

THE IMPACT OF ALTERNATIVE MODES
OF THIRD PARTY INTERVENTION IN
RESOLVING BARGAINING IMPASSES

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ABSTRACT

THE IMPACT OF ALTERNATIVE MODES OF THIRD PARTY INTERVENTION IN RESOLVING BARGAINING IMPASSES

By

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The present research examined the impact of four alternative modes of third party intervention in resolving bargaining impasses under conditions of high and low bargaining conflict. The modes of third party intervention were (1) bargaining (no third party intervention), (2) mediation, (3) voluntary arbitration and (4) compulsory arbitration.

The literature shows considerable disagreement regarding which style of third party intervention is most successful in facilitating bargaining settlements. For example, Northrup (1966) and Bok and Dunlop (1970) have argued that compulsory arbitration tends to undermine meaningful collective bargaining, while Reuther (1965) and Stevens (1966) suggest that the threat of intervention may foster a greater sense of urgency for bargainers to settle their disputes. Podell and Knapp (1969) and Pruitt and Johnson (1970) found mediation enhances bargaining outcomes while Johnson and Tullar (1972) found mediation was the least effective mode of third party intervention. Johnson and Pruitt (1972) found arbitration to be a more effective style of intervention than mediation.

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Even greater uncertainty exists regarding what potential conditions either enhance or hinder alternative modes of third party intervention. Research by Landsburger (1955) and Vidmar (1971) suggest that stronger modes of third party intervention are more successful in high conflict situations than low conflict situations.

The results of the present study shows the following:

- (a) Dyads who faced no third party intervention (bargaining only) settled more contracts (11) than dyads under any style of third party intervention. Of the three intervention conditions, mediation was found to be the least successful in that only 2 of 20 contracts were settled while in the voluntary arbitration condition 7 of 20 contracts were settled and under compulsory arbitration 10 of 20 contracts were settled prior to intervention.
- (b) Subjects under low conflict left significantly fewer issues unresolved under voluntary and compulsory arbitration than subjects negotiating under bargaining and mediation. However, under high conflict significantly fewer issues were left unresolved under bargaining than in any other condition.
- (c) Dyads under mediation exchanged significantly fewer total bids than subjects under any condition.
- (d) Subjects bargaining under high conflict demanded a significantly smaller total opening bid than subjects bargaining under low conflict.
- (e) Subjects under high conflict conceded significantly less than subjects under low conflict.
- (f) Under low conflict, subjects anticipating voluntary and compulsory arbitration had significantly higher earnings than subjects in the other two conditions (bargaining and mediation); while under high conflict, subjects in the bargaining condition earned significantly higher payoffs than subjects in the other three conditions.

In general, stronger modes of third party intervention were found to facilitate bargaining settlements when subjects faced low conflict. However, under high conflict conditions, subjects bargained most successfully in the absence of outside intervention. These results tend

to suggest that the superiority of a particular mode of third party intervention varies with the magnitude and intensity of the conflict between the parties.

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William J. Bigoness

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CHAPTER I

INTRODUCTION AND REVIEW OF LITERATURE

Introduction

The expansion of strife and conflict within numerous spheres of contemporary society during the past decade has caused social scientists to devote renewed attention and energies to the study of conflict and conflict resolution strategies (Coser, 1956; Schelling, 1960; Pondy, 1967; and Schmidt and Kochan, 1972). Conflict in international relations, unionization and collective bargaining in the public sector, efforts to achieve racial and sexual equality and consumerism have been among the more fertile grounds for the study of conflict and its consequent resolution.

Among the most fruitful strategies frequently employed in resolving conflict is the intervention of a third party who is not a direct participant to the immediate conflict. Blake, Shepard and Mouton (1964) have argued that conditions for a third party resolution exist when two disagreeing parties have reached an impasse, and it is assumed that no further interaction can produce a change in the disagreement.

Authors (Kerr, 1954; Elkouri and Elkouri, 1960; Prasow and Peters, 1970; and Pruitt and Johnson, 1970) have cited numerous attributes which third parties introduce to a conflict situation which enhance a third party's capacity to bring about accord between the

disputants. The third party has the capacity to (1) introduce original ideas; (2) be impartial; (3) act as a communication catalyst; (4) bring parties to a more rational mood; (5) clarify the intentions of the parties toward each other; and (6) relieve the sense of personal weakness that is otherwise inherent in making concessions.

The extent to which a third party is successful in resolving bargaining impasses is often determined, in part, by the power granted the third party by the principal contestants. On a continuum of increasing power, third party intervention is characteristically classified (Bok and Dunlop, 1970; Chamberlain and Cullen, 1972) into one of the following categories; (1) conciliation; (2) mediation; (3) fact finding; (4) voluntary arbitration; and (5) compulsory arbitration.

Conciliation and mediation involves those responses by a third party aimed at bringing about agreement or compromise and settling the conflict. Under conditions of conciliation and mediation the decision making responsibility, regarding mutual accommodation, remains internalized within the bargaining dyad. Fact finding involves the third party in a more investigative role because he is obligated to explore the issues causing conflict and report each party's respective position relative to a bargaining settlement. A fact finder's report is customarily made available to individuals or groups outside the conflict, thus, often increasing the pressure upon the bargainers to reach a settlement (Hildebrand, 1967).

Arbitration entails a third party's entering into the conflict and making a final determination regarding the terms of the settlement. Under a system of voluntary arbitration both bargaining parties must mutually agree to the intervention of a third party regarding any

specific bargaining impasse. Compulsory arbitration differs from voluntary arbitration in that a superior power, in relation to the bargaining parties, may dictate that should an impasse occur that the dispute will be submitted to compulsory arbitration. Decision making under an arbitration system, in terms of closure, is granted to the third party and thus externalized beyond the dyad (Urban, 1971).

Which of the preceding modes of third party intervention is most effective and under what conditions has remained an issue of controversy among both practitioners and academicians. Only during recent years have researchers begun systematically to investigate the impact of various modes of third party intervention.

Rosenau (1969) drawing principally from the field of political science, succinctly summarized that state of knowledge pertaining to third party intervention when he stated that despite an enormous amount of conventional and legal wisdom leading to prescriptive solutions and ringing affirmations not much is known about third party intervention.

In reference to mediation, Podell and Knapp (1969) concluded that evidence concerning the contribution of the mediator has remained anecdotal and controversial. Vidmar (1971) concurred when he stated "that despite common assumptions that the presence of a neutral leader can reduce internegotiator conflict and thereby enhance negotiation outcomes, there is, in fact, very little experimental research on the effects of mediators on the negotiation process (p. 49)."

Despite such apparent uncertainty, bountiful predictions exist. Such viewpoints often are based on descriptive studies of collective bargaining which often, unfortunately, are tinged with emotional

reasoning. Numerous authors contend that the use of arbitration, voluntary or compulsory, deters the tendency of bargainers to resolve conflict. Northrup (1966) contends that when closure by arbitration is available, the incentive for the bargainers to agree sharply declines, even to the point where bargainers will force intervention. Bok and Dunlop (1970) have argued that compulsory arbitration even within a few industries tends to undermine an important ingredient in productive labor-management relations, namely, the willingness of the parties to bargain conscientiously over their differences. It should be noted, however, that these researchers have presented only limited data to support their conclusions.

Informed opinion, however, is not unanimously aligned in opposition to arbitration. The late Walter Reuther (1965) contended that the threat of government intervention fosters a greater sense of urgency for the bargainers to settle their disputes. Stevens (1966) has stated that the contention that the availability of a strike is an essential part of collective bargaining may not be as self-evident as most proponents seem to think.

Loewenberg (1970) found that the availability of compulsory arbitration did not terminate collective bargaining activity among police and fire fighters in Pennsylvania. Two-thirds (132 of 198) of the municipalities examined reached negotiated settlements prior to resorting to compulsory arbitration. Loewenberg concluded that the advent of compulsory arbitration did not prove detrimental to meaningful collective bargaining.

In light of the expanding reliance upon third parties in resolving bargaining impasses it becomes increasingly crucial that we more

fully understand the impact of alternative modes of third party intervention. The underlying area of interest in this paper is whether different modes of third party intervention hinder or facilitate mutual accommodation. In particular, the issue under investigation is whether the anticipation of different modes of intervention has an effect on the behavior of bargainers in a distributive bargaining task under simulated conditions designed to represent high and low degrees of bargaining conflict.

In summary, researchers are divided on the issue of what effect, if any, alternative modes of third party intervention have upon bargaining behavior. This study will attempt to expand our knowledge and understanding pertaining to this issue. Prior to discussing the experimental design which will be utilized in this study, as well as specific hypotheses which will be tested, a review of relevant prior research examining third party intervention, upon which this study will build, will be presented.

Literature Review

Research pertaining to third party intervention originates primarily from two distinct sources. The first is that research based upon field studies drawn from the actual experiences of practicing mediators and arbitrators or the observations of individuals having access to such data. The second major area of research encompasses research conducted by behavioral scientists utilizing laboratory studies and experimental simulations as methods of investigation. Unfortunately, the extent of cross fertilization between these two camps has been minimal and disappointing. While this study will

utilize the methodological framework employed by the latter group of researchers, an attempt will be made to utilize the findings from field studies to advance our understanding of third party intervention.

For organizational purposes, a review of the literature and examination of the field studies is presented, followed by a review of pertinent laboratory research relevant to third party intervention.

Field Studies

Among the first to present evidence related to mediation was Peters (1952, 1955). A member of the California State Conciliation Service, Peters sought to bring to the public's attention, primarily through a series of case incidents, the more common issues that frequently arise in collective bargaining and the conciliator's role and contribution in resolving conflict. One of Peters' principal contribution was answering such commonly raised questions as "Why do negotiations take so long?" "Why is the whole process accompanied by so much threat and bluff?" "What does a mediator do?"

Peters argued that bluffing is an accepted tactic by which each party attempts to gain a little more than they are actually willing to settle for. Lengthy and heated negotiations often serve as a form of catharsis for worker hostility thereby preventing its emergence in the form of slowdowns, wildcat strikes and generally disruptive labor relations. The mediator's function, according to Peters, is not how to keep emotions, personalities and politics out of collective bargaining, but rather how to assist negotiators to meet the inevitable psychological as well as economic needs of their respective parties.

Utilizing Bales' interaction process analysis, which he applied to recordings of actual mediation sessions, Landsburger (1955, 1956, 1960) sought to determine what personality and personal attributes distinguished "good" and "bad" mediators. Landsburger concluded that a "good" mediator, among other things, learns rapidly, has original ideas, and is able to sell these ideas vigorously to others. In addition, Landsburger (1955) found that the extent to which a mediation session went through a hypothesized phase movement was of some validity in indicating the extent to which specific items in dispute between the parties were resolved. Second, the ultimate success of the session could be partially predicted from the parties' state of mind when they embarked upon the session: the more hostile their expressed feelings, the less likelihood of success. Third, all mediation sessions progressed through this hypothesized phase movement not only those resulting in successful outcomes.

Drawing from a cross cultural sample, Jackson (1952) sought to determine what factors and conditions enhanced mediation effectiveness. He suggested that mediation needs to be flexible and adaptable to the particular dispute. Proper timing of the mediation effort is crucial in all instances; public debate between the parties has a deleterious effect upon the likelihood of peaceful settlement in most situations; but public reports and recommendations by neutral mediators may be appropriate and useful in many disputes.

Lovell (1952), Rehmus (1953) and Warren (1954) have argued that a mediator's effectiveness is primarily determined by the success with which he is able to bring pressure to bear upon the parties. More specifically, they emphasize that the mediator's role allows him to

channel and concentrate existing pressures to break deadlocks. In these authors' view, the mediator's primary role is to force the parties to change positions rather than resolving personality clashes or providing negotiating skills.

Kerr (1954) discussed the inevitability of conflict in an industrial society and examined mediation as one means of keeping industrial conflict within controllable bounds. Principal contributions which a mediator brings to industrial conflict, according to Kerr, include (1) reduction of irrationality; (2) removal of nonrationality; (3) exploration of solution; (4) assistance in the graceful retreat and (5) raising the cost of conflict.

Kerr referred to mediation designed to resolve existing conflicts as "tactical" mediation. The advancement of long-term industrial peace is beyond the scope of tactical mediation. "Strategical" mediation, on the other hand, involves processes designed to structure the environment to accommodate long term industrial peace. Strategical mediation involves such processes as (1) the integration of workers and employees into society; (2) the advancement of stability within society; (3) the dispersion of grievances; (4) ideological compatibility; (5) secure and responsive relationship of leaders and members; and (6) the structuring of conflict within acceptable boundaries. Strategic mediation is today referred to as preventive mediation and is practiced frequently by state and federal mediation services.

Douglas (1962) attempted a psychological analysis of the interaction of bargainers and mediators. Her work is based on observations and records of actual negotiations. Douglas maintains that meaningful negotiations go through three stages: (1) establishing the range,

i.e., setting the limits of the bargaining range; (2) reconnoitering the range, i.e., through interpersonal interaction and not conflict, each party searches for areas in the other's range where he may make inroads without firm commitments; and (3) confronting the decision-reaching crisis, i.e., reaching the impasse or agreement.

In concluding her study, Douglas questions three areas of the conventional wisdom of mediators and negotiators about collective bargaining. She characterizes the following as fiction: (1) the possibility of a strike is essential to resolution of conflict; (2) compromise is an essential part of agreement making; and (3) the ultimate agreement is narrowly circumscribed by market economics. All three of these points have raised substantial controversy and are largely rejected by those with experience in industrial relations (Rehmus, 1965).

Numerous additional field researchers have documented the assets they believe third parties may contribute in resolving a bargaining impasse. Chamberlain (1965) hypothesizes that mediation or conciliation fares best when the deadlock has risen over some misunderstanding; it fares worst when the intent of both parties is simply to hold the best bargaining position. Chamberlain does, however, concede that mediation and conciliation in labor relations are the most effective devices yet developed to head off strikes and enable collective bargaining to function.

Prassow and Peters (1970) maintain that mediators intensify negotiations; that they are confidants for both parties; that their exploratory conversations on disputed issues should be off the record; that lawyers (presumably well-grounded in the principle of contract

law and judicial proof) make the best mediators; and that the old adage about experience being the best teacher certainly plays an important role.

Miner (1969) argues that the most effective conciliator or mediator is a "communications catalyst" and that successful mediation is a function of perceived impartiality and the capacity of the third party to win trust. The mediator aids parties in determining their relative position in the bargaining range; he more fully explains positions; he points out nonapparent bases for agreement; he helps search for solutions; and he generally facilitates the agreement.

Experimental Literature

Although the preceding review of field studies and observations by practitioners pertaining to third party intervention would appear to provide ample evidence for generalizations such is unfortunately not the case. As McGrath (1966) has stated, although field studies possess the great advantage of realism their generalizability is limited.

In addition to the limitation cited by McGrath, most field studies dealing with third party intervention have been written by direct participants to the collective bargaining situation and are, therefore, potentially confounded.

In efforts to overcome the inherent limitations relating to the case study approach numerous researchers have turned to experimental simulations (Campbell, 1960; McGrath, 1966; Bass, 1966; Johnson and Pruitt, 1972) as a method of examining third party intervention strategies. McGrath (1966) asserts that experimental simulations,

unlike field experiments, offer greater experimental control, permit replication and thereby can escape the particular and advance the generalizability of findings.

Vaughan and Bass (1967) argue that although simulations cannot reproduce real-life operations in every detail, "business games" often make it possible to make measurements of potentially important variables.

