

# Working Paper

## The Situational Levers of Negotiating Flexibility

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WP-92-17  
February 1992



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## Preface

This working paper represents research conducted for the Negotiation Laboratory of the Processes of International Negotiation (PIN) Project during the Summer 1991. Negotiating flexibility is defined behaviorally as the moves and counter-moves made by negotiating actors that lead to adjustments from their initial positions and possibly to compromise and agreement among the parties. Thus, it is a central concept in the analysis of negotiation processes.

In this paper, Dr. Druckman explores the concept in a systematic and empirical fashion, seeking to understand the situational correlates that make flexibility in negotiating behavior more likely. The research literature on flexibility has focused primarily on the impact of situational factor taken one at a time. In this paper, Dr. Druckman has designed an interesting scenario questionnaire that facilitates the examination of multiple situational factors simultaneously. Through statistical analysis of paired-comparison data, he is able to evaluate the relative importance of each situational factor on negotiating flexibility. The analysis presented here represents a pilot test of this approach.

A Negotiating Flexibility Study Group has been established by the PIN Project to continue this line of research and conduct a collaborative multi-method research program concerning this essential dynamic in the negotiation process.

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# The Situational Levers of Negotiating Flexibility<sup>1</sup>

*Daniel Druckman*

This is an experimental study of some aspects of a negotiation situation that may influence a bargainer's decisions about his or her positions and tactics. The experiment is an attempt to explore hypothesized relationships between these types of variables in the setting of a simulated international conference on environmental regulation. It is regarded as a next step in a progression of analytical work on these relationships. In order to place the experiment in that analytical context, a general discussion of the meaning of negotiating flexibility and of situational levers precedes a description of methods and results. A final section develops implications of the findings for further work on this topic.

## What is Negotiating Flexibility?

Flexibility in negotiation is indicated by a variety of behaviors which may be correlated. In gaming studies it is the cooperative choice in the game matrix. This choice reflects a willingness to accept a smaller payoff than is possible to obtain while trusting that the other will also cooperate. If he does not cooperate, you lose and he wins. There are risks involved in both cooperative and competitive choices: a cooperative choice may be exploited; a competitive choice may lead to mutual losses. The matrix used by Wilson (1971) illustrates this dilemma.

		Player 2	
		Cooperate	Compete
		Cooperate	2,2                    -1,4
Player 1	Cooperate	4,-1	0,0
	Compete		

Both choices in this matrix pose a dilemma. By choosing to cooperate, the decision maker risks the possibility of being exploited and losing (-1); by choosing to compete, the decision maker risks no gain (0). The risk is, however reduced by the possibility of retaliation in future moves; an habitual competitor is punished by reciprocated competitive moves, reducing his payoffs substantially. This definition may capture the basic dimension of the concept, which is the expectation that the other will reciprocate one's willingness to concede some gain. One is, however, unlikely to continue to cooperate in the absence of reciprocity. Failure to reciprocate a cooperative move is likely to reduce one's willingness to continue to cooperate, leading often to competitive spirals and stalemates.

This idea is captured in Gouldner's (1960) concept of a "reciprocity norm" and in Osgood's (1979)

<sup>1</sup> The work reported in this paper is part of the Negotiation Laboratory sponsored by the Processes of International Negotiation (PIN) Project of the International Institute of Applied Systems Analysis (IIASA). Valuable suggestions on design and implementation were made by Bert Spector, Lynn Wagner, Amanda Wolf, Per Larsson, and Kathy Druckman. Appreciation is extended to the participants in IIASA's Young Scientists' Summer Program (YSSP) and to the diplomats-in-training at the Vienna Diplomatic Academy for taking part in the simulation. Special thanks go to James Druckman for his work on several aspects of the statistical analyses, including analysis of the paired-comparisons judgments.

GRIT strategy (Graduated Reciprocation in Tension Reduction). Many studies have shown that one's failure to reciprocate another's cooperative gesture produces anger and reduces the other's willingness to cooperate. [See Druckman's (1990) review of this literature.] Osgood proposed a strategy for reducing cold war tensions based on making unilateral cooperative moves contingent on eventual reciprocation. His decision maker is cooperative to a point; tolerance has its limits which are reached after several attempts have been made to demonstrate cooperation without reciprocated cooperation on the part of an opponent.

The focus of this work is on the dynamics of interactions where moves and counter-moves are made through time. Strings of mutually cooperative moves demonstrate flexibility whereas strings of mutually competitive moves demonstrate toughness or inflexibility in terms of sticking to a strategy intended to maximize one's own returns. [Wilson (1971) measured such strings of cooperative and competitive moves over trials.] The conception of competitive and cooperative moves made in interactive games corresponds to changing or not changing positions on issues during a negotiation. Cooperation consists of moving in the direction of the other's positions or away from one's own initial position, demonstrating flexibility. Competition consists of sticking to your own position in the hope that others will move toward that position, resulting in one's own position prevailing as the outcome of the negotiation. The experimental gaming research (and the game theory models) concentrate primarily on interaction dynamics, positing an outcome that emerges from patterns of choices through time. Similarly, outcomes in negotiation can emerge from patterns of position change through time as illustrated by Ikle and Leites (1962).

Flexibility can be shown to occur in other ways and may be influenced by aspects of the situation other than (or in addition to) the opponent's moves or concessions. It can be reflected in the verbal exchanges between negotiators or in their perceptions of the situation and opponent. Process analysis coding of "hard" and "soft" rhetoric or of revealed commonalities and differences in positions can be regarded as indications of flexible or inflexible negotiating behavior, whether or not public movement from initial positions has occurred . [See Druckman and Hopmann (1991) for a discussion of the uses of content analysis in negotiation.] Responses to questions about perceived commitment to positions about perceived incompatibility between positions, about whether the situation is viewed more as a win-lose contest or as a problem-solving debate, and the willingness to seek either compromise or integrative agreements may also be indicators of flexible or inflexible behavior. The perceptions may be construed as variables that intervene between the situation and negotiating behavior as depicted, for example, by the model used to explain results obtained in the bargaining study by Druckman, Broome, and Korper (1988).

Flexible (or inflexible) behavior may occur during any stage of a negotiation, and may take different forms from one stage to the next. It may consist of decisions that lead to movement from initial positions or to agreements. Here are some examples of decisions that indicate flexibility in each of four stages thought to capture the progression of many talks (see Druckman, 1990a).

- o During the preparation period: A willingness to study the issues from the perspective of other parties, including attempts to reverse roles; a search for possible solutions that are integrative or that serve to maximize the return of all parties, and efforts to de-emphasize the ideological aspects of issues.
- o At the early periods when parties "set the stage" for the discussions to come: A willingness to disaggregate issues, to consider the possibility of partial agreements if a comprehensive agreement is not possible; a willingness to hold many informal meetings with delegates of other nations to explore the issues outside plenary sessions, and a willingness to consider a variety of alternative formats and venues for holding the sessions.

- o During the "give-and-take" discussions: The discovery of a formula or framework for defining issues suitable for bargaining; a willingness to incorporate in one's own proposals arguments made by delegates from other nations, including reversing roles during the debating, and, recognizing and the seizing upon turning points that may occur during the process.
- o During the endgame: A willingness to make concessions in order to get an agreement; the offering of proposals intended to avoid impasses, and a willingness to let contentious issues go unresolved in order to get an agreement.

These decisions are examples of flexible behaviors. They are also decisions that may influence movement in negotiation as indicated by measures developed in gaming experiments, simulations, and case studies. Measures of choices made in the gaming studies are attempts to distinguish cooperative from competitive decisions. Flexibility is defined as a willingness to forfeit some gain in order either to avoid loses (in game-matrix studies) or to avoid deadlocks (in board-game studies). In the game-matrix experiments, these include the total number of cooperative choices, number of cooperative choices as a function of trials, and strings of mutually cooperative or competitive moves (Wilson, 1971). Examples of measures used in board-game experiments are the total number of offers, number of the other's offers accepted, difference in outcomes, and the difference in offers made "toward" versus "away" from the opponent's interests as these are defined in tasks where players distribute limited resources among themselves (Druckman, Solomon, and Zechmeister, 1972; Druckman et al., 1976).

The dependent variables used frequently in simulations are variations on yielding from initial positions on issues defined in the scenarios: for example, total dyadic yielding from initial positions, distance apart on each issue at the conclusion of the talks, symmetry of final offers, relative payoffs or other outcomes indicating which party gains more, number of issues resolved, rate of concession making from one period to the next, average demand, private position change by issue (Bartos, 1974; Brehmer and Hammond, 1977). Another measure used in some studies is speed to resolution of the issues (Druckman, 1968). Pruitt (1981) has developed indicators of integrative agreements where parties strive for better outcomes than compromises. Perceptual measures of flexibility used in these studies have included extent of commitment to positions, expressed willingness to compromise, views of the situation as win-lose or problem-solving, and evaluations of the negotiating climate and opponent (Zechmeister and Druckman, 1973; Druckman and Broome, 1991). In some simulation studies, investigators have content analyzed the transcripts to develop measures of "hard and "soft" negotiating behavior (Hopmann and Walcott, 1977) or revealed similarities and differences (Zechmeister and Druckman, 1973).

