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# Interorganizational conflict: a labor-management bargaining experiment<sup>1</sup>

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The recent growth of research on conflict has been stimulated principally by the work of game theorists and psychologists.<sup>2</sup> Relatively few recent contributions have been made by sociologists whose interest in conflict is of long standing (cf. Bernard, 1965). One outstanding exception is Coser's work in codifying Simmel's analysis of conflict and in advancing the thesis that conflict often has positive functions in social systems (Coser, 1956). Another exception is Lipset's work on the importance of conflict for democracy and societal integration (Lipset, 1960, pp. 1-2, 27-28, 428ff).

Several decades ago, Ross formulated the proposition that noncoincident multiple lines of cleavage have a stabilizing function

in society. "A society . . . which is ridden by a dozen oppositions along lines running in every direction may actually be in less danger of being torn with violence or falling to pieces than one split just along one line. For each new cleavage contributes to narrow the cross clefts, so that one might say that society is *sewn together* by its inner conflicts" (Ross, 1920, p. 165).

This proposition is not only of great value in understanding the dynamics of stability and change at the level of a society, but also at a higher level of aggregation, namely, at the level of intersocietal relations. It may be relevant as well at lower levels of aggregation, as in the relations between organizations. When conflicts arise between or within societies or organizations and the parties share an interest that transcends the immediate conflict at hand, there is a disposition to engage in bargaining as a means of resolving the conflict.

The purpose of this paper is to report the results of a laboratory experiment in which lines of cleavage are reflected in alternative bargaining strategies, each having different predicted effects on the resolution of the conflict. The specific organiza-

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<sup>2</sup> See, for example, Rapoport (1960); Schelling (1960); Siegel and Fouraker (1960); Fouraker and Siegel (1963); Bishop (1963); Deutsch and Krauss (1960 and 1962); Kelley (1965); Joseph and Willis (1963).

tional setting chosen for the experiment involved a dispute between labor and management.

### *Alternative Bargaining Strategies and Conflict Resolution*

Conflicts arise when transactions, economic or noneconomic, occur among nations, organizations, or subunits of organizations (cf. Evan, 1965a, 1965b, and 1966). One mode of conflict resolution employed by such social units is bargaining. The prevailing strategy in bargaining, whether in the field of labor-management relations, international relations, or even at suborganizational levels, is guided by what we might call *the principle of unanimity*. According to this principle, each party must in its own best interest present a united front to the opposing party. Both parties appear typically to be guided by concepts underlying a mode of conflict referred to by Rapoport (1960, pp. 2-5, 107-242) as a "game," in which each party seeks to out-manuever the other in order to achieve victory. The folk rationale for this bargaining strategy is that if one publicly airs intrateam conflicts, one's adversary will exploit them to his advantage.

However, the principle of unanimity tends to generate a "self-fulfilling prophecy" mechanism (Merton, 1957, pp. 421-36) in the course of negotiations. Each side may become convinced of the intransigence and unreasonableness of the other side and then defensively act similarly. This in turn produces unfeigned intransigence and unreasonableness on the part of the adversary. Thus bilateral employment of the principle of unanimity appears conducive to recurrent stalemates when stalemates are possible, as in the international realm. In labor-management negotiations, in which societal pressures and the supervening interests of the parties generally promote a higher rate of

*some* conflict resolution than in the international realm, bilateral employment of the unanimity principle probably leads to either mutual compromise or to a victory by one of the parties.

An opposite bargaining strategy is guided by what we might call *the principle of dissent*. According to this principle, each party airs its internal differences in the course of negotiations with its adversary. Negotiations governed entirely by the principle of dissent tend to approximate what Rapoport (1960, pp. 5-12, 245-309) conceptualizes as a "debate," in which an exchange of genuinely-held views occurs, rather than as a "game," in which such views may be deliberately camouflaged. Although it is not uncommon for negotiating teams to be internally divided, it is uncommon for them to air their disputes publicly in the presence of their adversaries.

If the bargaining strategies of *both* negotiating teams are guided by the principle of dissent, there may well be a greater probability not only of a resolution of the conflict but also of a "creative" or an "integrative" type of resolution than if negotiations are guided by the principle of unanimity. Among the possible outcomes of bargaining, the three discussed by Mary Parker Follett several decades ago still appear useful: *domination* occurs when one party wins all and the other party loses all; *compromise*, when each side wins some points but loses others; and *integration*, when both sides, in effect, win and neither side loses any points due to the achievement of a new, mutually beneficial set of terms.<sup>3</sup>

<sup>3</sup> For Follett's work, see Metcalf and Urwick (1941, pp. 30-49). See also North *et al.* (1960).

The principal hypothesis tested in this experiment was that the airing of *intra-organizational* conflicts would not impede but would promote the resolution of *inter-organizational* conflict. More particularly, when negotiations are governed by the bilateral employment of the principle of dissent rather than by the bilateral employment of the principle of unanimity, not only would more conflict resolution occur but also integrative outcomes would occur more frequently than domination or compromise outcomes.