Among the first researchers to investigate the impact of third party intervention, within the context of experimental simulations, was McGrath and his colleagues (McGrath and Julian, 1962; Julian and McGrath, 1963; Vidmar and McGrath, 1967). Employing what he termed a tri-polar model of negotiations McGrath has systematically attempted to examine what factors enhance a mediator's effectiveness. Based on several studies McGrath (1966) concluded that the principal component a mediator provides within a bargaining situation is that of providing structure. The amount of structuring activity (by the mediator) does not correlate with group success, but the timing of such activities does. Successful groups are characterized by high structuring activity during the initial bargaining phases, followed by low structuring activity in the final bargaining phases, whereas unsuccessful groups have highest structuring activity during the final phase.

The successful mediator focuses the group on its task sufficiently well and sufficiently early, so that they can grapple with the issues. A second key element contributing to mediation effectiveness is the mediator's ability to refrain from displaying negative interpersonal feelings himself, and not to permit negotiating parties to do so.

Podell and Knapp (1969) examined bargainers' willingness to accept a solution offered by a mediator once a bargaining deadlock had been reached. Their study simulated a labor-management wage negotiation by college students in a laboratory atmosphere, with the Ss assuming the role of the labor negotiator. In order to study the process of mediation, the authors argue, it was necessary to guarantee a need for it, and this need was achieved by assuring that no agreement would occur prior to the mediator's intervention. A negotiation deadlock was accomplished by having the "management" role played by a research assistant who appeared to be a peer of the subject, and who followed a prearranged program of "hard line" bargaining. Once the deadlock was achieved, social pressure from the Programmed Management Negotiator (PMN) and the experimenter induced the subject to accept mediation. The final aspect of the simulation was to offer the subject exactly the same concession on two different issues, one of these offers coming directly from the subject's opponent, (the PMN), and the other coming through the mediator.

The researchers found that suggested concessions attributable to the mediator were more readily accepted by the subjects than comparable concessions offered by the subjects' opponent. They conclude that "the present results indicate that concessions which come through a mediator create less of an impression of weakening of bargaining position than identical concessions which came from one's opposite negotiator (p. 517)."

Podell and Knapp's findings, however, are not so illuminating as they might first appear because of several methodological limitations. First, no attempt was made to determine whether mediation produced

more effective or more frequent settlements than the parties would have reached under a condition of no intervention. In essence, no control group was included in the study. Second, by having the subjects bargain against an opponent who rigidly adhered to a pre-programmed hard-line bargaining position foreclosed the feasibility of the parties' reaching a settlement prior to the mediator's intervention. Such constraints may have enhanced the parties' receptiveness to the mediator's suggested settlement. Third, the Ss belief that the mediator's proposals were actually a basis for settlement may have been based on prestige. Specifically, the Ss may well have felt that management would not refuse to accept the mediated proposal any more than he could, since the negotiators were students while the experimenter-mediator was evidently a professor.

Utilizing a bilateral monopoly bargaining game, Pruitt and Johnson (1970) created a simulated situation similar to that employed by Podell and Knapp (1969), such that subjects would, by design, encounter a bargaining impasse. The researchers hypothesized that following the occurrence of such an impasse a suggestion by a mediator of a point of settlement halfway between the positions of the two negotiators would produce substantial concessions.

Support was found for the conclusion that a third party can stimulate concessions by suggesting an equitable solution to both negotiators. Additional hypotheses advanced by Pruitt and Johnson suggested that mediation would be most effective under conditions of high time pressure, where the other party moved slowly toward agreement, and in situations where the opposing party had made few

concessions. None of the hypothesized interactions were found to be significant.

Pruitt and Johnson's study suffers several of the limitations cited earlier when discussing Podell and Knapp's research. Briefly, subjects were programmed to bargain against a fixed schedule which was designed to discourage a negotiated settlement prior to intervention. Additionally, no alternative mode of third party intervention (i.e., arbitration) was included in this study.

In generalizing Pruitt and Johnson's findings to broader collective bargaining situations, it should be noted that by utilizing a bilateral monopoly bargaining game the parties were not presented the variety of negotiable issues usually present in a collective bargaining situation. The bilateral monopoly bargaining game compels the parties to bargain over a single issue and thus prohibits "horse-trading" between alternative issues.

One of the few studies designed specifically to examine the impact of alternative modes of third party intervention was Urban's (1971) research. This study utilized 150 upper-division college students as subjects. The subjects engaged in a distributive bargaining task. The objective for each bargainer was to maximize his total profit for the bargaining session. The bargainers negotiated in a state of incomplete information using written communications.

The subjects were randomly assigned to bargain in one of three intervention modes; no arbitration (NA), voluntary arbitration (VA) or compulsory arbitration (CA). In the NA mode, bargainers negotiated to agreement without outside intervention. In the VA mode the bargainers could request the third party to intervene and conclude negotiations

by rendering a decision. In the CA mode, if the bargainers could not reach agreement, the third party would automatically intervene and conclude negotiations. In the VA and CA modes, the experimenter used an arbitration scheme to allocate the fixed resource.

Urban hypothesized that bargainers in the NA mode of intervention would be more conducive to mutual agreement than bargainers in the VA and CA modes respectively. The dependent variables utilized in this study were adopted from the Siegel and Fouraker (1960) model of negotiation. The aspects of bargaining behavior studied were: (1) initial profit expectation; (2) duration of bargaining process; and (3) yielding behavior of bargainers.

Urban's results failed to support his hypotheses. Bargainers in the VA mode initially requested the least initial profit, concluded negotiations in the least amount of time and exchanged the least number of bids. NA bargainers initially requested the greatest profit and exchanged the greatest overall number of bids. The CA bargainers required the greatest time to conclude negotiations but were not significantly different from NA bargainers in terms of number of bids. CA bargainers requested more profit initially than VA bargainers but less than NA bargainers.

In terms of yielding behavior, no significant differences were found between the three modes. NA, VA, and CA bargainers did not differ significantly in regard to amounts yielded, changes of position, and concession rates.

Vidmar (1971), in the context of an experimental simulation of negotiation process, sought to determine if a neutral leader or "mediator" could increase negotiation effectiveness. Vidmar desired

to study the impact of mediation under two distinct conditions. First, a mediator's contribution within the context of a discussion group where the group members were not given representational role obligations. The group was told their goal was to set forth a solution which was constructive and acceptable to both groups. Secondly, Vidmar examined mediator's contribution in a situation characterized by participants encouraged to assume representational role obligations and were instructed that the groups task was to set forth a constructive solution to the problem, but each representative was to make sure that his organization's viewpoints were represented in the final written group decision.

Vidmar hypothesized, based on earlier field studies by Landsburger (1955), that a mediator's contribution to negotiation effectiveness is, in part, determined by the degree of conflict in any particular situation. By analyzing the solutions developed by discussion and negotiation groups, Vidmar sought to determine the extent to which conflict may serve as a moderator of mediation effectiveness.

The results of this study indicated that mediators tended to improve the performance of negotiation groups, and on the overall success criterion, conceptually the most important, mediated negotiation groups performed significantly better than those without a mediator.

The mediators employed by the experimenter in this study it is interesting to note, were peers of the group participants and possessed no power or status differential upon which they might draw. This fact led Vidmar to suggest "had the mediators had more power or status, the difference between the mediated and unmediated negotiation groups might have been greater (p. 55)."

In summary, Vidmar's study suggests that the presence of a mediator can improve negotiation effectiveness, but indicates that his contribution may be contingent upon the magnitude of the conflict and his status.

Johnson and Pruitt (1972), employing a simulated collective bargaining game, sought to determine the impact that the anticipation of alternative modes of third party intervention had upon concession making in negotiations. Johnson and Pruitt hypothesized that concessions would be more rapid under the threat of binding, as opposed to non-binding, third party intervention.

The authors' study involved 50 male graduate students in a course on collective bargaining. Manipulation of the independent variable, anticipated mode of third party intervention, was achieved by distributing different instructional sheets to the subjects contingent upon the experimental treatment.

Research results confirmed that negotiators faced with a binding decision (arbitration) made larger and more frequent concessions than those faced with a non-binding (mediation) decision. However, the authors make two qualifications with respect to their findings. First, their hypothesis received strong support from those bargainers representing the union position but only marginal support from bargainers representing the management position. Furthermore, the different concession strategy found between the binding and non-binding conditions can be clearly seen only during the late phases of the collective bargaining simulation.

Following an examination of data collected by means of a post experimental questionnaire, Johnson and Pruitt suggest that certain

factors attributable to their experimental design may explain the previously unexplainable reluctance of union negotiators to be confronted by a binding decision. First, in examining the collective bargaining simulation materials the authors discerned that the structure of the offer scales was such that the management negotiator was able to move well beyond the midpoint on all important wage scales before reaching his breakeven point while union negotiators could not do so. Furthermore, the hypothetical mediator was described in the simulation material as an "advanced management trainee" once again potentially encouraging the union negotiator to reach an agreement prior to third party intervention. If, as Johnson and Pruitt suggest, their study was significantly compromised for reasons noted above, their findings must certainly be considered highly tentative.

Johnson and Tullar (1972), in perhaps the most ambitious study of third party intervention to date, sought to investigate four forms of third party intervention under conditions of both high and low need to save face. The four forms of third party intervention were: (1) non-binding suggestion (mediation); (2) binding decision (arbitration); (3) selection of the best of the bargainers own proposals (govplan); (4) no third party intervention (control). As in the Johnson and Pruitt study mode of third party intervention was manipulated by use of alternative instructional sheets. The second independent variable, need to save face, was manipulated by the inclusion or exclusion of a video tape and voice recorder. Subjects in the high need to save face condition were told that the equipment was there to make a training film dealing with "novice bargaining" to be used in various classes in the area.

Johnson and Tullar's findings were that there was a significant main effect based on style of intervention and an interaction effect of intervention by face saving. In the face-saving condition those pairs expecting the govplan form of intervention were quite far from agreement while those not expecting any intervention were close to agreement. Those anticipating mediation and arbitration were at a moderate distance from agreement. In the low face-saving condition, those expecting arbitration had all reached agreement while those anticipating mediation were farthest from agreement. After intervention those who received a suggestion for settlement were no more likely to reach agreement than were those who did not receive a suggestion.

The authors concluded that when the need to save face is strong bargainers are more willing to let an outsider come in and resolve the conflict. The expectation of any outside intervention appears to decrease the likelihood of agreement prior to that intervention. Parties appear even willing to allow the possibility of forced compliance to a third party's demands. When there is a low need to save face, those expecting arbitration expend considerable effort in order to avoid intervention and settle things on their own.

Although need to save face should not be equated as a direct corollary of conflict intensity, it does appear logical that some correlation between the two phenomena is plausible. If this is the case, Johnson and Tullar's findings are of particular importance. What their findings imply, at least indirectly, is that bargainers, confronted by the most difficult bargaining situations, bargain least effectively when confronted by binding arbitration.

Such a conclusion tends to support Northrup's impressions drawn from extensive field experience while at the same time contradicting earlier research by Johnson and Pruitt. Additional research designed to shed light on this problem would appear to be needed, particularly in view of the fact that numerous states have recently passed laws requiring compulsory arbitration in the field of public employee bargaining (Weissbrodt, 1973).

Johnson and Tullar's study raises several issues for future research, for example the ineffectiveness of mediation as a mode of third party intervention challenges results of several earlier studies (Podell and Knapp, 1969; Pruitt and Johnson, 1970; and Vidmar, 1971). As discussed earlier, many earlier studies were structured in such a manner that they encouraged affirmative findings relating to mediation effectiveness. The effectiveness of mediation in resolving bargaining impasses remains an unresolved issue.

Summary of Literature Review

As the preceding review illustrates both researchers and practitioners are divided as to what style of third party intervention most enhances conflict resolution. Even greater uncertainty surrounds what potential factors or conditions might improve or hinder alternative styles of intervention.

Landsburger (1955), Douglas (1962), and Chamberlain (1965), all drawing from field experience, endorse mediation as an effective mode of conflict resolution. Their findings appear supported by laboratory studies conducted by Podell and Knapp (1969), Pruitt and Johnson (1970), and Vidmar (1971). However, as Vidmar himself admits, there

is in fact, very little experimental research on the effects of mediators on the negotiation process. As previously noted several of the studies cited above, in support of mediation effectiveness, have suffered from significant methodological limitations. A recent study by Johnson and Tullar (1972), designed to overcome such limitations, found parties receiving a suggested settlement from a mediator were no more likely to reach agreement than were those who did not receive a suggestion.

Arbitration as a mode of conflict resolution engenders even greater controversy. Northrup (1966) and Bok and Dunlop (1970) adamantly insist that the threat of arbitration seriously erodes the collective bargaining process. Stevens (1966) and Loewenberg (1970), on the other hand, find no support for such assertions. Laboratory research by Urban (1971), Johnson and Pruitt (1972), and Johnson and Tullar (1972) also appears equally divided on the impact of arbitration on bargaining behavior.

To date only two studies (Vidmar, 1971; Johnson and Tullar, 1972) have attempted to weigh the impact of moderating variables upon third party intervention. Presently no study has attempted to evaluate the impact of the three most commonly utilized styles of third party intervention (mediation, voluntary arbitration, and compulsory arbitration) as well as including a control group within the context of a single study.

The study described in the following chapters examined the impact of four alternative modes of third party intervention upon bargaining behavior under conditions of high and low conflict. The review of literature presented above documents the controversy currently

existing pertaining to the effects of the anticipation of alternative modes of third party intervention. By adopting a somewhat different methodological framework than earlier studies it is hoped that a more comprehensive understanding of third party intervention will be gained through this study.

In Chapter II the methodology utilized in this study and hypotheses that were tested are presented. Chapter III presents the quantitative findings obtained from a statistical analysis of the experimental data collected in this study. Discussion and conclusions are presented in Chapter IV.

CHAPTER II

METHODOLOGY AND HYPOTHESES

Introduction

In the preceding chapter, third party intervention as one strategy of conflict resolution and literature pertaining to third party intervention was presented. This chapter begins with a brief reiteration of the problem under investigation, followed by a presentation of the following: (1) the methodology utilized in this study, (2) the operational definition of the independent and dependent variables, (3) the hypotheses which were tested in this study, (4) a description of the sample selected (5) a description of the instructions relevant to the experimental task and (6) the proposed statistical treatment of these data.

Statement of the Problem

Third party intervention has been widely heralded as an effective way to resolving bargaining impasses (Kerr, 1954; Chamberlain, 1965; Walton, 1967; and Pruitt and Johnson, 1970). However, as Rehmus (1965), Rosenau (1969) and Vidmar (1971) have noted, we know very little regarding the extent to which third parties enhance negotiation outcomes. Two unresolved questions are: (1) what mode of third party intervention is most successful in enhancing bargaining settlements

and (2) does conflict intensity have an impact upon the effectiveness of alternative modes of third party intervention.

Bok and Dunlop (1970) and Northrup (1966) have argued strongly that compulsory arbitration has a detrimental impact upon the bargaining process. Stevens (1966) and Reuther (1965), on the other hand, believe that this proposition is not necessarily self-evident and in fact compulsory intervention may foster a greater sense of urgency for the bargainers to settle their disputes. Evidence concerning the effectiveness of mediation is also divided (e.g. see Podell and Knapp, 1969; Johnson and Pruitt, 1972).

Recent research by Vidmar (1971) and Johnson and Tullar (1972) suggests that the success of third party intervention may be contingent upon the magnitude of the conflict between the parties. Vidmar found that mediators improve negotiation effectiveness more under high as opposed to low conflict situations. Johnson and Tullar found that when the need to save face is strong arbitration inhibited parties from reaching an accord prior to third party intervention. However, when there is low need to save face arbitration enhanced bargaining settlements.

