Experiential Learning Enters the Eighties, Volume 7, 1980

AN EXERCISE IN CONFLICT-HANDLING BEHAVIOR

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ABSTRACT

An interactive game is proposed to enhance classroom learning of conflict-handling behavior. The game is based on a two-dimensional model of conflict and offers significant improvements over dichotomous (e.g., competition-cooperation) models such as the Prisoner's Dilemma Game. Preliminary results support the two-dimensional model and suggest the value of the game for experiential learning.

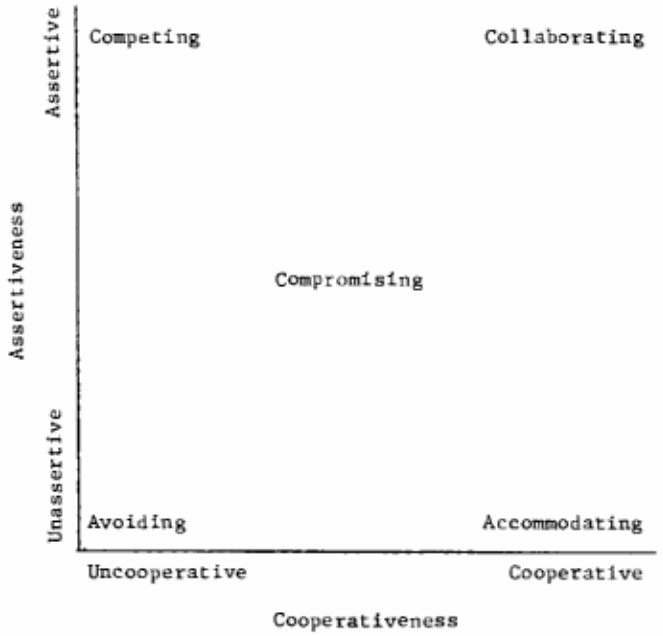
INTRODUCTION

The Prisoner's Dilemma Game (PDC) has been a very popular model for studying conflict. In part, this popularity has developed because the PDG captures a number of fascinating interpersonal issues in a very simple format. Two decision makers are faced with two choices. The two choices, often labeled "C" (for Cooperation) and 'D" (for Defection), involve a contrast between individual outcomes and joint outcomes. Choice "D" will potentially maximize an individual's outcomes while "C" will potentially maximize joint outcomes. The dilemma arises because if both parties choose "D", the individual outcomes and joint outcomes are lower than a "C-C" set of choices. However, choosing "C" leaves one vulnerable to exploitation. Thus, elements of risk and trust are involved as well as the basic contrast between individual outcomes and joint outcomes.

The simple format of the PDG offers a number of advantages for research and teaching/learning: (1) the choice is clear, "C" or "D", and (2) the outcomes are also clear and occur automatically as a consequence of the pair of choices. Thus, the PDC has been used extensively as a basis for classroom exercises and experiential learning [4] Unfortunately, the PDG tends to oversimplify the possible responses available in a conflict situation. That is, the PDC allows only two possible responses that are intended to represent cooperative versus competitive behavior. However, real-life conflict behavior is more complex than suggested by a cooperative-competitive dichotomy. Moreover, learning which emphasizes the dichotomous classification of conflict behavior may simply reinforce perceptions of conflict as a win-lose situation.

An alternative model of conflict behavior emphasizes the potential for integrative (win-win) conflict- handling behavior as well as distributive (win-lose) behavior. This model, presented in Figure 1, originated with the work of Blake and Mouton [1] and has been extended by Thomas [7,8]. The model recognizes two basic dimensions of behavior in a conflict setting: (1) assertiveness, defined as a person's attempt to satisfy his or her own concerns, and (2) cooperativeness, defined as attempts to satisfy the concerns of the other person. These two dimensions are used to define five conflict-handling modes: competing (assertive, uncooperative), avoiding (unassertive, uncooperative), accommodating (unassertive, cooperative), collaborating (assertive, cooperative), and compromising (intermediate in assertiveness and cooperativeness). Three of the modes, competing, Compromising, and accommodating, are said to represent distributive (win-lose) bargaining while collaborating represents an integrative (win-win) problem solving approach to conflict.

FIGURE 1
TWO-DIMENSIONAL MODEL OF CONFLICT BEHAVIOR



In our research, we have been developing a laboratory paradigm for studying the interaction of the five conflict-handling modes [2]. So far, the results look promising - for research purposes. However, a 5 x 5 matrix becomes very cumbersome to use for classroom exercises or demonstrations. In order to provide a suitable classroom vehicle for experiencing and/or discussing the two-dimensional model, we have been working on an abbreviated version of the 5 x 5 matrix.

METHOD

Our abbreviated version of the laboratory game offers each decision maker four options. These four options are considered equivalent to the four options in the "corners" of the two dimensional model -- compromising has been dropped in order to focus on the more "extreme" of the conflict-handling modes.

One option is to choose NP (no play) on each trial. This option, which is intended to correspond to avoiding, "pre-empts" the other options. That is, if NP is chosen by one decision maker, a minimum payoff is provided to both decision makers and the next trial follows. Having one of the options, in this case NP, act to pre-empt the others allows us to present the

remaining three choices in a 3 x 3 matrix. The result is a much simpler matrix.

