (1962), for example, has provided a formula for determining the number of symmetrical relationships possible in various size groups and, whereas the two-man group has but one such relationship possible, the seven-man group has 966 potential relationships. Thus, the addition or subtraction of a member, either physically or psychologically, occurs arithmetically, but the effect on interpersonal relations follows a geometric progression. The potentiality of symmetrical relationships has consequence in terms of Newcomb's (1956) notion that agreement from others constitutes reinforcement for an individual's ideas. With greater numbers of symmetrical relationships available, as in large groups, the probability of attaining reinforcement for one's opinions is also greater. Therefore, the maintenance of self-esteem should become an easier task in large groups than in small assemblies. The converse is true for deviates.

The effect of the deviate in groups of varying size is construed as producing two by-products which are related to interpersonal threat. First, deviant behavior of a member serves to maximize the individuality of both the deviate and his partner in the two-man group while it allows de-individuation for all others in larger groups. Secondly, the behavior of a deviate serves to decrease the number of symmetrical relationships possible in a group due to the assymetrical character of deviant behavior per se. The consequences of severing relationships vary as a function of group size, since in a two-man group the number of relationships having symmetrical qualities is reduced to zero while in a four-man group, for example, relationships are reduced from 25 to 6. Thus, the loss of a member through his withdrawal or by rejection in a two-man group would destroy the group, while in a four-man group several relationships among other members would continue to exist. For these reasons, de-individuation and number of relationships, deviant behavior is seen as constituting more threat in the two-man groups than it does in larger groups. Similarly, rejection of the deviate should be greater in the two-man group than in larger groups provided that the members feel free to dissolve the group. When they do not feel such freedom rejection occurs at the covert level of behavior.

In view of the past research, it is assumed that group size significantly affects the amount of threat experienced by group members and the strength of their tendency to reject the deviate. Therefore, threat was manipulated in the present study by employing groups

of size two or size four.

The status variable. An important feature of social structure is the status hierarchy within which individuals operate. The amount of acceptance and power accorded an individual may be said to reflect his status relative to that of others. To the extent that the status of an individual can exert influence on the way in which he will behave toward or in the present of other persons, the status variable assumes significance as a source of interpersonal threat.

The tendency for individuals to defer to people of higher status than themselves has received attention in a number of studies. Lippitt, Polansky, Redl, & Rosen (1958) found, for example, that children were more likely to imitate those persons with high attributed status and were less likely to try to influence them. Individuals with high attributed status, on the other hand, felt free to exert influence in a directive manner while resisting direct influence attempts from those of lower status. In addition, the authors found that perception of one's own power relative to that of others was a significant determinant of the type of social behavior employed by individuals in a group. Torrance (1955) reported similar results from a study concerning permanent and temporary three-man bomber crews. Among both types of crews high status members tended to have their opinions and suggestions accepted significantly more than lower status crew members. At the same time, higher status members were more receptive to the influence attempts of other high status member than they were to those of lower status personnel. Lower status Ss felt little commitment to group decisions reached, apparently due to the lack of participation

allowed them, but were unable to voice their disagreement. Bass & Wuster (1953) concluded from their experiments that a high status supervisor is more likely to exert leadership in discussion groups composed of lower ranking supervisors when the group task concerns his area of specialty. Hurwitz, Zander, & Hymovitch (1953) found that high status Ss made more influence attempts than low status Ss while the low status members engaged in approval-seeking behavior more than the high status members. The authors concluded that low status persons behave in an ego-defensive manner toward those people with relatively more power than they, i.e., group members seem to perceive the power of others and behave in a manner designed to reduce the tension associated with the potential exercising of power. The fact that differential tension can accrue from status differences is illustrated in the work of Hokanson and Shetler (1961). In their study, Ss who were faced with a low status frustrator experienced an increase in systolic blood pressure. If given the opportunity to aggress toward the frustrator, Ss exhibited a marked decrease in pressure when aggression was denied them. With high status frustrators, however, Ss experienced no increase in blood pressure when the opportunity to aggress was denied, but their pressures rose significantly when aggression rights were allowed. The indication seems to be that the experience of freedom to aggress toward a higher status person produces more tension than the blocking of such aggression. Thus, the authors concluded that their Ss responded to low status frustrators with direct aggression, but tended to withdraw when confronted with high status frustrators.

Commensurate with the tension hypothesis of Hurwitz, et al. (1953) and Hokanson & Shetler (1961), low status Ss have been found to be less free to deviate from group norms, more susceptible to influence attempts, less aggressive, and less internally directed than high status Ss. Kelley & Shapiro (1954) found that high status group members exhibited more freedom in deviating from a group sanctioned norm than did low status member of the group, especially when conformity was detrimental to the group. Low status members, on the other hand, felt little or no freedom to deviate regardless of their perception of the consequences of conformity for the group's well-being. Revealed differences between husband and wife pairs are most frequently resolved in favor of the higher status member in a study by Strodtbeck (1951), and Mausner (1953) found that persons conform more to the judgments of perceived experts than they do to those of persons of equal or lower skills in judging the quality of art objects. By the same token, Festinger, Gerard, et al. (1952) found that the tendency to influence others or to re-define the boundaries of the group is reduced among group members when an "expert" is present in the group. Thibaut & Riecken (1955) reported that less aggression is communicated upward than downward in a status hierarchy created in their study and commented on the tendency of low status Ss to inhibit overt hostility in the presence of higher status Ss. High status Ss paired with lower status confederates, however, exhibited increased overt hostility and rejection. In another study, Thibaut & Riecken (1956) found that the behavior of high status persons was perceived as stemming from their own internal motivations while that

of lower status individuals was interpreted as a response to external demands. Perceptions of this sort are in keeping with the suggestion by Block & Block (1952) that people tend to overlook the inconsistencies in interpersonal situations and achieve stability by interpreting suggestions from authority as demands for conformity. Thus, deference may be an instrumental act designed to lend structure and logic to a situation based on varying combinations of member status. It should be noted that individuals of varying dogmatism would be expected to differ in this respect.

The general tendencies of low status individuals to defer to higher status persons, to lack freedom in constructing their social behavior, to inhibit aggression toward their superiors, to conform readily to suggestions from authority, and to experience increased tension when placed in a situation in which these modes of behavior are denied or discouraged suggests the operation of a threat mechanism. The general security of the individual is related to his attributed power or status in a given situation involving interpersonal relationships. Arsenian (1943) and Wright (1943) have defined individual security in fact, as equal to the quantity of individual perceived power plus any supporting power divided by perceived hostile power. Thus, the perceived power of a high status deviate might be considerably greater, and consequently the perception of his supporting power, than that of a low status deviate. By the same token, group members confronted by a deviate in a four-man group may perceive more supporting power for their own perceived power than in a two-man group. For this reason, status may be interpreted as a potential source of interpersonal threat. The effect of

this source varies both as a function of the individual's position in the status hierarchy and as a function of the size of the group within which the individual is working. Status-oriented threat, therefore, should be greater for the low status person working in a small group.

Dogmatism. The importance of the personality characteristics of group members for group performance has been demonstrated by Haythorn (1953) who found that maturity, adaptability, and acceptance of others were positively related to effective group functioning, while suspiciousness, eccentricity, and coolness toward others tended to impair group functioning. Dogmatism seems to represent a personality trait which has particular relevance for group performance in that it is a determinant of susceptibility to threat as well as of attitudes toward authority. As such, the dogmatism variable may provide the basis for interaction effects in the attempt to produce differential threat. High dogmatic persons, as previously mentioned, are characteristically more anxious than low dogmatic individuals. By the same token, dogmatic people are more likely to defer to external authorities and to confuse the source of information with the content of that information. Thus, groups composed of either highly dogmatic individuals or low dogmatic persons should react differently to situations designed to produce threat. In general, high dogmatics should experience greater threat across conditions than should low dogmatics. Since low dogmatic persons are less sensitive to the meanings of status differences, they should show less response variability across status conditions than should high dogmatic people. Thus, while group size

and status of the deviate may produce the conditions for differential threat, the dogmatism of the individuals involved may determine the ultimate degree of threat which a particular situation will generate as well as the response elicited by threat.

Hypotheses

Under the assumption that it is possible to produce differential threat in individuals by employing groups of different sizes, deviates of varied status, and individuals differing in dogmatism, the following hypotheses concerning reactions to deviates will be tested.

Hypothesis 1. The smaller the group within which deviate behavior occurs, the greater will be the tendency to reject the deviate. Specifically, individuals confronted with deviant behavior in two-man groups will reject the deviate more strongly than will individuals in four-man groups.

Hypothesis 2. High status deviates will be rejected more strongly than will low status deviates.

Hypothesis 3. Individuals who are highly dogmatic will be more rejecting of deviates than will individuals who are low dogmatic.

Hypothesis 4. Reactions to high and low status deviates will vary as a function of the level of dogmatism of the group members.

a. Highly dogmatic individuals will be more rejecting of low status deviates than will low dogmatic individuals.

b. Highly dogmatic individuals will be less rejecting of high status deviates than will low dogmatic individuals.

Chapter IV

EXPERIMENTAL DESIGN

The study was defined for participants as an investigation of group decision-making behavior, sponsored by the Air Force Office of Scientific Research[1] and designed to provide information concerning the effectiveness of performance of different sized crews in projected manned space flights.

Setting and Subjects

A total of 80 Ss were utilized initially in the research. Experimental Ss from the Sophomore level of the Air Force and Army ROTC Detachments at The University of Texas were selected on the basis of (1) Cadet rank and (2) scores on Form E of the Dogmatism Scale (Rokeach, 1960).

Status and dogmatism. Approximately 200 individuals representing the Sophomore level of the two ROTC Branches Cadet Corps were administered the Dogmatism Scale. Of these, the 40 individuals producing the highest dogmatism scores and the 40 individuals producing the lowest dogmatism scores were selected for use in the experiment. The 40 Ss selected as high dogmatics had a mean score on the Dogmatism Scale of 180.8, with a standard deviation of 8.7, while the 40 Ss selected as low dogmatics produced a mean dogmatism score of 116.4, with a standard deviation of 10.65. These 80 Ss, representing the first

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[1]This research was supported in part by Air Force Grant No. 275-63 and in part by URI-Project SRF 696 from The University of Texas.

three enlisted grades in military rank in the two Cadet Corps, were rank-ordered according to their Dogmatism scores and randomly assigned in orders of five Ss each to each of eight experimental conditions. Subsequent to the experiment, however, a test for differences between the responses of Army and Air Force Ss produced an F of 16.83 ($p < .005$, 1 and 38 d.f). Data from the two Branches could not, therefore, be combined for analysis and the variable of Military Branch was introduced into the design.

