

THE EFFECTS OF MUNDANE STATUS ON  
COOPERATION, COMPETITION AND  
COMMUNICATION PATTERNS  
BETWEEN MEMBERS OF  
DISSIMILAR  
STATUSES

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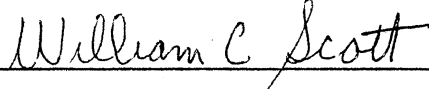
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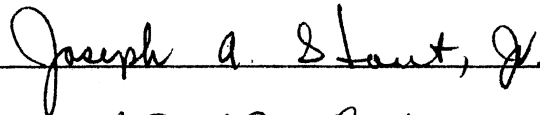
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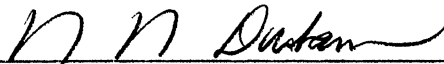
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## PREFACE

Cooperation and competition, in some form, pervade most aspects of mankind's life. This study was done in an attempt to measure behaviorally and verbally, human reaction to others in a potentially competitive situation. Since the present study is concerned with the mundane realism of the experimental situation, a point that seems to have been overlooked in most studies relating competition to status, there was very little guidance outside that provided by my adviser, Dr. Bob Helm. Since the present study was an early attempt in obtaining high degrees of realism, several aspects of it are purely investigatory. In particular, studies which compare message usage with behavioral correlates of competition and cooperation are in the pioneering stages of inquiry. In this aspect the present study represents pilot work.

Perhaps one of the more difficult aspects of this study was obtaining the participation of high status members. My special thanks to members of the Third ROTC region without whose help this study would have been impossible.

The remaining members of my committee, Dr. William Scott and Dr. Joseph Stout, deserve particular appreciation for their encouragement and help given me in the planning and preparation of this study. Other members of the

Psychology department were quite helpful whenever special advice was needed.

In addition, I would like to extend my appreciation to Dr. Robert Morrison, who provided immeasurable help through the statistical analysis portion of this study and without whose help the special programming of the SAS system, required by this study, would have been impossible. Particularly one of his graduate students, Ben Mullinex, who gave so freely of his time.

Finally, I would like to thank my wife, Margaret, for her patience, encouragement and understanding, without which graduate study would have been a burden rather than a pleasure.

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## CHAPTER I

### STATEMENT OF THE PROBLEM

#### Purpose of the Study

The purpose of this study was to study the effects of status differentials on cooperation, competition, and message usage between dyads of dissimilar statuses. Fisek, Hamit and Ofshe (1970) found that the attributes of the participants themselves are the variables that determine status structures. Therefore, the interaction processes themselves would be patterned after correlates of the status hierarchy. Berger, Fisek, and Hamit (1970); they postulated that participants in an interaction operate with the information available about the states of specific status characteristics that each of them possess. This is enacted in the form of task expectations for self and others. Furthermore, the patterns of status influence can be expected to be delineated in communications between members of dissimilar statuses. Moore, Johnson, and Arnold (1972) have experimentally identified communication patterns in restricted communication networks that emphasize relative status ranks by interaction participants.

Cooperation and competition have been studied quite extensively using a wide variety of tasks (Bass and Dunteman,

1963; Blake and Mouton, 1962; Crombag, 1966; Grossak, 1954; Julian, Bishop and Fiedler, 1966; Baranowski and Summers, 1972). A general finding of this literature is that ingroup cooperation and outgroup competition produce within group solidarity, as measured by semantic differential scales and adjective check lists. Although it has never been shown, it seems that mundane status of the individual may be an important factor influencing cooperation, competition, and internal communication.

### Status

English and English (1958) describe status as "...the position accorded formally or informally, to a person in his own group; the acceptance and honor accorded to a person" (pg. 173). Kretch, Crutchfield and Ballarhey (1962) define status as "the rank of a position or an individual in the prestige heirarchy of a group or community" (pg. 82). For Homans (1961), status refers to the stimuli a man presents to himself and to others. This would include the kinds of activity he emits, as well as the kinds of clothes he wears, or the residence in which he lives. Two additional statements should be made to describe fully Homan's concept of status: (1) to qualify as the sort of stimuli that describes a man's status, they must be recognized by other men, and (2) people must be capable of ranking the stimuli with regard to the stimuli provided by other persons. Status, therefore, refers to what men perceive about one of their peers and placing stimuli in rank order.

Still another interpretation of status has been postulated by Sherif and Sherif (1956). As they phrase it:

...when interaction continues over a period of time among individuals with persistent, common motives or problems, the reciprocal expectations among them fall into hierarchial patterns or scales. A differentiated position in this hierarchy is called status (pg. 162).

Another manner of looking at status is to define it operationally. Harvey (1953) used two sets of operations in defining status, sociometric choices and ratings by an independent observer. He felt that the sociometric choice technique analyzed effective initiative. While the ratings by an independent observer refer in general to observational analysis of the group being made by persons who, themselves, are not members of the group.

Status of members within the groups can be defined conceptually or operationally. However, when a broad conceptual definition is used, considerable latitude in behavioral response is implied; that is, the term 'status' itself can assume many behavioral definitions. Conversely, when status is operationally defined as in the present study, a much greater degree of precision is effected. That is, the ambiguity of behavioral classification is removed for all experimenters and thereby insures the possibility of replication at a later date. In this study, as opposed to the great majority of studies in this area, real status-relevant positions were employed, ensuring that mundane realism exceeds work done in this area in the past.

## Status and Behavior

Research in the area of the effect of status on cooperation and competition has been inconclusive. Grant and Sermat (1969) found that there were indications that game behavior was influenced by status or perceived power of the players. Although they did not find support for the effects of power relationships in their study, they felt that there was evidence of such an effect. Faley and Tedeschi (1971) found support in their work when they observed that low status subjects complied to threats from a higher status subject, and that higher status subjects complied more frequently to the threat of an equal status source, than low status subjects. In Faley and Tedeschi's work, subjects interacted with "bogus" peers, superiors, or lower status others. The question of the empirical effects of mundane realism remains unanswered in these studies.

Kahn and Alexander (1971) found that perceived bogus differences in social status affect attraction, communication, and attitude change in the dyad in much the same way as actual status differences affect these variables in larger groups. Because of this finding, it was considered reasonable to use the economy and relative precision of the live dyad in this experiment. It was expected that higher status persons would have greater influence in the dyad, as observed by Faley and Tedeschi (1971).

Mehrabian (1970) found that higher status persons elicited more affiliation and conformity than those persons of

a lower status. On the other hand, Kogan, Nathan, Lamm, and Trommsdorff (1972) found that during interaction between high and low status members, high status members were more flexible. They posit that this was due to a "loss of face" of the high status members in making concessions to lower status members. Toder and Marcia (1973) confirm this viewpoint, at least for females, and recommend that a similar study be undertaken utilizing male subjects.

Gartner and Iverson (1967) found that occupational promotional opportunity failed to encourage a positive group sentiment. An effort toward status enhancement fostered individual goals incompatible to a collective identity. Zeff and Iverson (1966) found that individuals with potential upward mobility tended to focus in group tasks; however, they made relatively little use of their peer group as a basis for identifying themselves in terms of status. Because of (this dichotomy), it appears as though status assumptions are of two kinds. Indeed Berger, Cohen, and Zelditch (1972) identify two kinds of assumptions: those dealing with specific abilities relevant to the interaction situation, and those dealing with generally useful capacities. Graves (1972) was able to correlate mutual esteem with the amount of interaction initiated, and this may give us an insight into the functional reality of status. It may be, as Montgomery (1971) has concluded, that high status members were merely complying to previously internalized judgmental scales while eliciting compliant behavior from status different members, while low status subjects reacted to the

external situation. Under these circumstances, for the investigator studying conformity, the dependent variable would be the frequency with which an individual utilizes a particular message type. This would represent his internalized perceptual field.

In keeping with this degree of internal consistency, Gergen and Taylor (1969) found that high status members, particularly under conditions of occupational productivity, avoid expectations of the group. This seems in consonance with Brehm's (1969) theory of psychological reactance which assumes universal antipathy to others who delimit one's freedom of action. The possibility exists, however, as Moore (1969) points out, that high status members simply had very little to lose by agreeing with their low status partners and, therefore, acted in a cooperative appearing manner. Of course the individual consideration is significant in any interaction; as Moore and Krupat (1971) point out, it is important to consider the subject, who himself is an active source, and not simply a passive receiver of information. Fisek, Hamit, and Ofshe (1970) consider the attributes of group participants the variables that determine a group's status structure. Toder and Marcia (1973) found that a "loss of face" phenomenon occurred in their work with females, and suggested similar work using males. The present study utilized males in response to this point. Additionally, in conjunction with both Mehrabian (1970) and Kogam, Nathan, Lamm, and Tromsdorff (1972), this study looked at the responses elicited from low status members by



high status members observed in the former study, and the flexibility of high status members found in the latter study. In the works of Faley and Tedeschi (1971), Kahan and Alexander (1971), and Cohen and Zelditch (1972), bogus or imaginary high status members were utilized, therefore, it seemed salient that the present study be conducted with status differentials high in mundane realism.

#### Review of the Literature on Status and Behavior

The literature on status is vast and varied. Therefore, this review will be restricted to status influences on behavior. Gergen (1969), using NROTC Cadets, did not find confirmation of Brehm's (1966) theory of psychological reactance. In fact, Gergen found that high status members, under conditions of productivity, avoided expectations of the group. This is in direct opposition to Wahram's (1970) findings that deviance on the part of high status members provoked extreme reaction: Wahram is not alone in these findings; others agree with his position (Blau, 1966; Hollander and Willis, 1967; and Sabath, 1964).

Interaction between high and low status members seems to carry overtones of implicit behavior. Moore (1968) found that information regarding the existence of a status differential was as potent a factor in leading to differential influence as was information regarding relevant ability differences. Smith (1968) found that competence was a salient element of status, at least in children. Zaenglein (1971) also found that statuses carried power and control

potential, with direct effects on influence perception. Status appears to exert subtle behavioral influences that affect self and other perception in two primary areas:

(1) perceptual fields of the interactees and (2) mutual expectations of the interaction outcome.

In view of the fact that status appears to affect perceptual processes, a productive area of investigation would be that of communication patterns between dissimilar status. Grant and Sermatt (1969) recommend the use of limited feedback in cases where the experimenter wishes to examine the response patterns of status influences. Moore, James, Johnson and Arnold (1972) further point out that, in restricted communication networks, the crucial concern should be with the interaction between the structure and the relative status ranks of the participants. Baranowski, Summers, and David (1972) further feel that a strong correlation exists between perception and Prisoner's Dilemma Game behavior, particularly that subject perception varies according to the status and strategy of the others. Conversely, Fisek, Hamit, and Ofshe (1970) found that the attributes of the participants themselves were the variables that determine a group's status structure. Clearly, there is ambiguity in the literature as to precisely what influences status presents within dissimilar status interactions. Silver (1970) suggests that the term "status" is a highly complex construct and that posited effects may be specific to the particular manipulation within the experiment. An example of this kind of artifact is outlined by Lott and Sommer

(1967) when they describe the effects of allowing eye contact within an experiment dealing with status. Furthermore, Cohen, Davis, and James (1973) found that there were audience effects on lower status persons that served to increase drive. In all these studies the status differential is based upon implied meaning, such as sociograms or role playing. The obvious lack of mundane realism is evident. Therefore, to remove any ambiguity, any further study in these areas should resolve the problem of realism, as it appears to have an influential effect on behavior; or as a minimum, the investigator should insure that the manipulation of status is truly viable. Previous studies concerning status have not approached the problem of realism with authority, and quite often skirt it entirely, particularly when the experimenter discovers that high status persons are extremely difficult to bring into the laboratory.

#### Review of Literature on Cooperation and Competition

The literature on competition and cooperation is quite extensive and varied. In summarizing, this review is generally limited to the mixed-motive interaction afforded by variations of the Prisoner's Dilemma Game, used frequently in the study of cooperation and competition. This type of game was selected for the present study because: (1) much background work has already been performed using the Prisoner's Dilemma Game; (2) it involves motive choices on behalf of the subjects; (3) game theory can be utilized as a model for human behavior; (4) cooperative and competitive

motives can be clearly separated in a quantitative manner; and (5) controlled communication between subjects can be accurately measured.

The mixed-motive type of game is one in which the goals of the interacting players are partially in cooperation, and partially in conflict. The interest in the Prisoner's Dilemma Game lies in the fact that if a player attempts to maximize his own goals, with complete disregard to his partner, mutual loss will result. However, Gallo and McClintock (1965), as well as Rapoport and Orwant (1962), found in comprehensive reviews that the game is played competitively.

The general form of the Prisoner's Dilemma Game is depicted below in Figure 1 (Scodel, Minas, Ratoosh and Lipetz, 1959). The following set of general rules apply with regard to value relationships across the various choice outcomes: (1)  $2X_1 X_2 + X_3 2X_4$ ; (2)  $X_3 X_1$ ; (3)  $X_3 X_2$ ; and (4)  $X_4 X_2$ . These rules allow for the mixed motivation present in the game because they provide reward for mutually cooperative behavior, but also provide a temptation to exploit the other's cooperative behavior through a competitive choice.

