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## A Study Designed to Investigate the Effects of Motivational Orientations and Environmental Conditions Upon Bargaining Behavior

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A STUDY DESIGNED TO INVESTIGATE THE EFFECTS  
OF MOTIVATIONAL ORIENTATIONS  
AND ENVIRONMENTAL CONDITIONS UPON BARGAINING BEHAVIOR

being

A Thesis Presented to the Graduate Faculty  
of the Fort Hays Kansas State College in  
Partial Fulfillment of the Requirement for  
the Degree of Master of Science

by

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Date Dec. 20, 1963

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## ABSTRACT

The purpose of this study was to determine some of the possible differences in three different types of motivational orientations and two different environmental conditions in behavior in a bargaining game. Sixty undergraduates enrolled in General Psychology at Fort Hays Kansas State College were used. The three different motivational orientations were: 1) cooperative, 2) competitive, and 3) individualistic; and the two different environmental conditions were: 1) face-to-face, and 2) behind-the-screen. The subject's task was to make one of two choices which could be either a cooperative or a competitive choice.

Significant differences were obtained in comparing responses given in the three different motivational orientations, but significant differences were not obtained between responses in the two different environmental conditions. A cooperative orientation led to more cooperative behavior than the individualistically or competitively oriented groups and the competitively oriented was least cooperative of all.

## ACKNOWLEDGEMENT

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## CHAPTER I

### INTRODUCTION

The concern of the populace for bargaining is slowly being rewarded by the encouragement it has given scientists to make some empirical studies. There are a host of conditions in a game situation that are associated with bargaining. The purpose of this study was to summarize what conditions have thus far been found to effect cooperation and to experiment with several entirely new conditions to reveal their importance in the bargaining situation. Before proceeding, however, a definition of game theory, bargaining, and conflict is necessary.

#### Definition

Conflict is the resultant state when there is an opposition between impulses. Bargaining shall refer to that means by which one comes to terms. Game theory, although not really a written theory, conveys the combined connotation of these two definitions. In essence, it refers to the bargaining that takes place in an attempt to resolve a conflict.

## CHAPTER II

### REVIEW OF THE LITERATURE

All individuals at sometime or other in their lives are confronted with conflicts, usually many thousands of them throughout a lifetime. The conflicts, which are oppositions between impulses, are generally resolved in a process of finding a solution by coming to agreeable terms between these opposing impulses, or, in other words, making a bargain, whether that bargain be within one's self, or between two individuals, or among groups of individuals. These conflicts, especially the personal ones, or the ones within the individual, if not solved may become more severe and in their extreme turmoil cause a neurosis. However, most individuals learn to make an introspective agreement and resolve these conflicts, reduce their threat, and consequently are able to live with them. For illustrative purposes visualize a hungry man confronted with food which he strongly suspects to be poisoned. He has two opposing impulses, one to eat and another to reject the food for fear of immediate death, thus composing a conflict. In order to resolve this conflict he must attempt to satisfy both drives which, intelligently, would be to look elsewhere for food. If he does this he has made a bargain (as defined in this paper), he has reached agreeable terms



and resolved the prevalent conflict. It should be evident then that making a bargain is a strong motivating force. The motivation is energized by the misery and discomfort that a conflict may arouse.

Game theory is a "youngster" as a theoretical concept, innovated approximately two decades ago. Since its beginning there have been only a modest number of experimental studies published. However, as few as there may be, they have unearthed exceedingly interesting results and, consequently, laid the ground work for further experimentation. Stated as generally as possible, game theory's prime objective is to observe behavior in a bargaining situation. Of course, in observing behavior it is hoped to determine what conditions are conducive to bargaining and conversely, what conditions tend to hamper the reaching of agreement in a bargaining situation.

The research and experimentation reported in this paper applies mainly to conflicts which are aroused by external conditions rather than internal needs. Results from these studies may be generalized to most facets of life, since most phases of being involve conflict. With respect to the value and practicality of game theory a synopsis of the relevant experimentation thus far accomplished follows.