Since the design originally called for five groups per cell, of which either two or three were of the same Branch, those cells were divided according to Branch and assigned to the appropriate Branch condition. In cases where three groups from the same Branch were represented in a cell, one group was randomly discarded in order to obtain equal n's in all cells. The number of Ss actually used was reduced to 64, therefore, and the number of groups contributing data for the final analysis was reduced to 32. The number of experimental conditions was increased from eight to 16, and critical Ss were re-ranked according to their dogmatism scores in each cell. Thus, a randomized block design (Edwards, 1960) with two groups of Ss per block was utilized. These blocks were arranged in a 2 x 2 x 2 x 2 factorial design, with Dogmatism, Military Branch, Status of the Deviate, and Group Size constituting the independent factors.

Under both High and Low Dogmatism conditions, the experimental Ss were placed in a group in which an instructed deviate had also been placed. One-half the Ss under each level of Dogmatism were confronted

with a deviate of higher rank than themselves, specifically, a representative of the Senior level of the Cadet Corps who was a Cadet Officer. The remaining half of the Ss under each Dogmatism condition were confronted with deviates of lower rank than themselves, namely, Basic recruits representing the Freshman level of the Cadet Corps. Thus, the Ss were arranged in four combinations of Dogmatism and Status conditions. These combinations were: (1) High Status Deviate - High Dogmatic S, (2) High Status Deviate - Low Dogmatic S, (3) Low Status Deviate - High Dogmatic S, and (4) Low Status Deviate - Low Dogmatic S. Each of these four combinations of Status and Dogmatism conditions were further broken down and employed under two conditions of group size.

Group conditions. Individuals from each combination of Status and Dogmatism were randomly assigned to either two-man or four-man conditions for the purpose of working on the experimental task. Groups were homogeneous with respect to status and dogmatism, with the exception of the instructed confederate in each group. In all, 16 two-man groups and 16 four-man groups were studied under each level of dogmatism. Of these, half contained high-status deviates and half contained low-status deviates relative to the status of the naive Ss.

Since the data obtained from two-man groups were actually based on the reactions of but one group member as opposed to three members in the four-man groups, steps were taken to equate the information obtained from varying sized groups. The use of mean scores was not desirable since this would result in a compressing of the variance

for four-man groups. Therefore, in order to allow a conservative estimate of the effect of group size on reactions to the deviate and to fulfill the requirements for independence only one S's data from each four-man group were used in comparison with the one S's data from each two-man group. Selection of the S to be used was made in advance of the experimental session on the basis of scores on the Dogmatism Scale. The individual in each four-man group who had either the highest or lowest score on the Scale, depending on the particular condition, was used as the S from that group for comparison with the S from the two-man group size condition. Thus, data from 16 Ss from each of the Group Size conditions were utilized in the final analysis.

Instructed confederates. Six paid confederates served under all conditions. These instructed confederates assumed roles, as designated by appropriate military insignia, of both high and low status group members in order to control for differences associated with confederate behavior. Confederates were randomly assigned to the experimental conditions under investigation. Confederates met with the E in advance of each experimental session for the purpose of receiving their briefing and a set of standard instructions concerning the selection of an illogical and unattractive position on the group problem-solving task. They, thus, assumed the role of deviates in their groups and their behavior was governed by the following conditions.

1. They were provided with two standard arguments relative to the position they were to take on the group problem.

2. The tone and manner of their remarks were to be objective and non-aggressive.
3. They were to defend their positions for the duration of the experiment, rephrasing the two basic arguments underlying their position.
4. They were not to yield to conformity pressures nor were they to reveal that they had been instructed to behave as they were.

In summary, the experiment employed Ss from the Army and Air Force ROTC of Sophomore status who scored high or low on Rokeach's Form E Dogmatism Scale and who were studied in either two- or four-man groups. In each group, an instructed deviate of higher or lower status than other group members defended an illogical position on the group task. Thus, the study employed a 2 x 2 x 2 x 2 factorial design with two randomized blocks per condition.

Task

The task consisted of a manned space survival problem similar to Hare's (1952) "camping game" task. The problem concerns an ill-fated space flight which has ended in a forced landing on the moon, some two-hundred miles from its destination. Survival of the crew members depends on reaching the mother-ship at the original rendezvous point, and the group task concerns the selection of priority equipment items to be taken on the cross-country trek. Since only 15 items of equipment have been left undamaged during the landing and since only two crew members are in condition to carry them, manpower,

distance, and basic necessities must be considered in making a selection. Ss were asked to rank order the 15 items of equipment in terms of their importance for insuring survival. Each S was asked to first rank order the items alone and to then join with his group or "crew" for the purpose of producing a group rank order (Appendix A).

Such a task involves a series of interdependent judgments on which a number of points of view can be brought to bear, thus providing a legitimate situation within which deviant behavior can occur. The use of a rank order task afforded a means of computing the amount of agreement represented among pre-interaction individual scores and, thereby, an investigation between amount of agreement and degree of threat experienced by Ss.

Procedure

Participants were assembled to receive instructions and S folders containing all necessary forms for the experiment. In order to increase the level of involvement of the Ss, they were told that their performance on the task was to be compared for adequacy with an expert judgment provided by the National Aeronautics and Space Administration.[2]

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[2]Appreciation is expressed to Mr. Mathew Radnofsky and Dr. Robert B. Voas of the National Aeronautics and Space Administration for their help in providing the expert judgments on the survival task. Mr. Radnofsky administered the task to five of his personnel in the Crew Equipment Research Department of NASA and then compiled a consolidated rank-order from the individual orders of his personnel. The final consolidated rank-order was employed as the expert criterion in the present study. The interjudge reliability among the five independent judges, as determined by a coefficient of concordance (Walker & Lev, 1958), was .82.

In addition, Ss were informed that results of the group-produced decisions, in terms of quality, would constitute a basis for evaluating individual potential as a candidate for ROTC contract status. Thus, a basis for evaluating decision quality, as well as a requirement for interdependent activity, was made explicit.

Individual judgments. After instructions were given and all questions answered, individual Ss were asked to begin work on the task. Each S entered his rank order on an original and a carbon copy of the task form. After all Ss had completed their rankings, the original forms were collected while each S retained his carbon copy for use as a guide in the group decision-making period which followed.

Group judgments. At the completion of individual preparation, Ss joined their respective groups as designated by a Crew Roster form. Groups represented ad hoc assemblies, created only for the duration of the experiment. Each group was asked to produce a decision regarding the order of importance of the 15 survival items and Ss were instructed not to open their S folders until told to do so by the E. A thirty-minute time limit was imposed on the groups. It was explained to the groups that some decision must be reached during that time period and that failure to reach a decision would be penalized by crediting all members of a defaulting group with the least accurate score produced by a group in the study.

Post decision reactions. At the end of the thirty-minute time limit, all group solutions and individual carbons were collected. At this point, Ss were asked to open their S folders to the reaction forms

(Appendix B). Using 10-point scales similar to those used by Berkowitz & Howard (1959) reflecting the extremes of subjective reactions from one to ten, measurements were obtained on the Ss' feelings of responsibility for performance, threat, hostility, commitment and willingness to work with individual members or the crew again in the future. In addition, measures of rejection used by Byrne (1961a, 1961b) were used. In this manner, the effects of deviant behavior on interpersonal relations were evaluated under the conditions of interest.

At this time, the E pointed out that the success of the experiment in providing information for manned space flight crews depended on the honest assessment of their reactions by Ss. Thus, particular emphasis was placed on the fact that all forms were to be filled out anonymously so that Ss might feel free to express their true feelings. When all forms had been completed, the purpose of the study and the presence of the instructed deviates was revealed. Participants were asked not to divulge any information concerning the experiment to others who might be used in subsequent sessions.

Criteria of measurement

Since the study concerned the effects of deviant behavior on interpersonal relations, specific instruments were incorporated in the design to reflect such effects.

Indices of interpersonal reactions. In addition to the reaction scales previously mentioned, the task per se affords a basis for evaluating interpersonal reactions. Subsequent to the group dis-

cussion period, individual Ss were asked to fill out a post-discussion rank order of survival items which reflected the way they felt after having had the opportunity to compare their original decisions with those of fellow group members. Changes from pre- to post-discussion were analyzed as an index of opinion change resulting from interaction. Subjective reactions, as reflected in the reaction scales, served to indicate the success of varying group size, status of the deviate, and member dogmatism in creating differential threat. By the same token, the amount of threat experienced by Ss was assessed by the use of a DRQ sentence analysis (Mowrer, 1953) of written reports of the decision-making session made by them at the conclusion of the experimental session.

Indices of group performance. Such data as those pertaining to the quality of crew decisions across all conditions may also be interpreted as reflecting the effects of deviant behavior on group performance and were analyzed as ancillary data since no formal predictions were made concerning performance. The deviation of group rank order from the expert rank order yields an Error Score which is inversely related to the quality of group performance. Thus, a group decision which deviated markedly from the expert rank order reflected inferior group performance.

Under the procedure described, comparisons were made of subjective reactions to deviant behavior in task groups as a function of group size, status of the deviate relative to that of other group members, and level of member dogmatism. The adequacy of group decision was

compared across all conditions as a test of group performance. While subjective reports of the amount of threat experienced served to test the success or failure of experimental manipulations in producing differential threat, hypotheses were evaluated in terms of the rejection tendencies reported by Ss.

Chapter V

RESULTS

Results of the study are presented in three main sections. The first section deals with the effectiveness of the attempt to induce differential threat. The data obtained from subjective-reaction questionnaires and individual verbal summaries of the experimental session are employed as indices of the amount of threat experienced by Ss in each condition. The second section concerns a comparison of the rejection-tendencies exhibited by Ss in each threat condition with Ss' reactions measured by the sociometric instruments described earlier. Ancillary results pertaining to the effects of deviant behavior on crew performance across all conditions are presented in the third section. The data have been arranged in a 2 x 2 x 2 x 2 analysis of variance employing a randomized blocks design, and a separate analysis has been made of each variable of interest.