One mechanism which would possibly produce these effects is an internally induced effort at mediating the dispute. In any triad, as Simmel has shown (see Wolff, 1960, pp. 145-69), the third member can benefit from the conflict of the other two members; he can aid one of the parties; he can remain an inactive neutral, or he can act as a mediator in an effort to bring the two conflicting parties closer together. If the bargaining strategy employed triggers a mediation mechanism, the probability of an integrative conflict resolution would increase.

In order to test the principal hypothesis, a laboratory experiment simulating a labor-management bargaining process (cf. Zelditch and Evan, 1962), was designed using, for simplicity, a dyadic team on each side. Three negotiating situations were of major interest.

The first negotiating situation is guided entirely by the principle of unanimity. Each pair of negotiators presents a unanimous and, in general, an extremist position. We predicted that the negotiations would remain effectively dyadic in nature; the four-man bargaining situation is not likely to decompose into triads. Hence no mediation mechanism is likely to be activated, since there are no structural factors facilitat-

ing a change to moderation by an extremist. We shall refer to this condition as *bilateral consensus*.

In the second negotiating situation, each dyadic team of negotiators is internally divided in its bargaining positions, one negotiator advancing an extremist position and the other a moderate one. This four-man situation can effectively decompose into four overlapping triads, in two of which the moderate finds himself mediating between his fellow extremist and one of the opposing extremists, and in two of which the two moderates, one from each side, may seek to persuade one extremist to alter his views. We shall refer to this second condition as *bilateral dissensus*.

A third negotiating situation can occur if one negotiating team uses a strategy of consensus and the other a strategy of dissensus. This four-man bargaining situation can effectively decompose into three triads, in two of which the moderate is likely to mediate between his fellow extremist and one of the extremist negotiators on the other team. In the third triad, the moderate is confronted with the two extremists of the other team, between whom he is not likely to succeed as a mediator. The purpose of the third condition, in fact, is to test the folk theory of bargaining that the team which exposes its internal differences to an adversary that remains united will be dominated. We shall refer to the third condition as *unilateral dissensus*.

The mediation mechanism—presumptively triggered in the four triadic coalition formations in the bilateral dissensus condition—may involve a relatively high degree of information exchange among the parties through the larger number of channels of receptive communication. In turn, more empathy may be generated among the parties. The combination of a greater

amount of information and empathy may produce more new ideas, some of which could directly comprise a creative-integrative resolution of the conflict.

In summary, then, the principal hypotheses tested in this experiment were that a bargaining strategy of bilateral dissensus, reflecting intraorganizational conflicts, will more frequently promote a resolution of the interorganizational conflict, and will more frequently promote integrative types of resolution, since only through bilateral use of a strategy of dissensus can effective mediation occur. We shall also test the folk theory of bargaining that unilateral dissensus is associated with a domination type of conflict resolution.

*Design of the Experiment*

COMPOSITION OF NEGOTIATING TEAMS

The personnel of each negotiating team consisted of two labor and two management representatives. There was a further distinction between the interests which each negotiator represented, so that honest articulation of these interests would require in some cases a moderate negotiating position and in others an extreme negotiating position.

Whenever two extremists were placed on the same team, both were given instructions to maintain a negotiating strategy of consensus between themselves. Whenever an extremist and a moderate were placed on the same team, both were given instructions to maintain a negotiating strategy of dissensus between themselves.

Combining consensus-dissensus bargaining strategies with moderate-extremist position intensities in composing negotiating teams for two organizations yielded six possible patterns of bargaining (Table I).

TABLE I  
POSSIBLE PATTERNS OF BARGAINING BETWEEN TWO ORGANIZATIONS

Negotiating team of Organization 1	Notation	Negotiating team of Organization 2
Consensus strategy, two extremists	$C_E C_E$	Consensus strategy, two extremists
Consensus strategy, two moderates	$C_M C_M$	Consensus strategy, two moderates
Consensus strategy, two extremists	$C_E C_M$	Consensus strategy, two moderates
Dissensus strategy, one extremist, one moderate	$DD$	Dissensus strategy, one extremist, one moderate
Consensus strategy, two extremists	$C_E D$	Dissensus strategy, one extremist, one moderate
Consensus strategy, two moderates	$C_M D$	Dissensus strategy, one extremist, one moderate

From the standpoint of strategy alone, the first three combinations in Table I can be described as bilateral consensus treatments; the fourth combination, a bilateral dissensus treatment; and the last two combinations, unilateral dissensus treatments.

Only three of the six possible treatments were run in this experiment: *bilateral consensus among extremists, bilateral dissensus, and unilateral dissensus* against two extremists in consensus. These treatments will henceforth be abbreviated  $C_E C_E$  (consensus between extremists on both sides),  $DD$  (dissensus on both sides), and  $C_E D$  (consensus between extremists on one side, dissensus on the other).