		Person 2	
		B <sub>1</sub>	B <sub>2</sub>
	A <sub>1</sub>	X <sub>1</sub> , X <sub>1</sub>	X <sub>2</sub> , X <sub>3</sub>
Person 1	A <sub>2</sub>	X <sub>3</sub> , X <sub>2</sub>	X <sub>4</sub> , X <sub>4</sub>

Figure 1. General Form of the  
Prisoner's Dilemma Game

A common Prisoner's Dilemma Game is represented in Figure 2. In the game interaction, Person 1 chooses between rows A<sub>1</sub> and A<sub>2</sub>, while Person 2 chooses between column B<sub>1</sub> and B<sub>2</sub>. Person 1's payoffs conventionally determined by the first number within each cell, and Person 2's payoffs are determined by the second number in each group. The gains or losses of each person are a function of the choices of each. For example, in Figure 2, if Person 1 chooses row A<sub>2</sub> and Person 2 chooses column B<sub>2</sub>, Person 1 would have lost four points, and Person 2 would have lost four points. Had Person 1 chosen row A<sub>1</sub> and Person 2 chosen column B<sub>2</sub>, Person 1 would have lost five points and Person 2 would have gained five points. Cell A<sub>1</sub>B<sub>1</sub> is the result of a cooperative strategy on the parts of both players, and cell A<sub>2</sub>B<sub>2</sub> the result of competitive choices of

both players. The remaining cells reflect a cooperative choice by one player and a competitive choice by the other.

		Person 2	
		B <sub>1</sub>	B <sub>2</sub>
Person 1	A <sub>1</sub>	+4,+4	-5,+5
	A <sub>2</sub>	+5,-5	-4,-4

Figure 2. Point Values in the Common Prisoner's Dilemma Game

Deutsch (1958, 1960) has attempted to explain the paradoxical behavior of mutually cooperative choices being most beneficial, while competitive responses prevail as a function of trust. He reasoned there exists no motivation for either player to make a cooperative response unless mutual trust exists. That is to say, if one cannot trust, it is then safer to choose minimum, rather than maximum losses; hence a dilemma of whether or not to trust the other person emerges. Deutsch further hypothesized that the most important features of a situation in which an individual can either cooperate or compete are: (1) the individual is confronted with ambiguous stimuli that can lead to a perceived beneficial result (gaining points) or harmful event (losing

points), (2) he perceives these events as being contingent upon the response of the other person, and (3) he hierarchically perceives the harmful event to be of greater cost than the beneficial event. This is to say, if Person 1 makes a cooperative choice, without knowing whether Person 2 will cooperate or compete, he has made a trusting response. If not, obviously he has made a distrustful choice (Deutsch, 1960a). Deutsch, therefore, feels that the Prisoner's Dilemma Game is an appropriate experimental paradigm for studying problems concerned with trust, cooperation, and competition.

Gallo and McClintock (1965) report that four types of variables have been employed with the Prisoner's Dilemma Game paradigm. These variables are: manipulation of the payoff matrices, strategy of the other player, possibilities of communication, and individual characteristics. These variables all have impact on the degree of cooperation and competition occurring within the Prisoner's Dilemma Game. In order to arrive at the most appropriate type of Prisoner's Dilemma Game for this study, a review of these variables is necessary.

#### Manipulation of the Payoff Matrix

Generally the manipulation of the payoff matrix has been done in three ways. They are: (1) the differences between  $X_3$  and  $X_2$  have been altered within the framework of the Prisoner's Dilemma Game, (2) at least one, and frequently more of the game rules are relaxed, and (3) the symmetry of

the game has been altered. Usually, the second type of manipulation has been performed in an attempt to encourage cooperation, while use of the third alternative has been to investigate unequal power relationships between subjects. Both of these manipulations change the basic Prisoner's Dilemma Game into different types of mixed-motive games that are beyond the scope of this review. The results of studies involving mixed-motive games of this type will only be included when they are directly salient to the conventional Prisoner's Dilemma Game.

In conjunction with this point, it might be fruitful to mention that there is a specific manipulation, that while slightly changing the outcome matrix, closely follows rules mentioned previously. This manipulation creates what is called a Maximizing Difference Game, and is contrasted to the Prisoner's Dilemma Game in Figure 3.

		Person 2				Person 2	
		B <sub>1</sub>	B <sub>2</sub>			B <sub>1</sub>	B <sub>2</sub>
Person 1	A <sub>1</sub>	+4,+4	-5,+5	Person 1	A <sub>1</sub>	+4,+4	0,+5
	A <sub>2</sub>	+5,-5	-4,-4		A <sub>2</sub>	+5, 0	0, 0
Prisoner's Dilemma Game				Maximizing Difference Game			

Figure 3. A Comparison of Payoff Matrices for the Prisoner's Dilemma Game and the Maximizing Difference Game



This has usually been utilized to study the three possible motives that are hypothesized to be operating in the Prisoner's Dilemma Game paradigm. These three motives are: (1) maximizing joint gain, (2) maximizing own gain, and (3) maximizing the difference between one's own score and the score of his other. That is, a cooperative choice,  $A_1B_1$ , in the Prisoner's Dilemma Game would indicate a cooperative motive (item one). But an  $A_2$  or  $B_2$  response would be indicative of either item two or item three, maximizing one's own gain by minimizing one's own potential losses. In juxtaposition to this, the Maximizing Difference Game allows the experimenter to study the competitive motive in isolation. That is, the competitive choice,  $A_2$  or  $B_2$ , would be representative of motive three, since there is no probability of either subject ever obtaining a negative score.

A review of the literature indicates that there are no studies showing specific differences in results obtained from using these two types of games. Since the present study is concerned with cooperation and competition, the review of literature has treated the Maximizing Difference's Game and the Prisoner's Dilemma Game as the same type of mixed-motive game.

The two primary factors of influence in the manipulation of payoff matrices have been the increase in the payoff differential, which produces more competition, and reward value. The higher the reward value, the more cooperation it engenders.

Along these lines, Rapoport and Orwant (1962) have

developed an index of competitive advantage. This index is obtained by subtracting the  $X_2$  payoff from the  $X_3$  payoff (see Figure 1). Numerous other studies have expanded this index, and thereby achieved a greater percentage of competitive interactions (Ells and Sermatt, 1966; Komorita and Mechling, 1967; Minas, Scodel, Marlowe and Rawson, 1960). Stelle and Tedeschi (1967) achieved similar results using a variation of the competitive index. The studies by Minas and Scodel (1960) relaxed rule 2 ( $X_3 X_1$ ) and rule 4 ( $X_4 X_2$ ) of the Prisoner's Dilemma Game to make competition less rewarding. Rule 4 was manipulated to make a competitive choice ( $A_2B_2$ ) the most punitive. Rule 2 was manipulated to reduce the individual gain that a competitive choice would produce. These manipulations indeed succeeded in reducing competitive choices; however, the competitive choices still exceeded the cooperative choices. As Scodel (1962) pointed out, these studies demonstrate the competitiveness with which the Prisoner's Dilemma Game is normally played.

Attempts have been made at manipulating the mundane realism of the payoff that is frequently represented by having interactions occur for real and imaginary monies. Evans (1964), Gallo, Funk and Levine (1969), and Wrightsman (1966) have found that subjects continue to make the same percentage of competitive responses irrespective of the mundane realism of the conditions.

There is some evidence that trivial payoffs result in more competitive responses. McClintock and McNeel (1966)

varied high (one cent) versus low (one-tenth of a cent) reward and found more competitive responses in the low payoff condition. Ells and Sermat (1966) and McClintock and McNeel (1964, 1967) found similar results. However, in all these studies, the differences between the high payoff condition and the low payoff condition are still relatively insignificant. In a study by Radlow (1965) in which he attempts to overcome this superficiality of reward, the reward payoff was increased to six dollars under the lowest cell sum ( $A_2, B_2$ ). Under these conditions, Radlow notes that subjects played more cooperatively. Oskamp and Perlman (1965) supported this position when they found that higher average payoffs per trial produced more cooperation.

While manipulation of the matrix was found to have an effect on the outcome of the Prisoner's Dilemma Game, the present study kept the outcome matrix constant throughout all trials and subjects to insure that this source of variation did not occur.

### Individual Characteristics

There have been numerous studies that suggest competitive individuals have the following traits: (1) they score high on need for aggression and autonomy on the Gough Adjective Check List, (2) they score high on the F Scale, (3) they adhere to more inflexible ethical standards, and (4) they are not altruistically orientated. Conversely, these same studies have found that cooperative individuals had the following traits: (1) they score high on need

abasement on the Gough Adjective Check List, (2) they are internationalistic, (3) they subscribe to less rigid ethical standards, and (4) they are altruistic in orientation. The question of sex influences in the Prisoner's Dilemma Game has been addressed by Grant and Sermat (1969). They note that females cooperated more than males, and received more cooperation than did males. An unpublished study by Vance and Helm (1974) showed expectations for greater cooperation by females in male-female dyads, supporting this position.

Deutsch (1960) concluded that high scorers on the F Scale play more competitively than do low scorers. Deutsch's study employed only two trials, and subjects were told that the simulated "other" player had made a cooperative response before each of his choices. He felt that a competitive choice for the first trial could be construed to be a lack of trust on the part of the subject, while a competitive choice on the second trial indicated a lack of trustworthiness on the part of the subject.

There have been several studies into the effects of internationalistic and isolationist foreign policy belief on competition and cooperation in the Prisoner's Dilemma Game. Generally these studies have found that internationalist subjects cooperate more than do the isolationist subjects. Lutzker (1960) found that internationalism correlated negatively with high scores on the F Scale. He further demonstrated that internationalistic subjects made fewer competitive responses than did isolationist subjects. However, these findings are still in keeping with Scodel's

(1962) observation that the Prisoner's Dilemma Game is normally competitively played; that is, the internationalists still made competitive choices in the majority of the trials. McClintock, Harrison, Strand, and Gallo (1963) confirmed these findings. In a later study McClintock, Gallo, and Harrison (1965) posit that internationalists may be more responsive to their partner's strategy, since they punished competitive and rewarded cooperative behavior with more credibility than did the isolationists.

Bixenstein, Potash, and Wilson (1963) developed a measure of a personality variable called 'flexible ethicality', used in an investigation of ethical flexibility effects on cooperation and competition. Bixenstein's scale measures the extent to which a hero is approved on moderate ethical grounds (N), or on the basis of his adherence to extreme and rigid ethics (F). This scale consists of twenty stories, each followed by four comments. Subjects were asked to read the stories and judge the comments for agreement with their own reaction to the hero's decision. The comments had been drawn from particular classes so that a moderate (N) or rigid (F) ethical score could be ascertained. Bixenstein found that subjects that scored high on the flexibility ethicality index (N-F) made more cooperative choices than medium or low scorers.

The outlook that an individual takes toward his fellow man seems to influence the extent to which he will cooperate or compete. Marlowe (1963) found that competitive subjects scored higher than cooperative subjects on need

for aggression, and autonomy, while cooperative subjects scored higher on need abasement and deference as measured by the Heilbrun adaption of the Gough Adjective Check List. Along these lines, Marlowe, Gergen, and Doob (1966) noted that subjects who anticipated ongoing interaction were more exploitative of egotistical partners than self-effacing partners. Terhune (1968) examined the relation of achievement affiliation and power motives, measured by the Thematic Apperception Test (TAT). He concluded that trends of behavior were suppressed by the inclusion of a threat condition which minimized motive differences. That is altruistic, trusting subjects made more cooperative responses than did subjects who held a more negative view of human nature, as measured by Wrightsman's Philosophies of Human Nature Scale (Wrightsman, 1966).

Another type of individual characteristic that seems important is that of sex. The relationship between sex and cooperation and competition is unclear. Rapoport and Chammah (1965) had male-male, female-female, and male-female dyads interact for a period of 300 trials in the Prisoner's Dilemma Game. They found that male pairs were more cooperative than female pairs. However, when males interacted with females, the sex differences tended to disappear. Just the opposite was found by Grant and Sermat (1969) when they concluded that females were more cooperative than males. A number of other studies have found males to be more cooperative (Bixenstine, Chamber, and Wilson, 1964; Komorita, 1965; and Oskamp and Perlman, 1965).

These studies are in direct opposition to studies that found no sex differences (Bixenstein, Potash, and Wilson, 1963; Lutzker, Minas, et al., 1960; and Wilson and Bixenstein, 1962).

In summary, the individual sources of variation were held to be of salient interest to the present study. The variance attributed to sex was held constant by utilizing all male members in this experiment. No attempt was made to correlate this study to already existing measures of individual personality traits, as Deutsch (1960) has done with the F Scale. The present study utilized the attribution concepts similar to Marlowe (1963) and Gergen and Doob (1966).

#### Strategy of the Other

There have been numerous attempts to determine strategy effects on dyadic interaction. The results of these studies, while implicating non-cooperative tendencies, are not clear. For example, high unconditional strategies, those approaching 100 percent cooperative or competitive choices, do not elicit cooperation from the subjects. Also, matching or systematically varying the strategies increases competition. Several of the experiments referred to used a "simulated other", which means that the subjects interacted with a preplanned set of responses engineered by the experimenter, while hopefully believing they were in interaction with a real person. Bixenstine, Potash, and Wilson (1963) used unstructured planned strategies of 83

percent cooperative responses for one group, and 83 percent competitive responses on the second group of subjects. These preplanned strategies were continued for 30 trials. For the next 60 trials a matching strategy was followed where the subjects response was matched by the program. They found no differences between the groups or between the strategies used on the groups. McClintock, et al. (1963) used random strategies of 85, 50 and 15 percent cooperative responses, and they found no differences between the three groups. Scodel (1962) used 100 percent cooperative strategies against one of his groups. Against a second group, he employed a strategy of the first ten trials being competitive and the remaining cooperative. He found no group differences. Gahagen and Tedeschi (1968) varied strategies near the 50 percent range and found no differences between groups. The same conclusions were reached by Komorita (1965), Minas (1960), and Sermat (1964).

