

# Developments in Business Simulation & Experiential Exercises, Volume 11, 1984

## DISTRIBUTIVE VERSUS INTEGRATIVE APPROACHES TO NEGOTIATION: EXPERIENTIAL LEARNING THROUGH A NEGOTIATION SIMULATION

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### ABSTRACT

Negotiation is among the most frequently utilized means of resolving conflicts. Negotiation strategies are generally characterized as either distributive or integrative in nature. The present study presents a negotiation simulation designed to enable participants to experience the different behavioral and attitudinal outcomes which frequently result from adopting these contrasting approaches to negotiation. The primary advantages of this simulation are that it is generic to a number of negotiation contexts and time efficient. Based upon results obtained from a sample of 102 managers, this negotiation simulation is shown to be highly effective in introducing participants to distributive versus integrative approaches to negotiation.

### INTRODUCTION

Given the increasing interdependence between persons, groups, and organizations in contemporary society, the effective management of conflict has become an increasingly salient issue. During the past decade the universality and viability of negotiation as a means of conflict management has attracted increased attention from both academics [4] and practitioners [2].

Drawing from Walton and McKenzie's [5] seminal work, most persons maintain that two broad approaches to negotiation exist: (1) distributive approaches; and (2) integrative approaches. Distributive negotiations are those requiring agreements about how to allocate shares of scarce resources. In essence, distributive negotiations concern who gets how much of a fixed total payoff. Game theorists refer to distributive negotiations as zero-sum games. Given the nature of distributive negotiations each party focuses on maximizing its own payoffs while conceding only enough to its opponent to obtain a basic agreement. Each party views the other as an adversary, and the parties debate their differences almost exclusively in terms of who will get how much of what. The only information that a party shares is that which enhances its point of view, or increases its chances of winning. At the same time, each party tries to learn all it can about the other party's positions, needs, and minimum acceptable demands.

Integrative negotiations, on the other hand, involves a joint effort directed at finding a solution that will be perceived as beneficial to both parties. Typically, the collaborating parties search for ways to increase the total payoff, while expressing little concern for how much each party will receive. Integrative negotiations are referred to as non-zero sum games. Parties engaged in integrative negotiations share norms that value reasoned, analytic, and objective problem solving. They recognize that they have common interests, and they believe that they will all benefit from their joint effort.

While Ware [6] and a few other persons have acknowledged that which approach one takes to negotiations should be contingent upon the situation, and others have noted that most negotiations are characterized by both distributive and integrative components [5], conventional wisdom and a sizeable body of research suggests that, in most cases, integrative negotiations result in superior outcomes (payoffs) compared to distributive negotiations [3]. In addition, proponents of integrative negotiations maintain that it leads to better long-run solutions, that it promotes authenticity in interpersonal and intergroup relationships, and that collaborative experiences lead to an improved organizational climate based on personal abilities, trust, and openness rather than political interests, competition, and job security.

As noted previously, negotiation as a mode of conflict management has achieved enhanced notoriety during the past decade. Therefore, it is desirable that negotiation simulations be available to introduce persons to the art of negotiation, and expose them to alternative approaches to negotiation. Although a number of negotiation simulations are currently available [1], many of these simulations possess two significant limitations. First, many negotiation simulations are highly complex and their effective utilization necessitates a sizeable time commitment. Second, negotiation simulations are often case in the context of a single sphere of negotiations such as labor-management negotiations or a purchasing decision. Persons not involved or familiar with these negotiation contexts often feel at a competitive disadvantage or fail to become as involved in the simulation as might otherwise be the case. The remainder of this paper presents a negotiation simulation which the author believes overcomes the limitations noted above, while still introducing participants to the dynamics of distributive versus integrative negotiations. After the simulation is described, the paper presents data the author has collected which seeks to examine the effectiveness of the negotiation simulation.

### SIMULATION AND INSTRUCTIONS

The simulation is a one-on-one negotiation exercise consisting of two phases. In each phase participants are required to negotiate over three issues labeled Issue I, Issue II, and Issue III. The three issues are deliberately labeled in an innocuous fashion to minimize emotionalism during negotiations and to prevent either party from perceiving that it is negotiating at a competitive disadvantage. For each issue, there is a range of possible settlement points or positions labeled A through T. Each position has assigned to it a number of points.