The induction of threat

One of the basic assumptions made under the threat model of rejection was that a positive relationship exists between the strength of an individual's tendency to reject other individuals and the amount of threat he experiences as a result of his interaction with those persons. A further assumption underlying the present experimental design was that it is possible to create conditions of differential threat by employing groups of different size as the locus for deviant behavior, group members of high or low dogmatism, and deviates of either higher

or lower status than other group members. Since threat exists primarily in subjective experience and cannot be measured directly, two techniques were employed in the assessment of the amount of threat experienced by Ss in each condition. A 10-point Likert scale, the first of these, was employed for the purpose of assessing the individual's awareness of experienced threat. Specifically, Ss were asked to respond to the question "How threatened or nervous did you feel during the decision-making session?" Points on the scale ranged from responses of "Completely unthreatened" to "Completely threatened." A summary of the analysis of Likert's index of threat scores is presented in Table 1. In addition, a second technique was employed to assess tension not necessarily consciously experienced by Ss. The Discomfort-Relief Quotient technique, as used by Mowrer (1953), was employed for this purpose. Two independent scorers analyzed written summaries of Ss' reactions to the experimental session and attained an interjudge reliability of DRQ's of .76 ($p < .005$, $n = 32$). The average DRQ score for each S was then employed in the final analysis of the success of threat-induction. A summary of this analysis may be found in Table 2.

It was assumed that deviant behavior would elicit greater feelings of threat from members of small groups than from members of larger groups. By the same token, the assumption was made that high status deviates would prove more threatening to other group members than would low status deviates. Similarly, in accordance with Rokeach's (1960) suggestion that closed-minded persons are more generally threatened than open-minded individuals, the assumption was made that

Table 1

Analysis of Variance of Ratings of Amount of Threat Experienced

Source	d.f.	Mean Square	F
Between Ss			
D	1	16.53	8.059**
B	1	16.53	8.059**
S	1	.031	
DxB	1	9.031	4.400
DxS	1	3.125	1.524
BxS	1	7.031	3.428
DxBxS	1	19.531	9.523**
Error (b)	8	2.051	
Within Ss			
GS	1	.78	
GSxD	1	19.531	3.386
GSxB	1	.125	
GSxS	1	3.781	
GSxDxB	1	7.031	1.219
GSxDxS	1	.281	
GSxBxS	1	9.031	1.565
GSxDxBxS	1	.781	
Error (w)	8	5.769	
Total	31		

**p < .025

Table 2

Analysis of Variance of Discomfort-Relief Quotients

Source	d.f.	Mean Square	F
Between Ss			
D	1	.0023	
B	1	.1421	11.016**
S	1	.4395	34.069***
DxB	1	.0030	
DxS	1	.0945	7.326*
BxS	1	.3023	23.434***
DxBxS	1	.0105	
Error (b)	8	.0129	
Within Ss			
GS	1	.0871	1.287
GSxD	1	.1418	2.095
GSxB	1	.0011	
GSxS	1	.0621	
GSxDxB	1	.0282	
GSxDxS	1	.0026	
GSxBxS	1	.0306	
GSxDxBxS	1	.0358	
Error (w)	8	.0677	
Total	31		

*p<.05
**p<.025
***p<.001

It was assumed that deviant behavior would elicit greater feelings of threat from members of small groups than from members of larger groups. By the same token, the assumption was made that high status deviates would prove more threatening to other group members than would low status deviates. Similarly, in accordance with Rokeach's (1960) suggestion that closed-minded persons are more generally threatened than open-minded individuals, the assumption was made that high dogmatic Ss would experience greater threat than low dogmatic Ss when confronted with a deviate. The results only partially confirm these assumptions.

The effects of group size on the amount of threat experienced. Both responses to the Likert scale and DRQ's failed to substantiate the assumption that members of two-man groups would be more threatened than members of four-man groups. Members of two-man groups produced a mean threat-score of 3.23 on the Likert scale, while members of four-man groups yielded a mean score of 3.55, producing an F of less than 1. The F of 1.287 obtained from comparisons of DRQ's between group-size conditions also failed to reach significance, although the means of .64 for two-man groups and .53 for four-man groups were in the predicted direction.

The effects of status of the deviate on the amount of threat elicited. Conflicting results were obtained from the two measures employed in terms of the assumption that high status deviates would elicit greater threat than low status deviates. While the mean threat-scores of 3.43 for members confronted with high status deviates and 3.37 for those facing low status deviates are in the predicted direction, scores from

the Likert scale did not differ significantly. DRQ-assessed threat, however, supported the assumption concerning status and a comparison of the mean DRQ's summed over both levels of dogmatism, military branch, and group size yielded an F of 34.069 ($p < .001$, with 1 and 8 d.f.). Those Ss confronted with a deviate of higher status than themselves produced a mean DRQ of .70, while Ss from crews with lower status deviates produced a mean DRQ of .47. Thus, partial support for the assumptions concerning status were obtained.

Dogmatism and the experience of threat. High dogmatic Ss reported a mean threat-score on the Likert scale of 2.69 and Low dogmatic Ss yielded a mean score of 4.10. This difference is significant at the .025 level ($F = 8.059$, with 1 and 8 d.f.) and constitutes a reversal of the assumed relationship of dogmatism and the propensity for experiencing threat. Whether these results are reliable or not is subject to further validation since Iscoe, in an unpublished study, obtained a correlation of -.335 ($n = 207$) between dogmatism and defensiveness as measured by the K scale of the MMPI. These results were explained by Rokeach, in a personal communication, as being due to the fact that the closed-minded person does not experience his defensiveness as a conscious process, whereas the open-minded person is aware of his ego-defensive behavior. If such is the case in reporting feelings of threat, then the present findings may constitute an artifact. The test of the validity of the obtained relationship may lie in whether or not high dogmatic Ss behave overtly in a less threatened manner than low dogmatic Ss. Results from the analysis of DRQ's, while not significant (F less than 1.0), are in the same

direction as those obtained from the Likert scale; with the high dogmatic Ss' summaries yielding a mean DRQ of .57 and low dogmatic Ss' a mean of .59. Literally interpreted, therefore, the results indicate a reversal of the assumed relationship between the dogmatic personality and threat and discredit predictions based on this assumption.

The relationship between ROTC branch and feelings of threat. While neither expected nor predicted on the basis of theory, significant differences associated with ROTC branch were obtained relative to the amount of threat experienced by Ss in the study. On both the Likert scale and DRQ indices, Ss representing the Army ROTC were found to be significantly more threatened than were Ss from the Air Force ROTC. Mean scores on the Likert scale ranged from 2.7 for the AFROTC cadets to 4.1 for the AROTC cadets. This difference produced an F of 8.059 ($p < .025$, with 1 and 8 d.f.) and corresponded to the difference between the mean DRQ's of .56 and .62 for the Air Force and Army respectively. As reflected in Table 2, the difference between the mean DRQ;s summed over dogmatism, status, and group size is significant beyond the .025 level ($F = 11.016$, with 1 and 8 d.f.). While no predictions were made concerning ROTC branch, if the assumed relationship between the amount of threat experienced and the strengh of rejection-tendencies is valid, it might be expected that AROTC Ss will exhibit stronger rejection-tendencies than will AFROTC Ss. At the same time, any generalization that AROTC cadets are generally more threatened than AFROTC cadets would seem premature. It seems more likely that the results obtained, while possibly related to general

organizational atmospheres characteristic of the two branches, are best understood in terms of the particular conditions created in the experiment. This point will be explored further in the discussion of the results.

Feelings of threat as a function of variables in interaction. It was suggested in the threat model that dogmatism might serve as the basis for interaction effects, both in terms of experienced threat and the strength of rejection-tendencies. Two of the three significant interactions from the Likert and DRQ assessments of threat reflect effects due to dogmatism in interaction with status and/or branch. The remaining significant interaction concerns a relationship of branch and status.

The D x B x S interaction produced an F of 9.523 which is significant beyond the .025 level (1 and 8 d.f.). This indicates that the two-factor interaction of status and dogmatism is not the same for the two levels of branch. While high dogmatic Ss from the AFROTC yielded a mean threat score of 3.25 when paired with high status deviates and a mean score of 1.75 when confronted with a low status deviate, AROTC closed-minded Ss produced a mean threat score of 1.75 when faced with a high status deviate and a mean score of 4.00 when paired with a low status deviate. Thus, greater feelings of threat are experienced by dogmatic Ss representing the AROTC when they interact with low status deviates, while greater threat is experienced by dogmatic Ss from the AFROTC when they meet with deviates of higher status. Similarly, the responses of low dogmatic Ss are seen to differ across the two levels of branch. Low dogmatic Ss from

the AFROTC experience less threat when confronted with a deviate of lower status than when facing a high status deviate. This reaction is reflected in the mean threat scores of 2.50 and 3.25 in response to low and high status deviates, respectively. Low dogmatic Ss from the AROTC, on the other hand, appear to be generally threatened, regardless of the status of the deviate, but somewhat more threatened by deviates of high as opposed to low status. Low dogmatic AROTC Ss produced a mean threat score of 6.25 in reaction to high status deviates and a mean score of 4.5 in response to low status deviates. These data suggest that the major portion of the variance underlying the significant branch difference reported earlier may be attributable to the responses of the low dogmatic Ss representing the AROTC, as well as to the high dogmatic Ss' apparent discomfort in the presence of low status deviates.

A significant interaction of dogmatism and status in the analysis of DRQ scores was also obtained. Summed over both levels of branch and group size, mean DRQ's of .71 and .44 for high and low status deviate conditions respectively were obtained from high dogmatic Ss. Low dogmatic Ss, on the other hand, responded with mean scores of .69 for high status deviates and .59 in reaction to low status deviates. This difference was significant at the .05 level with an F of 7.326 (1 and 8 d.f.). Thus, the effect of status differs significantly as a function of dogmatism.

Discomfort-Relief Quotients under the two status conditions were also found to differ as a function of ROTC branch. The B x S interaction produced an F of 23.434, significant at the .005 level (1 and

8 d.f.). While AFROTC cadets responded to high status deviates with a mean DRQ of .77, they produced a mean DRQ of only .34 when facing a deviate of low status. AROTC cadets, while exhibiting the same general tendency to experience greater tension in the presence of high status deviates as compared with low status deviates, were less threatened by high status and more threatened by low status deviates than were AFROTC Ss. Cadets representing the AROTC produced mean DRQ's of .64 and .59 for high and low status conditions respectively. The differential effects of status as a function of branch may be symptomatic of organizational differences of the two branches as suggested earlier.