However, there are exceptions to these findings. Solomon (1960) used the following strategies: (1) 100 percent competitive, (2) 100 percent cooperative, and (3) a cooperative choice on trial one, followed by matching the subject's responses. Solomon's game lasted for six trials. He found that the third strategy produced more cooperative responses than the other unconditional strategies. Furthermore, post-experimental interviews revealed that subjects either thought there was no other person in the unconditional strategies, or that "he" was rather foolish. Bixenstein and Wilson (1963) found that when the systematically varied



programmed strategy reached 95 percent, that cooperative or competitive responses of the subjects matched the programmed responses. They found that a very effective method of eliciting cooperative responses was to use a sequential program progressing from low to high cooperation. These strategies, however, failed to produce more than 50 percent cooperative responses in their subjects. Sermat (1967) significantly increased cooperative behavior by using a strategy consisting of 30 consecutive cooperative or competitive responses followed by a matching strategy for the remaining 200 trials. In this study, both groups showed significant increases in cooperative responses, and in some cases, the cooperative choices exceeded 50 percent. Sermat (1967) further found that subjects responded more cooperatively following a change in preplanned strategy from competitive to cooperative, or when they thought they were playing against a real person, as opposed to an absent person or one committed to a preplanned strategy. Motivation seems to play an important role in understanding why very high unconditional planned strategies do not elicit cooperation. This conclusion is supported by Bruning and Mettee (1966) who used a somewhat different task. Their task was to predict the outcome of a simulated horse race. Subjects in the cooperative condition were told their scores would be summed, while competitive subjects were informed that their scores would be added and compared to others. Using this paradigm and manipulating feedback, they concluded that persistent winners or losers are less

motivated than those who perform under conditions where the outcome is in doubt.

In summary, strategy of the other was not manipulated experimentally in the present study, but allowed to operate freely within the parameters of the Prisoner's Dilemma Game. It was felt that strategy of the other would be a behavioral representation of the status characteristic brought into the interaction. Furthermore, attempts to manipulate strategy in a controlled manner by having the subject interact with an imaginary other lack the degree of realism sought in the present work; therefore, no strategies were imputed to either subject.

#### Communication Possibilities

Possibilities for communication, the fourth major variable, has had more consistent findings. Generally, the more opportunity there is for communication, the more cooperation results. Loomis (1959) employed the Prisoner's Dilemma Game to study communication effects on cooperative and competitive choices. One half of his subjects received standardized notes expressing expectation intention, retaliation, absolution, or a mixture of these, while the other one half sent these messages. He found that subjects who sent or received messages perceived more mutual trust than subjects who were unable to communicate; the level of trust varying with the complexity of the message allowed. That is, the more complete messages engendered higher levels of trust. A number of other studies have obtained

comparable results (Evans, 1964; Horai and Tedeschi, 1969; Radlow and Weidner, 1966; Scodel, et al., 1959; and Terhune, 1968). Pilisuk and Skolnick (1968) and Tedeschi, Lindskold, and Horai and Gahagan (1969) found that a conciliatory manner, with honest prior announcement of intentions, led to higher degrees of cooperation after subjects had been given the motivational set to maximize their own gain. Gahagan and Tedeschi (1968) found increased amounts of cooperation, if the subject felt he could predict the strategy of the other, which was a preplanned matching strategy in their case. In summary, the possibility of communication has generally resulted in a more cooperative response. In the present study, the opportunity to send and receive messages was presented to both subjects 50 percent of the time. There were five messages available to both subjects, and the frequency of their uses was examined. The five messages chosen were: (1) a directive message, chosen because of the status differentials in the study, (2) a cooperative statement, chosen because of the status differentials in the study, (3) a contingent threat, demanding a Choice 1 on the next trial or points would be subtracted, (4) a contingent promise, making an influence attempt by offering a ten point reward for a Choice 1 on the next trial, and (5) a non-message message, communicating a desire to not make a disclosure at that time. These measures were felt to provide realistic strategy opportunities for the status interactions in the present study.

Other Variables of Importance in the PDG

In addition to the four major variables mentioned previously, there are other salient factors that have been less thoroughly investigated, and merit acknowledgment. Oskamp and Perlman (1965) found that friendships ranging from unacquainted to "fairly" friendly had no effect on Prisoner's Dilemma Game responses. However, close friendship can produce high amounts of either competition or cooperation. Unrewarding prior dyadic experience resulted in increased competition in a second Prisoner's Dilemma Game in experiments by Marlowe, Gergen and Doob (1966) and McClintock and McNeel (1967). Along these same lines Harrison and McClintock (1965) compared subjects who were rewarded during a reaction-time game with subjects who had no previous dyadic experience. They report that previously rewarded subjects exhibit a higher percentage of cooperative responses.

In other studies, Rapoport and Dale (1966) reported that subjects cooperate more at first and compete more on the last trials if they know how many trials there will be. They refer to this phenomenon as the "end" and "start" effects. McClintock and McNeel (1966) and Messick and McClintock (1968) note that if an opponent's score is fed back to the subject during the Prisoner's Dilemma Game, more competition results. The latter investigators also noted that labeling the other person as opponent or partner made no difference in game playing responses. Evans and

Crumbaugh (1966) found that if the Prisoner's Dilemma Game is presented in non-matrix form, more cooperation results. Marwell, Ratcliff, and Schmitt (1969) found that subjects who found themselves arbitrarily behind at the beginning of play cooperate less often than their ahead partners. Additionally, Oskamp and Perlman (1965) reach the following conclusions: (1) level of cooperation is sensitive to the amount of social interaction at the beginning of the experiment; (2) higher levels of cooperation are more easily achieved with subjects from smaller colleges as opposed to large universities; (3) previous public commitment to the norm that cooperation in the game is desirable, results in more cooperation; and (4) instructions labeling the experiment as dealing with cooperation and competition have no effect.

Deutsch (1960) manipulated competition and cooperation in the Prisoner's Dilemma Game by varying program instructions. His different sets of instructions emphasized the three possible motives that could be operating in the Prisoner's Dilemma Game. His instructions called for maximizing own gain, maximizing joint gain, and maximizing difference between own and other's gain. The sets were called individualistic, cooperative, and competitive. He obtained the following results: (1) the individualistic set group cooperated between 21 and 27 percent of the time; (2) the cooperative group set cooperated between 78 and 97 percent of the time; and (3) the competitive set group cooperated between 13 and 36 percent of the time. Since

the present study was interested only in status effects on cooperation and competition, the first set of program instructions were utilized.

Additionally, the present research was also concerned with measuring post-game attitudes of self and opponents. Wilson, Chun, and Kayatani (1965) had two teammates jointly choose a strategy of play against an opposing team, while playing the same Prisoner's Dilemma Game between themselves to determine the division of the winnings, if any. Subjects were college students and the game lasted 20 trials. Results showed that partners received more cooperative choices than their opponents. After 20 trials, all subjects were rated by each other on personality, sociometric ability, and motive traits. Positive ratings on motives such as kind, cooperative, and generous increased for partners and decreased for opponents. Examples of the personality traits used are anxious, dependable, and gullible. Some of the sociometric traits were likable, attractive, and desirable as a friend. Ability traits were characterized as capable, efficient, and intelligent. Subjects were rated on a nine point scale with each of the other three persons on a total of 22 traits.

Zajonc and Marin (1967), using two-man teams in a Prisoner's Dilemma Game, investigated the effects of interpersonal attitudes of winning and losing. One member of each team was programmed to reduce the likelihood of his team gaining points, while the other team member always increased that likelihood. This was accomplished by having

one member of the team play one member of the other team, while their teammates observed the progression of the game. After a fixed number of trials, the observing teammates would play one another. The winner of one team always played the loser of the other team. The results of this study indicated that successful members had more favorable attitudes towards their opponents than their teammates. Pylyshyn, Agnew, and Illingworth (1966) found that two-man teams made more cooperative responses than individuals.

In summary of these studies, it seems that greater degrees of cooperation can be obtained by (1) some previous acquaintance or social interaction prior to the game, (2) giving the subjects a cooperative motivational set, (3) allowing interaction within the game in a non-matrix form, and (4) playing the Prisoner's Dilemma Game with a partner. More competition can be induced by (1) having opponents' score available, (2) having close friends play the Prisoner's Dilemma Game, (3) playing the game with an opponent, and (4) giving the subjects a competitive motivational set.

In the present study, subjects who were friends were not used, nor were subjects with previous social interaction. The motivational set of the instructions were neutral, to prevent creating experimenter demands. And lastly, opponent's scores were available after completion of 20 trials, and at completion of the game, to minimize their competitive effect.

A summary of cooperative and competitive variables in the Prisoner's Dilemma Game can best be conceptualized in tables. The most important competitive and cooperative variables are

represented in Tables I and II, respectively.

TABLE I  
VARIABLES INFLUENCING COMPETITION IN THE  
PRISONER'S DILEMMA GAME

Variable	Reference
(1) Allow no communication	(1) Evans, 1964; Horai and Tedeschi, 1969; Loomis, 1959; Pilisuk and Skolnick, 1968; Radlow and Weidner, 1966; Scodel, 1959; Swenson, 1967; Tedeschi, et al., 1969; Terhune, 1968
(2) Competitive instructions	(2) Deutsch, 1960a
(3) Large index of competitive advantage	(3) Ellis and Sermat, 1968; Komorita and Mechling, 1967; Minas, et al., 1960; Scodel, 1959; Scodel, 1962; Steele Tedeschi, 1967
(4) Less than 100 percent consistent strategy of "other"	(4) Bixenstine, et al., 1963; Gahagen and Tedeschi, 1968; Komorita, 1965; McClintock, et al., 1963; Minas, et al., 1960
(5) Low rewards	(5) Evans, 1964; Gallo, et al., 1969; McClintock and McNeel, 1966; Wrightsman, 1966
(6) No prior acquaintance of subjects	(6) Oskamp and Perlman, 1965
(7) Non-altruistic subjects	(7) Wrightsman, 1966



TABLE I-(CONTINUED)

Variable	Reference
(8) Present the opponent's score	(8) McClintock and McNeel, 1966; McClintock and McNeel, 1967
(9) Previous competitive experience	(9) Marlowe, et al., 1966; McClintock and McNeel, 1967; Scodel, 1962
(10) Subjects from large colleges	(10) Oskamp and Perlman, 1965
(11) Subjects with high scores on "F" Scale	(11) Deutsch, 1960
(12) Subjects with isolationistic policy beliefs	(12) Leuzker, 1960; McClintock, et al., 1963; McClintock, et al., 1965
(13) Subjects with more rigid ethical beliefs	(13) Bixenstine, et al., 1963; Bixenstine and Wilson, 1963
(14) Use of real opponents	(14) Wilson, Chun, and Kayatani, 1965; Wilson and Rickard, 1968

TABLE II

VARIABLES INFLUENCING COOPERATION IN THE PRISONER'S DILEMMA GAME

Variable	Reference
(1) Allow communication	(1) Evans, 1964; Horai and Tedeschi, 1969; Loomis, 1959; Pilisuk and Skolnick, 1968; Radlow and Weidner, 1966;

TABLE II-(CONTINUED)

Variable	Reference
	Scodel, et al., 1959; Swensson, 1967; Tedeschi, et al., 1969; Terhune, 1968
(2) Altruistic subjects	(2) Wrightsman, 1966
(3) Cooperative instructions	(3) Deutsch, 1960
(4) Matching subject's strategy	(4) Bixenstine and Wilson, 1963; Sermat, 1967
(5) Non-matrix form of Prisoner's Dilemma Game	(5) Evans and Crumbaugh, 1966
(6) Previous cooperative experience	(6) Marlowe, et al., 1966; McClintock and McNeel, 1967; Scodel, 1962
(7) Previously acquainted subjects	(7) Oskamp and Perlman, 1965
(8) Subjects from small colleges	(8) Oskamp and Perlman, 1965
(9) Subjects with inter- nationalistic foreign	(9) Lutzker, 1960; McClintock, et al., 1963; McClintock, et al., 1965
(10) Subjects with less ethical beliefs	(10) Bixenstine, et al., 1963; Bixenstine and Wilson, 1963
(11) Subjects with low scores on "F" Scale	(11) Deutsch, 1960
(12) Use of partners	(12) Wilson, Chun, and Kayatani, 1965; Wilson and Rickard, 1968
(13) Very high outcome rewards	(13) Oskamp and Perlman, 1965; Radlow, 1965

## Overview and Hypotheses

Subjects were differentiated according to high status (Company Grade Officers) or low status (ROTC Cadets). The low status person, in general, might be described as a person who perceives himself as lacking in power, who lacks self confidence, and who has a generalized expectancy that interactions with high status persons require him to act in specific prescribed manner. Conversely, the high status type would exhibit the opposite set of characteristics. The assumptions underlying the present research is that these status distinctions lead to verifiable differences in interpersonal behaviors.

Subjects in the present study interacted with a status peer, or a person of a different status, in the context of the mixed-motive Prisoner's Dilemma Game (PDG). One of two responses, cooperate (1), or compete (2), is available to each of the two players of the standard Prisoner's Dilemma situation. If both players make the 1 response, both win a moderate number of points; if both make the 2 response, both lose a moderate number of points. In the case of unmatched choices, the competitive player gains his greatest amount, while the cooperative player loses the greatest amount. The PDG matrix used in the present study is shown in Figure 4. If both players select Choice 1, both won four points; if both chose Choice 2, both lost four points. For unmatched choices, the player choosing 1 lost five points, while the player choosing 2 won five points.

During conventional PDG play, players make choices without communication between them. The present study utilized a modified version of the PDG which provided subjects with the option to send or receive messages on all trials. The PDG provided a conflict situation in which the messages available would appear to be reasonable. The five prewritten messages were a directive, a cooperative statement, a contingent threat, a contingent promise, or a non-communication message. In the cases of contingencies, ten points could be awarded following compliance to a promise, or subtracted following non-compliance to a threat. Message use was not controlled in this experiment. It was hypothesized that both the frequency and type of message use would be a function of status in the interaction (see below for formal statements of hypotheses).

Because each subject received an individual treatment provided by the other in the dyadic interaction, the particular machine that the individual set at during the interaction was conceptualized as a condition. The four levels of interaction were both players high, or both players low status, or the dissimilar statuses of high-low and low-high. Thus, the 2 X 4 factorial arrangement of experimental conditions included position during the interaction, and four levels of status interactions.