When negotiations begin, one party makes an opening offer on an issue. The initiating party states to the other party the number of the issue under negotiation (I, II, or III) and the letter corresponding to the point value of the proposed settlement. Participants earn the number of points corresponding to the issue and settlement letter of their point schedule. The parties are allowed 15 minutes to negotiate during each of the two phases of the simulation. Negotiators receive no points for issues

# Developments in Business Simulation & Experiential Exercises, Volume 11, 1984

which remain unsettled at the conclusion of negotiations. Appendix I presents Negotiator A's payoff table. Appendix II presents Negotiator B's payoff table. The written instructions which each party receives prior to the start of negotiations are shown in Appendix III.

## APPENDIX I NEGOTIATOR A

SETTLEMENT POINT	ISSUE I	ISSUE II	ISSUE III
A	7	12	5
B	7	14	6
C	7	15	7
D	8	16	7
E	10	17	8
F	11	18	9
C	11	20	9
H	11	22	10
I	12	22	13
J	13	24	15
K	13	26	17
L	14	28	18
M	16	30	18
N	20	40	19
O	25	45	19
P	30	50	20
Q	35	55	25
R	40	60	30
S	45	65	35
T	50	70	40

Your maximum settlement = 50 + 70 + 40 = 160

Your minimum settlement = 7 + 12 + 5 = 24 (assuming all issues settled)

## APPENDIX II NEGOTIATOR B

SETTLEMENT POINT	ISSUE I	ISSUE II	ISSUE III
A	80	30	50
B	70	28	47
C	60	26	43
D	50	26	37
E	40	20	33
F	30	18	27
C	25	10	25
H	20	10	23
I	19	9	20
J	19	7	18
K	18	7	17
L	17	5	17
M	17	5	16
N	16	3	15
O	15	3	15
P	14	2	14
Q	14	1	13
R	13	0	13
S	13	0	12
T	12	0	12

Your maximum settlement = 80 + 30 + 50 = 160

Your minimum settlement = 12 + 0 + 12 = 24 (assuming all issues settled)

## APPENDIX III

### Negotiator A and Negotiator B

Hide your negotiation sheet from your opponent. Do not permit your opponent to see any of the point values on your sheet!

The purpose of this exercise is to test your skill as a negotiator of uncontroversial issues. On the negotiation sheet are three columns of numbers, labeled Issue I, Issue II and Issue III. These are the three issues on which you will bargain. For each issue, there is a range of possible settlement points or positions labeled A through T. Each position has assigned to it a number of satisfaction units, or points. In this exercise, your goal is to maximize the total number of points or satisfaction units to you. Your opponent may or may not have the same points attached to the same settlement values as you do.

You have already been assigned to a partner for this activity. Before the negotiations begin, you will have a few minutes to review these instructions and to determine a strategy. When the negotiations begin, one of you will make an "offer" on an issue. You will state to the other party the number of the issue that you want to negotiate (I, II or III), and the letter corresponding to the position value on which you wish to propose a settlement. The other party can then agree, respond with a different settlement letter, or propose to discuss a different issue. Agreement occurs when each party accepts the same letter as a settlement for each issue. Each negotiator then obtains the number of points corresponding to the issue and settlement letter on his own point schedule. Agreement on any issue is tentative until all three are settled. You may "reopen" negotiations on any issue that was previously agreed upon, if you desire.

You have fifteen minutes in total to strike an agreement on all three issues. Results will be compared to other negotiation pairs in order to assess the effectiveness of your bargaining. Remember, your sole objective is to maximize the number of points for your own individual settlement package.

Examination of Appendix I and II reveals that the payoff tables of Negotiator A and Negotiator B are asymmetrical. For example, while an A or B settlement on Issue I results in Negotiator B earning 80 or 70 points respectively, Negotiator A would earn only 7 points for either an A or B settlement on Issue I. The payoff tables on Issues II and III are constructed in a similar fashion. Although the payoff tables on each issue are asymmetrical, further examination reveals that the issues have differing degrees of utility for the parties. For instance, a favorable settlement on Issue II is far more important for Negotiator A than for Negotiator B. However, Issue I has a greater utility for Negotiator B compared to Negotiator A. The differing utility functions are not as pronounced on Issue III. The maximum number of points which either negotiator can earn is 160. However, for either negotiator to earn 160 points would require that their opponent accept an extremely unfavorable settlement. As constructed, the simulation provides the opportunity for integrative solutions.