Analytical case studies of negotiation have focused primarily on the process. Some studies have developed modified versions of measures used in laboratory experiments: for example, Jensen's (1988) index of the amount of concessions reflected in proposals, Hopmann's (e.g., Hopmann and Smith, 1977) index of hard and soft negotiating rhetoric, and King's (1976) index of role-reversing effectiveness. Other studies have devised new measures appropriate to the real-world contexts in which the case occurs: for example, the ratio of impasses to turning points, stressing commonalities or differences in the discussion, revealing and concealing positions, the rate at which the talks move through stages, the use of bracketing as a veto of other parties' proposals, and the extent to which others' proposals are incorporated in one's own positions. Using these measures, we have learned about the effects of power asymmetries and other structural variables (Hopmann, 1978), some causes of impasses (Druckman, 1986), patterns of responsiveness (Hopmann and Smith, 1977; Jensen, 1984; Stoll and McAndrew, 1986; Druckman and Harris, 1990), frequencies of cooperative or role-reversing behavior (King, 1976; Lebedeva, 1991), possible influences of external events

(Hopmann, 1972; Hopmann and King, 1976), and the role of creativity in negotiation (Spector, 1991).

One issue in the analytical work is the extent to which the various measures are correlated: Are they independent or interchangeable indicators of negotiating flexibility?, How many ways are there to measure flexibility?, What are the dimensions of flexibility?, Are there separate indicators of each of these dimensions? Another issue concerns comparative work: What are the key situational determinants of flexible behavior?, Do these relationships vary from one setting to another?, Do they vary from the laboratory to similar real-world cases? Comparable measures should facilitate comparative work, enabling us to assess case similarity as well as to discover relationships between situations or contexts and negotiating behavior. A step in this direction is taken in the experiment reported below.

## **What are the Situational Levers?**

Various aspects of the situation have been shown to influence a negotiator's flexibility or movement from initial positions. We have discussed some effects of the other's moves or concessions above, and have given examples of decisions that may produce flexible behavior. These and other variables can be categorized under the headings of issues, background factors, context, structure of conference and parties, and the immediate situation facing negotiators. We know something about how these factors impact on negotiators' perceptions leading either to cooperative or competitive behavior, to agreements or impasses. It may even be possible to indicate where, at which stage, in the process the different variables are likely to have their strongest impact on negotiating behavior. A preliminary sampling of effects of variables by stage is suggested by our review of the empirical literature.

We are making conceptual progress toward developing a differentiated approach to the study of negotiating behavior in international negotiations. The discussion above suggests that it is possible to distinguish among types of flexible behavior that occur in different stages of a negotiation. We can also distinguish among types of influences on these measures of flexibility, making it possible to explore relationships between independent (types of influences) and dependent (flexibility indicators) variables as time-specific effects in the negotiation process. We begin appropriately with a taxonomy of influences and behaviors as shown in Table 1. The table is organized by type of influence, how it operates in negotiation, the aspect of flexibility affected, and when (what stage) the effects are likely to occur. Key references to studies are also included.

The effects shown in the table are between two variables, an aspect of the negotiating situation and negotiating behavior. Some variables have positive effects in terms of facilitating agreements. Among the issue variables, delinking ideologies, fractionating issues, and salient solutions should make agreements easier to attain. The background factors of preparation consisting of bilateral study and familiarity with the others' positions are likely to have positive effects. So too would amiable relationships, peripheral locations and light media coverage (context), shared responsibility for outcomes and informal meetings (structure), and deadlines (situation). Other variables are likely to have negative effects, making impasses more probable. Examples are when position on issues are linked to ideologies, attempts are made to seek comprehensive agreements, preparation consists of unilateral strategizing, the talks are held at central locations with wide media coverage, attractive BATNAs are available, representatives have sole responsibility for outcomes, their nation has a power advantage, and there is a lack of deadlines. But, it is also possible that the effects of variables hypothesized to impact on the process in early phases (e.g. prenegotiation preparation, familiarity with opponents) dissipate in later stages.

TABLE 1

**Variables Organized by Type, Effects, and Stages**

Type of Factor	Variable	Effects on Negotiation	Stage	Sample References
<b>Issues</b>	Extent to which positions derive from broader ideologies	The more explicit the link between positions and ideologies, the less negotiators are willing to compromise	Early in talks when positions are staked out	Druckman & Zechmeister, 1973; Zechmeister and Druckman, 1973
	Seeking either comprehensive or partial agreements	Fractionating the size of issues or disaggregating packages of issues facilitates achieving agreements	Early to middle phases where agendas are developed and issues are organized for discussion	Fisher, 1964 Deutsch et al., 1971; Hopmann 1986
	Salient solutions	Salient outcomes are coordination points which facilitate compromising within a bargaining space	Middle to late phases where the search for solutions occur	Schelling, 1960; Benton & Druckman, 1973
<b>Background Factors</b>	Prenegotiation preparation	Unilateral strategy formation reduces flexibility; bilateral study of issues increases flexibility	Prior to the formal talks	Bass, 1966 Hammond, et al., 1966; Druckman, 1968

Type of Factor	Variable	Effects on Negotiation	Stage	Sample References
Background Factors	Familiarity with opponents and their position	Greater willingness to debate, to role-reverse, and to appreciate the complexity of issues and positions	Prenegotiation and early in talks	Johnson, 1967; Muney & Deutsch, 1968; Druckman & Broome, 1991
Best alternative to a negotiated agreement (BATNA)	Attractive BATNAs reduces willingness to concede, to rush to agreement or to be flexible; unattractive BATNAs have the opposite effect		Middle to late	Fisher & Ury, 1981; Thibaut & Kelley, 1959
Relationships between parties as amiable or antagonistic (country-side)	Amiable relationships enhance cooperation, facilitate bargaining over "large" issues		Throughout	Hopmann & Walcott, 1973; Druckman & Broome, 1991
Context	Location of conference as central (capital cities) or peripheral (country-side)	Peripheral locations enhance cooperation, reduce "public" commitment to positions	Early stages	Galtung, 1964
6	Visibility, media coverage as heavy or light	Public or well-covered negotiations serve to harden positions and highlights the importance of face-saving	Middle phases	Druckman & Rozelle 1975; Druckman et al 1976; Brown, 1977

<u>Type of Factor</u>	<u>Variable</u>	<u>Effects on Negotiation</u>	<u>Stage</u>	<u>Sample References</u>
Structure of Conference and Teams	Representational role obligations	More responsibility results in latitude for decision making, reduced willingness to compromise	Throughout	Druckman, 1971, 1973, 1977
	Power differences	Coalitions among weaker parties to increase their influence; asymmetrical bargaining toughness, use of vetos to block unfavorable agreements	Early to middle phases	Hopmann, 1974, 1978; King, 1979
	Format of meetings as formal or informal, many or few	Many informal meetings enhance cooperation in summity	Early agenda setting and middle give-and-take	Galtung, 1964
Immediate Situation	Other's concession making rate	Changes in other's concession making leads either to tough or soft bargaining depending on the direction of the change	Middle, during the give-&-take bargaining	Bartos, 1974; Druckman et al., 1972 1976: Druckman & Harris, 1990
	Conference leadership as innovative or not	Formula discovery as a basis for coordinating the bargaining over details of issues	Middle before bargaining occurs	Zartman, 1975; Underdal, 1992
Deadlines		Existence of a deadline results in large concessions as an "end effect"	During the later endgame phase	Pruitt & Drews, 1969 Bass, 1966 Druckman et al., 1972; Druckman et al., 1991

<u>Type of Factor</u>	<u>Variable</u>	<u>Effects on Negotiation</u>	<u>Stage</u>	<u>Sample References</u>
Immediate Situation	Mediator-presence	May produce a chilling effect as negotiators depend on the mediator for "solutions"; can also be used to convey concessions in a manner that saves face	Effects occur primarily during the later stages	Pruitt, 1981

We know less about how these variables combine to produce flexible or inflexible behavior in the different stages. We also know little about which variables are the stronger determinants of flexibility in the context of the situations where they act together. Furthermore, it would be interesting to explore the reasons why negotiators choose to be flexible or inflexible when confronted by pressures to go in either direction, as when a situation has elements hypothesized to produce flexible behavior as well as elements that would encourage inflexible behavior or when flexibility is encouraged in some stages but discouraged in other stages. A step is taken toward developing a methodological approach suitable for addressing these issues. The approach is illustrated with a first experiment designed to explore relationships among several situational and behavioral variables.

## **Embedding Experiments in Simulations**

The approach combines a concern for the generality of findings with analytical rigor in exploring hypotheses. While many simulations reflect a balance between these two concerns, some place more emphasis on the one -- e.g., generality -- or the other -- e.g., rigor. An advantage of the approach is that an investigator is forced to specify relationships between variables as they are thought to operate in real-world settings. A disadvantage is that we can never reproduce a case in all its contextual detail; nor can we capture the real-world pressures that impinge on negotiators and their support staffs. [Detailed discussions of simulation as a research tool can be found in Guetzkow and Valade (1981) and in Mahoney and Druckman (1975). For a discussion of the underlying philosophy for simulation research, see Raser, Campbell and Chadwick (1970).]

Simulations are attempts to create or recreate situations within which decisions are made and actions taken. The way these situations are represented is important. Also important is the way they are treated in the design of experiments. In some designs, only features of the immediate situation are varied within the setting of a particular negotiation. In other designs, both the situation and the context are varied. This distinction has implications for stages of research: Exploring the effects of varied situations on negotiation processes that occur within a particular context or issue area may precede efforts to compare processes occurring in varied contexts (e.g., arms control, trade, cease-fire talks). The experiment described below takes the first step. The effects of situational variables (e.g., type of representation, time pressures) operating within a particular context (international environmental regulation) are examined.