The most widely used experimental variable has been to study the effects of motivational orientation in a bargaining situation. Deutsch (1960) used three groups of subjects

and by means of verbal instruction induced each group with a different orientation. The three groups were labeled: cooperative, individualistic, or competitive. The cooperative group, before playing the game, was instructed that they were to be interested in winning as much as they could for themselves, but at the same time they were to be interested in helping their partner to win as much as possible. Under the individualistic condition the group was told to attempt to win as much as they could for themselves and not to worry about their partners because they felt exactly the same way. The competitive group was also encouraged to win as much as possible for themselves and also to try to beat or win more than the person playing with them. The experiment resulted with the competitively oriented group being least cooperative in game behavior, the cooperatively oriented group played the game most cooperatively, and the individualistically oriented group fell midway between these two extremes. Deutsch concluded that a cooperative orientation results in mutual trust and, consequently, trustworthy or cooperative behavior, whereas a competitive orientation results in suspicion and, consequently, untrustworthy or non-cooperative behavior.

Willis and Joseph (1959) ran essentially the same type of experiment but also added another variable, money versus

points, and found the same hierarchy of cooperativeness among the three groups but also found that the added incentive of money as opposed to mere points made no difference in behavior under any of these three conditions. In an additional experiment, this one to discern whether the values associated with the game's payoff matrix could be causative factors for directing behavior, Minas, Scodel, Marlowe, and Rawson, (1960) found that individuals persisted to play the game the same regardless of the differing payoff matrices. This was interpreted as indicating that people view a bargaining situation as a situation where one must compete.

Scodel (1962) was also interested in the effects of motivational orientation or what he called "induced collaboration". In a pilot study he found that players played more cooperatively if they played a stooge with a predetermined strategy than if they were left to their own capabilities to reach an agreement. He then attempted to determine whether different levels of collaboration could be induced by varying the strategy of the stooge. In one condition the stooge's strategy was to make the cooperative choice on each trial regardless of the subject's choice. In the other condition the stooge made the competitive choice on the first ten trials and thereafter chose cooperatively without deviation. He confirmed his hypothesis. Players who met with a competitive strategy followed by a

cooperative strategy were more cooperative than players who were met with a strategy which employed collaboration from the start.

Under the assumption that the game may better be perceived or understood by the players after some actual practice with it, Scodel, Minas, Ratoosh, and Lipetz (1959) set out to determine whether subjects would tend to become more cooperative as the game lengthened. They constructed the game to run for fifty trials and they compared the number of cooperative choices made in the first twenty-five trials with those made in the last twenty-five trials. Their assumption was incorrect however, for the last twenty-five trials had significantly fewer cooperative choices in it than the first twenty-five choices. This would indicate that as a game wears on its players become more competitive.

It is sometimes the case in bargaining situations such as union-management negotiations that a third party is called in to settle a dispute. Being curious about the effectiveness of this notion Deutsch (1958) created a game situation to explore this phenomenon. In his game situation he had two people playing a bargaining game and also a third person whose function was to predict the outcome of each trial in the game. The two players were motivated to accumulate as many points for themselves as possible and the third person, if he predicted correctly the outcome of the trial, would



receive the difference between the two player's score, which would be nothing if both players made the cooperative choice since they would both receive the same amount. Before playing the game the two players and the third party (who was an accomplice to the experimenter) took an intelligence test together. The third party acted in a conspicuously obnoxious manner throughout the test in order to establish dislike for the third person. The results illuminated the fact that the players became much more cooperative under these conditions than comparable groups playing the same game with the omission of the disliked third party. The explanation offered for these results was that when there is mutual suspicion between two people for another party the mutual suspicion instigates mutual trust between these two people which results in trusting or cooperative behavior.

On numerous occasions individuals are encouraged to come to agreement in the face of a threat. The threat is ordinarily used as a tool to enhance the threatener's position. Searching for scientific knowledge about the effectiveness of this condition upon inducing collaboration Deutsch and Krauss (1962) devised an experiment whereby they could determine whether cooperation was the outcome of no threat, unilateral threat, or bilateral threat. The results clearly indicate that bargaining will most likely occur when no threat is present, is a little less likely to occur in the

unilateral threat condition, and is least likely to occur in the bilateral threat condition. Therefore, it would appear that in most conflict situations agreement will be more likely to occur if neither of the two parties tries to threaten the other.