The relationship of amount of threat experienced to the strength of the tendency to reject deviates. Since a positive relationship between the amount of threat experienced by an individual in the presence of a deviate and the tendency to reject the deviate is the basic assumption underlying the major hypotheses of the study, the magnitude of this relationship--as measured by the Likert scales and DRQ for threat and Byrne's (1961a, 1961b) Personal Attraction scales and a separate Likert scale for rejection--was assessed. The DRQ, when compared with the rejection-tendencies reflected on a Likert scale indicating a S's reluctance to work with the deviate again in the future, produced a correlation coefficient of .559 ($p < .005$, $n = 32$). The same index of threat correlated .418 with the combined scores from the three Personal Attraction scales. Similarly, the Likert scale for threat correlated with the combined Personal Attraction scores .332 ($p < .05$, $n = 32$), and .356 ($p < .025$, $n = 32$) with the Likert scale

for rejection. Thus, although the relationships obtained are low, there exists some support for the postulated relationship between threat and the strength of the rejection-tendency.

It was also suggested earlier in this section that the two indices of threat employed in the study are designed to measure two possibly different levels of threat; viz. that threat of which the S was aware and which he was willing to admit, in the case of the Likert assessment, and that threat of which he was less aware, as reflected in the DRQ. If, in fact, two levels of threat are being measured, it might be expected that the two indices of threat employed--although correlating with common measures of the dependent variable--would not necessarily correlate significantly with one another. Such is the case since an analysis of the relationship between the two produced an insignificant r of less than .100.

In summary, the experimental conditions were sufficient to produce differential threat in some instances. The data indicate that Ss confronted with high status deviates experienced greater threat than those faced with deviates of low status; low dogmatic Ss exhibited greater threat than high dogmatic Ss; and Ss representing the AROTC produced higher threat scores than Ss from the AFROTC. In addition, the effects of variables in interaction, such as dogmatism with status and branch resulted in differential threat. In view of the positive relationships obtained between threat and rejection, these findings suggest that the major hypotheses of the study may have been stated too simply.

The effects of group size, dogmatism, ROTC branch and status of the deviate on the strength of the rejection-tendency.

Four instruments were employed to assess the tendency of Ss to reject the deviate under the conditions of interest. A Likert scale reflecting an individual's willingness--or reluctance--to work with the deviate again in the future was the first of these. The remaining three response measures reflected the Ss' assessments of the level of intelligence of the deviate, the degree of his positive adjustment, and the extent to which Ss felt they would like the deviate personally. These three seven-point scales comprise Byrne's (1961a, 1961b) Personal Attraction scales and have proven effective indices of attraction and/or rejection in past research. Each of the four hypotheses in the study were evaluated in terms of data from all four measures of rejection[3]. A summary of the analysis of scores on the Likert scale of rejection is presented in Table 3, while summaries of the analyses of intelligence ratings, adjustment, and likeability are presented in Tables 4, 5, and 6, respectively.

While all hypotheses were based on an assumption of differential threat which was not substantiated in every case, predictions were made in terms of the strength of rejection-tendencies elicited by deviant behavior. The first hypothesis specifically tested concerned the effect of group size on the tendency to reject, while the second and third dealt with the effects of status and dogmatism. The fourth hypothesis reflected the interaction of the status and dogmatism variables. No predictions were made concerning ROTC branch, but an ad hoc assumption based on the results of threat data would be that

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[3]Intercorrelations of the four measures may be found in Appendix C.

Table 3

Analysis of Variance of Ratings of Rejection of the Deviate

Source	d.f.	Mean Square	F
Between Ss			
D	1	6.125	2.882
B	1	45.125	21.235***
S	1	21.125	9.941**
DxB	1	21.125	9.941**
DxS	1	.125	
BxS	1	15.125	7.118*
DxBxS	1	.125	
Error (b)	8	2.125	
Within Ss			
GS	1	21.125	3.449
GSxD	1	10.125	1.653
GSxB	1	6.120	
GSxS	1	10.125	1.653
GSxDxB	1	.125	
GSxDxS	1	45.125	7.367*
GSxBxS	1	.125	
GSxDxBxS	1	6.125	
Error (w)	8	7.751	
Total	31		

*p<.05
**p<.025
***p<.001

Table 4

Analysis of Variance of Ratings of Intelligence of Deviates

Source	d.f.	Mean Square	F
Between Ss			
D	1	0.00	
B	1	18.00	12.517***
S	1	.50	
DxB	1	15.125	10.518**
DxS	1	10.125	7.041
BxS	1	1.125	
DxBxS	1	.50	
Error (b)	8	1.438	
Within Ss			
GS	1	2.00	1.279
GSxD	1	.125	
GSxB	1	1.125	
GSxS	1	10.125	6.478*
GSxDxB	1	0.00	
GSxDxS	1	.50	
GSxBxS	1	.50	
GSxDxBxS	1	1.125	
Error (w)	8	1.563	
Total	31		

*p<.05
**p<.025
***p<.01

Table 5

Analysis of Variance of Ratings of Adjustment of Deviates

Source	d.f.	Mean Square	F
Between Ss			
D	1	.125	
B	1	15.125	8.643**
S	1	6.125	3.500
DxB	1	3.125	1.786
DxS	1	10.125	5.786*
BxS	1	.125	
DxBxS	1	1.125	
Error (b)	8	1.750	
Within Ss			
GS	1	9.437	8.869**
GSxD	1	2.000	1.879
GSxB	1	0.000	
GSxS	1	2.000	
GSxDxB	1	.500	
GSxDxS	1	4.500	4.229
GSxBxS	1	2.000	
GSxDxBxS	1	.500	
Error (w)	8	1.064	
Total	31		

*p<.05
**p<.025

Table 6

Analysis of Variance of Ratings of Personal Feelings Toward Deviates

Source	d.f.	Mean Square	F
Between Ss			
D	1	.125	
B	1	18.000	16.933***
S	1	8.000	7.526*
DxB	1	10.125	9.525**
DxS	1	1.125	1.058
BxS	1	2.000	1.881
DxBxS	1	1.125	1.058
Error (b)	8	1.063	
Within Ss			
GS	1	2.000	1.684
GSxD	1	1.250	
GSxB	1	0.000	
GSxS	1	12.500	10.522**
GSxDxB	1	1.125	
GSxDxS	1	6.125	5.156
GSxBxS	1	.500	
GSxDxBxS	1	1.125	
Error (w)	8	1.188	
Total	31		

*p<.05
**p<.025
***p<.005

AROTC Ss are more rejecting than AFROTC Ss. The results of the analyses of rejection data follow.

Rejection of deviates as a function of group size. The first hypothesis stated that individuals confronted with deviant behavior in two-man groups would reject the deviate more strongly than would individuals in four-man groups. Reference to Table 3-6 will indicate that this hypothesis was not confirmed by the results. With the exception of the measures of adjustment ($F = 8.869$, $p < .025$ w/1 and 8 d.f.), none of the scales reflecting rejection produced an F of significant magnitude. In addition, although the assumption concerning differential threat in two- and four-man groups received support from the DRQ data, results from the rejection measures indicate that members from two-man groups are less rejecting than members of four-man groups. Mean rejection scores of 4.50 for willingness to work with the deviate again, 4.37 for intelligence, 4.50 for adjustment, and 4.50 for likeability were obtained from Ss in the two-man group condition summed across levels of dogmatism, status and branch. Lower means, reflecting greater rejection, of 2.87, 3.93, 4.18, and 4.00 were obtained from four-man groups for willingness, intelligence, adjustment, and likeability respectively. Thus, while individuals may experience greater threat, albeit not significantly so, in the two-man group condition, they tend to be less rejecting than are members of four-man groups. This tendency may reflect the concern of members of a dyad for mutuality and tension-reduction as described by Becker & Useem (1942). One inference which seems logical is that rejection of the deviate in a two-man group would, in effect,

destroy the group. To the extent that the group is essential to completion of the task, this tendency should be suppressed and the deviate retained as a group member, both physically and psychologically.

Group size does seem to provide the basis for significant interaction effects, however, concerning the effects of status and dogmatism. The difference in the relationship of the two factors of dogmatism and status as a function of group size, i.e., the G x D x S interaction, was significant at the .05 level ($F = 7.367$, w/1 and 8 d.f.) and indicates a rejection of high status deviates and an acceptance of low status deviates by high dogmatic Ss in two-man groups while low dogmatic Ss are equally rejecting of both levels of status. In four-man groups, however, high dogmatic Ss become more rejecting of low status deviates than of high while low dogmatic persons exhibit greater rejection-tendencies toward deviates of high status as opposed to low status.

Reference to Tables 4 and 6 reveals that ratings of the intelligence and likeability of the deviate by Ss differ as a function of group size and status. The GS x S interaction for intelligence ratings is essentially of the same form as that for likeability. In terms of intelligence, Ss faced with a high status deviate in a two-man group produced mean ratings of 3.75 while those Ss interacting with high status deviates in four-man groups rated their intelligence on the average as 4.37. Low status deviates were rated 5.12 on the average in two-man groups and 3.50 in four-man groups. Similarly, mean scores of likeability were 3.32 and 4.12 for Ss facing high status deviates in two- and four-man groups respectively and 5.62

and 3.87 for Ss facing low status deviates in two- and four-man groups. The GS x S interaction for intelligence produced an F of 6.478 ($p < .05$, w/1 and 8 d.f.) and the same interaction for ratings of likeability yielded an F of 10.522 ($p < .025$, w/1 and 8 d.f.). Thus, while the group size variable failed to provide the basis for differential rejection in isolation, it did contribute to interaction effects affecting the strength of the rejection-tendency.