This approach is synthetic. It integrates existing knowledge about the way situations influence negotiating behavior. The integration is achieved by combining these variables in ways that resemble how they operate in actual cases. It is also analytic. An attempt is made to evaluate the impacts of these variables on bargaining decisions, both in combination and taken singly. While capturing complexity in design, the simulation permits us to evaluate impacts in analysis. Moreover, by combining variables, we may be closer to representing the way they operate in the real world, making it possible to connect with actual cases.

The field is ready for this approach. It is now apparent that neither the case study nor the laboratory experiment achieves a proper balance between analytical rigor and real-world relevance. The case study is context-specific; the laboratory experiment is usually far removed from the contexts where actual negotiations occur. Complex simulations would seem to be closer to achieving the desired balance (see also Winham, 1991). However, in attempting to reproduce "reality," simulation designers often confuse sources of variation in the observed behavior of negotiators; this problem is referred to in statistical analysis as multicollinearity. The challenge for analysts is to situate the behavior of interest appropriately in a complex setting where many variables operate simultaneously while also distinguishing among these variables in terms of their relative impacts on that behavior. Both these aims have guided the work to be reported in the sections to follow.

## Negotiation Scenarios as "Packages" of Variables: Hypothesized Flexibility and Inflexibility

The exercise was a simulation of an international negotiation on the regulation of industrial emissions of gases contributing to the depletion of the ozone layer. Thirty-five "nations" participated in the negotiation, referred to as the Vienna talks on "Cooperative Measures to Reduce the Depletion of the Ozone Layer." The nations took different positions on the key issue — to establish an international commission that would set standards and regulate emissions in each of the participating countries. At issue was the status of the commission regarding its regulation authority and policing powers. Arranged on a seven step scale, positions ranged, at one end (1), from a commission that would have no authority to regulate the standards that it sets to, at the other end (7), one that would have regulation authority with strict policing for violations by nations. Participants were asked to take the role of a national representative whose nation's initial position was step 1 on the scale. They were told that while their government accepted the idea of a commission in principle, it was cautious about subscribing to standards imposed by an international body that would restrict its own domestic regulatory policies with regard to the country's private sector.

The background information and assigned positions were followed by descriptions of the situation confronting them at each of four stages of the talks: a prenegotiation planning stage, an early agenda-forming stage, the "give and-take," and an endgame. At each stage, certain aspects of the situation were highlighted by underlining them in the descriptions. These were the key variables hypothesized to produce flexibility or inflexibility: Each variable was manipulated in two versions of the negotiation; for example, in one version, the representative was his or her country's chief of delegation while in the other, he or she was a delegate-advisor to the chief of delegation. The aspects contained within each stage are listed in Table 2 along with references to earlier studies which document impacts on negotiating behavior. Across the four stages, 16 variables are represented. Six variables are repeated in two or more stages, bringing the total to 22 manipulated aspects of the negotiating situation for each of the experimental conditions.

The variables were embedded within a description of the situation confronting the "delegate." For example, in the prenegotiation stage of one condition (hypothesized flexibility), delegates were told that, "(A)s a member of your government's delegation, your role consists of advising the head of the delegation about positions and tactics. As one of the delegation's advisors, you are not directly accountable to constituents or government agencies for the advise you offer. You are to use your preparation time to study the issues both with members of your own and the other delegations." In the contrasting condition (hypothesized inflexibility), they were told that, "(Y)ou are your delegation's primary representative with sole responsibility for producing an outcome that is acceptable to your constituents and the government agencies that have a vested interest in the outcome of the talks. You are to use your preparation time to prepare a strategy for the upcoming talks." During the endgame stage they were told in one condition (hypothesized flexibility) that, "(Y)ou and the other delegates are faced with a decision dilemma: you must decide whether to strike an agreement on available terms, to conclude the talks without an agreement, or to continue negotiating in a reconvened forum at a different time... (t)his dilemma is particularly salient since you are negotiating in the face of a deadline which is about to expire... (t)he alternative to reaching an agreement is to maintain the current situation ... which is unacceptable to your government." In the contrasting condition, delegates were told that, "(T)here is no official deadline for concluding the talks although most delegations agree that after six rounds participants have had sufficient opportunities to arrive at an agreement. The alternative to reaching an agreement is to maintain the current situation... (which) is acceptable to your government."

Table 2  
**Variables by Stages**

<u>Stage</u>	<u>Variables</u>	<u>References</u>
Prenegotiation Planning	Positions linked or not linked to political ideologies Representing your government as either the primary representative or as a delegate-advisor Planning as either strategizing or studying the issues	Druckman and Zechmeister (1973) Druckman (1971, 1973); Druckman et al. (1972) Bass (1966); Hammond (1966); Druckman (1968)
Setting the Stage*	Familiarity with opponents' positions as familiar or unfamiliar Amiable or antagonistic relations among parties Location of talks as either a central or peripheral location Format of meetings as formal or informal Seeking either comprehensive or partial agreements	Johnson (1967); Muney and Deutsch (1968); Druckman and Broome (1991) Hopmann & Walcott (1973); Druckman and Broome (1991) Galtung (1964) Galtung (1964) Fisher (1964); Hopmann (1986)
The Give-and-Take**	National either a power advantage or a power disadvantage Salient solutions (coordination points) do or do not exist Other parties make many or few concessions Conference leadership innovative or not Media coverage is light or heavy; the conference is either visible or not	Hopmann (1978); King (1979) Schelling (1960); Benton and Druckman (1973) Siegel and Fouraker (1960); Bartos (1974); Druckman and Bonoma (1976) Underdal (1992) Brown (1977); Druckman and Rozelle (1975)

The Endgame***	A deadline either exists or does not exist	Pruitt and Drews (1969); Bass (1966); Druckman et al. (1991)
	There is an attractive alternative to a negotiated agreement (BATNA)	Fisher and Ury (1981); Thibaut and Kelley (1959)
	A solution is suggested by a mediator or by the other parties	Pruitt (1981)

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\* The variables of representative role, familiarity, and type of relationship are repeated in this stage.

\*\* The variable of type of relationship with other nations is repeated in this stage.

\*\*\* The variables of salient solutions and media coverage are repeated in this stage..

## **From Hypothesized Inflexibility to Flexibility**

The contrasting conditions described above were designed to produce either relatively flexible or inflexible behavior in each stage of the talks. It would also be possible to explore the effects of mixing the scenarios for the different stages. One variation consists of presenting the "inflexible" scenarios in the first three stages, concluding with a "flexible" scenario in the endgame. This particular combination would permit an evaluation of an impasse-resolution "technique:" If delegates are inflexible through three stages of the talks, do they become flexible in an endgame with a deadline, an unattractive alternative to a negotiated agreement, and a mediator present? This condition was included in the experimental design; it consisted of a package where the variables hypothesized to produce inflexibility were embedded in the scenarios for stages 1-3 and those hypothesized to produce flexibility were part of the description of the endgame. Twenty-one page packages containing the stage scenarios for each of the three conditions were arranged for distribution in a randomly-determined order. The variables embedded in the scenarios for each experimental condition are shown in Table 2a.

## **Perceptions, Decisions, and Tactics**

Following each stage scenario, "delegates" were asked a number of questions about their perceptions of the situation, their decisions about positions, and tactics. The first question asked them to indicate, on a five-step scale, their view of the situation (at this stage) as a win-lose contest or a problem-solving debate. They were then asked three questions about their position on the seven-step scale: how far are you willing to move (their "resistance point"), what is your desired outcome, and what do you think is the likely outcome. Then, they were asked to choose among alternative tactics that they would use in the talks: whether they plan to "hang tough" (a maximalist strategy), to seek a fair agreement through equal compromises, to be willing to make major concessions (a minimalist strategy), or to vacillate between hanging tough and making concessions. Additional perceptual questions included the extent to which they viewed the positions at the ends of the scale as incompatible, how their nation's position compares to those taken by other nations, the extent to which they wanted their position to prevail, and how satisfied they would be with a compromise outcome. A final set of questions, presented after the endgame, asked about how well they identified with their assigned roles and the extent to which they thought the scenario was realistic.

Delegates were given one more task at the conclusion of each stage. They were asked to perform paired-comparisons among all the underlined aspects of the situation contained within each stage scenario. To do this, they would compare each aspect (variable) against each of the other aspects in terms of which made them more flexible: For example, does having an ideology make you more or less flexible than if you are your nation's primary representative? All the pairings were arranged in a matrix format that required them simply to circle "more" or "less" for each comparison (five variables resulted in ten comparisons). To help them with this task, they were given a practice exercise with an example drawn from the well-known study of the American Soldier (Stouffer et al., 1949). The results of these comparisons permitted a scaling of the variables in terms of relative importance, and will be discussed below.