Methodology and Independent Variables

A 2x2x4 factorial design with fixed effects and equal cell sizes was employed in this study (see Figure 1). This experimental design was expanded by adding a fourth factor, role within the bargaining dyad (management role or union role), in cases where the individual subject's responses served as the unit of analysis rather than the bargaining dyad. The expanded experimental design therefore was a

2x2x4x2 factorial design with repeated measures analysis on the last variable. There were five (5) dyads (10 subjects) in each of the 16 cells of the experimental design.

FIGURE 1

EXPERIMENTAL DESIGN FOR THE STUDY OF INITIAL MANAGEMENT POSITION
BY INITIAL UNION POSITION BY MODE OF THIRD PARTY INTERVENTION

INITIAL UNION POSITION	INITIAL MANAGEMENT POSITION			
	Soft			
	<u>Bargaining</u>	<u>Mediation</u>	<u>Voluntary Arbitration</u>	<u>Compulsory Arbitration</u>
Soft	X_{111}	X_{112}	X_{113}	X_{114}
Tough	X_{211}	X_{212}	X_{213}	X_{214}

FIGURE 1 (Cont'd)

INITIAL UNION POSITION	INITIAL MANAGEMENT POSITION			
	Tough			
	<u>Bargaining</u>	<u>Mediation</u>	<u>Voluntary Arbitration</u>	<u>Compulsory Arbitration</u>
Soft	X_{121}	X_{122}	X_{123}	X_{124}
Tough	X_{221}	X_{222}	X_{223}	X_{224}

Factor A was initial management position, i.e. soft or tough. A "soft" initial management position was manipulated by assigning subjects to a treatment condition where their initial bargaining demand

was low, i.e., not very demanding. A "tough" initial position was manipulated by assigning subjects to a treatment condition where their initial bargaining demand was high, i.e., very demanding. Factor B was initial union position, i.e., soft or tough, and was operationalized in the same manner as initial management position (see Appendix A) Factor C represented four modes of third party intervention, i.e., bargaining (no third party intervention), mediation, voluntary arbitration and compulsory arbitration.

Mode of third party intervention was manipulated by means of different instructional sheets. All sheets stated that if a negotiated settlement had not been reached fifteen (15) minutes after negotiations began, negotiations would stop. Under each mode of third party intervention the remainder of the message was different (see Appendix B). Under bargaining, subjects were told they should cease discussion with their opponent and reevaluate their bargaining strategy. After they had thought things over for a few minutes it was indicated that negotiations would resume. Subjects under mediation were instructed that a person unrelated to this experiment but knowledgeable in the field of industrial relations who had earlier studied these bargaining issues would present his proposal for a settlement for their consideration. His proposal, it was stressed, was to be considered a suggested settlement and that subjects were free to act or not act on his suggestion. After the mediator's suggested settlement was presented, subjects were informed that negotiations would resume (see Appendix C). Under voluntary arbitration subjects were informed that should a bargaining impasse arise they could, if they desired, elect to submit their impasse to a neutral third party knowledgeable in the

field of industrial relations who had earlier studies these bargaining issues and arrived at a proposed settlement. This individual's settlement would be binding upon the parties. However, such third party intervention would occur only at the joint request of the subjects. Subjects under compulsory arbitration were informed that should they be unable to reach a settlement within the designated time a third party, knowledgeable in the field of industrial relations who had earlier studied these issues and arrived at a proposed settlement would intervene and render a binding settlement (see Appendix D).

The fourth independent variable was role within the bargaining dyad; management role and union role. Role was determined by randomly assigning subjects to represent either the management position or union position.

Dependent Variables

Ten different dependent variables were collected during the experimental session. These included both objective (task-oriented) and self-report (post experimental questionnaire) measures. The dependent measures under examination in each treatment condition as operationally defined were:

1. Number of Contracts Settled. A contract was regarded settled only if subjects reached agreement on all three issues under negotiation during the initial fifteen (15) minute bargaining session.
2. Number of Issues Left Unresolved. Issues under negotiation not settled during the initial fifteen (15) minute bargaining session were regarded as unresolved.
3. Total Number of Bids. A bid was defined as a subject's initial bid followed by his opponent's counter bid.

4. Total Opening Bid. The amount of earnings sought by subjects in their total opening bid as a percentage of the maximum they could have demanded.
5. Total Amount Conceded. The total amount conceded by subjects as a percentage of the maximum they could have conceded based on all three issues under negotiations during the initial fifteen (15) minute bargaining session.
6. Earnings. The total money earned by subjects in the course of the simulated collective bargaining game.

A post experimental questionnaire was given to all subjects following the completion of the simulated collective bargaining game to measure realism, fear of third party intervention, opponent's bargaining strategy and conflict intensity. The post experimental questionnaire is shown in Appendix E. Some items were included in the analysis as a check on the experimental manipulation and intended only for that purpose.

7. Mundane Realism. Self-reported realism experienced during the course of the simulated collective bargaining game.
8. Fear of Third Party Intervention. Self-reported importance of reaching an agreement during the initial fifteen (15) minute bargaining session prior to third party intervention.
9. Opponent's Bargaining Strategy. Self-reported perception of opponent's willingness to compromise.
10. Conflict Intensity. Self-reported perception of the extent of difference between subjects initial bargaining positions.

Hypotheses

The hypotheses which follow are drawn from the review of literature presented above. Mode of third party intervention and conflict intensity are the primary variables under examination in this study. Based on prior research findings and theoretical predictions, the

following hypotheses are presented:

Hypothesis 1-A. The stronger the anticipated mode of third party intervention, the greater will be the number of contracts settled.

Hypothesis 1 is based on research findings by Podell and Knapp (1969) and Pruitt and Johnson (1970). Podell and Knapp found that mediation assisted parties in reaching bargaining settlements, while Johnson and Pruitt found that arbitration was a more effective mode of third party intervention than mediation.

Hypothesis 2-A. Subjects bargaining under soft initial positions will settle significantly more issues than subjects negotiating under tough initial positions.

Hypothesis 2-B. Subjects anticipating stronger modes of third party intervention will settle more issues than subjects anticipating no third party intervention or weaker modes of third party intervention.

Hypothesis 2-C. A significant interaction is predicted such that stronger modes of third party intervention will result in fewer issues remaining unresolved under a tough initial position while a soft initial position will result in more unresolved issues under stronger modes of third party intervention.

Hypothesis 2 is based on theoretical hypotheses advanced by Komorita and Brenner (1968) suggesting that bargainers under high conflict or confronting tough bargaining strategies would reach fewer agreements than bargainers under low conflict or confronting softer bargaining strategies. The preceding hypothesis is also supported based on Johnson and Pruitt's (1972) findings that arbitration proved to be a more effective intervention strategy than mediation. The hypothesized interaction between initial position and mode of third party intervention is based on Vidmar's (1971) finding that mediation was more successful in negotiation than discussion groups.

- Hypothesis 3-A. Total number of bids exchanged within dyads will be significantly greater under a tough as compared to soft initial position.
- Hypothesis 3-B. The stronger the anticipated mode of third party intervention, the greater will be the total number of bids exchanged.
- Hypothesis 3-C. A significant interaction will be found between initial position and mode of third party intervention such that stronger modes of third party intervention will result in significantly more bids under a tough initial position while stronger modes of third party intervention will result in fewer total bids under a soft initial position.

Hypothesis 3 is based on the theoretical prediction that bargainers confronted by higher degrees of conflict will make a greater number of total bids in an effort to reach a settlement than subjects confronting lower degrees of conflict. Johnson and Pruitt's (1972) findings that stronger modes of third party intervention will encourage bargainers to reach a settlement prior to third party intervention and thereby increase the total number of bids between the parties also supports the preceding hypothesis. The predicted interaction between initial position and mode of intervention is supported by Vidmar's (1971) research cited above.

- Hypothesis 4-A. Total opening bid will be significantly less under a tough as compared to soft initial position.
- Hypothesis 4-B. The stronger the anticipated mode of third party intervention, the less subjects will demand in total opening bid.
- Hypothesis 4-C. A significant interaction is predicted such that stronger modes of third party intervention will result in smaller total opening bids under a tough initial position while a soft initial position will result in larger total opening bids under stronger modes of third party intervention.

Hypothesis 4 is based on the theoretical proposition that bargainers confronting large discrepancies between their respective positions will be less demanding in their total opening bid and Johnson and Pruitt's (1972) finding that bargainers fear stronger modes of third party intervention and therefore will be less demanding in their total opening bid to enhance agreement prior to third party intervention.

Hypothesis 5-A. Total amount conceded will be significantly greater under a tough as compared to soft initial position.

Hypothesis 5-B. Stronger modes of third party intervention will lead to a significantly greater total concession.

Hypothesis 5-C. A significant interaction between initial position and mode of third party intervention is predicted such that stronger modes of third party intervention will result in a greater total concession under a tough initial position while under a soft initial position stronger modes of third party intervention will result in a smaller total concession.

Hypothesis 5 is based on the prediction that subjects assuming a tough initial position will be forced to make greater concessions than subjects assuming soft initial positions to enable agreement to be reached. Hypothesis 5 is also supported by Johnson and Pruitt's (1972) finding that subjects fear stronger modes of third party intervention and therefore will make greater concessions to avoid such intervention. Vidmar's (1971) research showing mediation to be more effective under higher levels of conflict supports the predicted interaction between initial position and mode of third party intervention.

- Hypothesis 6-A. It is predicted that subjects bargaining under soft initial positions will reach more settlements and subsequently obtain higher earnings than subjects negotiating under tough initial positions.
- Hypothesis 6-B. The stronger the anticipated third party intervention, the greater will be subjects' earnings.
- Hypothesis 6-C. A significant interaction is predicted such that stronger modes of third party intervention will result in higher earnings under a tough initial position while stronger modes of third party intervention will result in smaller earnings under a soft initial position.

Hypothesis 6 is based on theoretical premises presented earlier. First, subjects bargaining under soft initial positions will reach more settlements hence obtain higher earnings. Secondly, stronger modes of third party intervention will result in greater pressure to reach agreement and subsequently result in higher earnings.

Experimental Method

Subjects and Sample Size

Subjects for the experiment were males recruited from undergraduate business and psychology classes at Michigan State University. A total of 196 subjects took part in this experiment, with 36 participating in the pilot study and 160 taking part in the main study. At the time of recruitment subjects were told they would participate in a collective bargaining exercise where they would have the opportunity to earn some money.

Apparatus

Two classrooms were used in this study. Subjects were randomly assigned to one of five (5) dyads in each of sixteen (16) treatment conditions. Each room contained tables and chairs arranged so that the subjects faced each other across a table. Only dyads under the same experimental treatment bargained within the same room. Clocks were also provided in each room so that subjects had knowledge of the negotiating time remaining. Five dyads bargained per negotiating session. Negotiation sessions were run on four consecutive evenings.

Experimental Task

A simulated collective bargaining game originally developed by Campbell (1960) and significantly modified for the purposes of this study was utilized. The task involved face-to-face bargaining between two subjects in a dyad. The simulation introduced enough background information to maintain the interest of the subjects.

Subjects bargained over three (3) issues (wages, hospital and medical plan, and a cost of living clause) simultaneously. Each bargaining issue was presented on an individual scale indicating various potential points of settlement. Each bargaining scale in addition to indicating points of potential settlement included scales informing the bargainers of "points" they would receive should a settlement be reached at any designated location. Subjects were informed that their earnings in the collective bargaining game were contingent upon the points they earned. To encourage subjects to actively bargain, point scales were constructed in a fashion to prohibit an even division of points. Potential earnings ranged from \$3.30 to zero if subjects

failed to reach agreement on any issue under negotiation (see Appendix A and F).

All subjects received an instructional sheet providing general background information regarding the company-union relationship (see Appendix G). Management representatives also received additional information pertaining to the company position (see Appendix H). Correspondingly, union representatives were provided with further information explaining the union position (see Appendix I). Subjects also received an instructional sheet outlining the procedures which would be followed in the event of a bargaining impasse. These sheets stated that if a negotiated settlement was not reached fifteen (15) minutes after negotiations had begun, negotiations would stop. The remainder of the instructions were different depending upon mode of third party intervention (see Appendix B).

To encourage subjects to reach a settlement prior to intervention and thereby stimulate costs similar to those incurred when bargainers fail to reach collective bargaining settlements without strikes, subjects were instructed that should they be unable to reach a contract settlement within the specified time (15 minutes) their earnings, based upon points accumulated, would be reduced by 20 percent. Subjects received 10 cents for every point earned when a contract was settled within the specified time. Subjects requiring more than the specified time to reach an agreement received 8 cents for every point earned until 25 minutes of bargaining time had elapsed, after which they received no payments.

The Instructions

Subjects were instructed to report to designated classrooms at a specified time. They were scheduled in groups of twenty, five dyads to each of two adjoining classrooms. Appropriate instructional material was distributed to subjects dependent upon experimental treatment condition.

After subjects had finished reading their instructions, the experimenter verbally went over the instructions with them answering any questions they might have. Great care was taken to ensure that each subject was totally familiar with the process before negotiations began. When the instructions were completely understood the negotiations began. The experimenter would exit the room leaving the door open so that he could observe the bargaining process.

At the end of the initial 15 minute bargaining session, all subjects were requested to cease bargaining and the appropriate mode of third party intervention was introduced. Subjects who had reached a settlement, who were bargaining under compulsory arbitration, or who decided to utilize voluntary arbitration were then asked to complete the post experimental questionnaire and then leave the room. Subjects under mediation who had not reached a settlement were given the mediator's suggested settlement at this time. Subjects who had not reached a settlement and were neither bargaining under compulsory arbitration nor utilized voluntary arbitration were given an additional 10 minute bargaining period to reach a settlement. Following this second bargaining session the remaining subjects were asked to complete the post experimental questionnaire.

After all post experimental questionnaires were completed, all subjects were reassembled in their appropriate classrooms and paid. Subjects were debriefed and then dismissed.

Data Collection and Scoring

Measures of the various dependent variables were taken during or after the collective bargaining game depending on the particular variable in question. Subjects were requested to record each of their bids on sheets provided for each issue under negotiation and to indicate when an agreement was reached on each issue under negotiation (see Appendix J). Analysis of these sheets provided data relating to the following dependent variables: (1) contracts settled; (2) issues left unresolved; (3) total number of bids; (4) total opening bid; (5) total amount conceded; and (6) earnings.

A post experimental questionnaire (see Appendix C) containing 10 forced choice items was used to collect data on subjects' perceptions of realism, fear of third party intervention, opponent's bargaining strategy and conflict intensity.

Pilot Study

Prior to conducting the main experiment a pilot study was carried out to answer the following questions:

1. Were the instructions clear and comprehensible?
2. Did the subjects become involved in the bargaining process?
3. Were time constraints sufficient to allow settlements to be reached and at the same time create adequate pressure to reach agreement?
4. Were data collection techniques adequate to insure tabulation and analysis?

5. Did the manipulation of independent variables appear to be effective?
6. Could five dyads carry on negotiations within the confines of a single classroom at the same time?
7. How much time should be allotted to conduct the experiment?
8. Was the post experimental questionnaire effective in measuring the perceptions of the subjects?

As a result of the pilot study: (a) The instructions were found to be clear; (b) Subjects appeared to become highly involved in the collective bargaining game; (c) Post experimental interviews with subjects revealed that 15 minutes was judged to be an adequate amount of time prior to third party intervention; (d) Data collection techniques were found adequate to insure data tabulation, although it was found essential to remind subjects to record each of their bids during the course of negotiations; (e) Measures designed to manipulate independent variables appeared to be operating effectively; (f) If tables were arranged in a proper fashion, five dyads could carry on negotiations at the same time free from undue interference; (g) It was determined that approximately one hour was necessary to carry out the experiment; and (h) For the purposes of this study, the post experimental questionnaire was judged as adequate to measure subjects' perceptions.