The effect of status on the strength of the rejection-tendency. It was predicted in Hypothesis II that high status deviates would be more strongly rejected than low status deviates. This hypothesis reflected the assumption that deviates of high status would prove more threatening to group members than deviates of low status. The results confirm this hypothesis. While differences between the average rejection scores for high and low status conditions reached significance on but two scales, all means were in the predicted direction. Mean rejection scores of 2.87 for high status deviates and 4.50 for low status deviates, with lower scores denoting greater rejection, were obtained from Ss across levels of dogmatism, branch, and group size on the Likert index of rejection. The difference between the means produced an F of 9.941 (1 and 8 d.f.), which is significant beyond the .025 level. Table 3 provides a summary of this analysis. Similarly, reference to Table 6, indicates that a significant difference between the mean ratings of likeability of deviates of high and low status was obtained. The mean likeability rating of 3.75 for high status deviates differs significantly from the

mean rating for low status deviates of 4.75 at the .05 level ($F = 7.526$, 1 and 8 d.f.). Once again, as with the Likert index, low scores denote greater rejection. While failing to reach an acceptable level of significance, mean ratings of the deviate in terms of intelligence and adjustment also reflected greater rejection of high status deviates as opposed to low. Mean ratings for high status deviates were 4.07 on intelligence and 3.87 on adjustment as compared with 4.31 and 4.75 for low status deviates on intelligence and adjustment. Thus, significant support for the second hypothesis was obtained from two of the four indices of rejection-strength and token support from the remaining two.

Rejection of deviates as a function of dogmatism. The third hypothesis dealt with the strength of the rejection-tendency as it is related to dogmatism, the assumption being held that high dogmatic Ss would experience greater threat when confronted with a deviate than would low dogmatic Ss. Data from the threat indices tended to discredit this assumption and possibly, as well, hypotheses based on it. Hypothesis III stated that highly dogmatic individuals would be more rejecting of deviates than would individuals who were low dogmatic. No significant differences attributable to dogmatism in isolation were obtained and this hypothesis must be rejected. It will be recalled that, contrary to expectations, it was the high dogmatic Ss who exhibited the lesser degree of experienced threat. Similarly, it is the high dogmatic group which is less rejecting on two of the four scales, with there being no difference between rejection scores on a third scale. The influence of different rejection-

tendencies attributable to dogmatism seems to be best reflected in conditions affording an interaction of dogmatism with other variables. Such an interaction was the concern of the fourth hypothesis.

Strength of the rejection-tendency as a function of dogmatism and status of the deviate. Hypothesis IV stated that (a) highly dogmatic individuals would be more rejecting of low status deviates than would low dogmatic individuals, and that (b) highly dogmatic individuals would be less rejecting of high status deviates than would low dogmatic individuals. The test for this hypothesis lies in the D x S interaction. Significant differences supporting the hypothesis were obtained from the intelligence and adjustment scales and supporting trends were in evidence on both the Likert and likeability indices of rejection. The D x S interaction for ratings of intelligence is of the same form as that for ratings of adjustment. Mean ratings of the intelligence of the deviate obtained from high dogmatic Ss were 4.62 for high status deviates and 3.75 for deviates of low status. Ratings from low dogmatic Ss, by comparison, were 3.50 for high status deviates and 4.87 for low status deviates. The difference between these means produced an F of 7.041, significant at the .05 level (1 and 8 d.f.). Similarly, the average ratings of adjustment of the deviate produced a difference significant at the .05 level ($F = 5.786$, 1 and 8 d.f.). Mean positive adjustment scores of 4.50 and 3.25 for high status deviates were obtained from high and low dogmatic Ss, respectively. Low status deviates received mean ratings of 4.25 from high dogmatic Ss and 5.25 from low dogmatic persons. Likert ratings and ratings of likeability, as stated earlier, were in the predicted direction,

but failed to reach significance. Thus, Hypothesis IV also receives partial support.

Differential rejection as a function of ROTC Branch. While differences in the strength of rejection-tendencies accruing from ROTC branch were not taken under consideration in the formulation of the hypotheses, notable differences were obtained. As with the threat data, results from measures of rejection indicate that AROTC cadets are consistently more rejecting than AFROTC cadets. Branch differences on all four indices of rejection attained statistically significant levels. Scores reflecting Ss' reluctance to work with the deviate again, as summarized in Table 3, resulted in branch differences significant at the .005 level ($F = 21.125$, 1 and 8 d.f.) and produced mean rejection scores of 2.50 for AROTC Ss and 4.87 for AFROTC Ss. The mean ratings of intelligence of the deviate were significantly different for the two branches with AROTC Ss rating the deviate an average of 3.44 and AFROTC Ss giving him a mean rating of 4.94. The difference between these means yielded an F of 12.517, significant at the .01 level (1 and 8 d.f.). Similarly, differences between both mean ratings of adjustment and likeability of the deviate were significant. The difference between the means of 3.62 and 5.00 for adjustment, as produced by AROTC and AFROTC Ss respectively, was significant at the .025 level with F equal to 8.643 (1 and 8 d.f.). Likeability mean ratings of 3.50 and 5.00 for AROTC and AFROTC Ss respectively resulted in an F of 16.933, significant at the .005 level. Thus, the main effects of branch were consistently and significantly different across levels of dogmatism, status, and group size.

In addition to the significant main effect obtained from the branch variable, several significant interactions of branch with dogmatism, status, and group size were obtained. On the Likert index of rejection, ratings of intelligence, and ratings of likeability of the deviate, significant D x B interactions occurred. The D x B interaction for ratings of intelligence, for the Likert scale, and for likeability are of the same general form. In all cases, little difference between the mean scores of high dogmatic Ss in AROTC or AFROTC was obtained. Low dogmatics of the AROTC were consistently more rejecting than low dogmatic Ss from the AFROTC were. This difference in the behavior of low dogmatic Ss from branch to branch yielded an F of 10.518 ($p < .025$) on ratings of intelligence, and an F of 9.525 ($p < .025$) on ratings of likeability. Mean ratings of adjustment, while not significantly different, reflected the same differential effects of dogmatism as a function of branch. The interaction indicates that behavioral differences exist between low dogmatic Ss of the two ROTC branches. This difference may suggest the need for additional research concerning the relationship of the dogmatic personality to different organizational structures, for the low dogmatics in the present study may be reacting to elements inherent in the organizational structure of the two branches rather than to the experimental situation alone.

Additional evidence of the tendency for AROTC Ss to be generally more rejecting than AFROTC Ss in the study may be found in the significant B x S interaction on the Likert rejection scale summarized in Table 3. While Ss from the AFROTC tended to reject differentially as

a function of status, AROTC Ss were equally rejecting of both levels of status. Mean rejection scores of 3.37 for high status deviates and 6.37 for low status deviates were obtained from AFROTC Ss. With low scores denoting greater rejection, AROTC Ss produced mean scores of 2.37 for high status deviates and 2.62 for deviates of low status. Thus, while status effects for rejection correspond very closely to those obtained for threat in the case of AFROTC Ss, AROTC Ss are rejecting to a greater degree than would be indicated by their threat data. A comparison of the significant B x S interaction ($F = 7.118$, $p < .05$) with the B x S interaction of threat scores will lend additional insight into the relationship of the response differences obtained between branches.

In summary, two of the four hypotheses were confirmed by the data obtained. Both status of the deviate and an interaction of status and dogmatism affect the strength of the rejection-tendency significantly. Neither group size nor dogmatism in isolation was found to exert significant influence on the strength of the tendency to reject deviates and hypotheses concerning these effects were rejected. In addition, branch differences occurred which reflect differential tendencies to reject as a function of branch, branch and dogmatism, and branch and status of the deviate. While no predictions were made to this effect, the results are not surprising in view of the significant differences associated with branch and its interaction with status and dogmatism on threat data discussed earlier.

The effects of deviant behavior on crew performance

In addition to the effects of deviant behavior on interpersonal relations, as reflected in the tendency to reject persons holding dissimilar beliefs, some mention of the effects of deviant behavior on decision-making groups relative to performance may be of interest. It was suggested in the threat model of rejection that one alternative to--or possible concomitant of--rejection was that of changing one's opinion to coincide with that of the comparison person as a means of reducing threat. It seems that a change of personal opinion may represent a constructive means of reducing threat in many instances, but would reflect a less constructive coping mechanism in the present study should Ss shift significantly toward the position held by the deviate. This section deals with data ancillary to the hypotheses which provide information concerning the disruptive effects of deviant behavior on crew performance as a function of status of the deviate, S dogmatism, branch, and group size.

Individual opinion change as a function of discussion with an opinion deviate. On the average, Ss in the study shifted 9.38 points, as measured by absolute deviation scores, toward the position of the deviate as a result of discussing the task with him. Pre- and post-experimental individual decisions on the rank order task were obtained from each S and the absolute deviations of each of these rankings from that of the deviate were computed. While greater shifting of opinion toward the deviate's position occurred in small groups as opposed to larger, for low dogmatic Ss as opposed to high, for AFROTC cadets as

opposed to cadets from the AROTC, and in response to high status deviates as compared with deviates of low status, only those differences associated with status reached significance. As reference to Table 7 indicates, Ss confronted with deviates of high status shifted significantly more toward the deviant position than Ss paired with low status deviates. This effect yielded an F of 11.719, significant at the .01 level. Thus, the implication is that persons of high status--whether in a deviate role or not--elicit greater opinion change than persons of low status. This is essentially what would be expected in terms of both theory and common sense. The effect of such yeilding behavior on the part of Ss when the comparison person holds a deviant or erroneous opinion, however, has interesting consequences for group effectiveness. It should be pointed out in connection with this point that the opinion change described here is neither the token change of opinion or protective facade of yielding described in the threat-reduction section, but seems to represent a less constructive "distortment of judgment" of the type cited by Asch (1958). Individuals were asked to rank survival items as they actually believed they should be after having had an opportunity to discuss the task with other persons. Since no significant differences existed among Ss on the accuracy of individual decisions prior to interacting with the deviate, opinion change of the sort obtained may well contribute to the final effectiveness of crew performance, as measured by the accuracy of crew decisions.