While most of these bargaining games were run under conditions of no communication it seemed plausible that being able to communicate in any way might induce collaboration. Working toward an answer to this possibility Morton Deutsch (1958) constructed an experimental procedure whereby the players were allowed to pass notes between themselves. Under this condition his players became more trusting and played the game more cooperatively than players who were not allowed to send notes. Then, two years later (1960), he used this same means of communication in an experiment employing three different motivational orientations, those being: cooperative, individualistic, and competitive. Under these three different motivational orientations he compared the results of the communicative group with that of a non-communicative group. He found that communication had no effect upon the cooperatively oriented group, but this was simply because this group played cooperatively regardless of their chance to communicate. However, the biggest change in behavior that communication brought about was in the individualistically oriented group. This group became just about as cooperative

when able to communicate as the cooperatively oriented group. The competitively oriented group became a little more cooperative when allowed to send notes but not significantly so. Then after a lapse of another two years Deutsch and Krauss (1962) again studied the effects of communication, but this time communication was in the oral form and allowed during each response period. This game set-up resulted in the players not using the communication period for talking about the game, and, consequently, it did not induce collaboration. They then entered the condition of compulsory communication and the verbalization during each communication period had to be in some way related to the immediate game. Under these restrictions the players tended to use their opportunity to communicate as a means of deciphering their opponent's strategy and this led to competitive behavior. They summarized these results as opposed to the results of Morton Deutsch's two previous studies by saying that when communication was in the form of notes the players were committed to behave as their notes had suggested, in order to save face, since they had committed themselves on paper, whereas oral communication was generally ambiguous and non-committing.

In summary, a cooperative orientation, a disliked third person, a method of communicating by sending notes, and an opponent who is a stooge with a preconceived strategy may induce collaboration. Whereas, a chance to verbally com-

municate, a game that is lengthened, or the ability to threaten may cause individuals to play competitively in a game where cooperation is the most beneficial alternative.

Several factors appear to make little if any difference in instigating any particular mode of behavior. One being the manipulation of the matrix values and the other being the added incentive of using real money in the game payoff as opposed to simply giving the subjects points which carry no value outside the game situation.



## CHAPTER III

### STATEMENT OF THE PROBLEM

The purpose of this study was to investigate several sets of conditions which the writer felt might have significant effects upon a player's behavior in a bargaining situation. Evidence has been presented that motivational orientation has a strong influence upon an individual's bargaining behavior (Deutsch, 1960; Willis & Joseph, 1959; and Scodel, 1962). However, these results were gained under experimental conditions which concealed the identity of each person in the bargaining situation. This being the case it would appear only reasonable that before the results stemming from these previous studies can be taken at face value and generalized to other bargaining situations, the effect of revealing the participant's identity should be investigated. Since a large number of bargaining situations occur under conditions of full awareness of one another's presence the effects of this awareness should be studied.

Therefore, the purpose of this study was to determine the effect of either seeing one's partner or not seeing one's partner in a bargaining situation while playing the game under three different motivational orientations. Under these conditions it was hypothesized that the subjects playing

this bargaining game while facing the other player would play more cooperatively than subjects playing the game while unaware of the other player's identity. It was also hypothesized that the subjects motivated to cooperate would cooperate more than subjects motivated to compete, and that subjects motivated only to try to achieve as much as possible for themselves without reference to competing or cooperating would bargain in a manner that would be in between the two extremes of behavior elicited by the competitively oriented and the cooperatively oriented subjects.

## CHAPTER IV

### PROCEDURE

#### Subjects

The subjects for this study were drawn from several sections of the General Psychology classes at Fort Hays Kansas State College. Sixty subjects were used and these subjects participated in this experiment only under their expressed wish to volunteer. The sex and/or age of the subjects was not controlled, but it was assumed that there would be an approximately equal number of male and female subjects and that their ages would range, for the most part, from eighteen to twenty years of age. This assumption was made since General Psychology is a required course and is usually taken within the first two years of college training.

#### Method

A non-zero-sum game was used in this experiment. A non-zero-sum game is a game in which both players may gain, both may lose, or one may gain and the other lose on a trial. The game started with the subjects looking at a diagram of the game's matrix which is diagramed in Figure I, Appendix A. While looking at the diagram the subjects listened to tape-recorded instructions which were given to the subjects so that

they would know exactly what the situation was and understand the implications of any combination of choices that they and the other person might make. The instructions were read as follows:

There are two of you who are going to play a game in which you can either win money or lose money. The money is going to be imaginary money; but I want you to make believe that it is real money. In other words, I want you to feel that it is important to you to win as much as you can in this game that you are going to play. Try to feel that it really makes a difference to you whether you win a lot or a little.