The simulation is introduced to participants as an opportunity to learn about negotiations by participating in an actual negotiation simulation. In addition, participants are told that the simulation will provide them with the opportunity to experience and assess

## Developments in Business Simulation & Experiential Exercises, Volume 11, 1984

alternative approaches to negotiation. Participants are then divided into two equal sized groups. One group is assigned the role of Negotiator A, while the other group assumes the role of Negotiator B. In most cases this division is done based upon participants' physical location in the classroom. In the event the group is comprised of an odd number of persons, one person is assigned the role of a negotiation assistant. After the group has been equally divided, and some physical separation between the negotiators introduced, the written instructions are distributed. After the parties have had ample time to read the instructions and study their payoff tables, approximately 10 minutes, the instructions are orally discussed. In addition, the parties are told that the negotiation simulation consists of two separate 15 minute phases. Next participants are told the rules and procedures which govern Phase I of the simulation. Parties are told that the instructions governing Phase II will be discussed at a later time.

Rules and procedures which govern Phase I are as follows: (1) each party's objective during Phase I is to maximize their point total; (2) during negotiations the parties should not reveal their payoff table to their opponent; (3) all offers and counteroffers must be recorded on the offer sheet which the parties pass back and forth during the negotiations; (4) other than exchanging offers and counteroffers the parties are forbidden from communicating either verbally or in writing; and (5) Phase I negotiations will last 15 minutes. The group is then divided into teams. Each team consists of one Negotiator A and one Negotiator B. The flip of a coin determines which party makes the opening offer.

Following the completion of Phase I, each party and each team is requested to total the number of points which they have earned. Team totals are determined by the sum of Negotiator A's points and Negotiator B's points. After individual and team point totals are tabulated, they are recorded on the classroom blackboard. In cases where group size prohibits posting all scores, a random sample of team point totals are displayed.

After Phase I negotiation data is recorded, participants are informed that Phase II of the simulation will commence. Rules and procedures which govern Phase II are the following: (1) the parties are to negotiate with the same opponent they faced during Phase I; (2) parties are free to share any and all information including their payoff tables with their opponent; (3) parties are free to communicate both verbally and in writing; and (4) Phase II negotiations will last 15 minutes.

Following the completion of Phase II, the parties are once again requested to determine their individual and team point totals. These data are then displayed alongside the data generated during Phase I of the negotiation simulation. The author has traditionally used different colored chalk to display Phase I and Phase II negotiation outcomes. If the negotiation simulation has proceeded according to plans, data generated by the participants serves as an excellent springboard to discuss their negotiation experience, and compare and critique distributive versus integrative approaches to negotiation. The depth of such a discussion is largely contingent upon the time made available to the facilitator. The author's experience is that the two phase negotiation simulation itself requires 50 to 60 minutes to complete. Although much negotiation resource material is available upon which to base a post-simulation discussion, the author has found Ware's [6] article to be particularly helpful.

### RESULTS

The negotiation simulation described above has been used by the author in a number of negotiation workshops during the past two years. These workshops generally last between one and one-half hours and three hours. The results presented below are based upon data collected from 102 persons employed by a large computer manufacturing organization who participated in negotiation workshops conducted by the author. These data were collected over a three month period. All participants were employed in supervisory positions, 71 percent were male, and the average age was 39. Persons functional areas included engineering, management information systems, materials management, maintenance and security, production, purchasing, and marketing.

Table 1 presents team earnings during Phase I of the negotiation simulation. The mean team earnings during the distributive phase of negotiations was 96.86. Results presented in Table 1 also show a wide variance pertaining to outcomes. No settlement point exceeded 7.8 percent of all settlements. Table 2 shows team earnings during Phase II of the simulation. Team earnings during the integrative phase of negotiations, Phase II, averaged 157.53. The difference in mean earnings between the two phases of negotiation is significantly different ( $t = 9.93$ ;  $p < .0001$ ).