This chapter has reiterated the problem under investigation in this study: (1) what mode of third party intervention is most successful in enhancing bargaining settlements and (2) does conflict intensity have an impact upon the effectiveness of alternative modes of third party intervention.

The methodology which was utilized in this study as well as the independent variables (initial management position, initial union position, mode of third party intervention and role) were presented and discussed. Dependent variables under examination including number of contracts settled, number of issues left unresolved, total number of bids, total opening bid, total amount conceded and earnings were identified. Questions contained within the post-experimental questionnaire were also discussed.

Based on earlier research and theoretical predictions hypotheses relating to the effect of initial position and mode of third party intervention upon bargaining behavior were presented. Information relating to sample size, apparatus, instructions, data collection and scoring and finally results of an earlier pilot were discussed. Chapter III reports the quantitative findings obtained from statistical analysis of the experimental data.

CHAPTER III

RESULTS

Introduction

As stated in the preceding chapter, a basic 2x2x4 factorial design with equal cell sizes was employed in this study. Dependent measures capable of being analyzed on the basis of individual responses such as total opening bid, concession rate and earnings were analyzed by adding an additional variable, role played within the bargaining dyad (management or union), to the factorial design thereby creating a 2x2x4x2 factorial design.

This chapter first examines in general the six previously identified dependent variables. Concurrence between the experimental findings and hypotheses earlier stated are discussed. Also, participants' responses to four post-experimental questionnaire items designed to measure participant's perception of realism, fear of third party intervention, bargaining opponent's strategy and conflict intensity are presented.

Contracts Settled

Contracts settled served as one of the primary dependent variables under study. A contract was regarded settled only when agreement was reached on all three issues under negotiation within the first fifteen minute bargaining session. Twenty dyads bargained under

each of four anticipated modes of intervention (bargaining, mediation, voluntary arbitration and compulsory arbitration). It was predicted that the stronger the anticipated mode of third party intervention the greater would be the number of contracts settled. Table 1 presents the results of the analysis of contracts settled.

TABLE 1
CHI-SQUARE ANALYSIS OF "CONTRACTS SETTLED"

<u>Contracts</u>	<u>Bargaining</u>	<u>Mediation</u>	<u>Voluntary Arbitration</u>	<u>Compulsory Arbitration</u>
Settled	11	2	7	10
Unsettled	9	18	13	10

$\chi^2 = 6.52, p < .10$

These results did not confirm the hypothesis. Dyads bargaining under voluntary arbitration reached more contract settlements than those negotiating under mediation. Further, dyads bargaining under compulsory arbitration reached more settlements than subjects under either mediation or voluntary arbitration. Surprisingly, the greatest number of contract settlements occurred under bargaining and compulsory arbitration. A second unexpected finding was the small number of contracts settled under mediation.

Issues Left Unresolved

To examine further the impact of alternative modes of third party intervention, in addition to including initial management position (Factor A) and initial union position (Factor B) within the analysis,

a 2x2x4 ANOVA was conducted to analyze the dependent variable, number of issues left unresolved.

Significant main effects based on initial position and mode of intervention were expected. Specifically, it was hypothesized that more issues would be left unresolved under a tough rather than soft initial position. It was predicted further that fewer issues would remain unresolved the stronger the anticipated mode of third party intervention. Finally, a significant interaction effect between initial position and mode of intervention was predicted such that stronger modes of third party intervention would result in fewer unresolved issues under a tough initial position while stronger modes of third party intervention would result in more unresolved issues under a soft initial position. Table 2 presents an analysis of variance table of issues left unresolved.

TABLE 2

MEANS, STANDARD DEVIATIONS AND SUMMARY OF ANALYSIS OF
VARIANCE OF THE "NUMBER OF ISSUES LEFT UNRESOLVED"

INITIAL UNION POSITION

Initial Management Position		Soft			Tough				
		<u>BAR.</u>	<u>MED.</u>	<u>V.A.</u>	<u>BAR.</u>	<u>MED.</u>	<u>V.A.</u>		
		<u>C.A.</u>			<u>C.A.</u>				
Soft	M	1.60	1.40	1.00	.60	.80	2.00	.20	
	S.D.	1.14	.55	1.00	1.34	1.30	1.23	.45	
Tough	M	.20	1.80	2.00	1.60	.80	2.00	1.80	2.00
	S.D.	.45	1.10	1.41	1.34	1.30	1.00	1.30	1.23

TABLE 2 (Cont'd)

<u>Source of Variance</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p<</u>
Management Position (A)	1	6.068	5.068	.03
Union Position (B)	1	.050	<1	ns
Mode (C)	3	3.233	2.709	.05
AB	1	1.800	1.508	ns
AC	3	4.950	4.147	.01
BC	3	.683	<1	ns
ABC	3	.700	<1	ns
Error	64	1.194		

Findings presented in Table 2 reveal, as predicted, significantly fewer issues were left unresolved under a soft as compared to tough initial management position. Mode of third party intervention was also found to affect significantly the number of issues left unresolved. Fewest issues were left unresolved under bargaining followed by compulsory arbitration, voluntary arbitration and mediation. A significant interaction effect was found between initial management position and mode of third party intervention. The cell means for this interaction are presented in Table 3.

TABLE 3

MEAN NUMBER OF ISSUES LEFT UNRESOLVED AS A FUNCTION
OF INITIAL MANAGEMENT POSITION X MODE

Initial Management Position	MODE			
	<u>Bargaining</u>	<u>Mediation</u>	<u>Voluntary Arbitration</u>	<u>Compulsory Arbitration</u>
Soft	1.20	1.70	.60	.40
Tough	.50	1.90	1.90	1.80

Table 3 and tests of simple effects revealed that issues left unresolved did differ significantly under different modes of third party intervention under both soft ($F=2.933$, $p < .05$) and tough ($F=3.940$, $p < .05$) initial management positions. Under a soft initial management position compulsory arbitration and voluntary arbitration were superior to bargaining and mediation while bargaining alone was found to be superior to all other modes of intervention under a tough initial management position ($p < .05$ by Newman Keuls tests).

Total Number of Bids

To assist in understanding the impact of initial bargaining position and anticipated mode of third party intervention upon bargaining behavior the total number of bids (a bid was defined as an initial bid followed by an opponent's counter bid) within each dyad was analyzed. It was predicted that a tough initial position would result in significantly more bids. It was further hypothesized that the stronger the anticipated third party intervention the greater would be the total number of bids taken to reach agreement. Finally, a significant

interaction was predicted such that stronger modes of third party intervention would result in a greater number of total bids under a tough initial position while stronger modes of third party intervention would result in fewer total bids under a soft initial position.

TABLE 4
MEANS, STANDARD DEVIATIONS AND SUMMARY OF ANALYSIS OF
VARIANCE OF THE "TOTAL NUMBER OF BIDS"

INITIAL UNION POSITION

Initial Management Position		Soft			Tough		
		<u>BAR.</u>	<u>MED.</u>	<u>V.A.</u>	<u>BAR.</u>	<u>MED.</u>	<u>V.A.</u>
		<u>C.A.</u>				<u>C.A.</u>	
Soft	M	6.00	6.60	9.20	8.40	14.00	8.60
	S.D.	2.12	1.82	3.11	5.03	5.39	2.61
Tough	M	8.00	9.00	5.00	6.60	6.80	6.00
	S.D.	3.16	4.90	3.67	2.07	3.83	1.00

TABLE 4 (Cont'd)

<u>Source of Variance</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p<</u>
Management Position (A)	1	40.613	2.686	ns
Union Position (B)	1	1.013	<1	ns
Mode (C)	3	20.913	1.383	ns
AB	1	21.013	1.390	ns
AC	3	37.479	2.479	.07
BC	3	37.413	2.475	.07
ABC	3	29.413	1.945	ns
Error	64	15.119		

Examination of Table 4 shows no significant main effects. Management initial position by mode of intervention and union initial position by mode of intervention were found to be marginally significant. The cell means for these two interactions are presented in Tables 5 and 6. Further analysis of these interactions were carried out through use of simple effects tests and Newman Keuls tests.

TABLE 5
MEAN NUMBER OF TOTAL BIDS AS A FUNCTION OF
INITIAL MANAGEMENT POSITION X MODE

<u>Initial Management Position</u>	<u>MODE</u>			
	<u>Bargaining</u>	<u>Mediation</u>	<u>Voluntary Arbitration</u>	<u>Compulsory Arbitration</u>
Soft	10.00	4.90	9.30	8.50
Tough	7.40	7.50	5.80	6.30

TABLE 6

MEAN NUMBER OF TOTAL BIDS AS A FUNCTION OF
INITIAL UNION POSITION X MODE

<u>Initial Union Position</u>	<u>MODE</u>			
	<u>Bargaining</u>	<u>Mediation</u>	<u>Voluntary Arbitration</u>	<u>Compulsory Arbitration</u>
Soft	7.00	7.80	7.10	7.50
Tough	10.40	4.60	8.00	7.30

Comparison of all cell means showed that under a soft initial management position significantly fewer total bids were made under mediation than any other mode of intervention ($p < .05$ by Newman Keuls tests). There were no significant differences under a tough initial management position. A tough initial union position resulted in fewer total bids under mediation than any other condition. No significant differences were found under a soft initial union position.

The remaining three dependent variables (total opening bid, concession rate and earnings) as well as the post experimental questionnaire differ from our three preceding dependent variables (contracts settled, issues left unresolved and total number of bids) in that they may be analyzed not only by utilizing the individual dyad as the unit of analysis but also by analyzing individual participants within each dyad as an additional unit of analysis. To incorporate this additional analysis a fourth factor (role within the dyad) possessing two levels (management role and union role) was incorporated into the remainder of the statistical analysis. The addition of role to the

experimental design created a 2x2x4x2 factorial design with role within each dyad being a repeated measure.

Total Opening Bid

It was hypothesized that subjects bargaining under tough initial positions would view contract settlement as more difficult to achieve and therefore be less demanding in their total opening bid than subjects bargaining under soft initial positions. It was further predicted that the stronger the anticipated mode of third party intervention, the more modest would be subjects' total opening bid due to the increased fear of third party intervention. Finally, a significant interaction effect was predicted between initial position and mode of intervention such that stronger modes of third party intervention would result in a smaller total opening bid under a tough initial position while stronger modes of intervention would lead to a larger total opening bid under a soft initial position.

TABLE 7
MEANS, STANDARD DEVIATIONS AND SUMMARY OF ANALYSIS
OF VARIANCE OF "TOTAL OPENING BID"*

INITIAL UNION POSITION

Initial Management Position		Soft							
		Bargaining		Mediation		Voluntary Arbitration		Compulsory Arbitration	
		M	U	M	U	M	U	M	U
Soft	M	95.00	95.00	84.40	91.80	92.00	91.80	94.80	98.60
	S.D.	4.85	3.08	11.33	7.66	5.57	7.26	9.55	3.13
Tough	M	79.60	82.20	89.80	97.00	90.40	96.20	83.00	91.00
	S.D.	6.84	15.22	7.82	3.00	11.30	4.49	20.62	7.31
*Cell means represent the percentage of total opening bid.									

*Cell means represent the percentage of total opening bid.

TABLE 7 (Cont'd)

INITIAL UNION POSITION

Initial Management Position	Tough								
	Bargaining		Mediation		Voluntary Arbitration		Compulsory Arbitration		
	M	U	M	U	M	U	M	U	
Soft	M	90.40	91.00	94.00	88.60	89.60	83.20	88.00	89.80
	S.D.	10.41	9.00	9.17	15.65	9.61	9.86	11.02	9.86
Tough	M	87.40	81.40	92.80	91.00	81.40	83.80	76.60	79.00
	S.D.	8.85	15.21	10.08	11.22	9.58	15.96	23.56	7.04

*Cell means represent the percentage of total opening bid.

TABLE 7 (Cont'd)

<u>Source of Variance</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p<</u>
<u>Between</u>				
Management Position (A)	1	888.306	4.801	.03
Union Position (B)	1	652.056	3.524	.07
Mode (C)	3	109.890	<1	ns
AB	1	7.656	<1	ns
AC	3	445.040	2.405	.08
BC	3	245.123	1.325	ns
ABC	3	90.723	<1	ns
Error	64	185.025		
<u>Within</u>				
Role (D)	1	77.006	1.418	ns
AD	1	56.406	1.039	ns
BD	1	345.156	6.358	.01
CD	3	41.240	<1	ns
ABD	1	6.006	<1	ns
ACD	3	37.373	<1	ns
BCD	3	28.523	<1	ns
ABCD	3	22.973	<1	ns
Error	64	54.289		

Table 7 shows a significant main effect based on initial management position and a marginally significant main effect based on initial union position. As predicted, a tough initial position resulted in subjects demanding less in their total opening bid.

A marginally significant interaction was found between initial management position and mode of intervention. Initial union position by role was found to interact significantly. Cell means for these two interactions are presented in Tables 8 and 9.

TABLE 8
MEAN PERCENTAGE OF TOTAL OPENING BID AS A FUNCTION
OF INITIAL MANAGEMENT POSITION X MODE

<u>Initial Management Position</u>	<u>MODE</u>			
	<u>Bargaining</u>	<u>Mediation</u>	<u>Voluntary Arbitration</u>	<u>Compulsory Arbitration</u>
Soft	92.85	89.70	89.15	92.80
Tough	82.65	92.65	87.95	82.40

Initial management position by mode of intervention was further analyzed through simple effects analysis. The mode of intervention simple effect, however, was not significant under either soft or tough initial management position.

TABLE 9
MEAN PERCENTAGE OF TOTAL OPENING BID AS A FUNCTION
OF INITIAL UNION POSITION X ROLE

<u>Initial Union Position</u>	<u>ROLE</u>	
	<u>Management</u>	<u>Union</u>
Soft	88.63	92.96
Tough	87.53	85.98

Simple effects analysis of the interaction between initial union position and role indicated that union representatives demanded a significantly smaller total opening bid under a tough initial union position ($F=8.131$, $p < .01$). No significant difference in total opening bid was found for management representatives based on initial union position.

Total Amount Conceded

It was predicted that subjects confronting a higher conflictual situation, as determined by initial positions, would make greater concessions in an attempt to reach settlements prior to third party intervention. It was further hypothesized that the stronger the anticipated third party intervention the greater would be the total amount conceded. Finally, a significant interaction was expected between initial position and mode of third party intervention such that stronger modes of third party intervention would result in a greater total concession under a tough initial position while stronger modes of intervention were expected to lead to a smaller total concession under a soft initial position.

TABLE 10
MEANS, STANDARD DEVIATIONS AND SUMMARY OF ANALYSIS OF
VARIANCE OF "TOTAL AMOUNT CONCEDED"*

INITIAL UNION POSITION										
		Soft								
		<u>Bargaining</u>		<u>Mediation</u>		<u>Voluntary Arbitration</u>		<u>Compulsory Arbitration</u>		
		M	U	M	U	M	U	M	U	
Initial Management Position	Soft	M	24.00	22.40	22.80	26.80	28.20	26.60	36.00	28.00
		S.D.	14.11	17.37	15.47	19.01	13.52	19.55	22.78	16.57
Tough		M	23.00	18.20	27.80	20.00	12.00	15.40	25.20	21.60
		S.D.	16.45	12.19	25.14	6.52	16.43	21.90	23.35	16.61
*Cell means represent the percentage of total amount conceded.										

*Cell means represent the percentage of total amount conceded.