#### Measure of Choice Behaviors

Competition and cooperation were operationalized as a competitive or non-competitive response in the Prisoner's

Dilemma Game. Analytic distinction may be drawn between accommodative, cooperative, and compliant responses, each of which refers to a Choice 1 strategy selection in the message-modified Prisoner's Dilemma Game. As defined by Schlenker, Bonoma, Tedeschi, and Pivnick (1970), accommodativeness refers to a cooperative response made by a source, on an influence occasion, with the aim of producing mutual rewards for both the source and the target. At the other end of the continuum, the source can attempt to exploit the target by using influence messages (such as threats or promises) to obtain compliance, and then make the '2' choice to achieve a competitive advantage. Compliance refers to the '1' choice by the target on the trial following transmission of a message demanding a '1' choice. Defiance or non-compliance refers to a '2' choice by the target on these occasions. Thus, an accommodative-exploitative dimension for the source, and a compliance-non-compliance dimension for the target exists on power occasions, while a cooperative-competitive dimension is established for both players throughout the social interaction.

Some predictions in the present study were related to behavioral considerations, and others were related to impressions data. The first three hypotheses deal with behavioral considerations of accommodativeness, compliance, and cooperation, within the context of the PDG. Mehrabian (1970) observed that low status subjects were more accommodative to high status subjects than to subjects of the same status. This led to the first hypothesis.

Hypothesis 1: Low status subjects will be more accommodative to high status subjects than to peer subjects.

Faley and Tedeschi (1971) observed that low status subjects were more compliant to threats from high status subjects; Montgomery (1971), too, suggested that high status subjects were more compliant to peer requests than to requests from lower status subjects. In view of these findings, Hypothesis 2 was formulated.

Hypothesis 2: Low status subjects will be more compliant to high status subjects than to peer subjects.

The cooperative aspects of the interaction were reviewed on the basis of overall game interaction defined by the subject making a Choice 1. Oskamp and Perlman (1965) found that a previous commitment to cooperate would lead to more cooperation during interaction. This cooperative set is frequently instilled in low status members under the guise of being a 'team' player; that is, cooperative with high status members. On the other hand, Gartner and Iverson (1967) observed that the presence of an opportunity for promotion (as in the case of ROTC Cadets, upon receipt of their commission) would create cooperative behavior in response to high status subjects, and, conversely, competitive behavior to other low status subjects. This led to the third hypothesis.

Hypothesis 3: Low status subjects will be more cooperative to high status subjects than to peer subjects.

## Measure of Communication Patterns

Communication responses were operationalized by the subject's choice of the five messages available to him.

These messages were:

1. YOU MAKE CHOICE ONE. (a directive)
2. I WILL MAKE CHOICE ONE. (a cooperative statement)
3. IF YOU MAKE CHOICE TWO, I WILL SUBTRACT TEN POINTS FROM YOUR SCORE. (a contingent threat)
4. IF YOU MAKE CHOICE ONE, I WILL ADD TEN POINTS TO YOUR SCORE. (a contingent promise)
5. I PREFER TO SEND NO MESSAGE AT THIS TIME. (a non-communicative message)

A frequency count of messages utilized by the players, constituted the pattern of communication within that specific interaction. An analysis of variance was then performed on treatment conditions.

The following hypotheses resulted from the expectation that subjects' influence attempts are a function of an overall strategy orchestrated to the basis three behaviors hypothesized above. The frequency use of the five messages available were felt to be a behavioral representation of these basic behaviors. The five messages available were a directive message, a cooperative statement, a contingent threat, a contingent promise, and a non-communication message. Mehrabian (1970) found that higher status subjects elicited compliance by directing acceptable behavioral standards. This method of obtaining compliance is typically utilized by the military in dress and grooming standards,

as well as numerous other organizational directives that insure status hierarchies within the organization. This high status tendency to issue directives led to the fourth hypothesis.

Hypothesis 4: High status subjects will make more influence attempts of a directive nature than low status subjects on all message trial options.

The status related power differential between the two groups implies a deferential approach to high status subjects by low status subjects. Moore (1968) found that implicit behaviors were carried with status differentials; one of these was cooperation with high status members. These implied behavioral responses are power related in the aspect of initiation of communication. When high status subjects initiate a communication, it carries power overtones, demanding compliance by the low status subject. Conversely, when the low status subject initiates communication with the high status subject, the communication usually invites cooperation. In view of these findings, hypothesis 5 was formulated.

Hypothesis 5: Low status subjects will use the cooperative statement message more frequently when interacting with high status members than with peers.

Kogan, Nathan, Lamm, and Trommsdorff (1972) found that high status subjects had a greater degree of behavioral flexibility than did low status subjects. They found that high status persons could use a threatening communication with little possibility of such behavior eliciting a like response



from low status subjects. This finding led to Hypothesis 6.

Hypothesis 6: High status subjects will make influencing attempts using a contingent threat message proportionally more often than low status subjects overall.

When low status individuals are denied direct confrontations with high status individuals by virtue of possible repercussions, it is expected that they will resort to a bribe for the requested behavior. Zaenglein (1971) reports that this method is frequently used by low status members as a technique of ingratiation, and therefore, a social credit. Therefore, in order for low status subjects to exert outcome influence, they would have to resort to use of the contingent promise message. This led to Hypothesis 7.

Hypothesis 7: Low status members will use the contingent promise message more frequently than will high status members.

The last hypothesis dealt with the non-communication message. Toder and Marcia (1973), in their work with females, found that a loss of face effect inhibited certain behaviors. That is, any response thought to be demeaning to a subject was avoided as a concession to a lower status subject. However, the effects of status inhibition should force the low status subject to retreat to the non-communication message more frequently than the high status subject, particularly when the two are interacting with each other. The continued threat of possible real repercussions if the high status subject were antagonized should result in a retreat into "silence", as implied by the non-communication message. This led to Hypothesis 8.

Hypothesis 8: Low status subjects will use the non-communicative message more frequently when interacting with high status subjects.

## CHAPTER II

### METHOD AND PROCEDURES

#### Experimental Design

In the 2 X 4 randomized block design, 64 high status individuals (Company Grade Officers) and 64 low status individuals (ROTC Cadets) were allowed to interact through a Prisoner's Dilemma Game for 40 trials. Each subject was allowed to send 20, and receive 20 messages through the 40 trial interaction; that is, a message was sent on every trial, with each subject sending 20 messages, randomly dispersed throughout the interaction. There were no experimental strategies imposed by the experimenter. The level of status of the interacting subjects were: high-high, low-low, high-low, and low-high.

#### Subjects

The experimental subjects were 64 ROTC Cadets randomly selected from a population of 1,995 and 64 Company Grade Officers selected randomly from a population of 459. These subjects were attending annual summer camp in Kansas. All races were included in no set ratio. Subjects' association with psychology ranged from none to a Master of Science in psychology. They ranged in age from 19 to 35 years, with a

mean of 24.8 years. All the Company Grade Officers had a bachelor's degree minimum, and the ROTC Cadets were in their third year of college. All subjects had no prior information of the experiment.

#### Choice Behaviors

Within the context of the modified Prisoner's Dilemma Game, a compliant response by the target of a threat can be exploited by the source, or can be used as a basis for producing mutual cooperation and attending mutual benefits. Within the sample matrix used in this game (see Figure 4) successful exploitation would yield the source five points, causing the target to lose five points, but accommodativeness by a successful threatener would yield a four point gain for both. The target's noncompliance to a contingent threat could lead to a successful exploitation of an accommodative source. However, the source could then justifiably punish the target with the threatened subtraction of points. In the case of a bribe the target must choose to either accept the bribe, that is to cooperate or attempt to exploit the source and forego the possible reward. The source, on the other hand, can either reward compliant behavior or refuse to, and thereby experience a loss in credibility. Within the present experiment, when the target did not comply, an option to add or subtract light illuminated for ten seconds, during which time the subject had the option of subtracting or adding the specified number of points from the other's score by turning the telephone dial in the lower

right hand corner of his panel.

#### Measure of Communication Pattern

A frequency count of the five messages available to the players, constituted the pattern of communication within a specific interaction. The five messages: directive, cooperative statement, contingent threat, contingent promise, and non-communicative message, were analyzed independently by analysis of various techniques for treatment conditions.

#### Measure of Attitude Perception

A modified Semantic Differential (Snider & Osgood, 1957, and Osgood, Suci & Tannenbaum, 1957), was used to provide a measure of social perceptions. The Semantic Differential ratings were provided on 12 seven-point adjective scales. Three rating dimensions -- evaluative, potency and activity -- were derived from summations of 12 bipolar-adjective scales, four adjective sets in each category. The evaluative dimension was composed of dishonest-honest, harmful-beneficial, good-bad, and kind-cruel scales. The potency dimension was comprised of the sever-lenient, cautious-rash, weak-strong, and hard-soft scales. Lastly, the activity dimension was comprised of the active-passive, stable-changeable, progressive-regressive, and calm-excitabile scales.

#### The Prisoner's Dilemma Game (PDG)

The treatment in the present study consisted of having each subject interact with another subject of the same or

different status through a Prisoner's Dilemma Game. Furthermore, the experimenter maintained a record of the interaction on an Experiment Event Record (see Appendix G, Experiment Event Record). The payoff matrices for the game are illustrated in Figure 4.

		Person 2	
		B <sub>1</sub>	B <sub>2</sub>
Person 1	A <sub>1</sub>	+4,+4	-5,+5
	A <sub>2</sub>	+5,-5	-4,-4

Figure 4. Prisoner's Dilemma  
Game Payoff Matrix

#### Procedure

Forty-five minutes prior to the arrival of the subjects, experimenters set up the Prisoner's Dilemma Game.

Individuals were selected randomly from their respective status populations (459 Company Grade Officers and 1,995 ROTC Cadets) and assigned to interact with a member of the same or different status. Subjects were instructed to report to a specific building at a specific time for an interview.

As each participant arrived, the experimenter asked

his first name, seated him outside the experiment room, and had him complete a survey of demographic information, a Semantic Differential on themselves, and one on the average of the status type with whom they would be interacting (see Appendix F, Pre-Interaction Questionnaires). This average rating was paraphrased as:

Please rate how you feel the average ROTC Cadet (Company Grade Officer) falls on the following scale.

Upon completion of this task, subjects were then brought to their respective positions at the Prisoner's Dilemma Game.

The experimenter randomly assigned same status persons to their positions at the Prisoner's Dilemma Game in ABBA order. Conversely, dissimilar status persons were balanced between machines one and two.

The game apparatus (see Figure 5, Prisoner's Dilemma Game Apparatus) was set up in a room (Room A) that was 8 X 14 feet (see Appendix E, Experiment Room). The only furniture in the room were three 3 X 3 feet tables on which the Prisoner's Dilemma Game rested, and three chairs. Subjects were seated with their backs to one another and the experimenters panel. To the right of each apparatus was a tally sheet (see Appendix C, Response Tally Sheets) on which subjects kept their scores and pencils. The only other item in the room was the experimenter's event record (see Appendix G, Experiment Event Record).

Upon arrival at their assigned positions at the Prisoner's Dilemma Game, the subjects were given a set of instruc-

tions to read (see Appendix N, Prisoner's Dilemma Game Instructions). After the subjects had read the instructions, the game was explained by a set of standardized instructions (see Appendix A, Experimenter Instructions to Subjects). In these instructions, several examples were given to insure a full understanding of all lights and the game.

All games were played for 40 trials, with each subject having a message opportunity for one-half of the trials according to a random message schedule. Scores were announced at the end of 20 and 40 trials respectively. After completion of the game, subjects were brought to separate rooms and asked to complete a Semantic Differential (see Appendix D, Modified Semantic Differentials Given to Subjects After Interaction) on the other person and to predict how the other person would rate them on the same scale. When these forms had been completed, a post-experimental questionnaire was given to the subjects (see Appendix H, Post-experimental Questionnaire). When this task had been completed, subjects were brought together, debriefed, and dismissed.

#### Apparatus

The subjects' panel of equipment contained: (a) Choice 1 (cooperative choice) and Choice 2 (competitive choice) strategy selection levers; (b) a 2 X 2 payoff matrix with cells which were separately illuminated to show the outcome of each trial; (c) five printed messages, each with a separate selection lever for message transmission with an accompanying white light illuminating when a partic-



ular message was selected; (d) five printed messages accompanied by blue lights that illuminated indicating which message had been sent by the interacting other; (e) a green light to indicate the start of each trial; (f) a yellow light indicating when communication channels were open to send a message (h) red and green lights indicating when the threatened reward or punishment could be imposed; (i) a red and green light to indicate that such reward or punishment had been imposed; and (j) a telephone dial to effect a reward or punishment. As determined by the fixed matrix (see Figure 4), if both players cooperated each won four points; if both competed each lost four points. For unmatched choices, the cooperator lost five points and the competitor gained five points. An illustration of the subjects' game panel is provided in Figure 5.