Here is how the game is played. There are two of you, and how much you win or lose is determined not only by what you yourself do but also by what the other person does. On the paper which is in front of you there is a diagram which shows how the game is played. One of you is Person I (the experimenter designates who Person I is); the other is Person II (the experimenter designates who Person II is). Person I has to choose between Row X and Row Y, while Person II has to choose between Column A and Column B. The amount of money that Person I can win or lose is indicated by the first number in each parenthesis, the amount of money that Person II can win or lose is indicated by the second number.

How much money either of you wins or loses is determined by the choices which you each make. Let me illustrate by considering Person I. Suppose he chooses Row X; whether he wins \$3, or \$0 will be determined by what Person II does. If Person I chooses Row X and Person II chooses Column A, Person I will win \$3.

However, if Person I chooses Row X and Person II chooses Column B, Person I will win \$0. Suppose Person I chooses Row Y; he will win either \$5 or \$1, depending upon whether Person II chooses Column A or Column B. If you compare the choice between Rows X and Y for Person I, you'll notice that, if he chooses Y and Person II chooses Column A, Person I will win \$5 rather than \$3. If Person I chooses Y and Person II chooses B, he will win \$1 rather than \$0.

Now let us consider Person II; what he can win or lose is indicated by the second numbers in the parentheses. He has to choose between Columns A and B; how much he wins or loses is determined not only by his own choice but also by how Person I chooses. Thus, if Person II chooses Column A and Person I chooses Row X, Person II will win \$3. On the other hand, if Person I chooses Y when Person II chooses A, Person II will win \$0. If Person II chooses B he can win either \$5 or \$1, depending upon what Person I does. If Person I chooses X, Person II, by choosing B, will win \$5 rather than \$3. If Person I chooses Y, Person II, by choosing B, will win \$1 rather than \$0.

Let me point out an interesting thing: If Person I chooses Y and if Person II chooses B, then both Person I and Person II will win \$1. On the other hand, if Person I chooses X and Person II chooses A, then both Person I and II will win \$3. However, if Person I knows or can be assured that Person II is going to choose A, Person I can win more by choosing Y. Similarly, if Person II knows or can be assured that Person I is going to choose X, Person II can win more by choosing B. If Person I chooses Y when II chooses A, I will win \$5 and II will win \$0. If Person II chooses B when I chooses X, II will win \$5 and I will win \$0.



Are there any questions about what happens when Person I chooses between Rows X and Y and Person II chooses between Columns A and B? (At this point they were asked some questions to ensure that there was complete understanding.)

Okay, here's how you play the game. When I tell you to make your choice you will make your choice in secret, not telling the other person your choice. You will write your choice down on the sheet of paper I am now going to hand out. After you have made your choice raise your hand. When both Person I and Person II have raised their hands, I will look at each of your choices and pay you an appropriate number of poker chips. You will then be able to determine what choice the other player made by comparing the number of poker chips with the amounts in the game diagram. Are there any questions before we start playing the game? Please write your name, classification, age, and sex on the sheet I have given you.

The different motivational orientations were created by inserting different paragraphs at the end of the instructions explaining the mechanics of the game. The instructions for the cooperative motivational orientation were:

Before you start playing the game, let me emphasize that in playing the game you should consider yourselves to be partners. You're interested in your partner's welfare as well as in your own. You do care how he does and he does care how you do. His feelings make a difference to you and your feelings make a difference to him. You want to win as much money as you can for yourself and you want him to win. He feels exactly the same way, he wants you to win too. In other words, you each want to win money and you also want your partner to win too.

The individualistic motivational orientation was created by using the following instructions:

Before you start playing the game, let me emphasize that in playing the game your only motivation should be to win as much money as you can for yourself. You are to have no interest whatsoever in how much the other person wins. You don't care how he does and he doesn't care how you do. Assume that you don't know each other and that you'll never see each other again. His feelings don't make any difference to you and your feelings don't make any difference to him. You're not out to help him and you're not out to beat him. You simply want to win as much money as you can for yourself and you don't care what happens to him. He feels exactly the same way.

The instructions for the competitive motivational orientation were:

Before you start playing the game, let me emphasize that in playing the game your motivation should be to win as much money as you can for yourself and also to do better than the other person. You want to make rather than lose money but you also want to come out ahead of the other person. Assume that you don't know each other and that you'll never see each other again. His feelings don't make any difference to you and your feelings don't make any difference to him. Accept the fact that you're out to beat him and he's out to beat you.