TABLE 10 (Cont'd)

INITIAL UNION POSITION

Initial Management Position		Tough							
		Bargaining		Mediation		Voluntary Arbitration		Compulsory Arbitration	
		M	U	M	U	M	U	M	U
Soft	M	26.60	39.00	5.00	4.80	24.00	35.20	25.80	33.40
	S.D.	7.96	17.56	5.00	5.72	10.51	16.35	14.46	15.76
Tough	M	20.80	20.80	15.60	13.40	10.80	16.40	15.40	10.60
	S.D.	15.02	16.90	20.02	14.43	12.77	11.06	9.10	7.77

*Cell means represent the percentage of total amount conceded.

TABLE 10 (Cont'd)

<u>Source of Variance</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p<</u>
<u>Between</u>				
Management Position (A)	1	2310.400	5.301	.03
Union Position (B)	1	570.025	1.308	ns
Mode (C)	3	494.708	1.135	ns
AB	1	52.900	<1	ns
AC	3	734.850	1.686	ns
BC	3	745.642	1.711	ns
ABC	3	205.617	<1	ns
Error	64	435.863		
<u>Within</u>				
Role (D)	1	14.400	<1	ns
AD	1	225.625	3.583	.06
BD	1	384.400	6.104	.02
CD	3	98.917	1.571	ns
ABD	1	112.225	1.782	ns
ACD	3	28.575	<1	ns
BCD	3	35.983	<1	ns
ABCD	3	82.442	1.309	ns
Error	64	62.974		

Contrary to expectations, Table 10 shows that subjects negotiating under a tough initial management position conceded significantly less than subjects negotiating under a soft initial management

position. A significant interaction was found between initial union position and role and a marginally significant interaction between initial management position and role. The cell means for these two interactions are presented in Tables 11 and 12.

TABLE 11

MEAN PERCENTAGE OF TOTAL AMOUNT CONCEDED AS A FUNCTION
OF INITIAL UNION POSITION X ROLE

<u>Initial Union Position</u>	<u>ROLE</u>	
	<u>Management</u>	<u>Union</u>
Soft	24.88	22.38
Tough	18.00	21.70

TABLE 12

MEAN PERCENTAGE OF TOTAL AMOUNT CONCEDED AS A FUNCTION
OF INITIAL MANAGEMENT POSITION X ROLE

<u>Initial Management Position</u>	<u>ROLE</u>	
	<u>Management</u>	<u>Union</u>
Soft	24.05	27.03
Tough	18.83	17.05

Further analysis of the interaction of initial union position by role through simple effects tests failed to show significant differences in concession rate based on role under soft or tough initial position. Simple effects analysis of initial management position by

role showed that union representatives conceded significantly more often ($F=7.979$, $p < .01$) under a soft initial management position. No significant difference in concession rate was found among management representatives based on initial management position.

Earnings

Earnings constituted the final objective dependent variable under examination in this study. Subjects' earnings were contingent upon reaching an agreement on issues under negotiation. Therefore, it was hypothesized that subjects bargaining under softer initial positions would reach more settlements and subsequently obtain higher earnings than subjects negotiating under tougher initial positions. Secondly, it was predicted that subjects anticipating stronger modes of third party intervention would reach more settlements, therefore experience greater earnings, than subjects anticipating no third party intervention or weaker modes of third party intervention. Finally, interactions between initial position and mode of third party intervention were predicted such that stronger modes of third party intervention would result in greater earnings under tough initial positions while under soft initial positions stronger modes of third party intervention would lead to smaller earnings.

TABLE 13
MEANS, STANDARD DEVIATIONS AND SUMMARY OF
ANALYSIS OF VARIANCE FOR "EARNINGS"

INITIAL UNION POSITION

Initial Management Position		Soft							
		Bargaining		Mediation		Voluntary Arbitration		Compulsory Arbitration	
		M	U	M	U	M	U	M	U
Soft	M	1.54	1.54	1.80	1.82	1.80	1.88	1.80	1.94
	S.D.	43.10	39.90	12.41	10.90	12.60	12.12	16.46	19.49
Tough	M	2.06	1.79	1.72	1.80	1.68	1.70	1.72	1.77
	S.D.	20.90	21.75	12.36	21.14	23.00	13.81	23.43	29.95

TABLE 13 (Cont'd)

INITIAL UNION POSITION

Initial Management Position		Tough							
		Bargaining		Mediation		Voluntary Arbitration		Compulsory Arbitration	
		M	U	M	U	M	U	M	U
Soft	M	1.86	1.87	1.72	1.67	1.86	1.99	1.77	2.08
	S.D.	15.23	15.79	19.51	20.17	9.84	11.79	18.95	14.79
Tough	M	1.93	1.76	1.68	1.64	1.72	1.71	1.63	1.71
	S.D.	22.16	16.09	16.76	4.90	17.23	22.70	13.24	13.90

TABLE 13 (Cont'd)

<u>Source of Variance</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p<</u>
<u>Between</u>				
Management Position (A)	1	1328.256	2.483	ns
Union Position (B)	1	74.256	<1	ns
Mode (C)	3	426.523	<1	ns
AB	1	2052.056	3.837	.06
AC	3	3000.709	5.610	.01
BC	3	1013.123	1.894	ns
ABC	3	847.656	1.585	ns
Error	64	534.853		
<u>Within</u>				
Role (D)	1	228.006	<1	ns
AD	1	1293.906	4.947	.03
BD	1	28.056	<1	ns
CD	3	1105.506	4.226	.01
ABD	1	51.756	<1	ns
ACD	3	297.873	1.139	ns
BCD	3	172.556	<1	ns
ABCD	3	47.790	<1	ns
Error	64	261.576		

An analysis of variance (Table 13) was performed on these data. Contrary to our prediction, no main effects were found. Three interaction effects (initial management position by mode, initial management position by role and mode by role) were found to be significant.

Initial management position by initial union position approached significance. Cell means for these four interactions are presented in Tables 14-17.

TABLE 14
MEAN EARNINGS AS A FUNCTION OF INITIAL
MANAGEMENT POSITION X MODE

Initial Management Position	MODE			
	<u>Bargaining</u>	<u>Mediation</u>	<u>Voluntary Arbitration</u>	<u>Compulsory Arbitration</u>
Soft	1.70	1.75	1.88	1.90
Tough	1.88	1.71	1.70	1.71

Table 14 shows (and simple effects tests confirm) that mode of intervention significantly affected earning under both soft ($F=3.464$, $p < .05$) and tough ($F=2.944$, $p < .05$) initial positions. However, the manner in which mode of intervention effected earnings was distinctly different dependent upon initial management position. Under a soft initial management position voluntary and compulsory arbitration led to significantly higher payoffs than did bargaining ($p < .05$ by Newman Keuls tests). The superiority of voluntary and compulsory arbitration in relation to mediation approached significance. On the other hand, bargaining led to a significantly higher ($p < .05$) payoff under a tough initial management position than did any other form of third party intervention. These findings were not as predicted.

TABLE 15
MEAN EARNINGS AS A FUNCTION OF INITIAL
MANAGEMENT POSITION X ROLE

<u>Initial Management Position</u>	<u>ROLE</u>	
	<u>Management</u>	<u>Union</u>
Soft	1.77	1.85
Tough	1.77	1.73

The interaction between initial management position and role (Table 15) was found to be significant only for union representatives. Union representatives, as predicted, earned significantly more ($F=6.584$, $p < .05$) under a soft initial management position.

TABLE 16
MEAN EARNINGS AS A FUNCTION
OF MODE X ROLE

<u>ROLE</u>	<u>MODE</u>			
	<u>Bargaining</u>	<u>Mediation</u>	<u>Voluntary Arbitration</u>	<u>Compulsory Arbitration</u>
Management	1.85	1.73	1.77	1.73
Union	1.74	1.73	1.82	1.87

Table 16 shows (and simple effects tests confirmed) that under compulsory arbitration union representatives earned significantly more ($F=5.207$; $p < .05$) than management representatives.

TABLE 17

MEAN EARNINGS AS A FUNCTION OF INITIAL MANAGEMENT
POSITION X INITIAL UNION POSITION

<u>INITIAL MANAGEMENT POSITION</u>	<u>INITIAL UNION POSITION</u>	
	<u>Soft</u>	<u>Tough</u>
Soft	1.77	1.85
Tough	1.78	1.72

Table 17 shows that under a soft initial union position initial management position does not significantly effect subjects earnings. However, under a tough initial union position a soft initial management position led, as predicted, to significantly higher subject earnings.

Post Experimental Questionnaire

Following the conclusion of the simulated collective bargaining game all subjects were asked to complete a ten item post experimental questionnaire. Four questions included within this questionnaire were designed explicitly to provide data which would contribute to an understanding of the behavioral data reported above. An analysis of the findings from this post experimental questionnaire is presented below.

Mundane Realism

"I tried to effectively represent my party's position."

Subjects responses to the above item are presented in Table 18.

TABLE 18
MEANS, STANDARD DEVIATIONS AND SUMMARY OF
ANALYSIS OF VARIANCE FOR "MUNDANE REALISM"*

INITIAL UNION POSITION

Initial Management Position		Soft							
		Bargaining		Mediation		Voluntary Arbitration		Compulsory Arbitration	
		M	U	M	U	M	U	M	U
Soft	M	2.20	1.80	2.00	1.60	2.00	1.40	1.60	1.60
	S.D.	1.30	1.10	.71	1.34	1.00	.54	.89	.55
Tough	M	1.60	2.00	1.40	1.80	1.00	1.00	2.20	2.40
	S.D.	.55	1.23	.55	.84	.12	.12	1.30	2.61

*The smaller the cell mean the greater the perceived mundane realism.

TABLE 18 (Cont'd)

INITIAL UNION POSITION

Initial Management Position		Tough							
		Bargaining		Mediation		Voluntary Arbitration		Compulsory Arbitration	
		M	U	M	U	M	U	M	U
Soft	M	1.80	1.40	1.00	1.20	2.00	2.00	2.00	1.80
	S.D.	.84	.55	.12	.45	1.23	.71	1.23	.45
Tough	M	1.80	1.60	3.00	2.40	1.60	1.40	1.20	1.20
	S.D.	.84	.55	2.45	1.40	.89	.55	.45	.45

*The smaller the cell mean the greater the perceived mundane realism.

TABLE 18 (Cont'd)

<u>Source of Variance</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p<</u>
<u>Between</u>				
Management Position (A)	1	.006	<1	ns
Union Position (B)	1	.006	<1	ns
Mode (C)	3	.523	<1	ns
AB	1	.506	<1	ns
AC	3	2.840	2.626	.06
BC	3	1.406	1.301	ns
ABC	3	4.273	3.952	.01
Error	64	1.081		
<u>Within</u>				
Role (D)	1	.506	<1	ns
AD	1	.506	<1	ns
BD	1	.156	<1	ns
CD	3	.073	<1	ns
ABD	1	1.406	1.368	ns
ACD	3	.106	<1	ns
BCD	3	.123	<1	ns
ABCD	3	.273	<1	ns
Error	64	1.028		

No differences across treatment conditions were anticipated in response to this question. Surprisingly, initial management position, initial union position and mode were found to interact significantly.

Table 19 presents cell means for this interaction. Test of simple effects, contingent upon mode of intervention, were used to analyze this interaction further. No differences in perceived realism was found among subjects under bargaining. Under mediation subjects under a tough initial management position reported significantly less ($F=5.604, p < .05$) realism under a tough as compared to soft initial union position. Likewise, under a tough initial union position a tough initial management position reduced realism ($F=11.841, p < .01$).

TABLE 19

MEAN MUNDANE REALISM AS A FUNCTION OF INITIAL MANAGEMENT POSITION X INITIAL UNION POSITION X MODE

INITIAL MANAGEMENT POSITION	INITIAL UNION POSITION			
	Soft			
	<u>Bargaining</u>	<u>Mediation</u>	<u>Voluntary Arbitration</u>	<u>Compulsory Arbitration</u>
Soft	2.00	1.80	1.70	1.60
Tough	1.80	1.60	1.00	2.30

TABLE 19 (Cont'd)

INITIAL MANAGEMENT POSITION	INITIAL UNION POSITION			
	Tough			
	<u>Bargaining</u>	<u>Mediation</u>	<u>Voluntary Arbitration</u>	<u>Compulsory Arbitration</u>
Soft	1.60	1.10	2.00	1.90
Tough	1.70	2.70	1.50	1.20

Subjects bargaining under conditions of voluntary arbitration were not found to differ significantly in their perception of mundane realism. However, under compulsory arbitration initial union position significantly effected realism under a tough initial management position. A tough initial union position was found to increase realism when interacting with a tough initial management position ($F=5.560$, $p < .05$).

Fear of Third Party Intervention

"It was important to me that my bargaining opponent and I reached an agreement during the initial fifteen (15) minute bargaining period."

As stated in Chapter II, of primary interest in this study was the effect of alternative modes of third party intervention upon bargaining behavior. It was predicted that participants would fear mediation more than bargaining, voluntary arbitration to a greater extent than bargaining or mediation and in turn fear compulsory arbitration more than either bargaining, mediation or voluntary arbitration.

An ANOVA performed on subjects' responses to this question is presented in Table 20. Table 20 shows a highly significant main effect ($F=4.926$, $p < .01$) based on mode of third party intervention. Cell means based on mode of third party intervention are presented in Table 21.

TABLE 20
MEANS, STANDARD DEVIATIONS AND SUMMARY OF ANALYSIS OF
VARIANCE FOR "FEAR OF THIRD PARTY INTERVENTION"*

		INITIAL UNION POSITION									
		Soft									
		Bargaining		Mediation		Voluntary Arbitration		Compulsory Arbitration			
		M	U	M	U	M	U	M	U	M	U
Initial Management Positions	Soft	M	4.40	4.00	3.60	6.20	2.60	2.20	2.00	3.00	
		S.D.	1.67	2.35	1.82	1.30	1.52	1.30	1.30	1.00	
Tough	M	3.00	2.20	4.20	2.80	1.00	1.00	1.00	3.20	3.60	
	S.D.	2.55	1.30	1.48	1.92	.12	.12	.12	1.79	2.30	

*The smaller the cell mean the greater the fear of third party intervention.

TABLE 20 (Cont'd)

INITIAL UNION POSITION

Initial Management Position		Tough							
		Bargaining		Mediation		Voluntary Arbitration		Compulsory Arbitration	
		M	U	M	U	M	U	M	U
Soft	M	3.20	4.40	3.60	4.00	2.40	1.80	4.20	4.60
	S.D.	1.30	3.13	2.19	1.87	1.52	.84	1.64	1.82
Tough	M	2.40	3.00	5.40	3.60	4.00	4.20	4.20	3.40
	S.D.	1.67	2.35	2.07	2.30	2.35	2.28	1.30	2.51

*The smaller the cell mean the greater the fear of third party intervention.

TABLE 20 (Cont'd)

<u>Source of Variance</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p<</u>
<u>Between</u>				
Management Position (A)	1	4.225	<1	ns
Union Position (B)	1	13.225	3.010	ns
Mode (C)	3	21.642	4.926	.01
AB	1	13.225	3.010	ns
AC	3	5.408	1.231	ns
BC	3	6.242	1.421	ns
ABC	3	10.742	2.445	ns
Error	64	4.394		
<u>Within</u>				
Role (D)	1	.025	<1	ns
AD	1	9.025	3.423	ns
BD	1	.225	<1	ns
CD	3	.342	<1	ns
ABD	1	.225	<1	ns
ACD	3	6.042	2.291	ns
BCD	3	3.742	1.419	ns
ABCD	3	.775	<1	ns
Error	64	2.637		

TABLE 21
MEAN FEAR OF THIRD PARTY INTERVENTION
AS A FUNCTION OF MODE

MODE			
<u>Bargaining</u>	<u>Mediation</u>	<u>Voluntary Arbitration</u>	<u>Compulsory Arbitration</u>
3.33	4.18	2.40	3.50

Table 21 shows that subjects under voluntary arbitration were most desirous of reaching an agreement during the initial fifteen (15) minute bargaining session followed by subjects under bargaining and compulsory arbitration. Subjects under mediation reported being least concerned with reaching an early agreement. Newman Keuls tests showed subjects under voluntary arbitration were significantly more concerned with reaching a settlement than subjects under any other condition ($p < .05$).