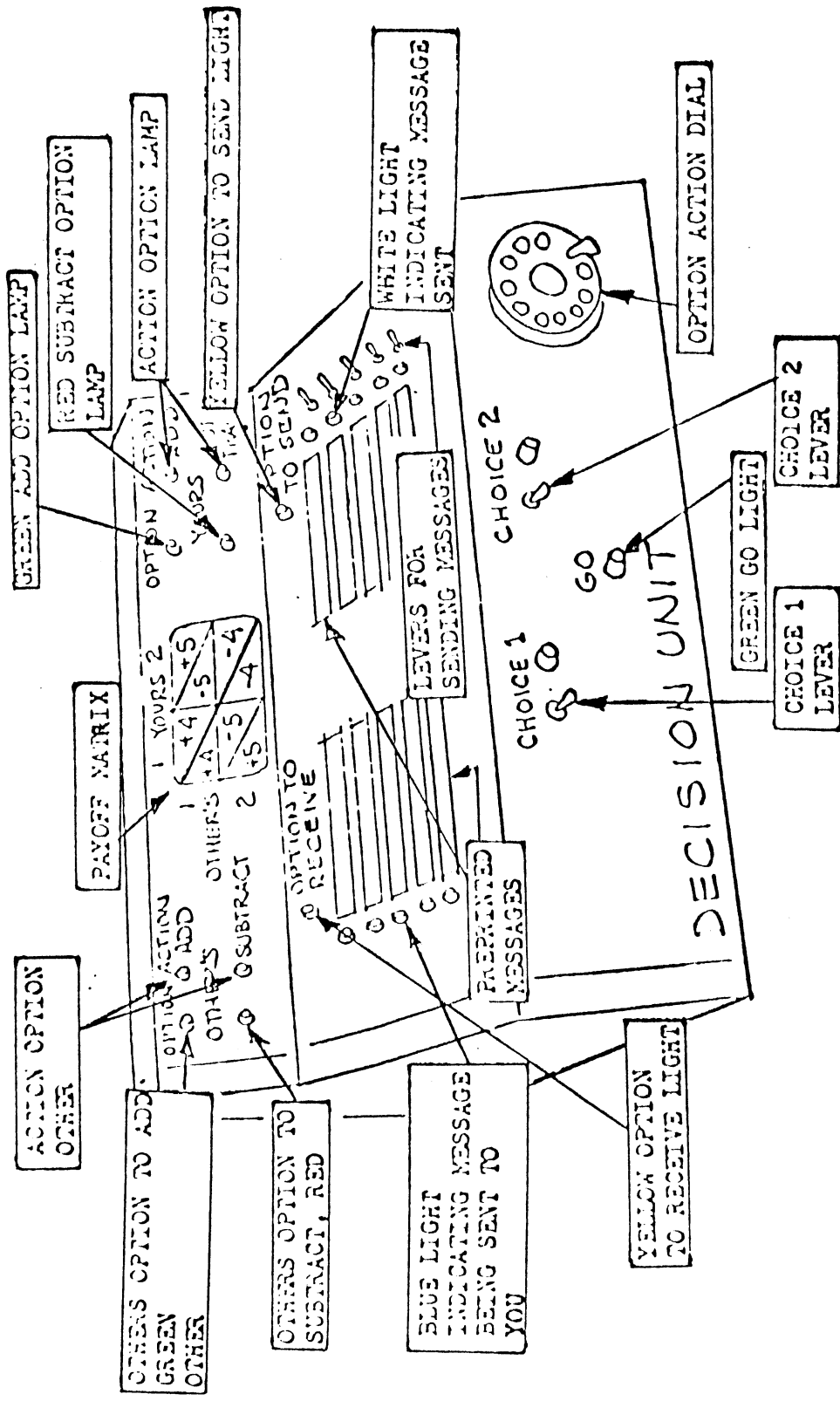


Figure 5. Prisoner's Dilemma Game Apparatus

## CHAPTER III

### RESULTS

The effects of the high-low status variable were tested in a 2 X 4 analysis of variance. The high and low status subjects were compared on cooperation, accommodativeness, compliance, and communication patterns. No differences between same status levels were expected.

All hypotheses were supported. Behavioral data were tested by Hypotheses 1 through 3, and Hypotheses 4 through 8 pertained to message use. Subjects' impressions data were correlated with the primary behavioral measures and used as supportive information for Hypotheses 1 through 3. Outcomes and statistical analyses for all communications and behavioral measures are reported below.

#### Data

During the experiment, each response a subject made was recorded. Each response contributed to a subjects' score on the basis of its frequency. Unless otherwise noted, these scores were used in the following data analyses.

## Primary Behavioral Measures

Cooperation

Cooperation was defined in this experiment as the number of Choice 1's made overall; that is, during all 40 game trials. The interaction effects ( $F=11.583$ ,  $df=3/60$ ,  $p<.001$ ) provided support to Hypothesis 3 (see Tables III and IV). Low status subjects were found to be more cooperative to high status subjects than to their peers (see Table III). The levels of cooperation between the two status groups, when interacting between similar statuses were very nearly identical. However, in interaction with another of a differing status, marked changes occurred in opposite directions. High status subjects became less cooperative when interacting with low status subjects, and low status subjects became more cooperative. The increased level of cooperation by low status players allowed the high status subjects to win the game in all but four dissimilar status interactions. These results indicated that low status subjects assumed a more cooperative role when interacting with high status subjects than they normally displayed when interacting with their similar status peers. The relative difference within the dissimilar status interaction is emphasized in that, as the low status subject became more cooperative, the high status subjects became less so. It appears that the effects of the status roles were enhanced when differing statuses interacted. These effects were further evident in the source measure of Accommodation and the target measure of Compliance.

TABLE III  
MEANS OF THE COOPERATION SCORES

		Subject	
		1	2
Status	high-high	21.3	23.2
	low-low	20.3	23.5
	low-high	29.6	15.6
	high-low	14.7	28.0

TABLE IV  
ANALYSIS OF VARIANCE OF COOPERATIVE SCORES

Source	SS	df	MS	F
Between Subjects				
A (subject group)	22.781	1	22.781	0.788
Subjects within groups	1734.062	60		
Total	1756.843	61		
Within Subjects				
B (treatment)	72.812	3	24.270	0.517
AB	1631.406	3	543.802	11.583**
B X Subjects within groups	2816.812	60	46.947	
Total	4521.030	66		

\*\* $p < .001$

### Accommodativeness

Accommodativeness was defined in this experiment as the

number of Choice 1's made during the interaction when the source had a message opportunity. An analysis of variance for this variable produced significance for both treatment ( $F=12.468$ ,  $df=3/60$ ,  $p<.001$ ) and interaction effects ( $F=51.437$ ,  $df=3/60$ ,  $p<.001$ ; see Tables V and VI).

TABLE V  
MEANS OF THE ACCOMMODATIVENESS SCORES

		Subject	
		1	2
Status	high-high	8.2	7.6
	low-low	4.1	4.3
	low-high	12.1	6.4
	high-low	7.1	11.8

TABLE VI  
ANALYSIS OF VARIANCE OF ACCOMMODATIVENESS SCORES

Source	SS	df	MS	F
Between Subjects				
A (subject group)	0.581	1	0.581	0.076
Subjects within groups	461.531	60	7.692	
Total	462.112	61		

TABLE VI-(CONTINUED)

Source	SS	df	MS	F
Within Subjects				
B (treatment)	112.210	3	37.403	12.468**
AB	841.773	3	280.591	51.437**
B X Subjects within groups	327.280	60	5.455	
Total	1281.263	66		

\*\*p < .001

High status subjects were found to be more accommodative among themselves than were low status subjects. Furthermore, when low status subjects were in interaction with high status subjects, they became much more accommodative to those subjects, and thereby supported Hypothesis 1. This pattern of interaction seems to indicate that low status subjects harbor specific behavioral responses when interacting with high status subjects. These behaviors are in marked contrast to behavior exhibited when low status subjects are interacting with peers. High status subjects, while becoming somewhat less accommodative during the high-low interaction, do not differ to the extent that low status subjects do, with regard to the overall level of accommodativeness exhibited. It appears that high status subjects have learned to become accommodative in their peer interactions, and low status subjects have yet to learn this.

However, low status subjects do perceive that when in interaction with high status subjects, accommodative behavior is expected of them, and they provide it.

### Compliance

Compliance was defined in this experiment as the number of Choice 1's made during interaction with another, when that other sent a message. Overall, there were noteworthy, treatment ( $F=5.687$ ,  $df=3/60$ ,  $p<.05$ ) and interaction, ( $F=27.373$ ,  $df=3/60$ ,  $p<.001$ ) effects (see Tables VII and VIII). These responses supported Hypothesis 2; low status subjects were found to be more compliant to high status subjects than to peer subjects. It was observed that high status subjects were more compliant to one another than were low status subjects (see Table VII). Additionally, during the dissimilar status interactions, low status subjects were consistently more compliant to high status subjects. Of particular interest was the fact that low status subjects were more compliant to high status subjects in the dissimilar status interaction than in the low status pairing. Conversely, when the high status subjects were interacting with lows, they became less compliant than in a high status pairing.



TABLE VII  
MEANS OF THE COMPLIANCE SCORES

		Subject	
		1	2
Source	high-high	4.8	4.2
	low-low	4.0	3.9
	low-high	8.6	2.3
	high-low	1.9	9.2

TABLE VIII  
ANALYSIS OF VARIANCE OF COMPLIANCE SCORES

Source	SS	df	MS	F
Between Subjects				
A (subject group)	4.321	1	4.321	0.936
Subjects within groups	276.817	60	4.614	
Total	281.138	61		
Within Subjects				
B (treatment)	58.416	3	19.472	5.687*
AB	281.172	3	93.724	27.373**
B X Subjects within groups	205.468	60	3.424	
Total	545.056	66		

\* $p < .05$     \*\* $p < .001$

## Communication Strategy

### Use of the Directive Message

Use of all messages, including the directive message was conceptualized as a communication strategy orchestrated by the basic status-associated behaviors of cooperation, accommodativeness, and compliance. That is, the overall pattern of message use represents a complicated pattern of status-associated game strategy. In this experiment, the five messages were statistically analysed on the basis of frequency of use independent of each other. The first of these, the directive message, indicated that high status subjects may have been more accustomed than low status individuals to using messages of this nature. Hypothesis 4 was supported. High status subjects made influence attempts of a directive nature proportionally more often than low status subjects on all message options. The main effects of status ( $F=6.783$ ,  $df=3/60$ ,  $p<.001$ ) and the interaction effects ( $F=41.121$ ,  $df=3/60$ ,  $p<.001$ ) can be reviewed in Tables IX and X. High status members used this message approximately 30 percent of the time when they interacted with similar statused members, while low status members resorted to 20 percent usage when interacting with their peers. During interaction of dissimilar statuses, this changed to high status subjects using this message nearly 50 percent of the time when communicating with low status subjects. Low status subjects used this message only 15 to 20 percent when they were interacting with high status

partners.

TABLE IX  
MEANS OF THE DIRECTIVE MESSAGE

		Subject	
		1	2
Status	high-high	6.3	5.5
	low-low	4.0	3.8
	low-high	3.1	9.1
	high-low	9.1	2.6

TABLE X  
ANALYSIS OF VARIANCE OF DIRECTIVE MESSAGE

Source	SS	df	MS	F
Between Subjects				
A (subject group)	0.195	1	0.195	0.026
Subjects within groups	450.531	60	7.509	
Total	450.726	61		
Within Subjects				
B (treatment)	104.211	3	34.737	6.783**
AB	631.773	3	210.591	41.121**
B X Subjects within groups	307.281	60	5.121	
Total	1043.265	66		

\*\*p<.001

Cooperative Statement Message

The main effects ( $F=3.028$ ,  $df=3/60$ ,  $p<.05$ ) and the interaction effects ( $F=11.276$ ,  $df=3/60$ ,  $p<.001$ ) indicate support for Hypothesis 4 (see Tables XI and XII). Use of the cooperative statement message indicated high status subjects had previously learned to cooperate with other high status subjects, while low status subjects, when they were interacting with their peers, had not. During dissimilar status interactions, the use of this message increased for low status members and decreased for high status members. Low status subjects used the cooperative statement message more frequently when interacting with high status subjects than they did with their peers. The relative usage of this message decreased from 31 percent of all message use for high status subjects during peer interaction to 14 percent when they were interacting with low status subjects. Conversely, low status subjects increased their level of usage of this message from 20 percent for peers to 34 percent when in interaction with high status subjects. Interestingly, the level of use of this message for low status subjects reached approximately the same level of usage of high status subjects when they were interacting with their own peers. Indicating that the accepted use of this message was known to low status members; that is, the low status subjects appeared cognizant of high status behavior and attempted to emulate that behavior when in interaction with high status subjects. This did not take place with high status members,

however, they appeared to perceive low status members as persons whom you direct, but not necessarily cooperate with.

TABLE XI  
MEANS OF THE COOPERATIVE STATEMENT MESSAGE

		Subject	
		1	2
Status	high-high	6.3	6.0
	low-low	4.8	3.6
	low-high	6.9	3.0
	high-low	2.8	6.7

TABLE XII  
ANALYSIS OF VARIANCE OF COOPERATIVE STATEMENT MESSAGE

Source	SS	df	MS	F
Between Subjects				
A (subject group)	4.500	1	4.500	0.801
Subjects within groups	336.938	60	5.616	
Total	341.438	61		
Within Subjects				
B (treatment)	67.281	3	22.427	3.028*
AB	250.563	3	83.521	11.276**
B X Subjects within groups	444.438	60	7.407	
Total	761.282	66		

\* $p < .05$     \*\* $p < .001$

### Contingent Threat Message

An analysis of variance for the contingent threat message indicated a marked change in frequency of use by low status members. Again the main effects ( $F=5.414$ ,  $df=3/60$ ,  $p<.001$ ) point out a difference between status use of this message and the interaction effects ( $F=11.829$ ,  $df=3/60$ ,  $p<.001$ ) indicate the directional changes evidenced by both statuses. The use of the contingent threat message among status peers shows that high status members use this type of message less frequently when dealing with status peers, than did low status subjects. However, low status subjects, when in interaction with high status subjects, simply did not use this message. Tables XIII and XIV illustrate these findings. High status subjects increased usage of this message when interacting with low status others from 24 to 27 percent of the time. However, the greatest effect was the apparent reluctance of the low status subjects to use such contingent threat message in interaction with high status subjects (30 to 40 percent). This indicates a status related reluctance for low status subjects to use a contingent threat message to a high status subject. Thus, Hypothesis 6 was supported. High status subjects did make use of the contingent threat message proportionally more often than did low status subjects.