The effects of deviant behavior on the quality of crew-decisions. Absolute deviations of crew-produced decisions from the expert criterion

Table 7

Analysis of Variance of Opinion Change Scores

Source	d.f.	Mean Square	F
Between Ss			
D	1	78.125	1.063
B	1	120.125	1.635
S	1	861.125	11.719***
DxB	1	2.000	
DxS	1	253.125	3.445
BxS	1	50.000	
DxBxS	1	66.125	
Error (b)	8	73.484	
Within Ss			
GS	1	98.000	
GSxD	1	78.125	
GSxB	1	.125	
GSxS	1	253.125	1.965
GSxDxB	1	60.500	
GSxDxS	1	0.000	
GSxBxS	1	.500	
GSxDxBxS	1	10.125	
Error (w)	8	128.813	
Total	31		

***p<.01

supplied by NASA were computed as a means of assessing the accuracy of crew decisions. Crews producing decisions which differed markedly from the expert solution obtained Error Scores of greater magnitude than crews producing decisions in agreement with the expert judgments. Thus, Error Scores are inversely related to the quality of crew performance on the task. Table 8 presents a summary of the analysis of Error Scores, and it may be seen that, as expected on the basis of the opinion change data, significant differences in performance accrue as a result of status of the deviate. While crews confronted with a high status deviate produced decisions which deviated from expert criteria an average of 68.5 points, crews interacting with low status deviates produced scores deviating on the average of 36.6. This difference yielded an F of 16.834, which is significant beyond the .005 level. Since the deviates were instructed not to enforce their opinions, regardless of their rank, but merely to lobby enthusiastically for their position, these data seem to indicate an acquiescence to authority rather than a following of orders. These results are, of course, consistent with the findings of Lippitt, Polansky, et al (1958) and Torrance (1955). Thus, crew performance suffers significantly more under the influence of a high status deviate than it does under the influence of a deviate of low status.

Crew performance was also found to be significantly less effective in groups of size two than in four-man groups. The difference in mean deviations from expert criteria of 66.3 for two-man crews and 38.8 for four-man crews resulted in an F of 25.830 ($p < .005$). Apparently, the opportunity of comparisons of opinion--and the validation of the logic

Table 8

Analysis of Variance of Error Scores for Crew-Decisions

Source	d.f.	Mean Square	F
Between Ss			
D	1	185.28	
B	1	621.28	1.292
S	1	8096.28	16.834**
DxB	1	2000.28	4.159
DxS	1	750.28	1.560
BxS	1	81.28	
DxBxS	1	225.78	
Error (b)	8	480.943	
Within Ss			
GS	1	6022.53	25.830**
GSxD	1	1667.53	8.151*
GSxB	1	603.78	2.589
GSxS	1	552.78	2.370
GSxDxB	1	42.78	
GSxDxS	1	621.28	2.665
GSxBxS	1	586.53	2.516
GSxDxBxS	1	294.03	1.261
Error (w)	8	233.158	
Total	31		

*p<.05
**p<.005

of one's opinions--as it occurs in four-man crews facilitates crew performance by providing sources of information in addition to the deviate. By the same token, an increase in the size of a crew should be accompanied by a decrease in the influence of the deviate since it affords the formation of over-riding coalitions and majority pressures.

Evidence exists that dogmatic and low dogmatic crews react differently to decision-making situations under the two group sizes investigated. The GS x D interaction, summed over status and branch, is significant at the .05 level ($F = 7.151$, 1 and 8 d.f.). Both high and low dogmatic crews experience increments in accuracy as a function of increased group size, but crews composed of low dogmatic Ss perform less well under two-man conditions and better under four-man conditions than crews composed of high dogmatic Ss. The GS x D interaction reflects a mean deviation from the expert judgment of 61.50 points for high dogmatic crews under two-man conditions as compared with an average deviation of 71.11 points for low dogmatic crews under two-man conditions. Under four-man conditions, high dogmatic crews produced decisions which deviated on the average 48.50 points, while low dogmatic crews produced scores deviating but 29.25 points. The effects of group size as a function of dogmatism may be symptomatic of a difference in the manner in which Ss of high and low dogmatism resolve conflict. Conflicts of opinion arising within the context of a two-man group seem to produce greater performance decrements for low dogmatic crews. Greater performance increments, however, seem to occur in low dogmatic crews of size four. Apparently, low

dogmatic Ss withdraw from prolonged conflict and abdicate responsibility to the deviate in two-man groups while entering into more effective problem-solving when additional social support is available as in the four-man groups. High dogmatics, on the other hand, seem to be generally more resistant to influence attempts in two-man crews and continue to remain involved in the discussion. Possible reasons for these and other findings reported in this section will be explored in the discussion of results obtained.

Chapter VI

DISCUSSION

In his discussion of theoretical issues concerning conformity and deviation, Schachter (1951) explains the rejection phenomenon in terms of those pressures toward uniformity of behavior and opinion which are characteristic of most social groups. Accordingly, he postulates that, should differences of opinion occur, forces will arise which act on group members to restore uniformity. When all but one member share similar opinions, Schachter suggests that the predominant tendencies elicited by deviant behavior are pressures to change the opinion of the deviate and pressures to decrease dependence on the deviate in establishing social reality. Pressures to change the deviate's opinions (Pch) are predicted to increase as the magnitude of opinion differences increases. Similarly, dependence (Dep), or the extent to which individuals rely on others as points of reference in establishing social reality, is expected to decrease with increases in opinion differences. Schachter, therefore, coordinates rejection to the amount of pressures to change the deviate which do not find expression and dependence, which defines the proportion of pressures to change which can be expressed. Implicit in this coordination is the notion that high dependence facilitates high expression of pressures to change. Dependence is conceived of as combining multiplicatively with Pch to determine the amount of pressures to change which will be communicated, i.e., Comm = Pch x Dep. Rejection, as a reflection of Pch not communicated, is formulated as Rej = Pch x (1 - Dep),

where 1 is equal to maximum dependence. Thus, rejection requires relatively little dependence on a person and, at the same time, strong pressures to change his opinions in Schachter's model. Similarly, if Pch is high but dependence is high also, rejection will be slight. If dependence is low and there are no pressures to change, rejection will not occur.

Succinctly, Schachter's formulation suggests that rejection requires a relatively great difference of opinion, coupled with relatively low dependence on the person holding the diverse opinion. Contrasted with this position is that taken under the threat model of rejection, which states that rejection is a response to threat emanating from interpersonal relations and attributable to thwarted needs for esteem and power. In addition, the strength of rejection, as it is conceived under the threat model, bears a positive relationship to the amount of threat experienced as a result of the confrontation with deviant behavior. As in Schachter's theory, differences of opinion or belief dissimilarity are basic to the rejection phenomenon. While Schachter describes the effect of such differences in terms of their effect on pressures toward uniformity, however, differences of opinion are seen as implications of illogical thinking which reflect badly on one's self-esteem under the threat model. Also implicit in the threat model of rejection is the notion that high dependence on a comparison person facilitates the threatening effect of differences of opinion since it denotes greater reliance on him and his opinions as criteria for establishing one's own social worth. Should a comparison person

upon whom one is dependent refute one's opinions, social needs would be thwarted more than when contradiction occurred with someone upon whom one was not dependent. Thus, threat is conceived as resulting from a relationship characterized by relatively high dependence and belief dissimilarity. Rejection, by definition, is therefore a function of high dependence coupled with high belief dissimilarity under the threat model. Schachter, on the other hand, suggests that rejection requires low dependence and great differences of opinion in his pressures toward uniformity of behavior model.

From a comparison of theoretical considerations, it seems that two somewhat different positions emerge relative to the effect of dependence on the strength of the rejection-tendency. A threat explanation of rejection assumes a high degree of dependence on the deviate. A model of pressures toward uniformity assumes a low degree of dependence as a necessary condition for rejection, on the other hand. The relevance of any attempt to resolve discrepancies between the two explanations of the rejection-tendency would seem to stem primarily from the current concern of research dealing with personal attraction and rejection as a function of attitude similarities and prejudice. If rejection of persons holding dissimilar attitudes occurs because of the operation of a threat mechanism, as opposed to a general lack of dependence on those persons, different approaches to the resolution of interpersonal conflicts and prejudice may be suggested. For that matter, a decrease in dependence seems but one form of rejection. Similarly, it is a quite

different realization for the person contemplating deviation from a group norm to tell himself "I must present my position in such a way as not to threaten the group, for threat will result in rejection," than it is for him to think "I must maximize the group's dependence on me or they will reject me." Thus, while the two positions concerning rejection may represent but two different ways of conceiving of the rejection phenomenon, each suggests somewhat different consequences of deviant behavior and each is predicated upon interpersonal relationships of different affectual qualities. The hypotheses tested in the present study reflect, of course, a concern with the threat-interpretation of the rejection-phenomenon. In most instances, the same hypotheses could not have been made logically from the considerations outlined in Schachter's model.

The hypotheses specifically tested in the study were (a) that members of two-man groups would be more rejecting of the deviate than members of four-man groups; (b) that high status deviates would be rejected more strongly than low status deviates; (c) that high dogmatic individuals would be generally more rejecting than low dogmatic individuals; and (d) that high dogmatic persons would be more accepting of high status deviates and more rejecting of low status deviates than low dogmatic persons would. The degree of belief dissimilarity between the instructed deviates and experimental Ss was held relatively constant in the study, and an analysis of variance of Ss' deviation scores on the task, i.e., the amount each S's rank order differed from that of the deviate, produced no significant differences. Thus, the effect of differences of opinion on Pch and Dep in

Schachter's framework was constant across conditions.

Other sources of influence on the relative strengths of pressures to change the deviate and dependence were introduced, however, through the employment of high and low dogmatic Ss, high and low status deviates, and two- and four-man groups. Dogmatic persons are less able to tolerate differences of opinion and, therefore, experience greater pressures to change the deviate. Similarly, individuals tend generally to be more dependent upon high status persons for validation of beliefs than they do upon low status persons. Dependence is higher in two-man groups than in four-man groups. Dogmatism also influences dependence on high status persons, since the high dogmatic individual is more dependent on high status persons than on low status persons, while the low dogmatic individual is not necessarily dependent on either. Thus, through the use of status, dogmatism, and group size, differential conditions of Pch and Dep--or threat--were created.