$C_E C_E$  was selected since it probably occurs more frequently than the other five patterns of bargaining.  $DD$  was selected since it was essential for the testing of the principal hypothesis of this study, that bilateral dissensus would facilitate a creative-integrative type of agreement.  $C_E D$  was chosen to test the folk theory of the disadvantageous effects of employing a dis-

sensus strategy in a situation when only one side used the strategy. As an internal control for labor and management roles in the C<sub>ED</sub> treatment, in one-half of the trials, labor was in dissensus, and in the other half, management.

Each of the treatments was replicated ten times for a total of thirty sets of negotiations. Ten replications were judged to be the minimal number in which the effects of the independent variables could be shown to be statistically significant. If our resources had not been so limited we would have run at least fifteen replications of each treatment.

#### SUBJECT SELECTION

The 120 subjects required for thirty pairs of negotiating teams were recruited from universities in the Boston-Cambridge area. Within each university, the experimental sample was restricted almost entirely to the junior and senior classes, in which presumably the more knowledgeable students would be found. Two kinds of background information were gathered on the volunteer forms to provide a basis for inferences regarding the familiarity of prospective subjects with labor-management relations. These included (1) course background and (2) a brief labor-management knowledge test. The latter was used as a screening device to "flunk" or "pass" students for participation in the experiment.

In the interest of promoting social-psychological realism in the experiment, a deliberate effort was made to match subjects having pro-management sympathies with experimental management roles and subjects having pro-labor sympathies with experimental labor roles. A further effort was made to place subjects in extremist or moderate positions within their roles depending upon their degree of commitment

to labor or management values. The vehicle for this matching operation was a composite labor-management preference index.

The final criterion for selecting subjects was their score on a dominance-submission scale (Shaw, 1960). Overly submissive persons would presumably not be chosen as actual negotiators for fear of their yielding too easily to pressures by their adversaries. Similarly, overly dominant persons might not be selected for fear of unnecessarily antagonizing an opposition from whom concessions were sought. Students scoring beyond specified limits on the scale were thus disqualified from participating in the experiment.

#### EXPERIMENTAL TASK

The subjects were asked to negotiate a dispute between labor and management which had arisen from the proposed introduction of automated equipment. The same automation problem was presented to all negotiators in all treatments. An automation dispute was chosen since it seemed to lend itself to a wide variety of resolutions, whether of a domination, compromise, or integration type. It is impossible to be certain that one of these types of conflict resolution was not intrinsically favored by the nature of the problem, but the expected diversity of agreements did materialize, indicating that the selection of the problem was, in all likelihood, a good one. The problem itself was fictional, but this was not told to the subjects. Some subjects realized immediately that this was the case, but some wished to know after the experimental session how the dispute was *really* resolved. This was a reassuring indication of the realism implicit in the statement of the bargaining problem and of the ego-involvement in the simulated bargaining.

Subjects were also instructed not to hold secret discussions with their negotiating partners. All intrateam discussions were supposed to be over the table. This procedure was resorted to so that all remarks of the negotiators would be audible and hence recorded on tape by a coder using Bales' (1951) Interaction Process Analysis Recorder in an adjoining room behind a one-way mirror. Another reason for this procedure was that caucusing among negotiators was found in a pretest to encourage a convergence of views within a team, hence impeding the induction of the bilateral dissensus condition.

#### INDUCTION OF THE INDEPENDENT VARIABLES

To create *de facto* facsimiles of the three experimental conditions, subjects had to learn three crucial items of information beyond the facts of the dispute. They had to know (1) whether they were to play *labor or management roles*, (2) whether they were to argue *extremist or moderate positions*, and (3) whether they were to employ a *consensus or dissensus negotiating strategy*.

The induction of the organizational role was relatively simple. Upon entering the experimental room, subjects were asked to find seats opposite a nameplate bearing their name and organizational title. The nameplate of each was visible to all. The two labor representatives were seated on one side of the table, and the two management representatives on the other. A statement was distributed to all negotiators stating the facts of the dispute and making references to each role in the dispute. This statement reinforced the perception of the organizational role each subject was to perform. In addition, references to office titles by the negotiators themselves during the

negotiations further strengthened this induction, as did the procedure of having the negotiators write memoranda to their "superiors" after each negotiating session.

The induction of the bargaining position, whether extremist or moderate, as required by the experimental design, involved (1) a description of the organizational pressures impinging upon each negotiator, (2) a series of "quotes" from the press supposedly reporting each negotiator's position prior to the negotiations, and (3) direct injunctions by each negotiator's "superior" to take extremist or moderate positions.

The induction of the negotiating strategy of dissensus proved more difficult than the induction of either the organizational role or the bargaining position. To induce the members of a negotiating team to disagree publicly with one another in the presence of their adversaries appeared to entail violating what may appear to the average person as a compelling social law: "In the presence of outgroup adversaries, ingroup conflicts are suppressed" (cf. Coser, 1956, p. 73; Mack and Snyder, 1957, pp. 228-34). This problem was solved by building a conflict of interest into each negotiating team whenever the dissensus strategy was called for. On the management side, one of the subjects played the role of a cost-conscious assistant vice-president of production who took an extreme position on the automation issue. His partner played the role of an assistant vice-president of personnel concerned with maintaining harmonious labor-management relations, and thus took a moderate stand. On the labor side, it proved necessary to have two business representatives of two different unions, the United Automobile Workers (UAW) and the International Association of Machinists (IAM). The business representative of the aggressive industrial union, the UAW,

was disposed to an extreme view of the issue because some of the members of his union were to be displaced by the projected program of automation. His fellow-negotiator, representing the craft union, the IAM, was inclined toward a moderate position on this issue, especially since its members were not affected by the planned program of automation.