TABLE XIII  
MEANS OF THE CONTINGENT THREAT MESSAGE

		Subject	
		1	2
Status	high-high	4.3	5.2
	low-low	5.0	7.1
	low-high	0.9	5.4
	high-low	5.5	0.6

TABLE XIV  
ANALYSIS OF VARIANCE OF CONTINGENT THREAT MESSAGE

Source	SS	df	MS	F
Between Subjects				
A (subject group)	12.187	1	12.187	1.949
Subjects within groups	375.188	60	6.253	
Total	387.275	61		
Within Subjects				
B (treatment)	178.406	3	59.469	5.414**
AB	389.813	3	129.938	11.829**
B X Subjects within groups	659.063	60	10.984	
Total	1227.281	66		

\*\* $p < .001$

Contingent Promise Message

The contingent promise message was used more frequently, overall, by low status subjects than the high status subjects when in interaction with peers and high status subjects. Main effects identified the use of differential ( $F=18.929$ ,  $df=3/60$ ,  $p<.001$ ) and observation of the interaction effect confirms the supposition that low status members use this message more frequently ( $F=18.239$ ,  $df=3/60$ ,  $p<.001$ ) (see Tables XV and XVI). Therefore, Hypothesis 7 was supported. Low status members did use a contingent promise message more frequently than did high status members. Overall, high status members did not alter frequency of use of this message regardless of the other with whom they were interacting. High status members used this message 2 percent of the time. On the other hand, low status subjects used this message 18 percent of the time when in interaction with other subjects of the same status, other, and high status subjects.

TABLE XV  
MEANS OF THE CONTINGENT PROMISE MESSAGE

	Subject	
	1	2
high-high	0.5	0.4
low-low	3.8	3.5
low-high	3.5	0.4
high-low	0.4	3.4



TABLE XVI  
ANALYSIS OF VARIANCE OF CONTINGENT PROMISE MESSAGE

Source	SS	df	MS	F
Between Subjects				
A (subject group)	0.281	1	0.281	0.198
Subjects within groups	85.438	60	1.424	
Total	85.719	61		
Within Subjects				
B (treatment)	505.250	3	55.427	18.929**
AB	166.281	3	54.427	18.239**
B X Subjects within groups	175.688	60	2.928	
Total	502.250	66		

\*\* $p < .001$

#### Non-message Message

Main effects ( $F=9.364$ ,  $df=3/60$ ,  $p < .001$ ) pointed out the inherent differences between statuses in terms of frequency of usage, while the interaction effects ( $F=28.341$ ,  $df=3/60$ ,  $p < .001$ ) points out the dramatic changes when the two statuses interact (see Tables XVII and XVIII). Hypothesis 8 was supported; low status subjects did use the non-communication message more frequently when interacting with high status subjects. The use of the non-communication message was found to be higher for high status interactions than for low status interactions. That is, high status subjects were significantly more uncommunicative to one

another than were low status subjects interacting with each other. High status subjects sent the non-communication message 18 percent of the time when interacting with peers. Conversely, low status subjects sent a non-communication message to one another 10 percent of the time. However, when low status subjects interacted with high status subjects, use of this message increased to 30 percent of the time, and high status subjects decreased their non-communication message usage to 10 percent of the time, indicating that low status subjects were using the non-communication message as an announcement of dissatisfaction with the dissimilar status interaction. The change evidenced by the high status subjects indicates an attempt to convey desired behavior to the low status subjects.

TABLE XVII  
MEANS OF THE NON-COMMUNICATION MESSAGE

		Subject	
		1	2
Status	high-high	3.7	2.8
	low-low	2.3	1.9
	low-high	6.0	2.0
	high-low	2.1	6.0

TABLE XVIII  
ANALYSIS OF VARIANCE OF NON-COMMUNICATION MESSAGE

Source	SS	df	MS	F
Between Subjects				
A (Subject group)	4.133	1	4.133	0.893
Subjects within groups	277.719	60	4.629	
Total	281.852	61		
Within Subjects				
B (treatment)	83.148	3	27.716	9.364**
AB	251.648	3	83.883	28.341**
B X Subjects within groups	177.594	60		
Total	512.391	66		

\*\*p < .001

#### Summary of Message Frequency

A summary of message frequencies by status interaction can be viewed in Table XIV, which presents percentage of message use. The effects of the orchestrated strategy is illustrated most vividly, when the dissimilar statuses interact. Low status subjects resort to the directive, cooperative statement and non-communication messages less when interacting with each other, than when high status subjects are interacting with high status subjects. High status subjects, on the other hand, resort to use of the contingent threat and non-communication message more when interacting with peers, than do low status subjects.

However, dramatic changes occur when these two dissimilar statuses interact. The low status subjects increase their use of the directive, cooperative statement, and non-communication message when interacting with high status subjects. This indicates an internalized role that low status persons assume when interacting with high status subjects. This assumption of a role is not limited to low status subjects, as high status subjects alter their behaviors to increase use of the directive and contingent threat message when in interaction with low status others.

TABLE XVIV  
PERCENTAGE OF MESSAGE USE

Status of Self and of Partner	<u>Message Sent by "Self"</u>					Total
	Direc- tive Message	Coopera- tive Statement	Contin- gent Threat	Contin- gent Promise	Non- Mes- sage	
high-high	28%	31%	24%	2%	15%	100%
low-low	22%	22%	31%	19%	6%	100%
low-high	15%	34%	4%	17%	30%	100%
high-low	46%	14%	27%	2%	11%	100%

In general, then, low status subjects, when in interaction with high status subjects, assume a role of cooperative behavior, refuse to threaten the high status subject,

and become more uncommunicative (use of the non-message increases). High status subjects, during the same interaction, may be generalized as becoming more directive, and using a contingent threat more frequently in their ongoing interaction with the low status subjects.

### Semantic Differential Ratings

Subjects were asked to rate their opponent and themselves on 19 Semantic Differentials scales (see Appendix D, Modified Semantic Differentials Given to Subjects After Interaction), each of which were scored on a seven point scale from one to seven points. The Potency, Activity, and Evaluative dimensions were scored for other and other's view of self. The initial self and general other ratings did not indicate any differences between pre and post measures, except for magnitude. Therefore, these pre-interaction measures were dropped. In the statistical evaluations of these three measures, all ratings were significant for main effects, interaction effects, or both. Each of these Attribution measures was correlated to the cooperativeness, accommodation and compliance PDG measures (all correlation coefficients were tested for significance at 124df).

### Other's Potency

The four scales which, when summed, provided a potency dimension, were Hard (7)-Soft (1); Cautious (1)-Rash (7); Weak (1)-Strong (7); and Severe (7)-Lenient (1). Thereby, a score of 4 indicated an extreme lack of potency, and a

score of 28 indicated another who was seen as extremely potent (powerful). A score of 16 would indicate neutral perceptions on this dimension. During dissimilar status interaction, high status subjects were attributed more potency than were low status subjects. The relative change for both status levels indicates 15, a fairly constant measure for this attribution for both status levels. Hence, a status role was enacted for both high and low status subjects, and they acted according to internalized norms. (see Tables XX and XXI).

TABLE XX  
MEANS FOR POTENCY OF OTHER

		Machine 1	Subject Machine 2
Status of & Machine 1 Machine 2	high-high	19.6	18.7
	low-low	16.3	16.4
	low-high	15.5	19.3
	high-low	20.1	15.8

TABLE XXI  
ANALYSIS OF VARIANCE FOR VARIABLE OF POTENCY

Source	SS	df	MS	F
Between Subjects				
A (subject group)	1.758	1	1.758	0.187
Subjects within groups	565.031	60	9.417	
Total	566.789	61		
Within Subjects				
B (treatment)	124.836	3	41.612	6.361**
AB	310.710	3	103.570	15.831**
B X Subjects within groups	392.531	60	6.542	
Total	828.077	66		

\*\* $p < .001$

Main effects of status ( $F=6.361$ ,  $df=3/60$ ,  $p < .001$ ) indicate that the other, when viewed by high and low status subjects, was attributed a greater degree of potency as a function of status. This effect was magnified when dissimilar subjects interacted ( $F=15.83$ ,  $df=3/60$ ,  $p < .001$ ). That is, low status others were attributed a somewhat lesser degree of potency than was attributed in low status peer interaction, while high status subjects were attributed by low status others to possess slightly more potency than high status subjects attributed to their same status. Potency was negatively correlated to the accommodative measure ( $r = -.56$ ,  $p .05$ ), the cooperation measure ( $r = -.59$ ,  $p < .05$ ), and the compliance measure ( $r = -.51$ ,  $p < .05$ ). These results indicate

that the more powerful the other is seen to be, the less cooperative, compliant, and accommodative he has been. This measure appears to verify the effects noted by Hypotheses 1, 2 and 3.

### Other's Activity

The four scales which, when summed, established an activity dimension, were Active (7)-Passive (1); Progressive (7)-Regressive (1); Stable (1)-Changeable (7); and Calm (1)-Excitable (7). Thus, as before, a score of four indicates a perception of extreme inactivity, and 28, of extreme activity. A neutral score would be 16. This dimension provided a main effect for treatment ( $F=3.085$ ,  $df=3/60$ ,  $p<.05$ ), with interaction effects ( $F=12.552$ ,  $df=3/60$ ,  $p<.001$ ) indicating that low status subjects attributed a greater degree of activity to peer others (see Tables XXII and XXIII). The attributional measure of activity remained fairly constant for low status subjects, regardless of the status of the interacting other.



TABLE XXII  
MEANS OF ACTIVITY OF OTHER

		Machine 1	Group Machine 2
Status of & Machine 1 Machine 2	high-high	17.5	17.4
	low-low	15.9	16.7
	low-high	16.3	19.3
	high-low	19.7	15.9

TABLE XXIII  
ANALYSIS OF VARIANCE FOR ACTIVITY OF OTHER

Source	SS	df	MS	F
Between Subjects				
A (subject group)	0.031	1	0.031	0.003
Subjects within groups	541.125	60		
Total	541.156	61		
Within Subjects				
B (treatment)	48.375	3	16.125	3.085*
AB	196.844	3	65.615	12.552**
B X Subjects within groups	313.625	60	5.227	
Total	558.844	66		

Activity correlated negatively to accommodation, compliance, and cooperation ( $\underline{r} = -.51$ ,  $p < .05$ ;  $\underline{r} = -.48$ ,  $p < .05$ ; and  $\underline{r} = -.53$ ,  $p < .05$ ) respectively. Thus subjects who were in interaction

with dissimilar status subjects attributed more activity to the other when their status was high, than when it was low. Hence, this measure also appears to verify the effects in Hypotheses 1, 2 and 3.

#### Other's Evaluation

The four scales which were summed to provide an evaluative dimension were Bad (1)-Good (7); Dishonest (1)-Honest (7); Harmful (1)-Beneficial (7), and Kind (7)-Cruel (1). Thus, a four point summation indicated an extremely low evaluation and 28 an extremely high evaluation. A 16 point summation would indicate neutrality. The evaluative measure indicated a significant difference between statuses when they were interacting with peers ( $F=11.438$ ,  $df=3/60$ ,  $p<.001$ ). High status subjects evaluated others higher than did low status subjects. However, in dissimilar status interaction, low status subjects were rated by the high status subjects as being equal to their high status peers (see Tables XXIV and XXV).

TABLE XXIV  
MEANS FOR EVALUATIVE OF OTHER

		Machine 1	Subject Machine 2
Status of & Machine 1 Machine 2	high-high	21.8	22.8
	low-low	15.9	16.7
	low-high	22.1	22.5
	high-low	22.9	22.0

TABLE XXV  
ANALYSIS OF VARIANCE FOR EVALUATIVE OF OTHER

Source	SS	df	MS	F
Between Subjects				
A (subject group)	4.500	1	4.500	0.569
Subjects within groups	474.438	60	7.907	
Total	478.938	61		
Within Subjects				
B (treatment)	402.938	3	134.313	11.438**
AB	67.063	3	22.354	1.904
B X Subjects within groups	704.563	60	11.743	
Total	1174.564	66		

\*\* $p < .001$

Evaluation correlated positively to cooperation ( $r = .58$ ,  $p < .05$ ) and negatively to accommodation and compliance

( $r = -.47, p < .05$ ;  $r = -.52, p < .05$ ) in support of Hypotheses 1 and 2. The significant main effects reflect a basic outlook of cooperation that high status subjects evidenced when interacting with their peers. This is confirmed by examination of dissimilar status interactions, where relative evaluations remained unchanged in the eyes of the high status subjects who provided the low status ratings in this measure. The salient change from peer to dissimilar interactions on this measure is provided by the low status subjects who rate high status subjects as being more evaluative than their peers. Furthermore, the relative increase of this attribute in the high status others is provided solely by the low status subjects during the dissimilar status interaction. Hypothesis 3 can be interpreted as supported if we examine the positive correlation to cooperation from this viewpoint, it can be inferred that low status subjects are attributed as more cooperative by high status subjects than by their peers. To do this, it must be kept in mind that, in the case of dissimilar interaction, the other represents a status different other, and in this case, the low status other is attributed as being cooperative, by the high status other. Hence, the positive correlation of activity to cooperation.

#### Other's View of Self: Potency

The four scales used to provide this measure are identical to those used to examine 'other's' potency, described

previously. However, these measures are taken from the perspective of predicting how the 'interacting other' would rate one's own self. Hence, an other's view of self perspective. Main effects ( $F=7.347$ ,  $df=3/60$ ,  $p<.001$ ) indicate a basic internalized recognition of potency by status. High status subjects apparently knew that they would be perceived as more potent, as reflected in the relative difference between peer, high and low status ratings. When the two statuses were in interaction, low status subjects believed they would be attributed a lesser degree of potency than when in interaction with their peers. The attributional change made by the high status subjects from dissimilar to peer interaction, did not vary significantly; however, interaction effects were ( $F=12.240$ ,  $df=3/60$ ,  $p<.001$ ; see Tables XXVI and XXVII).