Our matrix game is based on the assumption that conflict handling is an interpersonal process that takes place in a context of solving or resolving certain "substantive" issues. We believe that this approach is better than the PDG format which has no context other than the payoff matrix. In our version, a series of questions are provided for the decision makers to create a context for competing, accommodating, or collaborating with each other's.

Each trial the decision maker is given a question. The ability to answer the question becomes an important issue in the possible conflict-of-interest. After reading the question, the decision maker has three options besides the NP option.

1. The decision maker may choose to compete with the other. In this case, the question provides a basis for a win-lose confrontation. The payoff to the winner is high and the loser receives nothing. A confrontation occurs only if both choose this option. If one person chooses this option and the other person chooses a "cooperative" option, the competitor automatically wins. Note that simply choosing to compete does not automatically result in a payoff, as in the PDG. A successful competitor wins but an unsuccessful competitor gets nothing.

2. The decision maker may offer to split the available resource (money or points) . This is considered as a "cooperative" response that may result in a division of a given sum (distributive bargaining). This response avoids the necessity of answering the question. If a party chooses this option and the other party chooses to compete, the cooperator automatically loses and gains nothing.

3. The decision maker may choose to collaborate with the other. In this case, the correct answer to the question becomes a basis for determining joint payoffs. If both decision makers choose this option the payoff depends on whether they are both correct in answering the question. The payoff occurs if they collaborate successfully. Mutual collaboration does not automatically insure a payoff -- they both must answer the question correctly to gain a payoff.

The game is designed to present conflict in a "richer" setting than the PDG. There is greater chance to compete or not and to avoid a person who competes excessively. Finally, there are two "cooperative" choices, depending on whether the decision makers want to risk a question or simply, "split-the-difference."

We have used the 3 x 3 matrix game in two undergraduate classes. The class size ranged from 40 to 60 students. We divided the classes into groups of approximately seven students and paired up the groups randomly. The groups were given instructions which indicated that they could win M&Ms in the exercise.[1] The payoffs were presented in a matrix which indicated the number of N & N s the group could win per trial. One example of the payoff matrix is presented in Table 1.

TABLE 1

SAMPLE PAYOFF MATRIX

YOUR CHOICE	OTHER'S CHOICE X	Y	Z
X	Winner +30 Loser 0 NOTE: see below	You +30 Other 0	You +30 Other 0
Y	You 0 Other +30	You +20 Other +20	You +20 Other +20
Z	You 0 Other +30	You +20 Other +20	Both Right: both +40 Otherwise: both 0

NOTE: If you both choose X and both answer correctly, a coin-flip will determine who receives 30 M & M s. If you both answered incorrectly, neither group receives M & M s.

RESULTS

The results reported here are based on our first attempts to use the 3 x 3 matrix game in a classroom setting. In the first class, we conducted the exercise with a matrix of slightly different payoffs than those presented in Table 1. Specifically, the Y-Y choices and Y-Z choices had payoffs of 15 N & M s to each group while the Z-Z choices had a possible payoff of 30 N & Ns to each group (if both were correct in answering the question). In short, compared to the matrix in Table 1, our first version of the matrix offered less incentive for the cooperative choices, Y and Z. In the second class, we used the matrix presented in Table 1.

Group Choices In Matrix Game

In the first class, the competitive choice (X) was surprisingly dominant, occurring 78% of the time. The other uncooperative choice (NP) occurred 20% of the time. Of the 80 possible choices, only 2 (<3%) were cooperative: Since we had hoped to achieve a balance of uncooperative versus cooperative choices, we found this pattern of choices to be very disappointing. However, the exercise still had value as a learning experience for the class.

[1] Available from the authors. Address requests to either author at the Graduate School of Business, Indiana University, Bloomington, Indiana 47405.

In the second class, the number of cooperative choices (Y and Z) increased to 23%. The competitive choice (X) dropped to 67% and the avoiding choice (NP) dropped to 10%. Thus, we achieved a better balance of responses in the second class. However, even the second pattern of choices was highly competitive and did not approach the level of cooperation we have achieved in our laboratory version of the matrix [2].

Perceptions of the Other Group

Semantic differential research [3] has shown that individuals tend to perceive others in terms of two basic dimensions of connotative meaning: (1) an evaluative dimension (good vs. bad) and (2) a dynamism dimension (strong and active vs. weak and passive). In addition, previous research [2, 6] has shown a connection between the two dimensions of connotative meaning and the two dimensions of conflict handling identified by the model presented in Figure 1. Specifically, it has been found that the evaluative dimension of connotative meaning was associated with the cooperative dimension of conflict handling and the dynamism dimension of connotative meaning was associated with the assertiveness dimension of conflict handling.