## **Scientists at IIASA and Diplomats at the Vienna Academy**

The simulation was conducted with two samples of role players. One sample consisted largely of participants in the Young Scientists' Summer Program at the International Institute of Applied Systems Analysis (IIASA). The 41 participants were Ph.D. students or recent Ph.D. recipients in the sciences from over ten countries: Most were studying environmental science, population demography, or mathematics; the common language at IIASA is English. The other sample consisted of 17 diplomats

**Table 2a**  
**Variables by Conditions\***

<u>Stage</u>	<u>A</u>	<u>B</u>	<u>C</u>
Prenegotiation Planning	Positions not linked to ideologies	Positions linked to ideologies	Same as B
	Delegate	Primary representative	
	Studying	Strategizing	
	Familiar with opponents	Unfamiliar with opponents	
	Amiable relations	Antagonistic relations	
Setting the Stage	Peripheral location	Central location	Same as B
	Informal format	Formal format	
	Partial agreements	Comprehensive agreements	
	Power disadvantage	Power advantage	
	Delegate	Primary representative	
	Familiar and amiable relations	Unfamiliar and antagonistic relations	
The Give-and-Take	Salient solutions	No salient solutions	Same as B
	Others make many concessions	Others make few concessions	
	Leadership is innovative	Leadership is not innovative	
	Light media coverage	Heavy media coverage	
	Amiable relations	Antagonistic relations	
The Endgame	A deadline	No deadline	Same as A
	Attractive alternative	No attractive alternative	
	Mediator suggests a solution	Other parties suggest a solution	
	Salient solution	No salient solution	
	Light media coverage	Heavy media coverage	

\* Condition A is hypothesized flexibility; B is hypothesized inflexibility; C is from hypothesized inflexibility to flexibility.

in-training at the Vienna Academy of Diplomacy: Seven were from Czechoslovakia, 7 from Poland, 2 from Hungary, and one (the course instructor) from Austria; English is the lingua franca for these student-diplomats. Since English was not the primary language for many of these participants, care was taken to define unfamiliar words (e.g., vacillate) and to explain the procedures for the difficult task of making paired-comparisons. While noting some problems of interpretation due to language difficulties, it is also the case that the mix of native tongues represented in these samples is similar to the mix that exists in many international negotiations.

The three conditions were run for the IIASA sample: The random distribution by condition was 13 in the hypothesized flexibility condition (condition A), 15 in the hypothesized inflexibility condition (condition B), and 13 in the condition of hypothesized inflexibility to flexibility in the final stage (condition C). Due to the small size of the Vienna Academy sample, only conditions A and B were run with 9 role players in A and 8 in B. Results were compared for the two samples.

## Results

Three types of findings are reported. First, condition effects on decisions and perceptions of the combination of variables contained in the stage scenarios are presented. Second, condition differences on correlations among the perceptions and decisions are discussed. And, third, the results of the paired-comparisons analysis, showing the relative importance of the variables within stages and conditions, are shown. Results obtained from each of these analyses are presented for both samples.

Impacts of the Conditions ("Packages" of Variables) on Decisions and Perceptions. The effects of the experimental conditions on the outcome, decisions on positions, strategy preference, and perceptions are shown in Table 3 for the IIASA sample and in Table 4 for the Vienna Academy sample. Difference in the means on each dependent variable (except outcomes) were analyzed by a conditions by stages analysis of variable with stages as a repeated measure: This analysis permits an evaluation of the main effects of conditions and stages as well as the interaction between conditions and the four stages of the simulated negotiation.

Eight significant effects were obtained for the IIASA sample (see Table 3). Sixty-one percent of the role players in condition A reached agreements as compared to 43% for condition C and only 19% for B. Role players in conditions A and C moved significantly further from their initial positions on the measures of willingness to compromise and desired outcomes than those in condition B. The condition-A role players preferred a more conciliatory strategy than their counterparts in B and C. They also indicated less of a desire that their own position prevail as an outcome and viewed that position less as a superior one in comparison with other positions on the scale. Neither the main effect for stages nor the interaction between conditions and stages approached significance for any of these variables. Only views of the situation as a win-lose contest or problem-solving debate produced a significant stages main effect and interaction with conditions: Role players viewed the situation as being more like a win-lose contest as they progressed from stages 1 to 4 (means are 3.6, 3.3, 2.9, and 2.9 for the four stages progressively); this linear effect was evident for bargainers in conditions A and B, being strongest for those in condition B. The interaction is due to the trend for condition-C bargainers. They showed a change in perception from stage 3 to 4 in the direction

**Table 3**  
**Results for IIASA Sample**

<u>Measures</u>	<u>Condition Means*</u>			<u>F-Ratio (or <math>\chi^2</math>)</u>
	<u>A</u>	<u>B</u>	<u>C</u>	
<u>Outcome as Percent Agree</u>	61	19	43	5.65* ( $\chi^2$ )
<b>Decisions on Positions</b>				
~ Resistance Point	4.1	3.2	4	4.36**
~ Desired Outcome	3.8	2.2	3.6	8.72***
~ Estimated Likely Outcome	3.6	2.4	3.3	1.32
<u>Strategy Preference</u>	3	2.4	2.6	7.74**
<b>Perceptions</b>				
~ Win-Lose Contest or Problem-Solving Debate	3.4	3	3.1	1.78 6.87*** (stages) 2.17** (interaction with stages)
~ Desire Own Position to Prevail	3.1	2.5	2.7	5.19***
~ View Own Position as Superior	3.3	2.3	2.8	8.00***
~ Extent Satisfied with a Compromise Outcome	2.4	2.5	2.5	—

\*p < .10

\*\*p < .05

\*\*\*p < .01

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\* A = Flexibility Condition; B = Inflexibility Condition; C = From Inflexibility to Flexibility Condition.

opposite those in the other conditions: stage 4 was viewed as more like a problem-solving debate than stage 3.

Five significant effects were obtained for the Vienna Academy sample (see Table 4). Seventy-five percent of role players in condition A reached agreement compared to only 13% in condition B. Condition-A role players moved further from their initial position on the measures of willingness to compromise and their estimate of the likely outcome than those in condition B. They also viewed the situation as more of a problem-solving debate than their condition-B counterparts. No stages main effects or interactions with conditions occurred for any of these variables. A significant conditions by stages interaction did, however, occur for the extent to which they would be satisfied with a compromise solution: Role players in condition A indicated more satisfaction with a compromise outcome as they progressed from stage 1 to 4; those in condition B were less satisfied with a compromise solution in the final stage than in any of the earlier stages.

Effects of the change in scenarios for condition C (IIASA sample only) were evaluated by comparing decisions and perceptions made in stage 3 (hypothesized inflexibility) with those made in stage 4 (hypothesized flexibility). Matched-pairs t-tests (one-tailed) were computed for the three measures of position change and for two perceptions. For each measure, condition-C role players showed a significant change in the expected direction from stage 3 to 4: They moved further on willingness to compromise ( $t = 2.28$ , 10 df,  $p < .025$ ), desired outcome ( $t = 2.80$ , 11 df,  $p < .02$ ), and the likely outcome ( $t = 3.15$ , 12 df,  $p < .01$ ). They also viewed the situation as more of a problem-solving debate in stage 4 ( $t = 3.07$ , 12 df,  $p < .01$ ) and were more satisfied with a compromise outcome in that stage ( $t = 2.13$ , 12 df,  $p < .06$ ). Few of the changes on these variables occurred in the same direction for conditions A and B, and fewer approached significance.

Correlations Among Decisions and Perceptions. Further differences between the conditions were revealed by the results of a correlation analysis computed for conditions A and B of the IIASA sample. Correlations among all the dependent variables in each stage produced a 28 x 28 matrix. Following are some of the more interesting correlational patterns.

- a. Evidence for a concession to convergence pattern is provided by the correlations between willingness to compromise and the outcome. Successively higher correlations from stage 1 to 4 (.44, .69, .85, .98) for condition A indicates that bargainers in this condition gradually increased the size of their concession as they approached the agreement in the endgame. A similar pattern occurred for the condition-A correlations between desired outcome and the actual outcome (-.02, .33, .59, .62). Strong correlations were obtained between the willingness to compromise measure and desired outcomes, indicating that the bargainers' resistance points were close to their desired outcomes. These patterns did not occur for condition-B role players.
- b. For condition-B bargainers, the more they wanted their own position to prevail, the closer their desired outcomes were to their initial positions in three of the four stages. Bargainers in this condition who chose a "hang tough" strategy in the first stage were less willing to compromise in all stages (.47, .38, .58, .47 for the successive stages). These patterns did not occur for condition-A bargainers.
- c. For condition-A bargainers, the more they viewed the situation in win-lose terms, the less satisfied they were with a compromise outcome in all stages (-.46, -.66, -.51, -.67 for the successive stages). Also, the more they wanted their position to prevail, in stages 2, 3, and 4, the more likely they were to choose a "hang tough" strategy in stage 3. However, as indicated by the results above, most bargainers in this condition had cooperative perceptions and strategies that emphasized fairness or conciliation.

Table 4

## Results for Vienna Academy Sample

<u>Measures</u>	<u>Condition Means</u>		<u>F-Ratio (or <math>\chi^2</math>)</u>
	<u>A</u>	<u>B</u>	
<u>Outcome as Percent Agree</u>	75	13	5.67** ( $\chi^2$ )
<u>Decisions on Positions</u>			
~ Resistance Point	4.5	3.3	6.74**
~ Desired Outcome	4.3	3.8	—
~ Estimated Likely Outcome	4.6	3.3	19.28***
<u>Strategy Preference</u>	2.6	2.8	—
<u>Perceptions</u>			
~ Win-Lose Contest or Problem-Solving Debate	3.8	3.3	3.93*
~ Desire Own Position to Prevail	2.6	2.5	—
~ View Own Position as Superior	2.6	2.6	—
~ Extent Satisfied with a Compromise Solution	2.2	2.5	— 3.36** (interaction with stages)

\*p &lt; .10

\*\*p &lt; .05

\*\*\*p &lt; .01

d. For both conditions, bargainers who preferred a "hang tough" strategy in stage 3 were less willing to compromise in the endgame. However, bargainers in both conditions changed their strategy from being relatively tough to being conciliatory from earlier to later stages: for condition-A bargainers, the change occurred from stage 1 to 3 (-.53); for condition-B bargainers, the change occurred from stage 2 to 3 (-.42). And, bargainers in both conditions became more realistic through time. Desired outcomes in stages 3 and 4 correlated more highly with the actual outcome than in the earlier stages.