Had assumptions underlying the pressures toward uniformity model been employed in the study, hypotheses would have reflected predictions to the effect that high status deviates would be more acceptable than low status deviates, four-man groups would be more rejecting than two-man groups, and low dogmatic Ss would be more rejecting than high; while the D x S interaction would have been predicted to reflect greater rejection of low status deviates than high status deviates by high and low dogmatic Ss with low dogmatics rejecting high status deviates more than high dogmatics. The results of a study by Hurwitz, Zander, & Hymovitch (1960) might be interpreted as lending token support to hypotheses such as these. The authors found that high status persons

were liked more than low status persons, both by high and low status Ss. Similarly, they found that lows were liked more by other lows than by highs. Their results were interpreted in terms of a predisposition of individuals to like persons of higher status than themselves in the hope that they, the low status individuals, would be liked more by the high status persons, in turn. Thus, the authors postulated that individuals with relatively little power would act in an ego-defensive manner toward those persons with relatively more power because of the ability of high status persons to reward or punish. An interpretation based on ego-defensive behavior seems commensurate with the threat hypothesis suggested in the present study. While the results substantiate predictions which might best be made under the pressures toward uniformity model rather than the threat model, it is important to notice that Ss in the study by Hurwitz, et al. (1960) were not parties to a conformity-deviation situation. Rather, they were members of legitimate decision-making groups. Thus, they were not faced with a situation characterized by great belief dissimilarity coupled with high dependence. The interpretation given by the authors suggests only the presence of high dependence, and the results of the study are in keeping with a threat hypothesis, as well as with a uniformity of behavior hypothesis.

Since the results from the present study tend to support the contention that high status persons would be rejected more strongly than low status persons, with differential rejection of each accruing from the effect of the personality variable of dogmatism, and in view of the significant relationship between threat scores and rejection scores

produced by Ss, perhaps the concept of dependence requires a second look. Schachter (1951) has defined dependence as reliance on another for establishing social reality. French & Raven (1959) have postulated that dependence on an external agent is manifested in terms of psychological change and stability. Thus, dependence on a person is indicated by the amount that person can elicit a change in an individual's opinions even though no longer present. As reduced to the level of a formula, this definition of dependence becomes:

$$\text{Degree of Dep of P on O} = \text{amount P changes his opinion from } \text{Time}_1 \text{ to } \text{Time}_3, \text{ as a result of discussions with O during } \text{Time}_2.$$

In the present study, measures were taken of the changes in opinion occurring from Time_1 to Time_3, as a function of discussions with the deviate during Time_2. Greater changes were noted for Ss confronted with high status deviates than for Ss confronted with deviates of low status. This difference was significant. While producing no significant differences, trends were observable for two-man group members to change more than four-man group members, and for high dogmatic Ss to change more when faced with high status deviates than when faced with low status deviates, while low dogmatic Ss showed little differential change relative to status of the deviate. These data tend to give some support to the notion that dependence varies as a function of status and personality factors. Coupled with the greater rejection of high versus low status deviates by Ss, similar support is given to the relationship of dependence and belief dissimilarity to rejection strength, as postulated under the threat model. In the opinion of French & Raven

(1959), dependence of this type reflects the operation of differential power among parties to a group activity. It may well be, therefore, that any discrepancy between the threat model of rejection and the pressures toward uniformity model lies within the general framework of power dynamics.

Schachter (1951) has said that communication, as a function of pressures to change the deviate's opinions and dependence, constitutes the mechanism by which power is exerted. He uses this analysis in describing a means of reducing the power of the deviate by reducing his opportunity to communicate to the group. The same case seems to hold for individuals trying to give expression to their experienced Pch, however. Since unexpressed Pch is basic to rejection behavior, it seems that if power differences exist--and are perceived by Ss--less Pch will be expressed by low status Ss confronted with high status deviates. This is in keeping with the effects of power on influence attempts reported by Lippit, Polansky, et al. (1958), and with the ego-defensive behavior of lows facing highs reported by Hurwitz, et al. (1960). Thus, greater power differences between individuals may have the effect of inhibiting the expression of Pch, while simultaneously increasing Dep. Therefore, high dependence may not lend itself to greater expression of Pch in communication as postulated by Schachter. It is assumed in the present study that this inhibitory force stems from high dependence which renders both attempted influence and prolonged differences of opinion threatening, resulting in rejecting behavior. A generalization which seems plausible at this point is that greater dependence may create conditions for potentially greater threat

in interpersonal relationships. By the same token, the greater an individual's power--as an index of dependence--is relative to that of another, the less dependent, and therefore threatened, he will be when belief dissimilarities arise. Reactions of Ss to low status deviates in this study would seem to corroborate this generalization.

In addition, Festinger, Gerard, et al. (1952) have reported that the readiness of a S to change his own opinions is negatively correlated with expressed Pch or his attempts to influence the deviate. Thus, the greater changing of opinion coupled with the greater rejection-tendencies of Ss confronting high status deviates may reflect the presence of the greater ambivalence toward authority figures frequently reported in the literature.

The recognition of the legitimacy of power differences stems from internalized values on the part of individuals that another has the legitimate right to influence his behavior and is a function of personality attributes. Thus, dependence on authority is subject to the influence of personality. Rokeach (1960) has described the dogmatic person as one adhering to a basically authoritarian premise, while the low dogmatic individual approaches his relationships on the basis of a more equalitarian premise. Differential dependence of this sort may be responsible for the significant differences obtained from Ss of the two ROTC Branches in the study. The Air Force has been described as operating on a somewhat more equalitarian premise than the Army and reactions of high and low dogmatic Ss in each may be explainable in terms of reactions to organizational characteristics inherent in the Branches, rather than differences in individual Ss

per se. High dogmatic Ss responded to the conformity-deviation situation approximately alike across Branch conditions. Low dogmatic Ss, however, differed not only as a function of level of dogmatism, but as a function of Military Branch as well. The low dogmatic Ss of the Army ROTC produce rejection scores which account for the major portion of the variance underlying the significant Dogmatism x Branch interaction obtained. These Ss were more generally rejecting than would have been expected on the basis of predictions from either the threat model or the pressures toward uniformity model. One explanation seems to be that equalitarian persons operating under what they consider to be an imposed authoritarian system may over-react to the system, when threatened, in a counter-dependent manner. Some support for this notion is supplied by the superior performance of the low dogmatic four-man crews from the AROTC on the experimental task. Low dogmatic members of two-man crews, when faced with high status deviates, abdicated responsibility and accepted the deviant position; an indication of derogation of the task. In four-man crews, however, these individuals apparently assumed command and produced crew decisions which deviated an average of only 10 points from the expert criteria. Thus, dependency based on the recognition of the legitimacy of authority may differ as a function of the degree of authoritarianism characteristic of the organization within which a person of either high or low dogmatism is working. Additional research on the effects of organizational structure on the reactions of persons of high and low dogmatism is needed.

Thus, results obtained from the present study indicate the need for further analysis of the relationship of dependence on an external agent, in terms of power dynamics, and the tendency to reject him should he hold diverse opinions. A concern for an authoritarian-equalitarian dimension which affects the perception of authority--and therefore, dependence--is also indicated. The relative effects of power differences on dependence, and as a consequence on rejection, are in keeping with Maslow's (1954) postulated source of interpersonal threat. As such, they are commensurate with a threat interpretation of the rejection phenomenon.

Chapter VII

SUMMARY

Numerous investigators have studied rejection as a characteristic response to deviant behavior. Little information concerning the underlying motivation for rejection, however, has been forthcoming. This research was undertaken to investigate the relationship between the amount of threat experienced by individuals confronted with deviant behavior and the strength of their tendencies to reject the deviate. Employing Maslow's (1954) definition of threat, viz. the thwarting of individual social needs, an attempt was made to create conditions of threat due to deviant behavior and to assess the strength of rejection-tendencies exhibited by Ss under different threat conditions. Two assumptions were basic to the research. The first of these postulated a positive relationship between the amount of threat experienced and the strength of the rejection-tendency elicited in response to deviant behavior. The second assumption, which served as the underlying rationale for the experimental design, was that it is possible to create conditions of differential threat by employing groups of different sizes as the context for deviant behavior, deviates of either higher or lower status than other group members, and group members of either high or low dogmatism, as measured by Form E of Rokeach's (1960) Dogmatism Scale. Sufficient evidence supporting the assumptions of greater threat being characteristic of small groups, a greater propensity for threat for high dogmatic Ss, and the ability of high status antagonists to elicit greater threat feelings was found in the literature.

Therefore, the variables of Group Size, Status, and Dogmatism were incorporated in the experimental design.

The Conformity-Deviation situation employed by Schachter (1951) was utilized. Instructed opinion-deviates were placed in either two- or four-man groups for the duration of a group decision-making session. These confederates were randomly assigned to all conditions in an attempt to control for differences associated with behavior of the deviates. In half the groups, instructed deviates assumed the role of a high status group member and in the remaining half of the groups deviates assumed low status member roles as indicated by rank insignia. Approximately 200 cadets from the Sophomore level of the two ROTC branches were administered the Dogmatism Scale and Ss were selected on the basis of their scores. In all, 32 high dogmatic Ss and 32 low dogmatic Ss were used in the experiment. The 16 Ss scoring highest and the 16 Ss scoring lowest on the Dogmatism scale were randomly assigned to either a two-man or four-man group size condition. Under each level of ROTC Branch, experimental Ss of either high or low dogmatism were confronted with an opinion deviate of either high or lower status than themselves in groups of either two- or four- members, resulting in a 2 x 2 x 2 x 2 factorial design.

It was hypothesized that (a) Ss from two-man groups would be more rejecting of deviates than Ss from four-man groups; (b) high status deviates would be rejected more strongly than low status deviates; (c) high dogmatic Ss would be generally more rejecting of deviates than low dogmatic Ss; and (d) that high dogmatic Ss would be more accepting of high status deviates and more rejecting of low status

deviates than would low dogmatic Ss. The results failed to confirm either the group size or dogmatism hypothesis, but lent significant support to the hypotheses concerning status of the deviate and the interaction of status and dogmatism effects. In addition, significant differences were obtained in rejection and threat scores from Ss of the two ROTC branches. While the data indicate that a positive and significant relationship does exist between measures of experienced threat and the strength of Ss' tendency to reject deviates, the relationship appears to be more complex than that reflected in the hypotheses. Results are discussed in terms of power dynamics and an authoritarian-equalitarian dimension which seems to underlie the responses obtained. Such an explanation is in keeping with the basic concern for power and self-esteem postulated by Maslow as the likely source of interpersonal threat.