The subjects did not know how many trials they would be playing which, thusly, kept them from contaminating their last response. Their partner was always a stooge although they were not aware of this fact. By

using a stooge it was hoped that the facial expressions that would be observable in the face-to-face condition would be controlled. The stooge only faked playing the game and the game was structured thusly: Each time the experimental subject made the collaborative choice (X or A), he was paid as though his partner also made the collaborative choice. The first time the subject made a competitive choice (Y or B) he was paid the maximum for that choice (\$5) just as though his partner had made the collaborative choice. However, thereafter his competitive choice brought him the minimum payoff for that choice, (\$1), which would indicate that his partner had also chosen competitively.

The sixty subjects were divided evenly into six groups, ten in each. Three of the six groups played this game from behind a screen while the other three groups played it in a face-to-face position. Then, each one of these three groups in either the face-to-face or behind-the-screen condition received a different motivational orientation. Consequently, there was a group of ten subjects in the face-to-face condition who received the cooperative orientation, ten other subjects in the face-to-face condition who received the competitive orientation, and ten other subjects in the face-to-face condition who received the individualistic orientation. The same was



true for the behind-the-screen condition; there was a competitive, cooperative, and individualistic group in it.

This resulted in having the following six groups:

1) a behind-the-screen environmental condition with a cooperative orientation, 2) a behind-the-screen environmental condition with an individualistic orientation, 3) a behind-the-screen environmental condition with a cooperative orientation, 4) a face-to-face environmental condition with a competitive orientation, 5) a face-to-face environmental condition with an individualistic orientation, and 6) a face-to-face environmental condition with a cooperative orientation.

#### Apparatus

The two environmental conditions were attained by using two tables, one on both sides of a movable partition which completely hid the view of the two players from one another. In the face-to-face condition the partition was removed to reveal the identity of the two players. A small rack with the game diagram on it was slanted upward so as to hide the player's response sheet which made it impossible for either subject to see the other subject's responses.

The three motivational orientations were attained by playing the tape recorded instructions with the different motivational orientations included.

The analysis of the data showed that there was a significant difference in the amount of cooperation subjects showed when the three different motivational orientations were used. The amount of cooperation was highest when the instrumental orientation was used and lowest when the ego orientation was used.

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## CHAPTER V

### RESULTS

The data were reported in terms of frequency of occurrence of cooperative responses. The criterion for a cooperative choice in this game was for the experimental subject, who was always Person I, to make the "X" response. In analyzing the data, an analysis of variance and t tests were used where appropriate.

The analysis of the data showed that there was a significant difference in the amount of cooperative choices among the three different motivational orientation groups but no difference in cooperative choices between the face-to-face and the behind-the-screen groups. Also, there was not a significant difference between subject's behavior while playing the game with the cooperative orientation when seated face-to-face or behind-the-screen; or with the individualistic orientation when seated face-to-face or behind-the-screen; or with the competitive orientation when seated face-to-face or behind-the-screen. Thusly, the first hypothesis (that motivational orientation would have differing effects upon bargaining behavior) was supported, but the second one (that the environmental conditions would have differing effects upon bargaining behavior) was not.

As may be seen in Table I, page 22, the expected hierarchy in amount of cooperative behavior was found in the

TABLE I

TABLE OF MEANS, AND LIST OF t VALUES FOR  
THE SIX DIFFERENT CONDITIONS

	A. Cooperation	B. Individualistic	C. Competitive	Grand Mean
1. Face-to-Face	3.7	2.0	1.4	2.4
2. Behind-the-Screen	2.8	1.9	1.9	2.2
Grand Mean	3.3	2.0	1.7	

$$t_{A,B} = 2.95^{**}$$

$$t_{A,C} = 3.90^{**}$$

$$t_{B,C} = .81$$

$$t_{A1,A2} = 1.41$$

$$t_{B1,B2} = .18$$

$$t_{C1,C2} = 1.06$$

\*\* Significant beyond the .01 level of confidence.