Relative Impacts of the Situational Variables by Condition and Stage. The method of paired comparisons is one of a group of methods for scaling psychological objects. It requires judgments of comparison between each pair of objects in a set. Judges are asked to indicate which vegetable, for example, is better or which color is brighter, and so on. The set of objects are arranged in a symmetrical matrix that contains the proportion of times each object is judged to be "better" than each of the objects with which it is paired. Scale values for each object are derived from a series of computations performed on the proportions matrix. The advantages and disadvantages of this method are discussed in detail along with computational procedures by Guilford (1954, chapter 7). The method was applied to the problem of judging the situational variables in terms of which aspect (in each pair) made them "more" or "less" flexible. An example of the task, as presented during the first stage of condition B, is shown in Table 5.

Comparisons were made among all variables embedded within the stage scenarios for each condition. Results are shown for the IIASA sample in Table 6. Three items of information are contained in this table: the rank of the variables in terms of the extent to which each contributes to more flexible behavior; the distance between the variables in terms of their relative contribution to more flexible behavior, and a comparison of the rankings between conditions within a sample and between samples. Variables with higher scaled weights produced more flexibility than those with lower weights; all variables within a stage are scaled in relation to a zero point, assigned to the variable judged to produce the least flexibility. For example, being a delegate-advisor in stage 1 of condition A was judged to make bargainers more flexible than the other variables included in that scenario. It made them only slightly more flexible than studying the issues (.40 versus .36) but much more flexible than the fact that their positions did not derive from an ideology (.16), that relations with other relations were amiable (.08), and that they were familiar with the other nations' positions (0). This ranking of the variables was different than that obtained for the diplomat sample as indicated by the ranks shown in parenthesis. For other stages, however, the rankings are very similar, and, in some stages, identical.

The fact that condition C replicates condition B for stages 1-3 and condition A in stage 4 enables us to ascertain the stability of the results within the IIASA sample. Stability is indicated by generally similar rankings for the replicated stages of the conditions. The orderings for stages 1-3 of conditions B and C are similar, especially with respect to the variables at the top and bottom of the list. The order of the variables for stage 4, conditions A and C, are practically identical, although the distance between the scaled positions differ. Insofar as conditions A and B were repeated for the two samples, it is possible to ascertain stability between them. Strong similarities were obtained for stages 3 and 4 in condition A and for stages 1 and 4 in condition B. Although the rankings differed for the other stages in these conditions, there were a number of similarities: for example, being a delegate- advisor in stage 1 of condition A made both samples flexible; being at a power disadvantage in stage 2 of condition A made both samples flexible, as did holding the talks at a peripheral location; seeking comprehensive agreements in stage 2 of condition B made both samples inflexible, as did being a primary representative; and wide media coverage in stage 3 of condition B also made both samples relatively inflexible. Overall, the comparisons indicate more similarities than differences in ranking, both within and between samples, rendering the results generally stable.

Table 5

The Paired-Comparisons Task

make you more or less flexible than if:

<u>you are your nation's primary representative</u>	<u>you have prepared a detailed strategy</u>	<u>you are unfamiliar with the other nation's position</u>	<u>your nation has an antagonistic relationship with other nations</u>
<u>Does having more or less? an Ideology</u>	<u>more or less?</u>	<u>more or less?</u>	<u>more or less?</u>
<u>Does being the primary representative</u>	<u>more or less?</u>	<u>more or less?</u>	<u>more or less?</u>
<u>Does preparing a strategy</u>		<u>more or less?</u>	<u>more or less?</u>
<u>Does being unfamiliar with other nations</u>			<u>more or less?</u>

**EXAMPLE:** Does having an ideology make you [more or less] flexible than the fact that you are your nation's primary representative?

Table 6

Scaled Weightings of Variables (IIASA Sample)

**Condition A (Hypothesized Flexibility)**

**Stage I (Prenegotiation Planning)**

More to less flexible

- Being a delegate-advisor (.40)
- Studying the issues with other delegations (.36)
  
- Positions do not derive from an ideology (.16)
- Amiable relations with other nations (.08)
- Being familiar with other nations (0)

**Stage II (Setting the Stage)**

More to less flexible

- Holding the talks at a peripheral location (.67)
- Being at a power disadvantage (.55)
  
- Being familiar with other nations (.38)
- Seeking only partial agreements (.36)
- Being a delegate-advisor (.32)
  
- Amiable relations with other nations (.18)
- Having many informal meetings (0)

**Stage III (The Give-and-Take)**

More to less flexible

- Limited media attention (.87)
- Having an optimal solution available (.54)
- Innovative conference leadership (.28)

#### Stage IV (The Endgame)

More to less flexible

- Limited media attention (.64)
- Having an optimal solution available (.53)
- Having no better alternatives to negotiation (.49)
  
- Having deadline (.29)
  
- Presence of a mediator (0)

#### **Condition B (Hypothesized Inflexibility)**

##### Stage I (Prenegotiation Planning)

More to less flexible

- Positions derive from an ideology (.94)
  
- Antagonistic relations with other nations (.56)
  
- Preparing a detailed unilateral strategy (.31)
- Being the primary representative (.22)
  
- Being unfamiliar with other nations' positions (0)

##### Stage II (Setting the Stage)

More to less flexible

- Having a power advantage (.97)
- Having antagonistic relations with other nations (.87)
  
- Having few informal meetings (.70)
- Holding the talks at a central location (.62)
  
- Being unfamiliar with other nations' positions (.46)
- Being the primary representative (.44)
  
- Seeking comprehensive agreements (0)

##### Stage III (The Give-and-Take)

More to less flexible

- Relationships with other nations have deteriorated (2.33)
  
- Other nations make few concessions (1.42)

- A lack of conference leadership (1.05)
- No optimal solution exists (.50)
- There is wide media coverage (0)

#### Stage IV (The Endgame)

More to less flexible

- There is no deadline (.95)
- There is a lack of mediation (.65)
- There is limited media coverage (.24)
- There is no optimal solution (.23)
- There are alternatives to a negotiated agreement (0)

#### **Condition C (From Hypothesized Inflexibility to Flexibility)**

#### Stage I (Prenegotiation Planning)

More to less flexible

- Having antagonistic relations with other nations (.65)
- Positions derive from an ideology (.28)
- Being the primary representative (.20)
- Preparing a strategy unilaterally (.08)
- Being unfamiliar with other nations' positions (0)

#### Stage II (Setting the Stage)

More to less flexible

- Having antagonistic relations with other nations (1.28)
- Having a power advantage (1.04)
- Being the primary representative (.95)
- Being unfamiliar with other nations' positions (.79)
- Holding the meetings at a central location (.72)
- Having few informal meetings (.12)
- Seeking comprehensive agreements (0)

#### Stage III (The Give-and-Take)

More to less flexible

- Receiving few concessions from other nations (.95)

- Deteriorated relations with other nations (.92)
- Lack of conference leadership (.72)
- Wide media coverage (.58)
- No optimal solution exists (0)

#### Stage IV (The Endgame)

More to less flexible

- Little scrutiny by other governments (.49)
- An optimal solution exists (.17)
- A deadline (.13)
- Having no better alternatives to a negotiated agreement (.05)
- Presence of a mediator (0)

The strongest effects are obtained for those variables judged to produce relatively flexible behavior in condition A and relative inflexibility in condition B or in C for stages 1-3 of the IIASA sample. Five variables are highlighted for the IIASA sample.

Studying the issues or strategizing in planning. The flexibility produced by studying the issues in the first stage of condition A contrasts with the relative lack of flexibility produced by strategizing in conditions B and C. These "opposite" effects for studying versus strategizing supports the earlier findings on behavior during bargaining sessions in the studies reviewed above and summarized in Table 1.

Many versus few concessions made by other parties. When other parties mad many concessions, bargainers in stage 3 of condition A were relatively inflexible. When they made few concessions, bargainers in conditions B and C were quite flexible compared to the other variables included in stage 3. This findings supports the hypothesis that "it pays to be tough." This finding may, however, be contingent on such other aspects of the situation as deadlines and BATNAS. Referred to as a decision dilemma, bargainers often give in to the other's intransigence when, in the face of a deadline, their BATNAs are not better than the available terms. This hypothesis was not tested in this experiment: while the other's concessions were manipulated in stage 3, deadlines and BATNAs were varied only in the endgame.

Limited or wide media coverage. Limited media coverage was judged by condition-A bargainers to produce the most flexibility in both stages 3 and 4, as well as by condition-C bargainers in stage 4. Wide media coverage, on the other hand, was judged by condition-B and C bargainers to produce the least flexible in stage 3. The contrasting effects shown for this variable, with limited coverage producing the most and wide coverage the least flexibility, provide strong support for the audience effects obtained in earlier studies reviewed above.

With and without salient solutions. Having salient solutions available was judged to produce flexibility for bargainers in stages 3 and 4 of condition A and for those in the endgame stage of condition C. Not having these solutions available, on the other hand, made condition-B bargainers relatively inflexible in stages 3 and 4 as well as condition-C bargainers in stage 3. A salient solution had the anticipated effect of encouraging movement when it was available and discouraging movement was it was not available. This finding is similar to that obtained in the bargaining study by Benton and Druckman (1973).