Whenever a consensus strategy was called for, identical constituency interests were formulated. On the management side, a consensus strategy was utilized by *two* assistant vice-presidents of production. On the labor side, a consensus strategy was utilized by *two* business representatives of the UAW.

Two additional procedures were used to reinforce the strategy induction: (1) a message from the negotiator's immediate "superior" concerning the negotiating strategy he wished the bargaining representative to employ, and (2) a reaffirmative memorandum from that same "superior" during the course of the negotiation.

#### PROCEDURE

When the four subjects for each trial of the experiment arrived, they were escorted into the experimental room and asked to seat themselves in front of nameplates around a table. The experimenter then began the first of a series of remarks.

Gentlemen, tonight we would like you to imagine yourselves to be representatives of labor and management meeting to negotiate a problem which has arisen between your company and your union(s). The roles which you will play in these negotiations are noted on the cards in front of you. The problem about which you will be negotiating is explained in this statement, which I would like you to read at this point.

The description of the automation problem

was then distributed with appended statements designed to induce "moderate" and "extreme" bargaining positions.

The experimenter next distributed a one-page prebargaining questionnaire containing items for ascertaining the subjects' perceptions of the organizational role, bargaining strategy, and bargaining position intensity they had been designated to play in the negotiations. A limit of five sixteen-minute negotiating sessions was set for the overall length of the negotiations. If the dispute was resolved before the end of the fifth negotiating session, subjects were asked to fill out a questionnaire containing items on the negotiators' perception of the terms of any agreement reached, whether partial or total, as well as various other questions. The same questionnaire was distributed at the end of the fifth negotiating session if no final agreement had been reached. After this postexperimental questionnaire had been completed, the subjects were given an explanation of the purpose of the experiment and paid their fee for participating in the experiment.

#### Results

##### VALIDATION OF INDUCTION OF INDEPENDENT VARIABLES

As described above, it was necessary to manipulate three variables: (1) a particular *negotiator role*, whether *labor or management*; (2) a particular *bargaining position*, whether an *extremist labor position*, a *moderate labor position*, an *extremist management position*, or a *moderate management position*; and (3) a *bargaining strategy*, whether *dissensus or consensus*.

Validation of the first manipulation was achieved by experimenter observation. It was clear from the beginning of the first



TABLE 2  
A COMPARISON OF REQUIRED ROLE ORIENTATIONS AND ACTUALLY AVAILABLE ROLE ORIENTATIONS

	Management extremist	Management moderate	Labor moderate	Labor extremist
Number of required subjects with role orientations	45	15	15	45
Number of subjects actually having role orientations	21	53	39	7

negotiating session that every negotiator knew whether he was to play a labor or management role. The nameplates bearing the names and organizational titles of each subject induced the role from the moment he entered the experimental room.

Validation of the second manipulation, bargaining position intensity, proved more difficult. Table 2 compares the number of subjects with role orientations theoretically required by the experimental design and the actual number of subjects with role orientations finally selected as the most qualified available. This table reveals, first of all, that of the 120 subjects, 74 were actually pro-management and 46 pro-labor, whereas the design called for equal numbers (60 of each).

The extent of mismatching of roles was due not only to the relative unavailability of subjects with certain role orientations, but also to the exigencies of conducting an experiment in which four individuals were required to participate at one and the same time. At the eleventh hour, with one subject missing, it was sometimes necessary to complete the cast with a subject from the pool of available volunteers, who often did not have the attributes precisely required by the experimental design. The alternative to this mismatching of roles was to forfeit three subjects plus the subject fees, neither of which was feasible at the time.

The postexperiment questionnaire included a list of 100 adjectives from which each negotiator was asked to choose those descriptive of both members of the opposite team, taken one at a time (Gough, 1960). Fifty of these adjectives were chosen for their hypothetical association with extremism, the remaining 50 for their presumed association with moderation.

As shown in Table 3, the difference in the number of extremism-linked adjectives between the experimentally-assigned extremists and the experimentally-assigned moderates in condition DD is significant beyond the .0005 level ( $X^2 = 197.0$ , 1 d.f., one-tailed); as expected, more extremism-linked adjectives were applied to extremists. The same situation obtains in condition  $C_E D$ , with more extremism-linked adjectives applied to experimentally-assigned extremists than to experimentally-assigned moderates. The difference is significant beyond the .0005 level ( $X^2 = 344.2$ , 1 d.f., one-tailed).