Opponent's Bargaining Strategy

"I felt my bargaining opponent was flexible and willing to make significant compromises."

It was hypothesized that subjects bargaining under either a tough management or union initial position would perceive their opponent as more flexible as a result of the greater necessity for concessions to enable an agreement to be reached.

An analysis of variance (Table 22) was performed on these data. Surprisingly, no main nor interaction effects were found.

TABLE 22
MEANS, STANDARD DEVIATIONS AND SUMMARY OF ANALYSIS OF
VARIANCE FOR "OPPONENTS BARGAINING STRATEGY"*

		INITIAL UNION POSITION							
		Soft							
		Bargaining		Mediation		Voluntary Arbitration		Compulsory Arbitration	
Initial Management Position		M	U	M	U	M	U	M	U
Soft	M	3.40	3.00	3.20	4.20	3.20	2.80	4.40	3.20
	S.D.	1.34	2.55	1.64	2.17	2.59	2.49	1.82	1.64
Tough	M	2.60	2.40	5.00	3.80	3.00	4.00	4.00	4.80
	S.D.	.55	2.07	1.58	2.17	.53	.48	2.12	2.28

*The smaller the cell mean the more flexible was subject's bargaining opponent perceived.

TABLE 22 (Cont'd)

INITIAL UNION POSITION

Initial Management Position	Tough								
	Bargaining		Mediation		Voluntary Arbitration		Compulsory Arbitration		
	M	U	M	U	M	U	M	U	
Soft	M	2.80	3.20	2.80	2.80	2.80	2.60	3.00	3.80
	S.D.	1.30	1.79	2.05	1.92	.84	1.52	1.23	1.92
Tough	M	3.40	3.40	2.80	3.40	3.60	4.60	3.20	3.60
	S.D.	2.07	2.61	1.92	.89	2.07	1.14	1.48	1.82

*The smaller the cell mean the more flexible was subject's bargaining opponent perceived.

TABLE 22 (Cont'd)

<u>Source of Variance</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p<</u>
<u>Between</u>				
Management Position (A)	1	6.400	1.331	ns
Union Position (B)	1	4.225	1	ns
Mode (C)	3	3.717	1	ns
AB	1	.625	1	ns
AC	3	2.083	1	ns
BC	3	4.742	1	ns
ABC	3	1.908	1	ns
Error	64	4.809		
<u>Within</u>				
Role (D)	1	.900	1	ns
AD	1	.900	1	ns
BD	1	2.025	1.196	ns
CD	3	.283	1	ns
ABD	1	.025	1	ns
ACD	3	2.183	1.289	ns
BCD	3	.208	1	ns
ABCD	3	2.908	1.717	ns
Error	64	1.694		

Conflict Intensity

"The initial difference in bargaining positions between me and my bargaining opponent was broad."

The second major independent variable manipulated in this study was the intensity of conflict between the bargainers. As explained in Chapter II conflict intensity was manipulated by altering the disparity between the initial bargaining positions of the respective parties. The question above sought to evaluate the effectiveness of this manipulation. It was predicted that subjects bargaining under either tough management or union initial position would perceive greater differences between their respective positions than those bargaining under soft initial positions.

TABLE 23
MEANS, STANDARD DEVIATIONS AND SUMMARY OF ANALYSIS OF
VARIANCE FOR "CONFLICT INTENSITY"*

		INITIAL UNION POSITION							
		Soft				Tough			
		Bargaining		Mediation		Voluntary Arbitration		Compulsory Arbitration	
Initial Management Position		M	U	M	U	M	U	M	U
Soft	M	3.20	3.00	2.40	1.80	2.20	2.20	1.80	2.40
	S.D.	1.30	2.00	1.14	1.30	1.10	1.10	1.30	1.52
Tough	M	3.00	2.00	2.20	1.60	1.00	4.00	1.60	1.60
	S.D.	1.00	.71	1.10	.89	.12	.48	.55	.89

*The smaller the cell mean the greater the perceived conflict intensity.

TABLE 23 (Cont'd)

INITIAL UNION POSITION

Initial Management Position		Tough							
		Bargaining		Mediation		Voluntary Arbitration		Compulsory Arbitration	
		M	U	M	U	M	U	M	U
Soft	M	3.00	1.40	3.60	3.40	2.80	1.60	2.60	2.00
	S.D.	2.24	.55	1.52	1.14	.84	.55	1.34	1.00
Tough	M	2.60	1.80	2.20	2.40	2.60	2.60	2.00	2.40
	S.D.	1.14	1.30	1.30	1.14	1.14	.89	.24	1.14

*The smaller the cell mean the greater the perceived conflict intensity.

*The smaller the cell mean the greater the perceived conflict intensity.

TABLE 23 (Cont'd)

<u>Source of Variance</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p<</u>
<u>Between</u>				
Management Position (A)	1	2.256	1.355	ns
Union Position (B)	1	1.406	1	ns
Mode (C)	3	1.640	1	ns
AB	1	.006	1	ns
AC	3	1.890	1.134	ns
BC	3	3.973	2.385	ns
ABC	3	1.273	1	ns
Error	64	1.667		
<u>Within</u>				
Role (D)	1	1.056	1	ns
AD	1	3.906	3.311	ns
BD	1	3.906	3.311	ns
CD	3	3.356	2.845	.05
ABD	1	.506	1	ns
ACD	3	2.440	2.068	ns
BCD	3	3.106	2.633	ns
ABCD	3	1.606	1.361	ns
Error	64	1.180		

Table 23 reports the results of an ANOVA on these data. Mode by role interacted significantly. Cell means for this interaction are presented in Table 24.

TABLE 24
MEAN CONFLICT INTENSITY AS A FUNCTION
OF ROLE X MODE

ROLE	MODE			
	<u>Bargaining</u>	<u>Mediation</u>	<u>Voluntary Arbitration</u>	<u>Compulsory Arbitration</u>
Management	2.95	2.60	2.15	2.00
Union	2.05	2.30	2.60	2.10

Table 24 (simple effects tests) showed no significant differences across mode of intervention contingent upon role.

Summary of Results

The following section will present a summary of results pertaining to the major hypotheses tested in this study.

Hypothesis 1. Stronger modes of third party intervention will result in fewer unsettled contracts.

Results did not confirm the preceding hypothesis. Surprisingly, fewest contracts (9) were left unsettled under bargaining followed closely by dyads bargaining under compulsory arbitration (10 unsettled contracts). Under voluntary arbitration 13 contracts were left unresolved. Mediation was found to be the least successful mode of third party intervention. Eighteen (18) of twenty (20) contracts were left unsettled under mediation.

Hypothesis 2. More issues would be left unresolved under tough as compared to soft initial positions. Secondly, it was predicted that stronger modes of third party intervention would result in fewer unresolved issues. Finally, a significant interaction effect between initial position and mode of intervention was predicted such that stronger modes of

third party intervention would result in fewer unresolved issues under a tough initial position while a soft initial position would result in more unresolved under stronger modes of third party intervention.

Hypothesis 2 was partially confirmed. Under a soft initial management position compulsory arbitration and voluntary arbitration were found to result in fewer unresolved issues than bargaining and mediation. However, under a tough initial management position bargaining was found to be superior to all other modes of third party intervention.

Hypothesis 3. It was predicted that tough initial positions would result in significantly more bids than soft initial positions. It was further hypothesized that the stronger the anticipated third party intervention, the greater would be the total number of bids. Finally, a significant interaction was predicted such that stronger modes of third party intervention would result in a greater number of total bids under a tough initial position while stronger modes of third party intervention would result in fewer total bids under a soft initial position.

Findings did not support the predicted hypothesis. Comparison of all cell means showed that under a soft initial management position significantly fewer total bids were made under mediation than any other condition. A tough initial union position resulted in significantly fewer total bids under mediation than any other condition.

Hypothesis 4. Total opening bid it was hypothesized would be significantly less under tough rather than soft initial positions. It was also predicted that stronger modes of third party intervention would result in more modest total opening bids. Finally, an interaction between initial position and mode of third party intervention were predicted such that stronger modes of third party intervention would result in lower total opening bids under a tough initial position while a soft

initial position would result in a larger total opening bid the stronger the anticipated third party intervention.

Findings partially supported the predicted hypothesis. Tough initial positions lead to significantly smaller total opening bids.

Hypothesis 5. It was expected that subjects confronting a higher conflictual situation, as determined by initial position, would make greater concessions in an attempt to reach settlements prior to third party intervention. It was further hypothesized that the stronger the anticipated third party intervention the greater would be the rate of concession. Finally, a significant interaction was predicted between initial position and mode of third party intervention such that stronger modes of intervention would result in greater concessions under a tough initial position while stronger modes of third party intervention would result in a smaller total concession under a soft initial position.

Contrary to expectation, it was found that subjects negotiating under a tough initial management position conceded significantly less than subjects negotiating under a soft initial management position.

Hypothesis 6. It was hypothesized that subjects bargaining under soft initial positions would reach more settlements and subsequently obtain higher earnings than subjects negotiating under tough initial positions. Secondly, it was predicted that subjects anticipating stronger modes of third party intervention would reach more settlements, therefore experience greater earnings, than subjects anticipating no third party intervention or weaker modes of third party intervention. Finally, an interaction between initial position and mode of third party intervention was predicted such that stronger modes of third party intervention would result in greater earnings under a tough initial position while a soft initial position would result in lower earnings the stronger the anticipated third party intervention.

Results partially confirmed our hypothesis. Under a soft initial management position voluntary arbitration and compulsory arbitration led to significantly higher earnings than did bargaining and mediation. Bargaining, however, was found to lead to significantly greater payoffs than all other modes of intervention under a tough initial management position. It was also found that under a tough initial union position a soft initial management position led to significantly higher payoffs.

This chapter has presented the results of a statistical analysis of the experimental data collected in this study. Concurrence between the experimental findings and earlier stated hypotheses were also discussed. Chapter IV will review the major results of this study, discuss the theoretical and practical implications of these findings, identify the limitations of this study and suggest directions for future research.

CHAPTER IV

DISCUSSION AND CONCLUSIONS

This chapter reviews the major results of this study. Findings with respect to each independent variable as well as interaction effects are presented, and the implications of these findings as they support the predicted hypotheses are discussed. Theoretical and practical implications of these findings, limitations of the present study and directions for future research are suggested.

As stated in Chapter 1, the purpose of this study was to determine what mode of third party intervention was most effective in facilitating subjects to reach a collective bargaining agreement prior to third party intervention. The four types of third party intervention under examination were bargaining (with no third party intervention), mediation, voluntary arbitration and compulsory arbitration. Considerable disagreement exists among researchers as to which form of third party intervention is most effective (e.g. see Northrup, 1966; Vidmar, 1971; Johnson and Pruitt, 1972). Also of interest to this study was the effect that conflict intensity might have upon alternative modes of third party intervention. Research by Vidmar (1971) and Johnson and Tullar (1972) suggests that conflict intensity has an interaction effect upon the effectiveness of alternative forms of third party intervention.

It was hypothesized that dyads bargaining under stronger modes of third party intervention would be more successful in reaching contract settlements. In addition an interaction effect was predicted since a tough initial position was expected to increase the effectiveness of stronger styles of third party intervention.

The Effects of Third Party Intervention

It was hypothesized that the stronger the mode of third party intervention, the (1) fewer would be the number of unsettled contracts, (2) fewer issues would be left unresolved, (3) more total bids would be exchanged, (4) smaller total opening bids would result, (5) greater would be the total amount conceded and higher earnings would result.

As reported previously, dyads under bargaining were found to be most successful in reaching contract settlements followed by dyads under compulsory arbitration, voluntary arbitration, and mediation. Similar findings were found when analyzing issues left unresolved. Fewest issues were left unresolved by dyads under bargaining followed by dyads under compulsory arbitration, voluntary arbitration, and mediation. Contrary to stated predictions, these findings imply that subjects anticipating no outside assistance in resolving a bargaining impasse were most successful in reaching bargaining settlements. Almost equally successful were subjects anticipating compulsory arbitration. Surprisingly, mediation was found to be a highly ineffective mode of third party intervention.

These findings lend partial support to the observations of Northrup (1966) and Bok and Dunlop (1970) who contend that collective bargaining is most successful when parties negotiate free from outside

intervention. However, these results fail to support their contention that compulsory arbitration seriously undermines collective bargaining.

Johnson and Tullar's (1972) findings that mediation was the least effective form of third party intervention is supported by this study and challenges earlier findings reported by Podell and Knapp (1969), Pruitt and Johnson (1970) and Vidmar (1971) documenting the effectiveness of mediation. Studies by the latter group of researchers, as noted previously, foreclosed the possibility of a bargaining settlement prior to the introduction of mediation and also failed to compare the effectiveness of mediation in relation to alternative modes of third party intervention. Surprisingly, mode of third party intervention was not found to affect significantly total number of bids, total opening bid, total amount conceded or earnings.

A plausible explanation of these findings is that dyads bargaining in the absence of any form of third party intervention view themselves as solely responsible for the success of negotiations and thereby strive to reach settlement. Failure to reach a settlement cannot be transferred to any party outside the dyad. In situations where third party intervention is present compulsory arbitration is most conducive to settlements because subjects seek settlements in an attempt to avoid a binding decision over which they have no control. Under voluntary arbitration subjects maintain the right to reject third party intervention and thereby reduce the threat of outside intervention. Mediation, where failure to reach an agreement results in a third party merely suggesting a settlement, is viewed as least threatening and, therefore, provides little stimulus to reach an

agreement. Subjects under mediation may, in fact, await the mediator's suggested solution prior to reaching an accord.

The Effects of Initial Position

It was predicted that a tough initial position by either management or union would: (1) result in more unresolved issues, (2) lead to a greater number of total bids, (3) encourage a smaller total opening bid, (4) lead to a greater total concession and (5) result in lower earnings.

These hypotheses are based on bilateral monopoly bargaining literature (Komorita and Brenner, 1968) which suggests that subjects bargaining under high conflict or against tougher bargaining strategies would be less successful in reaching agreements than subjects bargaining under lower conflict or softer bargaining strategies. It was further predicted that subjects perceiving higher degrees of conflict would be less demanding in their total opening bid and be willing to make greater concessions. Conflict intensity was operationalized in this study by manipulating subjects' initial bargaining position.

Reference to Chapter 3 reveals that initial position significantly effected the number of issues left unresolved, the total opening bid, the total amount conceded and earnings received. The effects of initial position were generally as predicted. Significantly fewer issues were left unresolved when management assumed a soft as opposed to tough initial position. Total opening bids were significantly less under a tough as compared to soft initial management position. Also a tough initial union position resulted in a marginally smaller total opening bid under a soft initial union position.

Contrary to expectation, a tough initial management position resulted in a significantly smaller total concession than a soft initial position. Earnings were found to differ significantly based on an interaction between management initial position and union initial position. Under a soft initial union position earnings did not differ significantly based on the initial management position. However, under a tough initial union position earnings were significantly higher under a soft as compared to tough initial management position.

The Effects of Third Party and Initial Position

To this point, the discussion has focused on the main effect of third party intervention and initial position. However, of principal concern to the present investigation was the possible interaction effect of initial position with third party intervention. Vidmar's (1971) and Johnson and Tullar's (1972) findings have suggested such a possibility. Before any conclusions or implications about which mode of third party intervention, if any, is most conducive to resolving bargaining impasses, it is essential to examine the interaction effect between third party intervention and initial position in this study.