TABLE XXVI  
MEANS OF POTENCY, OTHER'S VIEW OF SELF

		Machine 1	Subject Machine 2
Status of & Machine 1 Machine 2	high-high	19.5	19.6
	low-low	17.3	17.4
	low-high	15.4	19.0
	high-low	19.1	15.6

TABLE XXVII  
ANALYSIS OF VARIANCE FOR POTENCY, OTHER'S VIEW OF SELF

Source	SS	df	MS	F
Between Subjects				
A (subject group)	0.281	1	0.281	0.028
Subjects within groups	605.563	60	10.093	
Total	605.844	61		
Within Subjects				
B (treatment)	121.937	3		
AB	203.156	3	40.646	7.347**
B X Subjects within groups	331.938	60	5.532	
Total	657.031	66		

\*\* $p < .001$

Differences between 'view of other' and 'other's view of self' were low (no statistical test was made), with the exception that low status subjects predicted that they would be rated as more potent than they actually were. Again potency was negatively correlated to cooperation, compliance and accommodation ( $r = -.574$ ,  $p < .05$ ;  $r = -.539$ ,  $p < .05$ ;  $r = -.541$ ,  $p < .05$ ). Therefore, as in the view of other, measures associated with Hypotheses 1, 2 and 3 were supported. The negative correlation indicates that as the relative difference between statuses increases, the attributional measure of potency increases, with cooperation, compliance, and accommodation decreasing.

Other's View of Self: Activity

This measure was derived from the same "Activity" scales as the 'other' ratings. As in the measure of other, main effects were observed ( $F=3.421$ ,  $df=3/60$ ,  $p<.05$ ) indicating that low status subjects expected to be rated lower by their peers than did high status subjects. During interaction, the two statuses displayed consistently differing expectations ( $F=16.479$ ,  $df=3/60$ ,  $p<.001$ ). Low status subjects expected to be rated somewhat less active than they were by their peers, and high status subjects had expectations in the opposite directions, expecting to be rated as higher in activity (see Tables XXVIII and XXIX).

TABLE XXVIII

MEANS OF ACTIVITY, OTHER'S VIEW OF SELF

		Subject	
		1	2
Status	high-high	17.5	18.8
	low-low	16.1	16.3
	low-high	15.3	20.6
	high-low	20.3	15.8

TABLE XXIX  
ANALYSIS OF VARIANCE FOR ACTIVITY, OTHER'S VIEW OF SELF

Source	SS	df	MS	F
Between Subjects				
A (Subject group)	10.695	1	10.695	1.266
<u>Subjects within groups</u>	<u>506.719</u>	<u>60</u>	8.445	
Total	517.414	61		
Within Subjects				
B (treatment)	80.148	3	26.716	3.421*
AB	386.086	3	128.695	16.479**
<u>B X Subjects within groups</u>	<u>468.594</u>	<u>60</u>	7.809	
Total	934.828	66		

\* $p < .05$     \*\* $p < .001$

Again, activity correlated negatively to accommodation, compliance, and cooperation ( $r = -.547$ ,  $p < .05$ ;  $r = -.504$ ,  $p < .05$ ;  $r = -.553$ ,  $p < .05$ , respectively). Thus, subjects predicted correctly that they would be attributed as more active with greater status, and the negative correlations to accommodation, compliance, and cooperation indicate support for Hypotheses 1, 2 and 3.

Other's View of Self: Evaluation

This measure was derived from the same "Evaluation" scales as "other's" evaluation. As in the 'other's evaluation', this view point indicated significance for main effects ( $F = 17.237$ ,  $df = 3/60$ ,  $p < .001$ ; see Table XXXI).



That is, high status subjects expected to be evaluated more highly by peers, and low status subjects expected to be evaluated somewhat higher by their peers than they were. An evaluation of expectations for ratings from peer groups thus exists for both status groupings. Results indicate, as they did in the other's viewpoint, that expectations of low status subjects are increased when they interact with high status subjects, and for this interaction, expectation of evaluation ratings are nearly equal (low status subjects slightly lower). This can be seen in Table XXX.

TABLE XXX  
MEANS FOR EVALUATIVE, OTHER'S VIEW OF SELF

		Subject	
		1	2
Status	high-high	24.1	23.1
	low-low	17.3	19.5
	low-high	21.9	22.9
	high-low	23.1	21.6

TABLE XXXI

## ANALYSIS OF VARIANCE FOR EVALUATIVE, OTHER'S VIEW OF SELF

Source	SS	df	MS	F
Between Subjects				
A (subject group)	5.695	1	5.695	0.518
Subjects within groups	659.469	60	10.991	
Total	665.164	61		
Within Subjects				
B (treatment)	497.586	3	165.862	17.237**
AB	67.336	3	22.445	2.333
B X Subjects within groups	577.344	60	9.622	
Total	1142.266	66		

\*\* $p < .001$ 

Again, evaluation correlated positively with cooperation ( $r = .591$ ,  $p < .05$ ) and negatively with accommodation and compliance ( $r = -.485$ ,  $p < .05$ ;  $r = -.547$ ,  $p < .05$ ). Therefore, Hypotheses 1 and 2 were supported, as in the case for view of other. Again, the positive correlations may be interpreted as a result of the 'halo' effect of the interaction of high and low status subjects. During the dissimilar interaction, low status subjects expected to be evaluated somewhat lower than they were by the high status partner. Furthermore, high status subjects expected to be evaluated somewhat higher than they actually were, during the dissimilar interaction. This leveling effect is evidenced by the proximity of all four interaction means (see Table XXX).

The positive correlation of evaluation to cooperation can be attributed to the 'halo' effect of dissimilar interactions, and the high level of evaluation maintained by high status subjects when in interaction with each other. Low status subjects evaluate peers lower than high status others, and as this measure correlated positively to cooperation, Hypothesis 3 receives consistent support. That is, low status subjects were more cooperative to high status subjects than to their peers.

## CHAPTER IV

### DISCUSSION

Each of the eight hypotheses in the present investigation was confirmed. Generally the position of Faley and Tedeschi (1971) was support in that high status subjects obtained a greater degree of compliance than did low status subjects regardless of the partners status. Low status subjects were more compliant to high status partners, and the high status subject was more compliant to a high status source than when the source was low status. These results confirm Tedeschi's (1968) hypothesis that the higher the status of the source, the more compliance a target will give to threats, holding message utility (credibility X punishment magnitude) constant, and once again challenges the hierarchial conception of status. Deference is shown to an equal if both are high status; however, if both the target and the source are low status, deference is not shown. A possible explanation lies in the apparent perogatives available to the high status subjects. Status usually can be equated with power and the control of rewards and punishments. That is, a high status subject can give more in interpersonal exchanges, and the company grade officers used in this study could expect ongoing

interactions with each other for some time following this experiment (although none were acquainted within dyads at the time of the experiment). Additionally, the high status individuals may have been merely showing respect for the high status other by compliance to his wishes. Thus, compliance on the basis of respect would yield idiosyncratic credits (Hollander, 1967) that could be exchanged for desired rewards at a later date. The low status subjects, on the other hand, could not expect much in later exchanges, as they had little control over rewards that were relevant to the mutual experiences, and therefore, did not exhibit the same deferential patterns shown by the high-status-peers condition. Thus, although the investment within high-high and low-low pairs was equal, and equal gains should be expected within these pairs, the overall level of cooperation was higher within high status than within low status pairs.

Status did have a differential effect on the subject's overall strategy selections. High status subjects cooperated less often when playing a low status subject. This differential effect of status on strategy choices can be interpreted within Homans' (1961) theory of social exchange. Homans' principle of distributive justice posits that people accept the fact that rewards are distributed unequally, as long as each individual gains proportionally to his investment. Homans suggests that investments refer to any attribute or possession of the individual which is viewed positively by the remainder of the group, and could include such things as wealth, age, job tenure, etc. Thus, status

constitutes an investment in the group by the individual holding the role position, and thereby accrues credits. That is, high status has been acquired by greater investments and, consequently, deserves a higher reward. Company Grade Officers have invested more time and effort in attaining their position than the ROTC Cadets. Accordingly, high status subjects in the present experiment expected that the appropriate gains distribution, between themselves and their low status opponents, should be based on status investments; they cooperated less often and exploited the cooperative low status subjects, insuring an equitable (not equal) share of the available rewards. On the other hand, the low status subjects interacting with a high status other might have expected to gain less, and would therefore accept exploitation. The level of cooperation between dissimilar status pairs indicated precisely this pattern of exploitation.

The experimental paradigm employed in this experiment allows a subject's role characteristics to be brought into the interaction and systematically studied. The strategy of role related behavior is reflected in the message use of the participants. Generally the frequency of message use may be interpreted as an orchestrated response designed to obtain a Choice 1 (compliant) response from the target. The level of message use was found to vary with status, particularly the contingent messages (threat and promise) and the attendant credibility of these two messages.

In previous studies (Gahagan and Tedeschi, 1968;

Tedeschi, Lindskold, Horai, and Gahagan, 1969), it was found that the perceived potency of a promiser of threatener was inversely related to his credibility. These investigators intimated that a powerful source who is provided with opportunities to give bribes or administer punishments, but then resists the temptation to utilize his power advantage, will be perceived as potent. This could not be tested in the present study; there were no cases of the high status subjects failing to either reward or punish as stated. This finding parallels Faley and Tedeschi's (1971) findings for ROTC Cadets. The military subjects used in the present experiment, particularly the high status subjects, may have internalized the belief that those who have power should use it. Consequently, both low and high status subjects apparently perceived the use of rewards and punishments as indicative of the strength or resolve of the high status source. The high status subjects never failed to fulfill a promise or threat. The implication is that the perception process is affected by identification with an organization or institution, and the norms associated with it. Within an institution, role occupants who are involved in the influence process perceive others as abiding by norms appropriate to their institution. Throughout dissimilar status interaction, potency remained high for high status members; in fact, higher than when high status subjects were in interaction with each other. Exactly the opposite occurred for low status subjects. Their potency percentage fell from peer status levels to

lower dissimilar status interaction levels. It appears that low status subjects, when in interaction, feel somewhat potent, perhaps on the basis of pending promotion (ROTC Cadets, Commissioning as 2 LTS., on completion). However, when confronted with a real status interaction, this relation was reflected in a realization that they were not yet equal to their high status others. The high status subjects appeared not to be aware of status potency differential until placed in interaction with low status subjects. Then they perceived themselves as more potent, indicating the role crystalization expected in dissimilar status interaction.

The potency results may be due to characteristics of the military population studied. Status studies which reported the opposite effects (Gahagan and Tedeschi, 1968; Tedeschi, Lindskold, Hoari, and Gahagan, 1969) studied college students who had little or no military experience. High status members, in the present study, were perceived as more active, confirming the Faley and Tedeschi (1971) finding that activity is rated proportionally to credibility in ROTC Cadets. Also, in the present study, only high status subjects were 100 percent credible. Low status subjects were less credible with reward than with punishment, particularly when interacting with high status subjects. It appears that any failure to enforce a threat or bribe resulted in an attribution of lowered activity. Thus, high status subjects who were 100 percent credible, were attributed as more active than low status subjects who



were less than 100 percent credible.

When considering the overall strategies of the status differentiated subjects for the contingent threat message, it must be remembered that there was relatively little difference between status peers in its use, even though in mixed status interactions, the low status person virtually never used it. This suggests that the assumed roles are characteristic of the statuses brought into the interaction. Interaction differences represent a status related interaction, within the confines of the conflict situation (Prisoner's Dilemma Game). Therefore, the distinctions in behavioral responses appear to be a result of role supportive actions.

Hoari and Tedeschi (1969) found that neither credibility, nor punishment, nor even sex had an effect on message use. However, in the present study, status was found to profoundly affect frequency of message use, particularly the directive message for high status subjects, and the non-communication message for low status subjects during dissimilar-statuses interaction. Frequency of message use was generally found to be related to status and the level of interaction. All five message-related hypotheses were supported. High status subjects, in interaction with low status subjects, resorted to use of the directive message nearly 50 percent of the time, when they could communicate with low status subjects. Through the use of this message, low status subjects were informed of the desired behavior, and they usually complied.

Conflict theorists have suggested that over a period of interaction, the more a threatener's verbal messages correspond to his subsequent behavior, the more compliance can be expected from the target (Singer, 1962). When the high status subjects in this study interacted with peers, the level of compliance to non-contingent threats was greater than for low status peer interactions. When dissimilar statuses interacted however, compliance levels decreased for high status subjects and increased for low status subjects. That is, low status subjects assumed a role of compliance, and the high status subjects acted to maintain role status differentials in the interaction. Kelley (1965) suggests that the use of the threat message itself involves a latent, as well as a manifest message. The source implies his superiority over the target with regard to his abilities and willingness to deliver punishment. In the present study, this seemed to be understood by both high and low status subjects, as evidenced by the 100 percent credibility of the high status subjects, and the refusal of low status subjects to resort to a contingent threat message to high status subjects. This behavior supports the latent portion of Kelley's theory, and also provides tacit support for the point raised by Singer (1965).

The act of target compliance may generally be viewed as successful influence by the source. It may be presumed that all messages were sent with the intent of obtaining a Choice 1 from the target. Gergen and Taylor (1969) noted

that low status subjects yielded to the expectations of the high status subjects. This does not imply that there are no role related behaviors expected of high status subjects. Blau (1960) points this out when he states that both high and low status members of an organization use differing tactics of ingratiation when relating to each other. The low status subject will make an attempt to create a good impression of himself, or at least appear very positive to his superior. On the other hand, the high status subject, to make himself liked by his subordinates, may belittle himself in certain respects. Blau feels that this belittlement is an attempt by high status members of the organization to appear as more approachable to subordinates. Blau's statement concerning self-effacement by high status individuals was not supported. The accommodation level of high status subjects in interaction with low status subjects showed a significant decrease from high status peer interaction. Possibly the formality of the interaction prevented this, or the status effects may have been so powerful as to "wash out" this belittlement effect (i.e., no sense of approachability was desired).