There is no statistically significant difference in the number of extremism-linked adjectives applied to experimentally-assigned extremists between DD and  $C_E D$ , DD and  $C_D C_E$ , or  $C_E D$  and  $C_D C_E$ , a between-treatment comparability which we sought to achieve. These results suggest a successful validation, although the question remains open whether the impact of the bargaining-position induction was strong enough.

TABLE 3  
ABSOLUTE NUMBER OF EXTREMISM-LINKED  
ADJECTIVES (CORRECTED FOR SAMPLE SIZE)  
BY TREATMENT\*

Treatment	Experimentally- assigned moderates	Experimentally- assigned extremists
DD	242	666
C <sub>E</sub> D	108	603
C <sub>E</sub> C <sub>E</sub>	-	626

\* Intratreatment differences are significant ( $p < .0005$ ).

Equally indeterminate is the comparability of bargaining positions for all replicates of a particular condition and for similar bargaining positions in the different conditions. In other words, it is uncertain whether we succeeded in inducing a similar *degree* of extremism on the labor and management sides in the C<sub>E</sub>C<sub>E</sub> condition, a similar difference in position between the extremists and moderates on both sides in the DD condition, and similar bargaining positions for extremists in C<sub>E</sub>C<sub>E</sub>, DD, and C<sub>E</sub>D.

The third variable that was manipulated, bargaining strategy, unlike the first two variables, refers to an attribute of a team and not an individual. To measure whether, in fact, the members of a team evidence disagreement with one another in the course of the negotiations, we analyzed the Interaction Process Analysis (IPA) data for behavioral evidence of disagreement within each team. Using Bales' IPA category 10, which refers to disagreement, we present in Table 4 the number of acts of disagreement for each dyadic team within each experimental condition, summed across all 10 trials or replicates. Using a nonparametric test, the Link and Wallace method of allowances (see Mosteller and Bush, 1954, pp. 304-307), no significant difference in intrateam disagreement was found

TABLE 4  
NUMBER OF ACTS OF INTRATEAM DISAGREEMENT\*  
FOR THE TEN REPLICATES IN EACH  
TREATMENT

	C <sub>E</sub> C <sub>E</sub>	C <sub>E</sub> D	DD
Team 1 replicates	18	22	279
Team 2 replicates	13	158	193

\* As measured by Bales' Interaction Process Analysis, category 10.

between sides in C<sub>E</sub>C<sub>E</sub> or in DD. Within C<sub>E</sub>D, the dissensus side showed more disagreement than the consensus side, a result significant at the .025 level, one-tailed. No difference in intrateam disagreement was found between the dissensus side in C<sub>E</sub>D and either dissensus side in DD, nor was there any difference between the consensus side in C<sub>E</sub>D and either consensus side in C<sub>E</sub>C<sub>E</sub>. In other words, between-treatment comparability in amount of intrateam disagreement for dissensus and consensus was also achieved, pointing toward a successful induction of the dissensus strategy.

A second measure of the effectiveness of the induction of the bargaining strategy variable, which is attitudinal in nature, raises some doubt about the *strength of the perception* of the bargaining strategy by the negotiators. In the postexperiment questionnaire, a question was asked to ascertain the subjects' perception of the overall use by the other side of a dissensus or a consensus strategy. In Table 5 we see that C<sub>E</sub>C<sub>E</sub> had a higher proportion of consensus answers and a lower proportion of dissensus answers than DD ( $X^2 = 11.7$ , 1 d.f., significant beyond the .0005 level, one-tailed). However, only 14 of the 40 subjects in the DD condition were *aware* of the dissensus bargaining strategy, which raises a question of the extent of impact of the induction. C<sub>E</sub>C<sub>E</sub> also had a higher proportion of consensus answers and a lower proportion of

TABLE 5  
PERCEIVED IMPACT OF BARGAINING STRATEGY  
BY TREATMENT

Treatment	Consensus answer	Dissensus answer
C <sub>E</sub> C <sub>E</sub> (N = 39)	38	1
C <sub>E</sub> D (N = 40)	30	10
DD (N = 40)	26	14

C<sub>E</sub>C<sub>E</sub> and DD:  $X^2 = 11.7$ , 1 d.f.,  $p < .0005$   
 C<sub>E</sub>C<sub>E</sub> and C<sub>E</sub>D:  $X^2 = 6.5$ , 1 d.f.,  $p < .01$   
 C<sub>E</sub>D and DD:  $X^2$  not significant

dissensus answers than C<sub>E</sub>D ( $X^2 = 6.52$ , 1 d.f., significant beyond the .01 level, one-tailed). However, C<sub>E</sub>D did not have a significantly higher proportion of consensus answers or a lower proportion of dissensus answers than DD, although the trend as shown in Table 5 was in the expected direction.

In short, the experimental manipulations for position intensity and bargaining strategy, while statistically successful in general, may not have made strong enough perceptual impacts on the subjects to produce the predicted effects. Accordingly, in analyzing the data, it seemed important to select only those replicates in which the inductions were *successful* and compare them with *all the replicates* in each treatment. If the findings for all the replicates in the treatment were consistent with those for the closely matched replicates in the treatment, we would have more confidence in the results. If, however, the findings for all the replicates were not consistent with those for the matched replicates in the treatment, it would diminish our confidence in the results.