The principal interaction predicted in this study was that stronger modes of third party intervention would be significantly more effective under tough as opposed to soft initial positions. This hypothesis was based on field observations reported by Landsburger (1955) and Vidmar's (1971) experimental findings.

Significant interaction effects were found to affect issues left unresolved, total number of bids and earnings. Compulsory arbitration and voluntary arbitration resulted in significantly fewer unresolved

issues under a soft initial management position than either bargaining or mediation. However, under a tough initial management position bargaining was superior to all other modes of third party intervention. These findings support Johnson and Tullar's (1972) results that under conditions of high need to "save face" subjects bargained most successfully in the absence of third party intervention. Conversely, in situations of low need to save face compulsory arbitration was found to be the most successful style of third party intervention. Perhaps students in this study were willing to allow an outside party to resolve differences where the potential difference in outcome to each bargainer would not be great.

Total number of bids was also found to be marginally affected by an interaction effect between management initial position and mode of intervention and union initial position and mode of third party intervention. A soft initial management position resulted in fewer total bids under mediation than any other form of intervention. A tough initial union position resulted in fewer total bids under mediation than any other style of third party intervention.

These findings add additional support to Johnson and Pruitt's (1972) and Johnson and Tullar's (1972) research showing that mediation may not be an effective strategy of third party intervention when compared to other alternatives. Johnson and Pruitt (1972) found subjects anticipating compulsory arbitration to reach significantly more settlements than subjects anticipating mediation. Under low face saving conditions mediation was found by Johnson and Tullar (1972) to be the least effective strategy of third party intervention and subjects

receiving a suggestion for settlement were no more likely to reach agreement than those who did not receive a suggestion.

Earnings were found to be significantly influenced by an interaction effect between initial management position and mode of third party intervention. In the soft initial management position condition subjects facing compulsory arbitration or voluntary arbitration had higher earnings than subjects facing bargaining or mediation. However, in a tough initial management position, subjects facing bargaining had significantly higher earnings than subjects facing any other mode of third party intervention. These results are similar to findings utilizing issues left unresolved as the dependent variable, this is not surprising, however, since the measures are not independent. Nevertheless, the results provide greater confidence in the reliability of these findings and further support Johnson and Tullar's (1972) findings that conflict intensity has an interaction effect upon the effectiveness of alternative modes of third party intervention.

Role

Each dyad in this study consisted of a management and union representative. Subjects were randomly assigned to represent one of the preceding positions. Role assignment was added as an additional variable to the experimental design in instances where individual as well as dyadic measures of dependent variables were available. No differences based upon role were hypothesized.

In several instances, however, differences contingent upon role were found. Union representatives were found to demand a significantly smaller total opening bid under a tough as opposed to soft

initial union position. Management representatives did not significantly alter their total opening bid contingent upon initial union position.

Total amount conceded was also found to differ significantly based on role. Union representatives were found to concede significantly more under a soft as opposed to tough initial management position. No significant difference in total amount conceded was found among management representatives based on initial management or union position.

Earnings were also found to differ contingent upon role. Union representatives' earnings were significantly higher under a soft as compared to tough initial management position. Management representatives' earnings were not found to differ significantly contingent upon initial management or union position. Union representatives were found to earn significantly more under compulsory arbitration than management representatives. No logical explanation emerges from these isolated instances of an interaction based on role.

Summary of the Findings

Several common trends emerge from the findings of this study. The main effect of third party intervention was found to have a surprisingly limited impact upon bargaining outcomes. Only the number of contracts settled and the number of issues left unresolved were found to differ significantly based on third party intervention. In each of these instances significant differences were attributable largely to the ineffectiveness of mediation. It is interesting to note that mediation was found to be the least effective style of third party

intervention based on all six objective dependent variables under examination.

The six objective dependent variables utilized in this study might be classified into two distinct categories; outcome variables and process variables. Outcome variables include contracts settled, issues left unresolved and earnings while total number of bids, total opening bid, and total amount conceded constitute process variables. While mode of intervention was found to significantly effect two of the three outcome variables it had no significant effect on any of the process variables.

Initial position was found to have a more broadly based effect upon bargaining both with respect to outcome and process variables. Significantly fewer issues were left unresolved when management assumed a soft as compared to tough initial position. A tough initial management position resulted in a significantly smaller total opening bid than under a soft initial management position. Similar findings were found based on initial union position. Unexpected was the finding that a soft initial management position resulted in a significantly smaller amount conceded than a tough initial management position. Finally, earnings were found to be lowest under conditions where both management and union assumed tough initial positions.

A more comprehensive interpretation of this study's findings, however, are gained through an analysis of the interaction effect of mode of third party intervention by initial position. The dependent variables issues left unresolved and earnings most clearly illustrate the effects of this interaction.

Under a soft initial management position compulsory arbitration and voluntary arbitration led to superior outcomes when compared to bargaining and mediation. Bargaining alone, however, was found to be superior under a tough initial management position. Similar results were found in relation to earnings. Compulsory arbitration and voluntary arbitration led to significantly higher payoffs under a soft initial management position while, bargaining led to significantly higher payoff under a tough initial management position. These findings are similar to Johnson and Tullar's (1972) recent findings and suggest that bargainers confronted by difficult bargaining situations bargain least effectively when confronted by stronger modes of third party intervention while, stronger modes of third party intervention enhance bargaining effectiveness under conditions of less conflict.

Implications of the Findings

In general, it can be argued that the results of this study suggest caution to individuals and parties advocating the introduction of arbitration into additional spheres of contemporary society. Supporters of such legislation argue that the threat of outside intervention will encourage parties to reach mutual agreements. The results of this study only partially support such a contention. Arbitration was found to facilitate agreements only under conditions of low conflict. The threat of any form of outside intervention in instances of high conflict was found to prove detrimental to the bargaining process. These findings suggest that parties are most successful in resolving difficult bargaining issues when they do not perceive outside alternatives available. Researchers and policy makers who

believe that collective bargaining settlements reached by the parties themselves are more broadly accepted and result in greater industrial peace would be advised, on the basis of this research, to oppose the passage of legislation requiring arbitration.

The effectiveness of mediation reported by earlier researchers appears seriously challenged by this study's findings. As noted in Chapter I, earlier studies citing mediation effectiveness often foreclosed the possibility of contract settlements prior to the mediator's suggested settlement and thereby considerably enhanced mediation effectiveness. The present study was specifically designed to overcome such limitations and mediation was found to be the least effective strategy of third party intervention.

It is important to note, however, that the present study presented subjects with only the anticipation of mediator's intervention. Anticipation of a suggestion from a qualified mediator may have, in fact, encouraged subjects to refrain from concluding a settlement prior to the mediator's suggestion. Mediation is perhaps most successful when it is introduced only after the parties have been unable to reach an agreement themselves.

Findings with respect to initial position strongly demonstrates that parties who enter negotiations with less disparity between their initial demands are more successful in reaching collective bargaining agreements. These findings tend to offer indirect support and encouragement for the efforts by several leading corporations and unions who have instituted "continuous bargaining" in an attempt to resolve or narrow the differences between their respective positions prior to the commencement of formal collective bargaining negotiations.

Limitations of the Present Study and Directions for Future Research

The preceding findings provide some clarification to the controversy surrounding which style of third party intervention most enhances bargaining outcomes and under what circumstances. However, significant additional research appears clearly warranted to resolve still unanswered questions.

The limited main effect attributable to third party intervention contrasts sharply with previous research. Studies by (Northrup, 1966; Urban, 1971; Johnson and Pruitt, 1972; and Johnson and Tullar, 1972) have all found significant main effects based on style of third party intervention. The present findings suggest only a limited main effect based on third party intervention which becomes significantly more pronounced when interacting with initial bargaining position. Clearly, additional research is necessary to clarify this relationship.

Although the manipulation of initial bargaining position did generally result in confirming our predicted hypotheses and did in several instances significantly effect subjects' bargaining behavior the success with which it truly simulated conflict intensity is open to question. In numerous instances initial position did not significantly effect bargaining behavior. Total number of bids, for example, was not significantly effected by initial position. Surprisingly, in only one instance was a significant interaction effect between initial management position and initial union position found. The post experimental questionnaire item designed to measure subjects' perception of conflict intensity failed to show any significant differences

based on initial position. These findings suggest that alternative methods designed to create conditions of high and low conflict should be utilized in future research in attempts to confirm, advance, or disprove the present findings.

Prior to dismissing mediation as a largely fruitless strategy of third party intervention it should be more thoroughly investigated under situations where parties have previously reached a mutual stalemate. Mediators' personal characteristics as well as strategies should be investigated in efforts to identify characteristics and strategies which might improve mediator and/or mediation effectiveness.

Subjects participating in the present study possessed neither a long term vested interest nor role representational responsibilities regarding the positions they were assigned to represent. Research by Druckman (1967) among others, has shown both factors to influence bargaining behavior significantly. To expand the generalizability of the present findings these additional factors should be included in future research designs.

These findings still leave unanswered a question raised initially by Johnson and Tullar (1972) -- what are the relative effects of the anticipation of intervention vs. the actual intervention on behavior after intervention?

A final area for future research is to test these findings in a field setting. Although several bargaining studies (Siegel and Harnett, 1964; and Vidmar, 1967) have shown laboratory research to be generalizable to broader populations the external validation of experimental findings is an issue of continual importance. The

150,000 collective bargaining agreements currently in effect in the United States provide ample data to test the validity of this study's findings. Recent legislation governing public employees establishes numerous alternative strategies of third party intervention which might be examined to expand the generalizability of the present findings.

As Coser (1956) and other social scientists have observed any society characterized by unlimited wants yet limited resources will experience conflict. Although inevitable, this phenomena is not necessarily dysfunctional not undesirable. The issue, rather, is how to constructively institutionalize conflict within acceptable limits and channels. Research examining third party intervention has been one approach suggested to achieve this goal. As noted above, much more research is needed to enable us to most effectively utilize third party intervention as a conflict resolution strategy.

BIBLIOGRAPHY

BIBLIOGRAPHY

- Bass, Bernard M., "Effects on the subsequent performance of negotiators of studying issues of planning strategies alone or in groups," Psychological Monographs: General and Applied, Vol. 80, No. 6, Whole No. 614, 1966, 1-31.
- Blake, R. R.; Shepard, H. A. and Mouton, J. S., Managing Intergroup Conflict in Industry, Gulf Publishing Co., Houston, Texas, 1964.
- Bok, D. C. and Dunlop, J. T., Labor and the American Community, Simon Schuster, New York, 1970.
- Campbell, R. J., Originality in Group Productivity: III Partisan Commitment and Productive Independence in a Collective Bargaining Situation, The Ohio State University Research Foundation, 1960.
- Chamberlain, N. W., The Labor Sector, New York: McGraw-Hill, 1965.
- Chamberlain, N. W. and Cullen, D. E., The Labor Sector, McGraw-Hill, New York, 1971.
- Coser, L., The Functions of Social Conflict, The Free Press, New York, N.Y., 1956.
- Douglas, A., Industrial Peacemaking, New York Columbia University Press, 1962.
- Druckman, D., "Dogmatism, prenegotiation experience, and simulated group representation as determinants of dyadic behavior in a bargaining situation," Journal of Personality and Social Psychology, 1967, 6, 279-290.
- Elkouri, F. and Elkouri, E. A., How Arbitration Works, BNA Incorporated, Washington, D.C., 1960.
- Hildebrand, G. H., "The public sector," in J. T. Dunlop and N. W. Chamberlain, eds., Frontiers of Collective Bargaining, New York: Harper and Row, 1967, Chap. 5, 147.
- Jackson, E., Meeting of the Minds: A Way to Peace Through Mediation, New York: McGraw-Hill, 1952.

- Johnson, D. F. and Pruitt, D. G., "Preintervention effects of mediation versus arbitration," Journal of Applied Psychology, 1972, Vol. 56, No. 1, 1-10.
- Johnson, D. F. and Tullar, W. L., "Style of third party intervention, face saving, and bargaining behavior," Journal of Experimental Social Psychology, 8, 319-330, 1972.
- Julian, J. W. and McGrath, J. E., The Influence of Leader and Member Behavior on the Adjustment and Task Effectiveness of Negotiation Groups, Technical Report No. 17, Group Effectiveness Research Laboratory, University of Illinois, 1963.
- Kerr, C., "Industrial conflict and its mediation," American Journal of Sociology, 60, 1954, 230-245.
- Komorita, S. S. and Brenner, A. R., "Bargaining and concession-making under bilateral monopoly," Journal of Personality and Social Psychology, 1968, 6, 349-353.
- Landsburger, H. A., "Final report on a research project in mediation," Labor Law Journal, 1956, 7, 501-510.
- Landsburger, H. A., "Interim report of a research project on mediation," Labor Law Journal, 1955, 6, 552-560.
- Landsburger, H. A., "The behavior and personality of the labor mediator: The parties perception of mediator behavior," Personnel Psychology, Autumn 1960, 329-347.
- Landsburger, H. A., "Interaction process analysis of the mediation of labor-management disputes," Journal of Abnormal and Social Psychology, 1955, 51, 552-558.
- Loewenberg, J. J., "Compulsory arbitration for police and fire fighters in Pennsylvania in 1968," Industrial and Labor Relations Review, Vol. 23, No. 3, April, 1970, 367-379.
- Lovell, H. G., "The pressure lever in mediation," Industrial and Labor Relations Review, 5, Oct. 1952, 119-127.
- McGrath, J. E., A social psychological approach to the study of negotiation. In R. Bowers (Eds.) Studies on Behavior in Organizations: A Research Symposium, Athens: University of Georgia Press, 1966.
- McGrath, J. E. and Julian, J. W., Negotiation and Conflict: An Experimental Study, Technical Report No. 16, Group Effectiveness Research Laboratory, University of Illinois, 1962.
- Miner, J. B., Personnel and Industrial Relations: A Managerial Approach, New York: The Macmillan Company, 1969.

- Northrup, H. R., Compulsory Arbitration and Government Intervention in Labor Disputes, Washington: Labor Policy Association, Inc., 1966.
- Peters, E., Conciliation in Action, New London, Conn.: National Foreman's Institute, 1952.
- Peters, E., Strategy and Tactics in Labor Negotiations, New London, Conn.: National Foreman's Institute, 1955.
- Podell, J. E. and Knapp, W. M., "The effect of mediation on perceived firmness of the opponent," Journal of Conflict Resolution, 1969, 13, 511-520.
- Pondy, L. R., "Organizational Conflict: Concepts and Models," Administrative Science Quarterly, 1967, 296-320.
- Prassow, P. and Peters, E., Conflict Resolution in Labor Relations, New York: McGraw-Hill, 1970, 284-293.
- Pruitt, D. G. and Johnson, D. F., "Mediation as an aid to face saving in negotiations," Journal of Personality and Social Psychology, 1970, 14, 239-246.
- Rehmus, C. M., "Mediation and conciliation," Labor Law Journal, 4, February 1953, 141-144.
- Rehmus, C. M., "The mediation of industrial conflict: A note on the literature," Journal of Conflict Resolution, 1965, 9, 118-126.
- Reuther, W. quoted in Chamberlain, N. W., The Labor Sector, New York: McGraw-Hill, 1965.
- Rosenau, J., "Intervention as a scientific construct," Journal of Conflict Resolution, XIII[(13)] June 1969, 150-151.
- Schelling, T., The Strategy of Conflict, Cambridge: Harvard University Press, 1960.
- Schmidt, S. M. and Kochan, T. A., "Conflict: Toward conceptual clarity," Administrative Science Quarterly, Vol. 17, No. 3, September 1972, 359-370.
- Siegel, S. and Harnett, D. L., "Bargaining behavior: A comparison between mature industrial personnel and college students," Operations Research, 12, 1964.
- Stevens, C. M., "Is compulsory arbitration compatible with bargaining," Industrial Relations, Vol. 5, No. 2, February 1966, 38-52.