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APPENDIX A

Name_____

Rank_____

Instructions: You are a member of a space crew originally scheduled to rendezvous with a mother ship on the lighted surface of the moon. Due to mechanical difficulties, however, your ship was forced to land at a spot some two hundred miles from the rendezvous point. During re-entry and landing, much of the equipment aboard was damaged and, since survival depends on reaching the mother ship, the most critical items available must be chosen for the two hundred mile trip. Below are listed the 15 items left intact and undamaged after landing. Your task is to rank order them in terms of their importance for your crew in allowing them to reach the rendezvous point. Place the number 1 by the most important item, the number 2 by the second most important and so on through number 15, the least important.

Work on the list individually for the first ten minutes. At the end of this time, you will join with the other members of your crew in determining, as a group, the relative importance of the items available.

NOTE: Only two crew members are in any condition to carry equipment.

____ Box of matches

____ Food concentrate

____ 50 feet of nylon rope

____ Parachute silk

____ Portable heating unit

____2.45 calibre pistols

____ 1 case dehydrated Pet milk

____ 2 hundred-pound tanks of oxygen

____ Stellar map (of the moon's constellation)

____ Life raft

____ Magnetic Compass

____ 5 gallons of water

____ Signal flares

____ First aid kit containing injection needles

____ Solar-powered radio

Crew #_____

CREW DECISION FORM

Instructions. You are a space crew originally scheduled to rendezvous with a mother ship on the lighted surface of the moon. Due to mechanical difficulties, however, your ship was forced to land at a spot some two hundred miles from the rendezvous point. During re-entry and landing, much of the equipment aboard was damaged and, since survival depends on reaching the mother ship, the most critical items available must be chosen for the two hundred mile trip. Below are listed the 15 items left intact and undamaged after landing. Your task is to rank order them in terms of the importance in allowing your crew to reach the rendezvous point. Place the number 1 by the most important item, the number 2 by the second most important and so on through number 15, the least important.

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____ 2 hundred-pound tanks of oxygen

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____ Life raft

____ Magnetic Compass

____ 5 gallons of water

____ Signal flares

____ First aid kit containing injection needles

____ Solar-powered radio

APPENDIX B

PRIVATE REACTION FORM

Instructions. The success of this experiment depends on your honest assessment and reporting of your feelings about the decision-making session just completed and about the individuals with whom you worked. Feel free to express your true feelings on the following questions. If you feel hostile, for example, say so; if not, feel equally free to express your thoughts. These data are confidential and anonymous. No one but you and the experimenter will see them. Place a vertical mark on each scale at the point which best reflects your feelings.

1. How committed do you feel to the final decision produced by your crew?

Completely Committed _____ Completely Uncommitted
10 9 8 7 6 5 4 3 2 1

2. How much hostility did you feel toward your crew, either in general or toward particular individuals?

Completely Hostile _____ Completely Friendly
10 9 8 7 6 5 4 3 2 1

3. How threatened or "nervous" did you feel during the decision-making period?

Completely Threatened _____ Completely Unthreatened
10 9 8 7 6 5 4 3 2 1

4. How much responsibility for the final group decision do you feel?

Complete Responsibility _____ No Responsibility
10 9 8 7 6 5 4 3 2 1

5. To what extent would you be willing to work with each individual crew member again on a similar task? (Place a mark reflecting your feeling about <u>each</u> crew member in the space provided by his crew number.)

Crew Member #1 Completely Willing _____ Completely Unwilling
10 9 8 7 6 5 4 3 2 1

Crew Member #2 Completely Willing _____ Completely Unwilling
10 9 8 7 6 5 4 3 2 1

Crew Member #3 Completely Willing _____ Completely Unwilling
10 9 8 7 6 5 4 3 2 1

Crew Member #4 Completely Willing _____ Completely Unwilling
10 9 8 7 6 5 4 3 2 1

6. Rate each crew member on each of the following three scales: (Place a check on appropriate line reflecting your attitude toward each member).

A. <u>Intelligence</u>

	Crew Member # 1	2	3	4
I believe that this person is very much above average in intelligence.	___	___	___	___
I believe that this person is above average in intelligence.	___	___	___	___
I believe that this person is slightly above average in intelligence.	___	___	___	___
I believe that this person is average in intelligence.	___	___	___	___
I believe that this person is slightly below average in intelligence.	___	___	___	___
I believe that this person is below average in intelligence.	___	___	___	___
I believe that this person is very much below average in intelligence.	___	___	___	___

B. Adjustment	Crew Member #	1	2	3	4
I believe that this person is extremely maladjusted.		___	___	___	___
I believe that this person is maladjusted.		___	___	___	___
I believe that this person is maladjusted to a slight degree.		___	___	___	___
I believe that this person is neither particularly maladjusted nor particularly well adjusted.		___	___	___	___
I believe that this person is well adjusted to a slight degree.		___	___	___	___
I believe that this person is well adjusted.		___	___	___	___
I believe that this person is extremely well adjusted.		___	___	___	___

C. Personal Feelings	Crew Member #	1	2	3	4
I feel that I would probably like this person very much.		___	___	___	___
I feel that I would probably like this person.		___	___	___	___
I feel that I would probably like this person to a slight degree.		___	___	___	___
I feel that I would probably neither particularly like nor particularly dislike this person.		___	___	___	___
I feel that I would probably dislike this person to a slight degree.		___	___	___	___
I feel that I would probably dislike this person.		___	___	___	___
I feel that I would probably dislike this person very much.		___	___	___	___

7. In comparing your individual judgments on the survival task, how do you feel <u>your</u> <u>own</u> judgments of important items compared with those of the rest of the crew?

Mine was superior to the others — 10 9 8 7 6 5 4 3 2 1 — Mine was inferior to the others

8. On the following page, rank the items in order of their importance according to the way you now feel they should be ranked, after having discussed the ranking with your crew members.

   NOTE: Place your name in the space provided, but detach the Survival Items List from the rest of this questionnaire so that your answers to previous questions may remain anonymous.

Name_____

Rank_____

Instructions. You are a member of a space crew originally scheduled to rendezvous with a mother ship on the lighted surface of the moon. Due to mechanical difficulties, however, your ship was forced to land at a spot some two hundred miles from the rendezvous point. During re-entry and landing, much of the equipment aboard was damaged and, since survival depends on reaching the mother ship, the most critical items available must be chosen for the two hundred mile trip. Below are listed the 15 items left intact and undamaged after landing. Your task is to rank order them in terms of their importance for your crew in allowing them to reach the rendezvous point. Place the number 1 by the most important item, the number 2 by the second most important and so on through number 15, the least important.

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____ Stellar map (of the moon's constellation)

____ Life raft

____ Magnetic Compass

____ 5 gallons of water

____ Signal flares

____ First aid kit containing injection needles

____ Solar-powered radio

9. If it were necessary to leave <u>one</u> crew member behind to watch over the space ship and its equipment, which crew member would you most like to leave behind? (Disregard the fact that some of the crew are supposed to be injured and write the number of the crew member you would leave behind in the space provided below).

   I would leave Crew Member #_____

10. In your own words, briefly describe the decision-making session which you and the other crew members had in reaching a solution. Identify crew members by crew number, and feel free to make any comments you like which will give information as to how well of how badly you were all able to work together. Use the blank portion below for your description of the decision-making period.

Table 9

Individual Scores From the Likert Scale of Threat

			GS_1	GS_2
AFROTC	Hi D	Hi S	3	6
			2	2
		Lo S	1	2
			2	2
	Lo D	Hi S	4	2
			1	3
		Lo S	1	2
			6	4
AROTC	Hi D	Hi S	1	1
			2	3
		Lo S	1	6
			2	7
	Lo D	Hi S	6	6
			10	3
		Lo S	3	7
			7	1

Table 10

Individual Scores From the DRQ Index of Threat

GS_1	GS_2
.66	.83
.87	.66
.00	.39
.70	.18
.93	.72
.90	.58
.58	.11
.26	.50
.70	.68
.77	.52
.00	.70
.80	.77
.75	.31
.81	.55
.87	.53
.60	.50

Table 11

Individual Scores From the Likert Scale of Rejection

			GS_1	GS_2
AFROTC	Hi D	Hi S	4	3
			1	4
		Lo S	10	1
			10	3
	Lo D	Hi S	4	3
			7	1
		Lo S	3	9
			10	5
AROTC	Hi D	Hi S	4	4
			3	4
		Lo S	10	1
			2	2
	Lo D	Hi S	1	1
			1	1
		Lo S	1	2
			1	2

Table 12

Individual Ratings of Intelligence of the Deviate

			GS_1	GS_2
AFROTC	Hi D	Hi S	6	5
			3	5
		Lo S	6	2
			4	3
	Lo D	Hi S	5	5
			6	5
		Lo S	6	6
			7	5
AROTC	Hi D	Hi S	5	4
			3	6
		Lo S	6	4
			3	2
	Lo D	Hi S	1	2
			1	3
		Lo S	3	3
			6	3

Table 13

Individual Ratings of Adjustment of the Deviate

			GS_1	GS_2
AFROTC	Hi D	Hi S	6	5
			2	6
		Lo S	6	3
			4	6
	Lo D	Hi S	6	4
			5	3
		Lo S	6	6
			6	6
AROTC	Hi D	Hi S	5	6
			2	4
		Lo S	6	3
			3	3
	Lo D	Hi S	2	3
			2	1
		Lo S	4	4
			6	4

Table 14

Individual Ratings of Likeability of the Deviate

GS_1	GS_2
3	6
3	4
7	3
6	3
4	5
5	4
7	7
7	6
4	5
2	4
7	3
3	4
4	3
2	2
4	2
4	3

Table 15

Individual Change of Opinion Toward the Deviate From Pre- to Post-discussion (Constant of 13 added)

			GS_1	GS_2
AFROTC	Hi D	Hi S	45	21
			23	25
		Lo S	15	13
			15	23
	Lo D	Hi S	31	21
			33	27
		Lo S	34	29
			13	21
AROTC	Hi D	Hi S	40	23
			23	13
		Lo S	15	1
			17	21
	Lo D	Hi S	13	33
			49	21
		Lo S	19	17
			1	21

Table 16

Crew Error Scores

GS_1	GS_2
90	90
62	64
30	20
28	28
93	79
90	28
90	40
48	32
88	90
88	34
62	38
44	24
90	12
90	8
36	6
32	29

APPENDIX C

Intercorrelations of Four Measures of Rejection

	Intelligence	Adjustment	Likeability
Likert Index	.634	.586	.766
Intelligence		.747	.677
Adjustment			.653

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