#### NUMBER OF POINTS OF AGREEMENT

Our original hypothesis suggested that the number of points on which a set of negotiators agreed would be higher in the

DD condition than in either the C<sub>E</sub>C<sub>E</sub> or C<sub>E</sub>D conditions. To test this hypothesis, it was necessary to measure the number of points of agreement achieved in each replicate. Since negotiators in their reports did not always agree on whether a given term had been formally agreed upon during negotiations, a special scoring procedure was necessary in order to arrive at the most veridical measure of the number of terms actually agreed upon.

Two sources of raw data on terms of agreement were utilized: (1) the enumeration of these terms by one of the experimenters who observed all of the negotiations, and (2) the enumeration of these terms by the four negotiators. Since the observer had an opportunity to list agreed-upon terms as the negotiations progressed, while the negotiators usually did not, the observer's enumeration was given a somewhat higher probability of being accurate and inclusive. Terms mentioned by more than one of the five parties (i.e., the four negotiators and the observer) were also presumed to have a greater probability of actually having been agreed upon.

A chi-square test revealed no difference in number of terms of agreement among the three treatments ( $X^2 = 4.38$ , 2 d.f.). Even the rank order turned out differently from what had been expected, with C<sub>E</sub>C<sub>E</sub> and not DD achieving the most terms of agreement. On the basis of the total sample of replicates, the hypothesis was not confirmed. However, an analysis of the reduced sample of matched replicates yields different results. As may be seen in Table 6, while for all replicates C<sub>E</sub>C<sub>E</sub> scored highest in points of agreement and DD second, the order is reversed in the case of the matched and reduced sample. While no definitive conclusions can be drawn on the basis of a simple rank order, the dis-

TABLE 6  
MEAN NUMBER OF POINTS OF AGREEMENT PER  
REPLICATE BY TREATMENT

Treatment	Reduced sample of matched replicates	Entire sample of replicates
DD	3.7	2.5
C <sub>E</sub> C <sub>E</sub>	2.5	3.4
C <sub>E</sub> D	1.8	1.9

confirmatory results on the basis of the entire sample of replicates are at least cast in doubt.

#### TYPE OF CONFLICT RESOLUTION

Our original hypotheses regarding the quality of the agreement were that DD would be more productive of integrative outcomes than C<sub>E</sub>C<sub>E</sub> or C<sub>E</sub>D, and that C<sub>E</sub>D would be more productive of domination outcomes than DD or C<sub>E</sub>C<sub>E</sub>. To test these hypotheses, we had to devise a technique for classifying terms of agreement.

Each term of agreement was classified as reflecting domination, compromise, or integration elements. Domination was coded if the term reflected unilateral satisfaction for one side and unilateral dissatisfaction for the other; compromise, if the term reflected both bilateral satisfaction and bilateral dissatisfaction; and integration, if the term reflected only bilateral satisfaction. Two coders discussed every term to decide in which category it ought best to be placed. Whether other coders would have made different choices is an open question; but a reliability test, which yielded a correlation coefficient of .54, revealed that at least the two coders who scored the data jointly were fairly consistent with themselves over time.

After the quality of each term of agreement was coded, the term was then given a weight of 1 (low), 2 (medium), or 3

TABLE 7  
QUALITY OF MEAN NUMBER OF TERMS OF  
AGREEMENT BY TREATMENT\*

Type of quality	C <sub>E</sub> C <sub>E</sub>	C <sub>E</sub> D	DD
Integration	12.2(12.5)	3.4 (5.0)	15.2(23.3)
Compromise	25.2(15.0)	10.6(11.0)	11.2(16.7)
Domination	20.4 (7.5)	20.6(17.0)	13.2(18.0)

\* The numbers in parentheses refer to the reduced sample of matched replicates, the other numbers to the entire sample of replicates.

(high), in accordance with the degree to which the classified element was present. Table 7 reveals the mean amount per replicate of a given type of agreement for each treatment. Using the Link and Wallace method of allowances for all the following analyses, DD yielded a greater amount of integrative terms of agreement than C<sub>E</sub>D, this result being significant at the .05 level, one-tailed. DD did not yield, however, a significantly greater amount of integrative terms of agreement than C<sub>E</sub>C<sub>E</sub>, though it did yield somewhat more. The hypothesis, on the basis of the total sample of replicates, may thus be said to be partially confirmed.

An analysis of the results from the reduced sample strengthens the confirmation of this hypothesis. As may be seen in Table 7, the rank order on amount of integration is the same for the reduced sample as for the total sample. The superiority of DD to C<sub>E</sub>C<sub>E</sub> as far as amount of integrative terms of agreement is concerned appears even more strongly in the reduced sample.

