An Experimental Study of Decision-Making and Marital Discord

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Scientific observation and knowledge of two-person groups is perhaps one of the weakest areas in the psychological and sociological fields. We know a good deal about individual and small group dynamics, but the two-person dyad remains largely a mystery. This is particularly ~~true~~ of the marital pair, although it is generally recognized that this group is of fundamental importance to society, to child development and to the individual psychopathology of the spouses.

Examination of the clinical psychiatric, psychologic or social work record in any case of a child or an adult patient, almost always reveals that the interaction between marriage partners is difficult to define. This difficulty has been a matter of considerable concern in my own efforts to deal with couples in conjoint psychotherapy. During the past six years I have been treating marital pairs together, seeing them once or twice weekly over long periods of time. In addition, I have been supervising therapists at the Madelaine Borg Child Guidance Center in a research project designed to study the use of a conjoint therapeutic approach to the parents of children in treatment at the Center.

Knowledge gained in individual psychoanalytically oriented psychotherapy and in group therapy was helpful in understanding the interaction between couples. Applications of communication theory also proved to be valuable in the early stages. Over and beyond these, however, I became acutely aware, that I was being repeatedly involved in a game by the couples who came to my office. The game was familar to the man and woman. They knew its rules, its moves, and its plays very well, and generally had a great deal of ability to predict the behavior of their partners. What they did not seem to comprehend was the motives underlying the particular patterns of response, and consequently they were forced to make assumptions regarding this. These hypothetical assumptions regarding the partners behavior were usually mistaken and were projections. Essentially, each partner was implicitly saying that

"If I behaved as he (or she) is doing, it would be because ..." and then they would be giving their own reasons. These assumptions often seemed to be at the basis of a great deal of marital discord.

The game aspects impressed me more and more, especially since I realized that I was expected to play a particular part in the game as a third party. Many of the couples had included third party players repeatedly - parents, relatives, friends, therapists - and perhaps most of all children. They had drawn these third-participants into the game by indicating that they needed help in order to resolve their difficulties, but then had proceeded to frustrate the third party. Most could with withdraw from the game without too much difficulty, but children were often fixated in a most difficult position - unable to help, though asked to, and unable to withdraw because of their dependency upon the parents. A great deal of child psychopathology appeared to be related to this untenable position in the game.

These clinical observations led me to turn to game theory, a field to which psychiatrists, psychologists and sociologists appear to have given little attention. And I was particularly intrigued by the work of Professor Morton Deutsch, who together with Dr. Robert M. Krauss had developed a two-person bargaining game that appeared to me to offer possibilities for gaining some knowledge about how couples play a simple game. It appeared possible that this game could be used clinically as a model of their interaction.

I approached Professor Deutsch with this idea in mind. With the valuable assistance of Mr. Bert Brown who is a Ph.D. Candidate in the Social Psychology Department at Teachers College, Columbia University, a preliminary group of marital pairs have been tested. The findings constitute the data that we are reporting to you at this conference.

The couples consist of patients drawn from my private practice, who are either being seen together, or one member has been in individual treatment with me. They are, therefore, in various stages of treatment.

The test involves a simple game which the couple plays twenty times. The entire procedure is carried out in one visit, and takes about onehour. The man and woman are each presented with the diagram shown on Slide Number 1. They each sit in the same room, facing their own control panel that enables them to make various moves and gives them certain information. They are separated from each other by a screen, but they are allowed to communicate freely with one another. The experimenter sits in a separate room, at a machine which tells him what the pair are doing in the game and he is able to observe them through a one-way mirror. In addition, their verbal exchanges are recorded on tape.

As shown in the diagram, each member of the couple is to imagine that he or she is operating a truck which is to travel from a starting point to a destination. The time in seconds taken to travel from start to finish is deducted from a standard of 60 seconds. If it takes 60 seconds to travel the route, the player breaks even. If he or she takes longer than 60 seconds, they lose at the rate of one unit per second. On the other hand, if they require less than 60 seconds, they profit by the amount of the difference between 60 seconds and the time required to complete the trip. Thus, if it takes 30 seconds to reach the destination, the profit is 30 units.

The diagram shows that a portion of the route that must be transversed by both is a one way road, and it is necessary for the opposing player to be out of the way in order for the other to get through. To allow one player to reach his destination by the main road, it is necessary for the other player either to be on the main route, but not on the one way road, or to be on the alternate route. The players are given taped instructions as to all of this, and they are told that they must lose at least 10 units if they take that route.

Also, they are told that each of them has control of a gate that can be used to block the other on the one-way road. Finally, they are told that they are to try and win as much as they can individually.

The control panel for each player is shown on Slide Number 2. The player selects the route he or she wishes to take by pressing a button marked main route or alternate route. This switch enables the player to move his truck forward, to stop or to reverse on the selected route. These two buttons control the gate by which the opposing player can be blocked on the one-lane road. This panel shows the player the position of his truck on the path indicated on the diagram that he or she has selected. The player is not shown which route his opponent has taken nor what the position of the other truck is except when they block one another. He can see whether the opponent has closed the gate on him.

If the two trucks meet head-on in the one-way lane, a message to that effect is shown in red. At the conclusion of each run, the experimenter informs the players how much they have gained or lost individually.