Mediator presence in the endgame. When the solution was suggested by a mediator in the endgame of conditions A and C, bargainers judged their behavior to be quite inflexible (in both conditions, mediator presence produced the least flexibility in stage 4). When the solution was suggested by other parties, rather than by a mediator, bargainers in condition B were relatively flexible in the endgame. This finding suggests that the presence of a mediator at the end of the talks induces a "chilling" effect on concessions due, perhaps, to the feeling that some control is taken away from the delegations. This is a strong effect, especially since it was replicated with the diplomat sample to be discussed below.

Several variables were judged to produce relatively flexible or inflexible behavior in only one direction. Bargainers in condition A judged themselves to be quite flexible in their role as delegate-advisor in the first stage of the talks. Being a primary representative produced some degree of inflexibility in stages 1 and 2 of condition B. Holding the talks at a peripheral location was judged to produce flexibility for condition-A bargainers in stage 2; holding the talks at a central location was not judged to produce inflexibility for condition-B and C bargainers. However, seeking comprehensive agreements was judged to produce relative inflexibility in stage 2 for condition-B and

C bargainers. Conceivably, the facilitating effects produced by one direction (delegate-advisor, peripheral location) was not paired with hindering effects caused by the other direction (primary representative, central location). Similarly, the hindering effects produced by seeking comprehensive agreements were not mirrored in facilitating effects due to seeking only partial agreements

Judgments made by the sample of diplomat role players were similar in some respects, but differed in others from those made by the IIASA sample (see Table 7). Almost identical results were obtained for the media coverage and mediator presence variables: limited coverage was judged to produce flexible behavior while wide coverage had the opposite effect in stages 3 and 4; a mediator-suggested solution was judged to lead them to be less flexible in the endgame while a delegates-suggested solution was judged to produce more flexibility. Similarly, being a delegate-advisor produced more flexibility in stages 1 and 2, holding the talks at a peripheral location produced relative flexibility in stage 2, and seeking a comprehensive agreement was judged to produce relatively inflexible behavior in stage 2.

Two other variables produced strong effects only for the diplomat sample. Being at a power disadvantage was judged to result in flexible behavior for condition-A bargainers while having a power advantage resulted in inflexible behavior for condition-B bargainers in stage 2. Whether or not bargainers had BATNAs also had strong effects on judged flexibility: Condition-A bargainers judged the lack of attractive BATNAs to produce flexibility while bargainers in condition B judged having relatively attractive BATNAs to produce considerable inflexibility as indicated by the large distance between the scaled weights for this variable and the others judged in the endgame. Perhaps diplomats are more sensitive to the impact of these variables than role-players with different backgrounds or experiences such as the scientist sample from IIASA.

## Implications and Next Steps

The findings can be understood, first, in terms of what we have learned about the situational influences on flexibility and, second, in terms of implications for the value of simulation methodology. Overall, the constructed situations produced the expected impacts on decisions, perceptions, and choice of tactics for both samples. These impacts occurred across the four negotiating stages as indicated by a general lack of interactions between conditions and stages. Thus, effects of the situations were not contingent on particular combinations of variables created for the different stages. They were main effects, showing that the conditions had the same effect in each stage of the "talks:" condition A produced more movement from initial positions than condition B in both samples; these bargainers increased their concessions successively from one stage to another, culminating in a settlement that was close to their desire outcome. Condition-C bargainers in the IIASA sample showed the expected shift in decisions and perceptions from stage 3 to stage 4: their "profile" of effects was similar to those obtained for condition-B bargainers in stages 1-3 and to condition-A bargainers in the endgame, with 43% of the role-players reaching an agreement (compared to only 19% in condition B).

These are interesting findings. They reveal the combinations of variables that influence bargaining decisions. They do not, however, distinguish among the parts of the packages in terms of relative importance. To do this entails "unpacking" the situations. This was done analytically with a paired-comparison procedure. The results indicate similarities and differences among the experimental conditions and between the samples. Condition-A bargainers were most flexible throughout the negotiation: Which aspects of the situation most strongly influenced their flexibility? For the IIASA sample, the following variables can be aligned along a trajectory toward agreement:

Table 7

Scaled Weightings of Variables (Diplomat Sample)

Condition A (Hypothesized Flexibility)

Stage I (Prenegotiation Planning)

More to less flexible

- Having amiable relations with other nations (1.28) (4)\*
- Being a delegate-advisor (1.20) (1)
  
- Being familiar with other nations (.42) (5)
- Studying the issues with other delegations (.30) (2)
- Positions do not derive from an ideology (0) (3)

Stage II (Setting the Stage)

More to less flexible

- Being a delegate-advisor (.82) (5)
- Being at a power disadvantage (.69) (2)
- Holding the talks at a peripheral location (.45) (1)
  
- Having amiable relations with other nations (.29) (6)
- Having many informal meetings (.27) (7)
- Seeking only partial agreements (.24) (4)
  
- Being familiar with other nations (0) (3)

Stage III (The Give-and-Take)

More to less flexible

- Limited media attention (.89) (1)
- Having an optimal solution available (.54) (2)
- Innovative conference leadership (.42) (3)
- Improved relations with other nations (.26) (4)
  
- Many concessions made by other nations (0) (5)

#### Stage IV (The Endgame)

More to less flexible

- Limited media attention (.68) (1)
- Having no better alternatives to negotiation (.56) (3)
- Having a deadline (.41) (4)
- Having an optimal solution available (.12) (2)
- Presence of a mediator (0) (5)

#### **Condition B (Hypothesized Inflexibility)**

##### Stage I (Prenegotiation Planning)

More to less flexible

- Positions derive from an ideology (1.09) (1)
- Antagonistic relations with other nations (.63) (2)
- Being the primary representative (.39) (4)
- Being unfamiliar with other nation's positions (.36) (5)
- Preparing a detailed unilateral strategy (0) (3)

##### Stage II (Setting the Stage)

More to less flexible

- Holding the talks in a central location (1.86) (4)
- Having antagonistic relations with other nations (1.37) (2)
- Being unfamiliar with other nations' positions (1.25) (5)
- Being the primary representative (.75) (6)
- Having few informal meetings (.64) (3)
- Seeking comprehensive agreements (.43) (7)
- Having a power advantage (0) (1)

### Stage III (The Give-and-Take)

More to less flexible

- A lack of conference leadership (1.16) (3)
- Relationships with other nations have deteriorated (.99) (1)
- No optimal solution exists (.96) (4)
  
- There is wide media coverage (.20) (5)
- Other nations make few concessions (0) (2)

### Stage IV (The Endgame)

More to less flexible

- There is a lack of mediation (1.09) (2)
  
- No deadline exists (.79) (1)
- There is wide media coverage (.76) (3)
- There is no optimal solution (.67) (4)
  
- There are alternatives to a negotiated agreement (0) (5)

\*Rank of variable in the IIASA "scientist" sample

Being a delegate-advisor and studying the issues (stage 1) ----> holding the talks at a peripheral and being at a power disadvantage (stage 2) -- --> exposing the talks to limited media attention and having salient options (stage 3) ----> exposing the talks to limited media attention, having salient options, and having unattractive BATNAs (stage 4).

For the diplomat sample, the trajectory toward agreement for condition-A bargainers is as follows:

Being a delegate-advisor and having amiable relations with other parties (stage 1) ----> being a delegate advisor and being at a power disadvantage (stage 2) - ---> exposing the talks to limited media attention and having salient options (stage 3) ----> exposing the talks to limited media attention and having unattractive BATNAs (stage 4).

Interestingly, the only differences between the samples are the variables of amiable relations (emphasized by the diplomats in stage 1) and a peripheral location (emphasized by the scientists in stage 2). Like condition-A bargainers in both samples, bargainers in condition C emphasized limited media attention as the primary determinant of their flexibility.

Condition-B bargainers were least flexible through the stages: Which aspects of the situation most strongly influenced their inflexibility? The following trajectory toward stalemate occurred in conditions B and C (stages 1- 3) for the IIASA sample:

Unfamiliarity with the others' positions and strategy preparation (stage 1) ----> seeking comprehensive agreements (stage 2) ----> wide media coverage and no salient options (stage 3) ----> having attractive BATNAs available and no salient options (stage 4).

For the diplomat sample, condition-B bargainers followed this course to stalemate:

Strategy preparation (stage 1)---> having a power advantage (stage 2) ----> wide media coverage and few concessions from others (stage 3) ---> having attractive BATNAs available (stage 4).

The main contrast is between the scientists' emphasis on seeking comprehensive agreements and the diplomats' emphasis on having a power advantage in stage 2.

These, then, are the situational levers of bargaining flexibility for the samples used in this exercise. If sufficiently general, they are the aspects of a negotiating situation that can be manipulated for impact, either to produce agreements (condition-A trajectory) or stalemates (condition-B trajectory). Of particular interest are the effects produced by media coverage. This variable appears in each of the condition trajectories, with wide coverage producing inflexibility and limited coverage resulting in flexibility. This finding supports earlier results obtained on the way that audiences effect compromising behavior, as summarized by Druckman (1973). Media coverage also makes the talks visible to one's constituents, which serves to constrain a representative: "...the same compromise arrived at secretly may not look nearly so bad as if arrived at openly ... (n)either party expects concessions in formal public conferences, and such settings are often conceived of as occasions for melodramas in which all parties blurt out propaganda to the world rather than fulfill their stated purpose" (Druckman, 1973, p. 45). The results of this study suggest that visibility may be more important than some other sources of inflexibility and, if so, should be emphasized in further investigations.