No prediction was made that any of the three treatments would be peculiarly associated with compromise. In fact, no significant differences in mean number of compromise terms of agreement occurs between any two treatments. However, a trend does seem to appear, since C<sub>E</sub>C<sub>E</sub> yields more than twice as many compromise

TABLE 8  
MEAN NUMBER OF MEDIATIVE ACTS IN DD BASED ON LANDSBERGER'S MEDIATION PROFILE\*

	Management moderate	Management extremist	Labor moderate	Labor extremist
<i>Landsberger's Profile Categories:</i>				
Gives suggestion— IPA† category 4	24.7 (35.3)	17.3 (25.0)	28.4 (34.3)	27.9 (40.0)
Asks orientation— IPA category 7	4.2 (1.7)	3.4 (5.0)	3.3 (6.3)	2.9 (4.7)
Remarks to group as whole, irrespective of IPA category	37.0 (96.7)	32.7 (57.0)	61.9 (98.0)	39.0 (60.7)
Positive socioemotional behavior—IPA categories 1, 2, and 3	27.0 (35.3)	27.5 (17.3)	31.8 (31.3)	26.1 (24.3)
Negative socioemotional behavior—IPA categories 10, 11, and 12	59.0 (34.7)	139.2 (77.0)	100.7 (33.3)	81.3 (84.3)

\* The numbers in parentheses refer to the reduced sample of matched replicates, the other numbers to the total sample of replicates.

† Interaction Process Analysis.

terms of agreement than DD or C<sub>E</sub>D. But when the reduced sample is examined, no such trend appears. Thus it seems unlikely that compromise outcomes are peculiarly associated with any of the three treatments.

The hypothesis that unilateral dissensus is conducive to a domination type of conflict resolution was not confirmed. Hence our data did not confirm the folk theory of bargaining that unilateral dissensus leads to defeat by an adversary.

#### MEDIATION MECHANISM

The presumed mechanism by which bilateral dissensus was to reach more agreement and more integrative terms of agreement was through mediation. The evidence supporting the hypothesis that DD produces more terms of agreement than the other treatments is only suggestive because it is based only on the reduced sample of matched replicates and not on all the replicates. On the other hand, the evidence for the relationship between DD and inte-

grative terms of agreement is based on the reduced sample of matched replicates as well as on the entire sample of replicates. It thus became useful to examine our data for evidence of a mediation effect.

Landsberger (1955), in one of the few observational studies by a social scientist of actual labor-management mediation sessions, was able to derive empirically an Interaction Process Analysis (IPA) profile distinguishing the behavior of mediators from other negotiators. His findings revealed that mediators (1) gave more suggestions (IPA category 4), (2) asked more for orientation (IPA category 7), (3) addressed more remarks to the group as a whole irrespective of IPA category, (4) interacted more in a positive socioemotional manner (IPA categories 1, 2, 3), and (5) interacted less in a negative socioemotional manner (IPA categories 10, 11, 12). Admittedly, Landsberger is studying the mediative behavior of a third party, whereas in this study we are focusing on mediative

behavior manifested by the parties themselves. The analogue, however, seems close enough to warrant an analysis of our data modeled after that of Landsberger.

Since we obtained an IPA recording of the entire negotiation process, it was possible to use Landsberger's findings as a model of mediative behavior and to examine our data to discover whether there was an approximation to it in either the DD or the C<sub>E</sub>D treatment in which subjects performing moderate bargaining roles were present. In Table 8, we compare the four bargaining positions in DD on Landsberger's five categories. If management moderates were acting as mediators on the first of Landsberger's profile categories, i.e., giving suggestions, then they should be higher on this category than management extremists. Similarly, we would predict that labor moderates would be higher than labor extremists. Analogously, labor moderates should be higher than management extremists, and management moderates higher than labor extremists. When the moderates are compared with the extremists on the five categories suggested by Landsberger, the results are in the expected direction: 15 of the 20 times that such comparisons are possible, an outcome significant at the .025 level, one-tailed, by a sign test. Along every one of the five dimensions, the direction is as predicted 3 out of 4 times. Results for the reduced sample are given in parentheses in Table 8. Here 16 of 20 predictions are correct, which is also significant at the .025 level, one-tailed, by a sign test. When the data are further analyzed using the individual replicate, not the treatment, as a unit of analysis, the findings on all five categories of Landsberger's profile are significant only at the .07 level, one-tailed, by a sign test, for the entire sample of rep-

licates, and significant at the .025 level for the reduced sample of replicates.

A comparable analysis patterned after the Landsberger model of mediation was performed on the C<sub>E</sub>D treatment to ascertain whether the moderates manifested any mediative behavior. In both the original sample and in the reduced sample, no significant results were obtained.

Another measure of the presence of a mediation effect which we analyzed was *attitudinal* rather than *behavioral* in nature. In the postexperiment questionnaire, subjects were asked whether at any time in the course of the negotiations they found themselves "either trying to bring a proposal of your partner closer to a proposal made by a member of the other side, or to bring a proposal made by a member of the other side closer to a proposal made by your partner." No significant differences were found in the amount of perceived mediation among the three treatments or between any two treatments.