Status effects were observed on message use for all five of the messages available to the subjects. Tedeschi, Horai, Lindskold, and Faley (1970) earlier found no such variation in the use of messages, although they noted that message opportunity costs had a deterring effect on the sending of threat messages (no formal opportunity costs were employed in the present study). The use of a cooperative

statement strategy by low status members probably represented an effort to obtain Choice 1 behavior from high status opponents in the least offensive manner possible. Conversely, high status members resorted to a directive message, as indicated by the proportional use of these message types. Peer interaction strategies indicate a tendency for high status subjects to refrain from usage of the contingent threat, while low status subjects increased their usage of this message. This was, in fact, the best source strategy for a competing subject to employ with a status peer, as the worst that could occur, is that both subjects would lose four points, with a possible relative gain of ten points if the source made Choice 2 and the target made Choice 1. The exploitative choices by low status message sources indicate this is precisely what occurred in low status dyads. In short, low status subjects played the game competitively among themselves, but cooperatively when in interaction with high status others. The exact opposite occurred for high status subjects, who were cooperative with each other, but competitive with low status others.

The contingent promise was not used by high status subjects with the same frequency as by low status subjects. The low status subject's offer of a bribe for desired high status target behavior (rather than confronting the high status subject with a contingent threat) seems parallel to the situation of corruption in a public official (high status). As compared to threat of punishment, the use of a bribe attempt would only result in a minor loss if not

accepted, rather than an alteration in basic outcomes (incarceration, destruction, expulsion, etc.); on the other hand, bribe acceptance implies a move toward equal status consideration. Low status subjects could then operate on a basis of idiosyncratic credits (Hollander, 1967) to be exchanged for desired rewards at a later date.

During dissimilar interactions, low status subjects increased their use of the non-message message significantly more than when in interaction with their peers. If a high status subject could not be bribed, and if threats would not work, low status subjects could choose to communicate nothing. The only other alternative available to the low status subject was the simple cooperative statement message. In fact, cooperative statement messages were used most frequently, contingent promises next (bribe), and the non-message message least frequently. It appears that the low status approach to interaction with high status others was an attempt to cooperate first, failing that, an attempt to bribe; when that failed, there was no communication at all. Such a pattern of behavior would seem to parallel minority alienation in the larger society of America today, with the exception that violence was not displayed in the Prisoner's Dilemma interaction. It can be reasoned that if a low status person has been unsuccessful in his cooperation attempts, and is no longer communicating with high status others, the only remaining behavioral response is violence against the high status other in an effort to obtain recognition or restructuring of the rewards scheme.

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APPENDIX A

EXPERIMENTER INSTRUCTIONS TO SUBJECTS



Subjects were given the following verbal instructions by the experimenter:

Subject one (name), I will now go over the lights and procedures that will be used. I will announce that one of you will have an opportunity to send a message to the other. Notice the yellow light that illuminates over the right hand column of messages of the person having the opportunity to send the message. The person having the opportunity to send the message now has ten seconds to send one of the five messages. To do so, you press forward the small lever to the left on the desired message. At this time, subject one (name), please press the third message lever forward. Notice that a blue light illuminates at both of your panels; the left hand column for you, subject two (name), and the right hand column for you, subject one (name). This indicates to you, subject two (name), the message being sent to you by subject one (name).

Next, the green "go" light will come on in the lower center portion of both your panels; at this time both of you would make your choices. Now, both of you please make choice two. Notice that the lower left hand corner of the matrix illuminates indicating that you both lose four points. Record this on your score sheets.

Now, if you recall, subject two (name), subject one (name) had sent you message three, and because you have made choice two, he will have the opportunity to subtract ten points from your score. On the upper right hand side of your panel, subject one (name), please notice that the red option light has illuminated. It would be at this time that you would have to make a decision whether or not you wished to subtract ten points from subject two's (name) score. At this time, let us assume that you do. To effect such an action dial the telephone in the lower left hand portion of your panel--any number will suffice. Notice the second red light appearing in both your panels. Subject two, you would now record the loss of ten points by checking the appropriate column in the same row of this trial. That constitutes one trial.

Subject two (name), let us go over the same sequence with you sending the message. Notice now the yellow light appearing over your right hand column. You now have ten seconds to send a message to subject one (name). Please send message number three. Notice the blue light appearing adjacent to the message in the right hand column for

you, subject one (name).

Next, the green "go" light will illuminate in the lower center of your panels. At this time both of you will make your choices. Now, subject two (name), please make choice two; and subject one (name), you make your choice one. Notice, subject two (name), that the upper left hand portion of the matrix illuminates; and subject one (name), your lower left hand portion of the matrix illuminates indicating that you have lost five points. Subject two (name), you have gained five points. Both of you please record your scores at this time. Now, subject two (name), recall that you have sent message three; subject one (name) did not make choice two and that would constitute one trial. There would be no further action required. For the sake of argument, let us assume that subject one (name) had made choice two; then additional actions would be available to you, subject two (name).

The red option to subtract light will illuminate in the upper right hand portion of your panel indicating that you have the opportunity to subtract ten points from your score at this time, if you desired to do so. At this time, let us assume that you do. To effect such an action dial the telephone in the lower left hand portion of your panel --any number will suffice. Notice the second red light appearing in both your panels. Subject one (name) would then record the loss of ten points by checking the appropriate column in the same row of that trial.

Now, for both of you, the same procedures would follow if the option to add were used, except that the lights would be green. ARE THERE ANY QUESTIONS? If not, we will proceed through twenty trials and then we will stop, sum the scores, and announce them to both of you.

APPENDIX B

PRISONER'S DILEMMA GAME INSTRUCTIONS

Upon arrival at their assigned positions at the Prisoner's Dilemma Game, subjects were given the following instructions to read:

Your goal in this decision-making experiment is to get as many points as possible. Your points are determined by your interaction with the other person in the experiment. The interaction centers around the Choice one or Choice two selections made by each of you on decision trials. You make your selection each time the green "go" light comes on by pushing the choice one or choice two lever in the bottom center of your panel. Notice that you will either gain or lose points on each decision trial. The number of points that you gain or lose is shown in green in the lighted cell of the choice matrix, and what the other person gains or loses at the same time is shown in red. You must record your own point gain or loss for each trial by making a check mark in the appropriate column of the scoring sheet.

You should take a moment to read and understand the five messages in the center of your panel (both columns are the same). The experimenter will announce that one of you must send one of these messages to the other. These messages alternate between you. After you are told you must select a message to send, the light above your right-hand column will come on and you will have ten seconds in which to signal your message choice to the other person. You signal your message choice by pushing the small lever next to it in the right-hand column; the other person sees a blue light next to that message in the left-hand column of his panel. After a message has been sent, the green "go" light will come on and each of you will again make choice one or choice two. Depending on the wording of the messages and the choices made by individuals, the sender of the message may have an opportunity to add or subtract ten points to the other person's score.

A green (add) or red (subtract) light on the top right-hand side of the sender's panel (the top left side of the receiver's panel) will indicate this option. Action is taken; that is, points are added or subtracted by turning the telephone dial on the bottom right-hand side of the panel. Remember action is not mandatory, the sender of the message must make this decision on his own. The receiver will know what the

action taken was, as a light indicating action will illuminate adjacent to the already illuminated option lamp on the top left portion of his panel. If action is taken the receiver must indicate the ten point gain or loss with a check mark in the appropriate scoring column on the same line as the decision trial preceding the action. Scores will be summed and announced to participants following each twenty trials.

VERBAL COMMUNICATION BETWEEN YOU IS NOT PERMITTED DURING THE EXPERIMENT.

APPENDIX C

RESPONSE TALLY SHEET

Watch the decision matrix, and the other person's action lights. Each time the decision matrix lights, your score is in the green. Make a check mark ( ) to record the appropriate points for that trial. If the other person takes action that indicates you are to add or subtract points, then check the appropriate column. Scores will be summed after twenty trials.

TRIALS	POINTS	+4	-4	+5	-5	+10	-10
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

Scoring Record    x4=    x4=    x5=    x5=    x10=    x10=  
 + \_\_\_\_\_ - \_\_\_\_\_ + \_\_\_\_\_ - \_\_\_\_\_ + \_\_\_\_\_ - \_\_\_\_\_  
 TOTAL TRIALS 1-20 \_\_\_\_\_

	POINTS	+4	-4	+5	-5	+10	-10
TRIALS	21						
	22						
	23						
	24						
	25						
	26						
	27						
	28						
	29						
	30						
	31						
	32						
	33						
	34						
	35						
	36						
	37						
	38						
	39						
	40						

Scoring Record	x4=	x4=	x5=	x5=	x10=	x10=
	+ _____	- _____	+ _____	- _____	+ _____	- _____
			TOTAL TRIALS, 21-40			_____
			TOTAL TRIALS, 1-20			_____
			TOTAL SCORE			_____



APPENDIX D

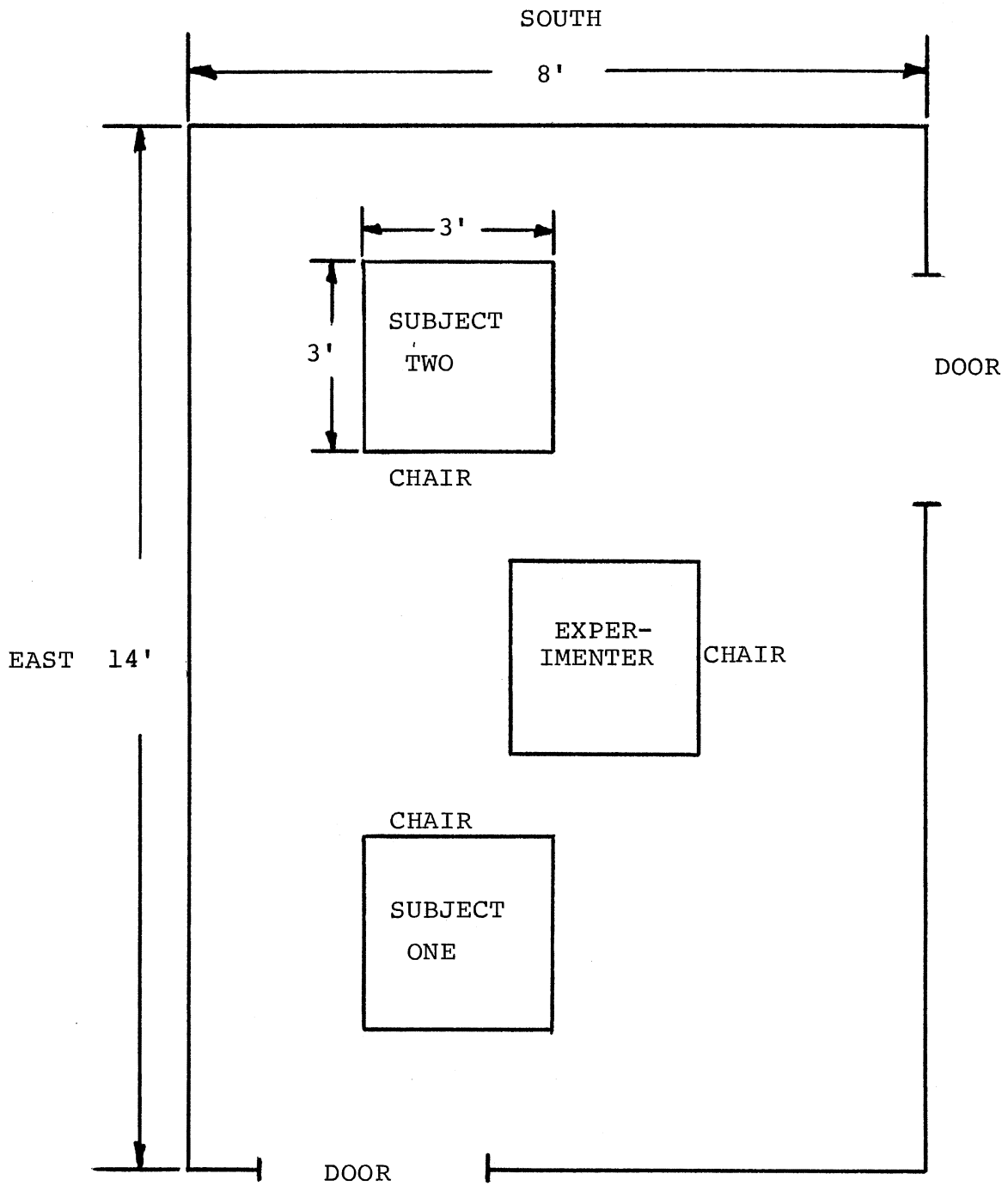
MODIFIED SEMANTIC DIFFERENTIALS GIVEN  
TO SUBJECTS AFTER INTERACTION





APPENDIX E

EXPERIMENT ROOM



APPENDIX F

PRE-INTERACTION QUESTIONNAIRES

Name \_\_\_\_\_

Age \_\_\_\_\_

Education \_\_\_\_\_

Years of active commissioned service \_\_\_\_\_ (if applicable)

Source of commission: ROTC OCS DIRECT M.A.  
(Circle one)

Years and months assigned to ROTC Program \_\_\_\_\_ or  
number of years in ROTC Program \_\_\_\_\_









APPENDIX G

EXPERIMENT EVENT RECORD



APPENDIX H

POST-EXPERIMENTAL QUESTIONNAIRE



2  
VITA

John Wayne Reynolds

Candidate for the Degree of

Master of Science

Thesis: THE EFFECTS OF MUNDANE STATUS ON COOPERATION,  
COMPETITION AND COMMUNICATION PATTERNS BETWEEN  
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