To see if our 3 x 3 matrix game captured these two dimensions of meaning, the semantic differential ratings were analyzed in a manner consistent with previous research [2, 6]. The semantic differential ratings were factor analyzed using a Varimax orthogonal rotation. The factor analysis identified the items loading on the evaluative and dynamism factors. Factor scores were computed by summing the ratings on the items which loaded above .50 on each factor. Indices of the two conflict-handling dimensions were also constructed by adding the ratings on the cooperative modes (accommodating and collaborating) and subtracting the ratings on the uncooperative modes (avoiding and competing) An assertive index was constructed by adding the ratings on the assertive modes (competing and collaborating) and subtracting the ratings on the unassertive modes (avoiding and accommodating).

Table 2 presents correlations of the factor scores with (1) the indices of the conflict-handling dimensions and (2) ratings of the other group's use of the separate modes.[2] The correlations presented here are based on the behavior that occurred in the second class thus, these results were obtained in the class that operated under the matrix presented in Table 1.

As shown in the table, the evaluative factor had a strong association with the cooperative index (r .55, p c .001) and virtually no association with the assertive index (r= -.04) . In contrast, the dynamism factor was associated with the assertive index (r= .34, p< .02) and not related to the cooperative index (r -.02) These correlations suggest that the exercise conducted in the second class successfully captured the two dimensions of conflict suggested by the model. Moreover, the correlations of the factor scores and the separate conflict-handling modes are all in the directions predicted by the two-dimensional model. However, in half of the cases, the correlations were not strong enough to reach statistical significance. This suggests the need for further development of the exercise. Specifically, obtaining a better balance between cooperative and uncooperative responses should clarify the meaning of the separate modes.

[2] Because the behavior in the first class had very little variance (over 97Z of the responses were uncooperative) their ratings are not included in this analysis.

TABLE 2

CORRELATIONS BETWEEN CONFLICT BEHAVIOR AND SEMANTIC DIFFERENTIAL RATINGS

Other Group's Conflict-Handling Behavior	Semantic Differential Ratings of Other Group	
	Evaluative	Dynamism
Dimension Indices		
Cooperative	.55***	-.02
Assertive	-.04	.34**
Conflict-Handling Modes		
Competing	-.45***	.09
Avoiding	-.26	-.16
Accommodating	.48***	-.28*
Collaborating	.46**	.08

NOTE: N = 40; data rounded to two places.

* p < .05
** p < .02
*** p < .001

DISCUSSION

The use of the PDG in a classroom setting is quite easy but also has a number of limitations. First, behavior is severely restricted in the PDG which reduces the relevance of the exercise for understanding real-life conflict. Second, the PDG typically generates a competitive atmosphere which "demoralizes" many of the students who see no way to achieve cooperation. In contrast, the two-dimensional model suggests the possibility of collaboration as an integrative alternative to competition.

Compared to the PDG, our laboratory version of the matrix game has yielded a much better balance of different responses to conflict [2]. However, the abbreviated 3 x 3 matrix game, as presented in this paper, did not yield a similar balance of responses. In the second class, the use of competition remained at a very high level (approximately 67%). Thus, we anticipate the need for further refinement of the payoffs and procedures in the 3 x 3 matrix game.

Despite the extensive use of competition in our two classes, the matrix game provided a useful (and fun) vehicle for class discussion. A number of issues can be raised by this exercise:

1. What were your group's goals in the exercise?
2. What were the other group's goals?
3. What is the best strategy? Why?
4. Did you trust the other group? Why or why not?
5. What kind of behavior is represented by the choice of X? Y? Z? NP?
6. Does this type of behavior occur in the "real world"? When? How?

The exercise and discussion can easily be tied to a lecturette on the two-dimensional model (see [5, 7, and 8] for more extensive discussions of the model). Following the exercise with a presentation of the model provides a cognitive framework for adding meaning to the experience. Thus, we feel that this exercise provides a basis for discussing conflict from a "richer" perspective than the PDG.

REFERENCES

[1] Blake, R. R. and J.S. Mouton, The Managerial Grid, (Houston: Gulf Publishing, 1964).

[2] Cosier, R.A. and T.L. Ruble, "Toward a New Paradigm for the Study of Conflict-Handling Behavior" Unpublished manuscript, Indiana University, 1979.

[3] Osgood, C. E., J. G. Suci, and P.H. Tannenbaum, The Measurement of Meaning, (Urbana: University of Illinois Press, 1957).

[4] Pfeiffer, J. W. and J.E. Jones, A Handbook of Structured Experiences for Human Relations Training. (La Jolla, California: University Associates, 1974, 1975).

[5] Ruble, T.L. and R. A. Cosier, "Conflict Processes" in D. Hellriegel and J.W. Slocum, Jr., Organizational Behavior, second edition (St. Paul: West Publishing Company, 1979).

[6] Ruble, T. L. and K.W. Thomas, "Support for a Two-Dimensional Model of Conflict Behavior," Organizational Behavior and Human Performance, Vol. 16, 1976, pp. 143-155.

[7] Thomas, K.W. "Conflict and Conflict Management," in H. Dunnette (editor), Handbook of Industrial and Organizational Psychology, (Chicago: Rand McNally, 1976).

[8] Thomas, K.W. "Organizational Conflict," In S. Kerr (editor) , Organizational Behavior, (Columbus: Grid Publishing, 1979).