It is evident that the game is essentially concerned with how the two players handle the problem of traversing the one-way road. The maximal strategy is simple. Both players advance their trucks to position Number 5 on the main route, and one waits there while the other continues through. When that player has passed position 16, the other player then has a clear road and can proceed. The player who goes through the one-lane road will arrive at his destination first and win substantially more than the player who waits. By working out a plan whereby they alternate as to who goes through the one-lane road first, the winnings can be equalized. Communication by one or both players can facilitate planning and maximize winnings, or they can confuse the situation and cause delays.

Encounters on the one-lane road can create delays or can be quickly resolved, depending upon how long it takes one player to yield to the other. As previously indicated, selection of the alternate route insures that there will be no encounter, but a loss of at least 10 units will have to be sustained.

The way in which each couple plays the game, how they share the rewards, and how they arrive at their decisions are all recorded as data for each of the twenty trials.

There were three distinct way in which the couples played the game as shown graphically in the following charts. Slide Number 3 shows the most common way used by 11 or 58% of the couples. It resulted from a decision to share the winnings equally by alternating who goes through the one-lane road first. There were two variants of the making of this decision. The couple either arrieved at it through a verbal exchange in which both reached agreement, or one of the pair decided upon the strategy independently, communicated the decision to the other who complied.

In Slide number 4, we see an entirely different solution in which one partner consistently came out ahead of the other. Here too, there were two ways in which this outcome was arrived at. This couple did not communicate at all. They arrived at independent decisions. The wife took the main route each time, while the husband avoided her entirely by taking the alternate route, losing every time.

This couple, (Slide number 5) accomplished essentially the same result, but by an entirely different method. They met onthe one-lane road each time; the woman backed down 17 times, while the man backed down 3 times toward the end of the play. He gave directions to her with which she complied, until the 17th trial, at which time she suggested that he back down. This highly unequal way of playing in which one partner won consistently and the other lost, occurred in these two cases among the 19 tested.

A third solution was achieved by 6 or 36% of the couples. This was characterized by an inconsistent interaction in which at times the players equalized the outcome, while at other times one won while the partner lost. The reasons underlying this inconsistent solution varied. One partner may have made the decisions, but failed to arrive at a set strategy. This was true in the case shown in Slide number 6. In another case, (Slide number 7) there was no communication of any

strategy, but the players came face to face repeatedly, and the man yielded 8 times after some delay, while the wife backed down twice. However, the woman lost further time by taking the alternate route 6 times.

Slide number 8 shows an instance in which the wife at time acquiesced, and at other times rebelled against her husband's decision.

There were significant differences in the mean payoffs achieved by the couples as a team in the three groups. The couples who alternately shared their winnings equitably had a mean pay-off of 4.26 for the twenty trials. Those who were inconsistent had a mean pay-off half as great, 2.10. The couples who did not share at all had a mean pay-off of 0.15, or 3% of that of the sharers.

Another manifestation of the different ways of playing the game is indicated by the mean differential scores of the two partners in each couple. The sharers had a mean differential of 0.45. The inconsistents had a mean differential of 1.66, and for the non-sharers the mean differential was 6.39.

Our findings suggest that the two-person game designed by Dr. Deutsch can reveal certain significant differences in marital interaction. Whereas the couples tested demonstrated a variety of individual emotional problems, and an apparent wide range of marital discord, on the basis of the test procedure, three distinct groupings emerged. The clinical significance of these three groupings requires further evaluation, not only as far as the pairs and individuals themselves, but also as far as their offsprings are concerned.

At this early point in our experimental study, it appears that a conjoint approach to therapy may be especially useful in those instances where each partner contributes significantly to the process of decision-making. Communication may be severely or mildly constricted, but the effectiveness of communication can be enhanced markedly by clarification of the underlying dynamics and motivations which are often poorly understood.

In those cases where the gains and losses are shared very inequitably, it appears that any deep exploration is not possible. The one who consistently loses may be helped best by being assisted to understand how he or she can best adapt to a generally frustrating situation. The constant winner is unlikely to desire any significant change in a relationship that is so narcissistically satisfying.

In some ways the inconsistent group is the most difficult and challenging to work with individually and conjointly. I suggest that they may have the most interesting children, too, because the patterning influence is the most flexible. The child, therefore, is left to formulate things more for himself.

Obviously I am suggesting that there is a relationship between performance in this game, and interaction in life. Experienc has indicated that this is certainly true. The couples invariably responded to the test as if it was a paradigm of their life together, and many of them verbalized this in subsequent sessions.

There are striking differences between the way in which married couples played the game, and the play of subjects who were unacquainted with each other. Although the instructions given indicated that each one should maximize his own winnings, the couples tended to defy this in an effort to equalize the gains. By contrast, subjects who were unknown to one another competed much more intensively. This was true in spite of the fact that some of the married couples are in the constant conflict of marital discord.

It was also noted that the married pairs did not use available threats against each other, even though these were available, and they frequently do threaten each other in real life situations. Finally, the results achieved by the married teams, particularly among those who equalized their winnings were far in excess of those achieved by independent subjects.

It is our intention to continue and expand these studies. We are seeking to determine whether this general method of approach can be of practical value in determining the optimal psychotherapeutic approach and in predicting the re-

sponse to treatment. We are also planning to study the relationship between parental patterns of interacting in the game and the diagnostic categories of children with various emotional disorders. It is hoped that discussion of these findings will suggest other possible useful avenues of exploration.