## SUMMARY OF ANALYSIS OF VARIANCE

Source	df	M S	F
Environmental Conditions	1	0.41	
Motivational Orientations	2	14.47	9.11 **
Interaction	2	2.47	
Treatment	5	6.86	4.31 **
Error	54	1.59	

\*\* Significant beyond the .01 level of confidence.

three different motivational orientations. The  $t_{A,B}$  (cooperative vs. individualistic) and the  $t_{A,C}$  (cooperative vs. competitive) were both significant at the 0.01 level of confidence, whereas the  $t_{B,C}$  (individualistic vs. competitive) was not significant.

As may be seen in Table II, page 23, the face-to-face and behind-the-screen conditions, and the interaction between the environmental conditions and motivational orientations was not significant.

The data indicate that a cooperative orientation will induce cooperation significantly more than either a competitive or individualistic orientation. Also, the individualistic orientation will not induce cooperation significantly more than a competitive orientation.

The data also indicate that playing a bargaining game face-to-face will not induce cooperation significantly more than playing the game behind-the-screen. The difference between the environmental conditions and the motivational orientation conditions not being significant suggest that these conditions operate independently of one another.

## CHAPTER VI

### DISCUSSION

The analysis of the data revealed that subjects' behavior in a game may be swayed by the suggestion of what their motives in the game should be. Of the three comparisons made among the motivational orientation groups, the amount of collaboration was highest in the cooperative group, lowest in the competitive group, and in between in the individualistic group.

The data did not bear out a difference between subjects' behavior in the face-to-face and behind-the-screen conditions. The difference in behavior between these two groups was so small that it was concluded that facing one's partner in a game, or being unaware of one's partner by concealing him behind a screen, made no difference in how cooperatively the game was played.

It would appear that individuals are generally competitively oriented when faced with a bargaining situation as was borne out by Willis and Joseph (1959), who found that people generally approach a game or bargaining situation in a competitive, individualistic, self-interest kind of way even when the most appropriate behavior would be cooperative. Consequently, to instill a cooperative orientation, the in-



dividuals' motives toward bargaining must be manipulated. The way these motives may be manipulated is by suggestion. This is exactly what the present experiment demonstrated. When the subjects were individualistically oriented their game strategy was not suggested. It would follow then that whatever strategy they chose would apparently be indicative of their typical motivation in a bargaining situation. The behavior they exhibited in this condition was not significantly different from the behavior displayed by the competitively oriented subjects. Therefore, people to whom competitive suggestions are given closely resemble people who are not told to compete or to cooperate.

Since the general nature of the subject's behavior in the competitive and individualistic orientations was competitive, and quite different from that behavior of the cooperatively oriented group's behavior; we may conclude that the difference resulted from the suggestion of cooperativeness.

An interpretation as to how the suggestion of a particular game strategy works in swaying one's behavior would appear to be in direct relation with one's own perceived intentions in a bargaining situation. When one is told to try to beat his opponent and that his opponent is going to do



the same, he suspects that his opponent will not make the rational choice that would be beneficial to both since it would not enable him to beat the other player. It is not surprising that individuals compete when it is suggested that they compete, but it is paradoxical that they should do so at the loss of prospering for themselves when self-gain is also part of the motivation. What seems to happen is that when one enters a game or bargaining situation with a competitive intention he perceives his partner as having the same intention. This makes him suspicious of making a cooperative choice with any consistency at all since, even though its reward value is higher than the reward value of the competitive choice, he can not trust his partner to make the cooperative choice.

Similarly, the cooperative behavior which results from a cooperative orientation is a result of the subject's perceived intention of his opponent's intention. He feels that his intention is also that of the other person's. This tends to form a mutual trust which, if reinforced after the first trial, will continue to exhibit itself throughout the game. This is precisely what happened in this experiment. The player's intention which was perceived as also being the other player's intention, formed a mutual trust and their assumption was reinforced by the

experimenter always reinforcing the cooperative choice. This hypothetical condition of mutual trust led these subjects to bargaining behavior that was more beneficial and appropriate than any of the behavior exhibited by any of the other subjects. Consequently, one's bargaining behavior can be molded according to the mood set by the bargaining situation.

The importance of this is that if cooperation is the desired behavior in a bargaining situation the strategy must be made explicit and the behavior must be reinforced if it is to continue. Conversely, if competitive behavior is the most appropriate behavior in the situation it will emerge as a function of one's wish for self-gain by simply entering the bargaining situation. However, to intensify this competitive behavior it should also be made explicit that the individuals motives are to be to outdo, beat, or win in the situation.