Table 1

Team Earnings: Distributive Bargaining			
EARNINGS	ABSOLUTE FREQ	RELATIVE	
		FREQ (PCT)	CUM FREQ (PCT)
0	2	2.0	2.0
31	2	2.0	3.9
33	4	3.9	7.8
34	4	3.9	11.8
35	2	2.0	13.7
62	2	2.0	15.7
65	4	3.9	19.6
67	6	5.9	25.5
69	4	3.9	29.4
71	2	2.0	31.4
75	2	2.0	33.3
86	4	3.9	37.3
87	2	2.0	39.2
97	8	7.8	47.1
98	6	5.9	52.9
99	2	2.0	54.9
101	2	2.0	56.9
102	4	3.9	60.8
104	2	2.0	62.7
105	6	5.9	68.6
106	2	2.0	70.6
111	2	2.0	72.5
114	2	2.0	74.5
117	2	2.0	76.5
123	2	2.0	78.4
128	2	2.0	80.4
133	2	2.0	82.4
140	2	2.0	84.3
142	2	2.0	86.3
143	2	2.0	88.2
154	2	2.0	90.2
166	2	2.0	92.2

## Developments in Business Simulation & Experiential Exercises, Volume 11, 1984

Table 1 (cont.)

172	2	2.0	94.1
174	2	2.0	96.1
184	2	2.0	98.0
192	2	2.0	100.0

Table 2

Team Earnings: Integrative Bargaining

EARNINGS	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	CUM FREQ (PCT)
33	2	2.0	2.0
96	2	2.0	3.9
100	2	2.0	5.9
101	4	3.9	9.8
102	2	2.0	11.8
103	8	7.8	19.6
104	6	5.9	25.5
105	2	2.0	27.5
106	2	2.0	29.4
115	2	2.0	31.4
116	4	3.9	35.3
123	2	2.0	39.2
126	2	2.0	39.2
129	2	2.0	41.2
139	2	2.0	43.1
157	2	2.0	45.1
181	2	2.0	47.1
191	26	25.5	72.5
192	6	5.9	78.4
195	2	2.0	80.4
205	2	2.0	82.4
209	2	2.0	84.3
212	16	15.7	100.0

Further examination of data presented in Table 2 shows that compared to Phase I results the parties arrived at a greater consensus pertaining to an appropriate settlement point. In fact, during Phase II two settlement points (191 and 212) were selected by 41.2 percent of the negotiation teams. Different motivations explain the popularity of these two settlements. A 191 settlement is derived by one negotiator earning 95 points, while the other negotiator earns 96. This settlement point results in a relatively high team total while simultaneously coming as close as possible to equality of outcomes. On the other hand, a 212 settlement is the maximum team total settlement possible. However, this solution necessitates that one party earn 130 points while the other party settles for 81 points. Following the completion of the simulation, the author frequently asks negotiation teams which reached these respective settlements to describe the decision process which led them to select these settlements. It should be noted that during Phase II of the negotiation simulation the facilitator deliberately does not specify a negotiation objective for the parties. Additional analysis revealed no statistically significant differences in the amounts earned by Negotiator A or Negotiator B during either the distributive or integrative phases of negotiation.

The final phase of the analysis sought to examine whether the differences in earnings between the parties were greater during the distributive compared to the integrative phase of negotiation. Data showed that the average difference between the 51 teams during the distributive phase of negotiation was 26.38. On the other hand,

when the parties approached negotiations from an integrative perspective the mean difference in outcomes across teams was reduced to 13.40. Again, this difference between the parties' earnings was statistically significant.

### DISCUSSION

Negotiation is among the most frequently utilized modes of conflict resolution. Negotiation strategies are generally categorized as being either distributive or integrative. Research has shown that these differing approaches to negotiation frequently lead to vastly different behavioral and attitudinal outcomes. Cognitive explanations alone do not enable persons to fully comprehend nor internalize these distinctly different approaches to negotiation. Therefore, there exists a need to develop and utilize negotiation simulations to meet these objectives.

This paper presents a negotiation simulation designed to enable participants to experience distributive versus integrative approaches to negotiation. The advantages of this simulation is that it is generic to numerous negotiation contexts and requires only a modest time commitment to utilize effectively. The simulation is a one-on-one negotiation exercise consisting of two 15 minute phases. The parties negotiate over three issues where their respective payoff tables are arranged asymmetrically. Based upon results obtained from a sample 102 managerial personnel the negotiation simulation effectively induces distributive and later integrative bargaining behavior among participants. Findings showed that negotiation teams earned a significantly higher point total under an integrative compared to distributive bargaining approach. Furthermore, the difference in mean earnings between team members was significantly less when parties negotiated in an integrative fashion.

### REFERENCES

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