- Urban, T. F., "The influence of intervention mode and experience upon bargaining behavior," Paper presented at the Midwest Aids Conference, 1973, MSU.
- Vaughan, J. A. and Bass, B. M., "Putting the business world into a test tube," Transaction, 1967, 5, 50-52.
- Vidmar, N., "Effects of representational roles and mediators on negotiation effectiveness," Journal of Personality and Social Psychology, 1971, 17, 48-58.
- Vidmar, N. and McGrath, J. E., Role Structure, Leadership and Negotiation Effectiveness (Technical Report No. 6) Urbana: University of Illinois, Department of Psychology, 1967.
- Warren, E. L., "Mediation and fact finding," In: A Kornhauser, R. Dubin, and A. Ross (eds.) Industrial Conflict, New York: McGraw-Hill, 1954.
- Weissbrodt, S., "Changes in state labor laws in 1972," Monthly Labor Review, January 1973, Bureau of Labor Statistics, U.S. Government Printing Office, Washington, D.C.
- Walton, R. E., Interpersonal Peacemaking: Confrontations and Third Party Consultation, Reading, Mass.: Addison-Wesley, 1969.

APPENDICES

APPENDIX A

INITIAL BARGAINING POSITIONS FOR MANAGEMENT
AND UNION REPRESENTATIVES

APPENDIX A

INITIAL BARGAINING POSITIONS FOR MANAGEMENT AND UNION REPRESENTATIVES

Soft Initial Management Position

Wages	Management representative offers 6 cent increase
Hospital and Medical Plan	Management representative offers to pay 4/12 of hospital and medical plan
Cost of Living Clause	Management representative offers to pay 32% of cost of living increases

Soft Initial Union Position

Wages	Union representative demands 16 cent increase
Hospital and Medical Plan	Union representative demands that company pay 9/12 of hospital and medical plan
Cost of Living Clause	Union representative demands that company pay 72% of cost of living increases

Tough Initial Management Position

Wages	Management representative offers 2 cent increase
Hospital and Medical Plan	Management representative offers to pay 2/12 of hospital and medical plan
Cost of Living Clause	Management representative offers to pay 16% of cost of living increases

Tough Initial Union Position

Wages

Union representative demands
20 cent increase

Hospital and Medical Plan

Union representative demands
that company pay 11/12 of hos-
pital and medical plan

Cost of Living Clause

Union representative demands
that company pay 88% of cost
of living increases

APPENDIX B

BARGAINING INSTRUCTIONS CONTINGENT UPON ALTERNATIVE MODES OF THIRD PARTY INTERVENTION

APPENDIX B

BARGAINING INSTRUCTIONS CONTINGENT UPON ALTERNATIVE MODES OF THIRD PARTY INTERVENTION

BARGAINING

You will have fifteen (15) minutes to successfully negotiate a completed contract with your bargaining opponent. All three (3) issues must be successfully resolved before a contract can be considered and completed. If you are unable to reach a settlement within the specified time you will be requested to cease bargaining with your bargaining opponent and reevaluate your bargaining strategy. After you have thought things over for a few minutes negotiations will resume for ten (10) additional minutes.

If however you require more than fifteen (15) minutes to reach a contract settlement you will receive only eight (8) cents for each point you have earned. It is therefore to your advantage to reach an agreement within the designated time if possible.

MEDIATION

You will have fifteen (15) minutes to successfully negotiate a completed contract with your bargaining opponent. All three (3) issues must be successfully resolved before a contract can be considered completed. If you are unable to reach an agreement within the specified time, a third person unrelated to this experiment but

knowledgeable in the field of industrial relations who has earlier studied these bargaining issues will present his proposal for a settlement for your consideration. His proposal is to be considered a suggestion for settlement you and your opponent can act or not act on this suggestion as you see fit. After his proposal has been presented, the negotiations will continue for ten (10) additional minutes. The purpose of bringing in a third party is so that you can get an outsiders' opinion.

If however you require more than fifteen (15) minutes to reach a contract settlement you will receive only eight (8) cents for each point you have earned. It is therefore to your advantage to reach an agreement within the designated time if possible.

VOLUNTARY ARBITRATION

You will have fifteen (15) minutes to successfully negotiate a completed contract with your bargaining opponent. All three (3) issues must be successfully resolved before a contract can be considered completed. If you are unable to reach an agreement within the specified time you may, if you and your bargaining opponent agree, elect to submit your bargaining impasse to a third person unrelated to this experiment but knowledgeable in the field of industrial relations who has earlier studied these bargaining issues and arrived at a proposed settlement. This individual's settlement will be binding upon you. However, such a third party will intervene only at the joint request of you and your bargaining opponent.

If however you require more than fifteen (15) minutes to reach a contract settlement you will receive only eight (8) cents for each

point you have earned. It is therefore to your advantage to reach an agreement within the designated time if possible.

COMPULSORY ARBITRATION

You will have fifteen (15) minutes to successfully negotiate a completed contract with your bargaining opponent. All three (3) issues must be successfully resolved before a contract can be considered completed. If you are unable to reach an agreement within the specified time a third person unrelated to this experiment but knowledgeable in the field of industrial relations who has earlier studied these bargaining issues and arrived at a proposed settlement will intervene and render a binding settlement to you and your bargaining opponent.

If however you require more than fifteen (15) minutes to reach a contract settlement you will receive only eight (8) cents for each point you have earned. It is therefore to your advantage to reach an agreement within the designated time if possible.

APPENDIX C

MEDIATOR'S SUGGESTED SETTLEMENT

APPENDIX C
MEDIATOR'S SUGGESTED SETTLEMENT

A noted Professor of Industrial Relations after studying the issues over which you are bargaining has suggested the following settlement:

Wages	A 12 cent per hour increase
Hospital and Medical Plan	Proportion of Company Payment 6/12
Percentage of Cost of Living Increase Covered by Contract	
Should be 56%	

APPENDIX D
ARBITRATOR'S SETTLEMENT

APPENDIX D
ARBITRATOR'S SETTLEMENT

A noted Professor of Industrial Relations after studying the issues over which you are bargaining has dictated the following settlements:

Wages	A 12 cent per hour increase
Hospital and Medical Plan	Proportion of Company Payment 6/12
Percentage of Cost of Living Increase Covered by Contract Should be 56%	

APPENDIX E

POST EXPERIMENTAL QUESTIONNAIRE

APPENDIX E

POST EXPERIMENTAL QUESTIONNAIRE

Please indicate your frank reactions to the collective bargaining experiment in which you have just been a participant. Place an X on the position that you endorse on each scale.

1. I was satisfied with my outcome (rewards) on the collective bargaining task.

strongly agree ____/____/____/____/____/____/____ strongly disagree

2. I wanted to do a good job on the task.

strongly agree ____/____/____/____/____/____/____ strongly disagree

3. My bargaining opponent seemed to be a reasonable person.

strongly agree ____/____/____/____/____/____/____ strongly disagree

4. The initial difference in bargaining positions between me and my bargaining opponent was great.

strongly agree ____/____/____/____/____/____/____ strongly disagree

5. I would like to take part in an experiment similar to this one again.

strongly agree ____/____/____/____/____/____/____ strongly disagree

6. I tried to effectively represent my party's position.

strongly agree ____/____/____/____/____/____/____ strongly disagree

7. It was important to me that my bargaining opponent and I reached an agreement during the initial fifteen (15) minute bargaining period.

strongly _____/_____/_____/_____/_____/_____/_____ strongly
agree disagree

8. At the beginning of negotiations I felt my initial position and my bargaining opponent's initial position were miles apart.

strongly _____/_____/_____/_____/_____/_____/_____ strongly
agree disagree

9. I felt my bargaining opponent was flexible and willing to make significant compromises.

strongly _____/_____/_____/_____/_____/_____/_____ strongly
agree disagree

10. The initial difference in bargaining positions between me and my bargaining opponent was broad.

_____ (1) strongly agree
_____ (2) agree
_____ (3) neutral
_____ (4) disagree
_____ (5) strongly disagree



APPENDIX F

BARGAINING SCALES FOR ISSUES UNDER NEGOTIATION
(WAGES, HOSPITAL AND MEDICAL PLAN
AND COST OF LIVING CLAUSE)

APPENDIX F

BARGAINING SCALES FOR ISSUES UNDER NEGOTIATION (WAGES, HOSPITAL AND MEDICAL PLAN AND COST OF LIVING CLAUSE)

WAGES

Union Points	1	2	3	4	5	6	7	8	9	10	11	12
-----------------	---	---	---	---	---	---	---	---	---	----	----	----

Cents Per Hour Increase

0	2	4	6	8	10	12	14	16	18	20	22
---	---	---	---	---	----	----	----	----	----	----	----

Management
Points

12	11	10	9	8	7	6	5	4	3	2	1
----	----	----	---	---	---	---	---	---	---	---	---

Union demands cent increase

Management offers cent increase

HOSPITAL AND MEDICAL PLAN

Union Points	1	2	3	4	5	6	7	8	9	10	11	12
	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12

Proportion of Company Payment

Management Points	12	11	10	9	8	7	6	5	4	3	2	1
----------------------	----	----	----	---	---	---	---	---	---	---	---	---

Union demands company payment

Management offers payment

Union Points	1	2	3	4	5	6	7	8	9	10	11	12
	<u>Percentage of Cost of Living Increase Covered by Contract</u>											
	8	16	24	32	40	48	56	64	72	80	88	96
Management Points	12	11	10	9	8	7	6	5	4	3	2	1

Union demands cost of living clause
Management offers cost of living clause

APPENDIX G

BACKGROUND INFORMATION TO COLLECTIVE BARGAINING GAME

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APPENDIX G
BACKGROUND INFORMATION TO COLLECTIVE
BARGAINING GAME

BACKGROUND INFORMATION

The Townsford Company is a small textile company located in a large northern city in the USA. Townsford is highly respected for its quality work in the dyeing and finishing of raw woven fabrics. It employs approximately 100 men. Townsford's men are among the most skilled to be found in the area.

The general business conditions of the country are good and the financial conditions of Townsford are stable. Townsford is operating at full capacity and has a six month backlog of orders. Profits are not as high as at previous times, however, since the company has not raised the prices in several years in order to maintain a good competitive position with other sections of the country. The company has been able to maintain a 6 percent shareholders' dividend and has made recent purchases of more modern equipment.

The personnel policies at Townsford are not the most modern but are better than those of most plants the same size. The past president of the company, who retired three months ago, knew most of the men personally and was well liked. He is largely responsible for the reputation of Townsford as a "good place to work." His successor is viewed with some suspicion by the workers, due mainly to his

statements about changing some of the work procedures to achieve greater efficiency.

For the last 25 years, a majority of the employees have been members of the union. Relations of the union with the company, for the most part, have been quite good with grievances promptly discussed and settled. The first strike occurred, however, three years ago and lasted 15 days. The workers lost the fight for a sliding-scale wage based on increases in the cost of living index, but did get several other minor fringe benefits.

Although Townsford's wage scale, \$1.94 per hour, compares favorably with most other textile firms in the area, it is 3 percent below those textile firms which employ workers of equivalent high skill and produce a similar high quality product. Wages in the industry have not increased in proportion to increases in the cost of living or increases in other industries.

Despite occasional small wage increases, over a period of years Townsford's workers have slipped from a relatively high pay scale to a position roughly equivalent to that of lowly skilled workers in other industries. This has caused some unrest among the workers, and there is some danger of the workers shifting into these other higher paying industries. Unemployment is below normal in the area, and it has been difficult to obtain replacements at Townsford.

The three year contract has now expired. Negotiations broke down in the final week with both sides adamant in their positions. The only agreement reached was that each side would select a new bargaining agent to represent it, scheduled to meet today in an attempt to reach a quick solution and avoid a strike.

APPENDIX H
INSTRUCTIONS TO MANAGEMENT REPRESENTATIVE

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APPENDIX H
INSTRUCTIONS TO MANAGEMENT REPRESENTATIVE

ASSIGNMENT AS COMPANY NEGOTIATOR

You have been selected by the Townsford Company to represent it in its negotiations with the Union. Negotiations for a new two-year contract broke down last week. The Union demands for general wage and benefit increases are completely unreasonable. If labor costs are increased it might necessitate price increases which could seriously hamper the company's competitive standing. Although no compromises were reached in either side's position, it was decided that each side should appoint new negotiators in an effort to settle the contract.

You are to do the best possible job you can to get a good settlement of the contract for the company. Although the company now has a backlog of orders, it is in danger of losing several major customers if increased labor costs necessitate a significant price increase. It is essential to the company, however, that the contract be settled in this bargaining period. We realize that this involves compromises on both sides, and you are appointed to carry out binding negotiations for us. Remember, your job is to reach a settlement, one that is good for the company, in this negotiating period.

Indicated below each bargaining issue you will find the last offer made by each party prior to the termination of bargaining. As you will notice there are numerous positions for potential agreement

regarding each issue under negotiation. Agreements must, however, be reached only at positions designated.

Above and below each bargaining scale you will notice additional scales identified as union points and management points. These are the points which you will earn when an agreement is reached at each designated point. As you will notice the more favorable an agreement you reach for your respective party the greater your point total. At the conclusion of bargaining you will receive ten (10) cents for every point you have earned.

APPENDIX I
INSTRUCTIONS TO UNION REPRESENTATIVE

APPENDIX I
INSTRUCTIONS TO UNION REPRESENTATIVE

ASSIGNMENT AS UNION NEGOTIATOR

You have been selected by the Union to represent it in its negotiations with the Townsford Company. Negotiations for a new two-year contract broke down last week. The Union is thoroughly irritated with the Company's refusal to grant the workers badly needed wage and benefit increases. Although no compromises were reached in either side's position, it was decided that each side should appoint new negotiating agents in an effort to settle the contract.

You are to do the best job you can to get a good settlement of the contract for labor. Union members were dissatisfied with the last contract three years ago and there is serious danger of division in the ranks of the Union if a more satisfactory contract is not achieved in these negotiations. It is essential to labor, however, that the contract be settled in this bargaining period. We realize that this involves compromises on both sides, and you are appointed to carry out binding negotiations for us. Remember, your job is to reach a settlement, one that is good for labor, in this negotiating period.

Indicated below each bargaining issue you will find the last offer made by each party prior to the termination of bargaining. As you will notice there are numerous positions for potential agreement

regarding each issue under negotiation. Agreement must, however, be reached only at positions designated.

Above and below each bargaining scale you will notice additional scales identified as union points and management points. These are the points which you will earn when an agreement is reached at each designated point. As you will notice the more favorable an agreement you reach for your respective party the greater your point total. At the conclusion of bargaining you will receive ten (10) cents for every point you have earned.

APPENDIX J

SUBJECT'S COLLECTIVE BARGAINING
RESPONSE SHEET

APPENDIX J

**SUBJECT'S COLLECTIVE BARGAINING
RESPONSE SHEET**

Union Initial Position Demands

Management Initial Position Offers

[illegible][illegible]

APPENDIX K
SUBJECT'S COLLECTIVE BARGAINING
SETTLEMENT FORM

APPENDIX K
SUBJECT'S COLLECTIVE BARGAINING
SETTLEMENT FORM

WE THE UNDERSIGNED HAVE REACHED AN AGREEMENT ON ALL THREE ISSUES
AND OUR CONTRACT IS THEREFORE SETTLED.

MANAGEMENT REPRESENTATIVE

UNION REPRESENTATIVE

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