The reason significant results were not found between the two environmental conditions of face-to-face and behind-the-screen was felt to be a function of the strength and influence that perceived intentions seem to have upon bargaining behavior. As stated above, individuals appear to assume that their intention will be the same as their opponent's intention. They therefore either trust that

cooperation will result if their intention is to cooperate, or they assume that competition will result if their own intention is to compete even when cooperation is more satisfying to the self-gain motive which they also were instructed to have. As it was, facing a person or not apparently had no effect upon their perceived intentions and consequently did not effect the behavior of the subjects.

In the third chapter it was suggested that the previous studies utilizing this bargaining game to study bargaining behavior should be viewed skeptically. The basis for this skepticism was that all the studies thus far had studied bargaining behavior in the behind-the-screen condition and most bargaining situations seemed to be more closely related to face-to-face bargaining. But, since the environmental conditions did not have the predicted effect, it would appear that these other experiments can be taken at face value.

Though it was beyond the scope of this research it would be interesting to determine the effect of intelligence upon bargaining behavior. It may be that, on the average, smarter individuals would be less persuaded by the mere suggestion of a motive than the less intelligent individuals.

Another possibility for a follow-up study would be an attempt to determine what personality characteristics are

most conducive to cooperation. One such study could be to screen subjects for those who are high in aggressive and hostile characteristics and those who are low in these characteristics to see whether these personality characteristics cause significantly different game strategies in and of themselves. Related to this would be an attempt to see whether a person who is narcissistic bargains differently from an individual who has a poor self-image.

Pending further investigation it may be that this game situation may not only tell us something about the variables which effect bargaining behavior, but also it could conceivably become a useful diagnostic tool. If further research bears out conclusive evidence that certain personality characteristics are related to specific ways in which a game such as this one is perceived and played, then it could become a useful tool for the clinician in helping him form his hypotheses about his patients.



## CHAPTER VII

### SUMMARY AND CONCLUSION

This study was designed to determine some of the possible differences in three different types of motivational orientations and two different environmental conditions in behavior in a bargaining game. The subjects were sixty undergraduate students enrolled in General Psychology at Fort Hays Kansas State College, Hays, Kansas. The subjects were randomly assigned to one of six groups, each group consisting of ten subjects. Each group had one of three possible motivational orientations and one of two possible environmental conditions. The three motivational orientations were: 1) cooperative, 2) competitive, and 3) individualistic; and the two environmental conditions were: 1) face-to-face, and 2) behind-the-screen. The subject's task was to make one of two choices in the game. One choice (X) was considered the cooperative choice because it maximized the gain for both players. The other choice (Y) was considered the competitive choice since it maximized self-gain at the loss of the other player. The game lasted for five trials and the subjects got paid imaginary money in the form of poker chips after each trial. The subjects did not know that the fifth trial would be the last trial. This was done for

purposes of controlling for possible contamination of the last trial.

In analyzing the data, an analysis of variance and  $t$  tests were used where appropriate. Significant differences were obtained among the motivational oriented groups. The number of cooperative responses given by subjects who played the game in the behind-the-screen condition were not significantly different from the number given by the subjects who played the game in the face-to-face condition.

The significant difference obtained indicated that there is a difference in the behavior that will occur under different motivational orientations. The difference indicated that a cooperative orientation results in the most appropriate behavior for this game, that being cooperative. The least appropriate behavior for this game was exhibited by the subjects who received a competitive orientation which resulted in an abundance of competitive responses. The individualistically-oriented subjects' behavior resembled closely that of the competitively-oriented subjects', but with a little more cooperation. These results were discussed in terms of possible implications for other bargaining situations. That is, a bargaining situation must explicitly spell out the appropriate motives for its participants.

Several suggestions for further research were mentioned.

One such suggestion was to determine the differential effects of different motivational orientations upon different levels of intelligence. Another research topic which would be of importance would be to determine whether different personality characteristics elicit different patterns of behavior in this bargaining situation. If it were determined that different personality types played differently in this game, then this game might become a useful diagnostic tool for the clinician in aiding him to recognize different personality types.

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APPENDIX A

Figure I. Game diagram.

		Person II	
		A	B
Person I	X	(3, 3)	(0, 5)
	Y	(5, 0)	(1, 1)

Person I chooses between rows X and Y, Person II between columns A and B. Person I's payoffs are the first numbers in the parentheses; Person II's are the second numbers.