Another variable of interest is mediator presence. The appearance of a mediator at the end was judged by bargainers in conditions A and C to make them relatively inflexible. When the solution was suggested by the delegates, however, bargainers in condition B judged themselves to be relatively

flexible, especially those in the diplomat sample. This finding points out the possible chilling effects of third-party involvement. Chilling effects may occur when bargainers judge that control has been taken out their hands, or when they fear a decision against their interest. These perceptions may be accentuated when the third-party suddenly appears at the end of the talks, as was the case in this exercise. A mediator who is involved during the earlier stages of a negotiation who develops relationships with the parties, and an understanding of the reasons for their positions may indeed be a catalyst for increased flexibility. Flexibility may be enhanced even further by a mediator judged to be able to "deliver" the other parties as illustrated by Kissinger's effective attempts as deal-maker shuttling from country to country in the Middle East (Rubin, 1981). These conditions can be represented in the scenarios and the results compared to the effects obtained in this experiment for "mere presence." They can also be investigated as part of a broader research program on the conditions for chilling and hastening effects of real or anticipated third-party interventions. (See Pruitt, 1981, and Brams and Merrill, 1983, for a start along these lines.)

Further Work. The experiment reported here is regarded as a first attempt to operationalize some variables hypothesized to influence flexibility in decisions, tactics, and perceptions. It is a basis for further work in several directions. One direction consists of gauging the impacts of providing more information about the situation. For example, background information about one's own and the other parties' positions was limited in the scenarios; so too were specific moves taken by the other delegations. A more detailed description of the way that national ideologies and interests evolved, along with the competing pressures exerted on representatives from diverse constituencies, would provide a richer context for their decisions; and, alternative "histories" can be contrived to evaluate effects on flexibility. More information about moves take at each stage by other delegations would provide a stronger test of the impact of this variable. Better yet, the paradigm can be extended to actual interactions where the opposing bargainers are either scripted in terms of their own willingness to move from initial positions or play the game as role players reacting to similar (or different) scenarios. Decisions made during the interactions can be compared to those made by the passive role-players in this study. Faced with a real opponent, a "delegate" may be either more or less responsive to those aspects of the situation shown in this experiment to influence their decisions on positions. For example, they may be more responsive to the opponents' moves or tactics than to media coverage or their role as a primary representative or advisor.

Another direction for further work would explore the effects of variations in the combinations of variables built into the stage scenarios. In this experiment, bargainers reacted to sets of variables "coded" in the same direction within stages, toward either hypothesized flexibility or inflexibility. Mixing the directions, for example by including both strategy preparation and being a delegate-advisor in stage 1, would create a conflict for bargainers. They must decide which aspects of the situation to emphasize and which to de-emphasize in making decisions. The actual decisions are the evidence in favor of the one or other type of variable. Of course, we could also vary the direction of the variables between stages as was done in condition C: Which combination of stage scenarios is more likely to lead to agreements, flexible scenarios in the early or late stages?

A third direction consists of evaluating influences on flexibility in other samples and in other contexts or issue areas. Although we are impressed with the similar results obtained for the scientist and diplomat samples used here, this is not sufficient evidence for extrapolation to other samples or contexts. These were motivated and sophisticated samples: Do less-experienced samples, such as students at American universities, respond to the situation in similar ways? Are similar results obtained for a larger sample of professionals, in particular those practitioners with experience in environmental negotiations? Without replicating the experiment in other negotiating contexts, we cannot evaluate the extent to which these results apply only to the environmental issues represented in this simulation. It should not be difficult to embed the situational variables in negotiations

involving security or trade issues, for example. Comparative work would elucidate whether these are the situational levers of flexibility or the levers that operate only in specific samples and contexts.

These directions for further work emphasize analysis of data collected from diverse samples and situations. Another important contribution of the simulation approach derives from the process of design. The 'art' of constructing situation forces a designer to articulate his or her understanding of international negotiation, the process, issues, and context in which it occurs (see Druckman, 1971a). The scenarios are "theories" about which aspects of the situation or context are likely to have impacts on negotiating behavior; the empirical evaluation of effects is limited to these variables. For this experiment, the rationale for choosing variables was based more on previous findings than on well-developed theories. The issue(s) selected for study are critical decisions As the key dependent variable(s), they must have certain properties: they should be central concerns in the simulated domain, be contentious in the sense of reflecting a variety of positions taken by the delegations, and have scale properties that permit a statistical assessment of differences in the flexibility variables. These criteria would seem to be satisfied by the issue chosen for this study, namely, the implementing of an international regulatory commission. It is now widely recognized that any analysis of negotiation processes must take into account dynamics (e.g., Kremenyuk, 1991). In this design an attempt was made to capture dynamics. We operationalized a differentiated conception of the negotiation process -- different activities, influences, and behaviors during different stages. Although still oversimplified for purposes of analysis, this conception moves the experimental work closer to descriptions of actual cases.<sup>2</sup> It also contributes an approach that can be used more broadly for comparative case studies and for diagnoses of the implications of particular negotiating situations.

The aspects of the situation created in the scenarios can also be used as dimensions for depicting cases. Referred to in an earlier literature as 'superimposing general dimensions on specific cases' (Bloomfield and Beattie, 1971; Druckman and Iaquinta, 1974), this analytic strategy is the basis for comparative work. Comparison is facilitated when different cases are described or "coded" in terms of the same attributes. Results of a companion project in which eleven cases were coded (arms-control talks, environmental, trade, and legislative negotiations) indicate that some attributes are easier to code than others. Aspects of the setting (international and national politics), structure (conference and within teams), and issues are easier to code reliably than such details of the process as concessions, expectations and aspirations, and group dynamics within and between delegations. So, for example, we coded the cases on such dimensions as number of parties, relationship between parties as cooperative or antagonistic, number and complexity of issues, presence of third parties, turnover of delegates, external events as impacting positively or negatively on the talks, and linkages to other negotiations. By computing distances among the profiles of codes, it was possible to compare diverse talks in terms of similarity or dissimilarity. The calculated distances (correlations were the data for multidimensional scaling, revealing several interesting clusters of similar and dissimilar cases. (A report of these results is forthcoming.) This is merely a first step in comparative analysis. While illuminating the possibilities for coding diverse cases on common dimensions, it also makes evident a value of simulation as a method for studying details of the process -- such as negotiator flexibility -- not easily accessible in real cases.

Results obtained from the simulation-experiments can also be used for the practical purpose of diagnosing particular negotiating situations in terms of likely outcomes. The experimentation provides

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<sup>2</sup> The results are regarded as being context-relevant. They are to be understood in terms of the created scenarios. Indeed, the scenarios could be responsible for the obtained results. The contribution of the scenarios can be investigated by comparing results obtained in response to two renditions of the situational variables: when they are embedded versus not embedded in case-oriented scenarios. Similar results would support hypotheses about general effects. Different results from the two versions would highlight context-specific effects.

a set of dimensions, analyzed relationships between the dimensions and negotiating behavior, and weights that indicate the relative importance of the dimensions as influences on negotiating behavior. Any case can be described or "coded" by each party in terms of the presence or absence of each of the dimensions, which are aspects of the negotiating situation. Drawing on the experimental findings, the dimensions can be weighted and aggregated into profiles that yield judgments of flexibility for each party. By deriving outcomes from combinations of the parties' flexibility, the situational diagnosis (relationships between dimensions and negotiating behavior) is used as a prognosis of likely outcomes, such as the distinction among agreements, stalemates, and continue negotiating. With the aid of a computer program, diagnoses can be performed by practitioners and analysts. By performing diagnoses of several cases, it would be possible to compare cases in terms of profiles of attributes and judged flexibility. These diagnostic aids derive from the experimental work discussed in this paper; they are described in some detail in a forthcoming article (Druckman, 1992).

## References

- Bartos, O. (1974) *Process and Outcome of Negotiations*. New York: Columbia University Press.
- Bass, B.M. (1966) "Effects on the subsequent performance of negotiators of studying issues or planning strategies alone or in groups." *Psychological Monographs*, Whole No. 614.
- Benton, A.A. and D. Druckman (1973) "Salient solutions and the bargaining behavior of representatives and non-representatives." *International Journal of Group Tensions*, 3: 28-39.
- Bloomfield, L.P. and R. Beattie (1971) "Computers and policy making: The CASCON experiment." *Journal of Conflict Resolution*, 15: 33-46.
- Brams, S. and S. Merrill (1983) "Equilibrium strategies for final-offer arbitration: There is no median convergence." *Management Science*, 29: 927- 941.
- Brehmer, B. and K. Hammond (1977) "Cognitive factors in interpersonal conflict." In D. Druckman (Ed.) *Negotiations: Social-Psychological Perspectives*. Beverly Hills: Sage.
- Brown, B. (1977) "Face-saving and face-restoration in negotiation." In D. Druckman (Ed.) *Negotiations: Social-Psychological Perspectives*. Beverly Hills: Sage.
- Deutsch, M., D. Canavan, and J. Rubin (1971) "The effects of size of conflict and sex of experimenter upon interpersonal bargaining." *Journal of Experimental Social Psychology*, 7: 258-267.
- Druckman, D. (1992) "Statistical analysis for decision support." *Theory and Decision*, forthcoming.
- Druckman, D. (1990) "The social psychology of arms control and reciprocation." *Political Psychology*, 11: 553-581.
- Druckman, D. (1990a) "Three cases of base-rights negotiations: Lessons learned." In J.W. McDonald, Jr. and D.B. Bendahmane (Eds.) *U.S. Bases Overseas*. Boulder, Colorado: Westview.
- Druckman, D. (1986) "Stages, turning points, and crises: Negotiating military base-rights, Spain and the United States." *Journal of Conflict Resolution*, 30: 327-360.