Although we might be inclined to lend more credence to the behavioral than to the attitudinal data, the lack of significant findings with respect to the latter, as well as the borderline significance of some of the findings concerning the behavioral measures, makes us cautious about suggesting the operation of a mediation mechanism in a bilateral bargaining situation. These somewhat inconsistent results suggest an alternative explanation of the finding that more terms of agreement are reached under bilateral dissensus bargaining than under bilateral consensus: When each negotiation team has an advocate of an extremist and a moderate position, the average position of the two teams is closer than when both teams have only advocates of an extremist position.

### Summary and Conclusion

An analysis of alternative bargaining strategies employed in resolving interorganizational conflicts resulted in the testing of the following principal hypotheses: (1) a bargaining strategy of bilateral dissensus reflecting *intraorganizational* conflicts will more frequently promote a resolution of *interorganizational* conflicts and will more frequently promote an integrative type of resolution than bargaining strategies of bilateral consensus or unilateral dissensus; (2) in accordance with the folk theory of bargaining, unilateral dissensus tends to generate a domination type of conflict resolution.

Inadequacies in the induction of two of the major variables manipulated, bargaining strategy and intensity of bargaining position, led us to test the hypotheses on the basis of results from two overlapping sets of replicates: (1) the entire sample of the replicates in the experiment and (2) a reduced sample of only those replicates in which the induction of bargaining strategy and bargaining position was unquestionably successful. When a hypothesis was confirmed in both cases, or disconfirmed in both, confidence would be had in either outcome. However, when a hypothesis held for the reduced sample but not for the entire sample, we provisionally accorded some weight to the evidence. Our conclusions, though only provisional and suggestive, are as follows:

(1) A bilateral dissensus strategy tends to produce more terms of agreement among the parties than does bilateral consensus or unilateral dissensus.

(2) A bilateral dissensus strategy tends to produce more integrative terms of agreement than unilateral dissensus, but the evidence is unclear as to whether it pro-

duces more such terms than bilateral consensus.

(3) In the bilateral dissensus treatment, we have some provisional evidence for the operation of a mediation mechanism which may have been a factor in generating integrative terms of agreement. No evidence of mediation was found in the unilateral dissensus treatment.

(4) The folk theory of bargaining, that a unilateral dissensus bargaining strategy is more conducive to a domination type of conflict resolution than is a bilateral consensus bargaining strategy, was not confirmed.

The bilateral dissensus strategy simulated in this experiment has an appearance of unreality. It is indeed difficult to find actual bargaining relationships in which bilateral dissensus is exhibited. It would almost appear as though the "institutionalization of dissent" (Lipset *et al.*, 1956, pp. 13-16, 403-18) in both trade unions and business organizations is a prerequisite for the emergence of a bilateral dissensus strategy. Another possible prerequisite is the "maturation" of a bargaining relationship in which both labor and management negotiators employ in the early stages a consensus strategy of extremist nature which is superseded first by a moderate consensus strategy and then by a dissensus strategy (cf. Stevens, 1963, pp. 4-5). In other words, the evolution of bargaining strategies between the two parties may exhibit the following pattern:

$$C_B C_S \longrightarrow C_M C_M \longrightarrow DD$$

A historical analysis of documentary materials on the bargaining relationships among a sample of labor-management parties could test this hypothesis.

If we distinguish bilateral dissensus as a mode of bargaining strategy to resolve a

conflict from bilateral dissensus as a mode of conflict, we may, however, observe at least one reasonably close approximation to our bilateral dissensus strategy model. In the current internal political schism within the two-party system in the United States, bilateral conflict exists, with liberals and conservatives represented in the Democratic as well as in the Republican party. After the 1964 election, a proposal was advanced for the realignment of the party structure such that all conservatives, whether presently within the Republican party or within the Democratic party, would join a newly-formed Republican party. Similarly, all liberals, whether presently in the Democratic or in the Republican party, would join the newly formed Democratic party. This proposal was criticized on the ground that it would encourage the development of an ideological and class-oriented party structure akin to that found in some European countries (*New York Times*, Nov. 16, 1964, p. 1).

The fact that bilateral conflict does exist in our political party structure has encouraged—in the legislative process—an approximation to the bilateral use of dissensus bargaining strategies. An analysis of the content of legislation, both in historical periods in which bilateral dissensus was approximated and in periods in which it was not approximated in American political party structures, would yield evidence on whether a bilateral dissensus situation produces an integrative type of legislation.

Apart from the need to test the effect of other combinations of bargaining strategies listed in Table 1, particularly of bilateral consensus at the moderate bargaining level, it would be important to replicate the experiment, using a larger sample of four-man groups, in two different settings—an intraorganizational problem (e.g., a

production department versus an engineering or a marketing department) as well as an international relations problem (Snyder, 1963; Guetzkow, 1963) to insure that the findings are not task-specific, i.e., a function of the particular labor-management bargaining problem used in this experiment. In short, further research on the bargaining strategies simulated in this experiment may shed light on the processes of conflict and conflict resolution not only in interorganizational relations, such as those involving labor and management, but also in intraorganizational relations and in international relations as well.

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