- Druckman, D. (1977) "Boundary role conflict: Negotiation as dual responsiveness. *Journal of Conflict Resolution*, 21: 639-662.
- Druckman, D. (1973) *Human factors in International Negotiations: Social- Psychological Aspects of International Conflict*. Sage Professional Paper in International Studies 02-020. Beverly Hills: Sage.
- Druckman, D. (1971) "The influence of the situation in interparty conflict." *Journal of Conflict Resolution*, 15: 523-554.
- Druckman, D. (1971a) "Understanding the operation of complex social systems: Some uses of simulation design." *Simulation and Games*, 2: 173-195.
- Druckman, D. (1968) "Prenegotiation experience and dyadic conflict resolution in a bargaining situation." *Journal of Experimental Social Psychology*, 4: 367-383.
- Druckman, D. and B.J. Broome (1991) "Value differences and conflict resolution: Familiarity or liking?" *Journal of Conflict Resolution*, 35: 571-593.
- Druckman, D. and R. Harris (1990) "Alternative models of responsiveness in international negotiation." *Journal of Conflict Resolution*, 34: 234-251.
- Druckman, D. and P.T. Hopmann (1991) "Content analysis." In V.A. Kremenyuk (Ed.) *International Negotiation: Analysis, Approaches, Issues*. San Francisco: Jossey-Bass.
- Druckman, D. and L. Iaquinta (1974) "Toward bridging the international negotiation/mediation gap." *International Studies Notes*, 1: 6-14.
- Druckman, D. and R. Rozelle (1975) "Performance evaluation as a determinant of willingness to defend a counterattitudinal position." *Social Behavior and Personality*, 3: 243-252.
- Druckman, D. and K. Zechmeister (1973) "Conflict of interest and value dissensus Propositions in the sociology of conflict." *Human Relations*, 26: 449-466.
- Druckman, D., B.J. Broome, and S.H. Korper (1988) "Value differences and conflict resolution: Facilitation or delinking?" *Journal of Conflict Resolution*, 32: 489-510.
- Druckman, D., J. Husbands, and K. Johnston (1991) "Turning points in the INF Negotiations." *Negotiation Journal*, 7: 55-67.
- Druckman, D., D. Solomon, and K. Zechmeister (1972) "Effects of representational role obligations on the process of children's distribution of resources." *Sociometry*, 35: 387-410.
- Druckman, D., K. Zechmeister, and D. Solomon (1972) "Determinants of bargaining behavior in a bilateral monopoly situation: Opponent's concession rate and relative defensibility." *Behavioral Science*, 17: 514-531.
- Druckman, D., A. Benton, F. Ali, and S. Bagur (1976) "Cultural differences in bargaining behavior: India, Argentina, and the United States." *Journal of Conflict Resolution*, 20: 413-452.
- Fisher, R. (1964) "Fractionating conflict." In R. Fisher (Ed.) *International Conflict and Behavioral Science: The Craigville Papers*. New York: Basic Books.

- Fisher, R. and W. Ury (1981) *Getting to Yes*. Boston: Houghton Mifflin.
- Galtung, J. (1964) "Summit meetings and international relations." *Journal of Peace Research*, 1: 36-54.
- Gouldner, A.W. (1960) "The norm of reciprocity: A preliminary statement." *American Sociological Review*, 25: 161-178.
- Guetzkow, H. and J.J. Valadez (Eds.) (1981) *Simulated International Processes*. Beverly Hills: Sage.
- Guilford, J.P. (1954) *Psychometric Methods*. New York: McGraw-Hill.
- Hammond, K.R., F.J. Todd, M. Wilkins, and T.O. Mitchell (1966) "Cognitive conflict between persons: Application of the 'lens model' paradigm." *Journal of Experimental Social Psychology*, 2: 343-360.
- Hopmann, P.T. (1986) "Arms control on Cobia: A simulation exercise." Unpublished instructor's manual, Brown University.
- Hopmann, P.T. (1978) "Asymmetrical bargaining in the conference on security and cooperation in Europe." *International Organization*, 32: 141-177.
- Hopmann, P.T. (1974) "Bargaining in arms control negotiations: The seabeds denuclearization treaty." *International Organization*, 28: 313-343.
- Hopmann, P.T. (1972) "Internal and external influences on bargaining in arms control negotiations: The partial test ban." In B.M. Russett (Ed.) *Peace, War, and Numbers*. Beverly Hills: Sage.
- Hopmann, P. T. and T.D. King (1976) "Interactions and perceptions in the test ban negotiations." *International Studies Quarterly*, 20: 105-142.
- Hopmann, P.T. and T.C. Smith (1977) "An application of a Richardson process model: Soviet-American interactions in the test ban negotiations, 1962- 1963." *Journal of Conflict Resolution*, 21: 701-726.
- Hopmann, P.T. and C. Walcott (1977) "The impact of external stresses and tension on negotiations." In D.Druckman (Ed.) *Negotiations: Social-Psychological Perspectives*. Beverly Hills: Sage.
- Hopmann, P.T. and C. Walcott (1973) "The bargaining process in arms control negotiations: An experimental analysis." University of Minnesota, Harold Scott Quigley Center of International Affairs.
- Ikle, F.C. and N. Leites (1962) "Political negotiation as a process of modifying utilities." *Journal of Conflict Resolution*, 6: 19-28.
- Jensen, L. (1988) *Bargaining for National Security: The Postwar Disarmament Negotiations*. Columbia S.C.: University of South Carolina Press.
- Jensen, L. (1984) "Negotiating strategic arms control, 1969-1979." *Journal of Conflict Resolution*, 28: 535-559.

Johnson, D.W. (1967) "The use of role reversal in intergroup competition." *Journal of Personality and Social Psychology*, 7: 135-142.

King, T.D. (1979) "Bargaining in the United Nations' Special Session on Disarmament." Paper presented at the American Political Science Association, Washington, D.C.

King, T.D. (1976) "Role reversal debates in international negotiations: The partial test ban case." Paper presented at the International Studies Association, Toronto.

Kremenyuk, V.A. (1991) (Ed.) *International Negotiation: Analysis, Approaches, Issues*. San Francisco: Jossey-Bass.

Lebedeva, M. (1991) "The analysis of negotiating behavior in simulations." Paper presented at the International Studies Association, Vancouver.

Mahoney, R. and D. Druckman (1975) "Simulation, experimentation, and context: Dimensions of design and inference." *Simulation and Games*, 6: 235-270.

Muney, B.F. and M. Deutsch (1968) "The effects of role reversal during the discussion of opposing viewpoints." *Journal of Conflict Resolution*, 12: 345-356.

Osgood, C. (1979) "GRIT for MBFR: A proposal for unfreezing force postures in Europe." *Peace Research Review*, 8: 77-92.

Pruitt, D.G. (1981) *Negotiation Behavior*. New York: Academic Press.

Pruitt, D.G. and J.L. Drews (1969) "The effect of time pressure, time elapsed, and the opponent's concession rate on behavior in negotiation." *Journal of Experimental Social Psychology*, 5: 43-60.

Raser, J.R., D.T. Campbell, and R.W. Chadwick (1970) "Gaming and simulation for developing theory relevant to international relations." *General Systems* 15: 183-204.

Rubin, J.Z. (1981) (Ed.) *Dynamics of Third-Party Intervention*. New York: Praeger.

Schelling, T.C. (1960) *The Strategy of Conflict*. Cambridge, Mass.: Harvard University Press.

Siegel, S. and L.E. Fouraker (1960) *Bargaining and Group Decision-Making: Experiments in Bilateral Monopoly*. New York: McGraw-Hill.

Spector B. (1991) "Freshness in negotiation: Creativity techniques that can break impasses." Paper presented at the International Association for Conflict Management, Den Dolder, the Netherlands.

Stoll, R.J. and W. McAndrew (1986) "Negotiating strategic arms control, 1969- 1979: Modeling the bargaining process." *Journal of Conflict Resolution*, 30: 315-326.

Stouffer, S.A. et al. (1949) *The American Soldier. Studies in Social Psychology in World War II*, vols. 1-2. Princeton: Princeton University Press.

Thibaut, J. and H.H. Kelley (1959) *The Social Psychology of Groups*. New York: Wiley.

Underdal, A. (1992) "Leadership in multilateral negotiations." In I.W. Zartman (Ed.) Perspectives on Multilateral Negotiations. forthcoming.

Wilson, W. (1971) "Reciprocation and other techniques for inducing cooperation in the Prisoner's Dilemma game." *Journal of Conflict Resolution*, 15: 167- 196.

Winham, G. (1991) "Simulation for teaching and analysis." In V.A. Kremenyuk (Ed. International Negotiation: Analysis, Approaches, Issues. San Francisco: Jossey-Bass.

Zartman, I.W. (1975) "Negotiations: Theory and reality." *Journal of International Affairs*, 9: 69-77.

Zechmeister, K. and D. Druckman (1973) "Determinants of resolving a conflict of interest: A simulation of political decision making." *Journal of Conflict Resolution*, 17: 63-88.