NEGOTIATION CONSTRAINTS IN THE RISK-TAKING DOMAIN: EFFECTS OF BEING OBSERVED BY PARTNERS OF HIGHER OR LOWER STATUS¹

NATHAN KOGAN,²

Educational Testing Service, Princeton, New Jersey

HELMUT LAMM, AND GISELA TROMMSDORFF

Universität Mannheim, West Germany

This study examined the effects of status held in a reference group and of prior issue commitment on the risky shift and other negotiation outcomes under conditions where accountability to the reference group during negotiation had been enhanced by having high and low status members observe each other. Following assessment of individual risk preferences on the choice-dilemmas task, subjects (eight at a time) were constituted as four leader-subordinate dyads and told to reach joint decisions on half of the choice-dilemmas items. Recombination as all-leader and all-subordinate groups followed. For half of each of these combinations, leaders were negotiators and subordinates were observers; role assignments were reversed for the other half. The negotiators' task was to achieve a consensus on all of the choice-dilemmas items—both those with prior dyadic decisions and those without. It was found that subordinate negotiators, relative to leader negotiators, consulted more with their former dyadic partner and more often failed to achieve consensus (dead-lock). Subordinate observers advocated higher risk levels than their leader negotiators, whereas subordinate negotiators and leader observers did not differ in risk preferences. Prior issue commitment increased the difficulty of a negotiated agreement and decreased decision satisfaction. On the whole, the presence of observers seemed to increase "loss of face" motivation in leaders and fears of sanction for deviation in subordinates.

As research on the risky-shift phenomenon continues to proliferate, social psychologists have been attempting to place this vast body of accumulated evidence into a coherent theoretical framework. Since the publication of the Kogan and Wallach (1967a) essay, at least four critical integrative reviews have been published (Clark, 1971; Dion, Baron, & Miller, 1970; Pruitt, 1971; Vinokur, 1971). It is important to note that this major integrative effort is almost exclusively devoted to research employing a single experimental paradigm—namely, two or more subjects (generally unacquainted) making individual decisions on a set of items and then constituted as a group to discuss these items with or without a consensus requirement. The con-

sistency in the direction and magnitude of the difference between the prior individual and group-influenced decisions is then examined. The many theoretical interpretations offered for these shifts (generally toward greater risk, but sometimes toward greater caution) as advanced in the reviews cited above cannot be given detailed treatment here. It should be emphasized that all of the foregoing interpretations are tied to the particular experimental paradigm described, a paradigm whose "ecological validity" may be exceedingly limited.

The limitation may be partly due to the fact that research on group risk taking with few exceptions (e.g., Mackenzie, 1970; Siegel & Zajonc, 1967) has been almost entirely laboratory based, and it is no simple matter to simulate in that context all of the many factors that impinge on group decision making in the "real world." It should nevertheless be possible to achieve a better laboratory approximation to natural decision-making situations by enhancing subjects' involvement in and commitment to the decisions that are achieved. There have been a number of experimental efforts in this direction. Thus, Zaleska and Kogan (1971) had subjects make decisions whose con-

¹This research was supported by Grant DAHC 15-67-G3 from the Advanced Research Projects Agency to the Educational Testing Service. We are grateful to Gisela Tracki for assistance in data collection, to Henrietta Gallagher for aid in data analysis, and to Harold Gerard, Margaret G. Hermann, and Allan I. Teger for critical comments on the manuscript.

²Requests for reprints should be sent to Nathan Kogan, who is now at the Department of Psychology, New School for Social Research, 66 West 12th Street, New York, New York 10011.

sequences (monetary gain or loss) impinged upon persons who had no voice in the original decision making, thereby enhancing the subjects' responsibility for another's welfare. In other studies, the subjects' involvement was increased through accountability to their reference group. This research in effect linked the work on group risk taking with studies of negotiation behavior (see Sawyer & Guetzkow, 1965). Participants in the Kogan and Doise (1969) investigation, for example, made group decisions with the anticipation that one of their members would subsequently act as a delegate, representing and defending the group's decisions before other delegates. In subsequent studies (Hermann & Kogan, 1968; Lamm & Kogan, 1970), delegates negotiating with one another were expected to represent their reference groups while at the same time striving to reach a consensus. Both of the foregoing studies were designed to permit comparisons between delegates of higher and lower status. The upshot of this research was a difference in negotiation outcomes, including magnitude of risky shift, as a function of status. These empirical outcomes pose an interpretive difficulty for prevailing conceptualizations of the risky-shift phenomenon and, at the same time, add to our store of knowledge about negotiation behavior. As Sawyer and Guetzkow (1965) have observed, little attention has been paid to the effect of the negotiators' status in their respective reference groups on specific negotiation outcomes.

Although negotiators' status proved to be a critical variable in both the Hermann-Kogan and Lamm-Kogan studies, the nature of the status effect was not consistent across the two experiments. It is this inconsistency that provided the main impetus for the research reported here. In brief, the Hermann-Kogan study set up four dyadic reference groups, each composed of a higher and lower status pair—a college senior or junior and a college freshman or sophomore, respectively. Following dyadic decisions, the higher and lower status members split into four-man groups of homogeneous status and were required to reach a consensus on the same decision material. The higher status subjects under the foregoing conditions manifested the often

replicated risky-shift effect in their final negotiated decisions, whereas the lower status groups yielded averaging effects. These findings suggested that the lower status individuals were somewhat more constrained than higher status individuals in departing from prior reference group positions, and hence adopted an arithmetic compromise under the pressure of a consensus requirement.

The procedure in the Lamm-Kogan investigation involved the random assignment of individuals to two three-man groups. Each of these groups arrived at a series of decisions and chose a delegate and an alternate to represent the group in subsequent negotiation. Selection as a delegate and an alternate was presumed to reflect high and intermediate achieved status, respectively, low status presumably adhering to the third unchosen member of the group. The status equals from the two groups met to negotiate an agreement on the same decision material discussed previously. High status negotiators manifested an averaging effect; low status negotiators showed the risky shift. Quite counter to the Hermann-Kogan findings, it appears that high status negotiators are more constrained than their low status counterparts in reaching agreement.

A variety of post hoc explanations can be invoked for contrasting effects in the two experiments described, since the methodologies employed differed in a number of respects. A possible critical difference is the manner in which the status variable was defined. Since the group-designated representative in the Lamm-Kogan research presumably derived his status from the persuasiveness of positions and arguments offered in the reference group, he was especially beholden to the group to defend that position in a subsequent negotiating session. Status differences in the Hermann-Kogan study, on the other hand, were established independently of any interaction in the reference group, and this might have allowed the high status negotiator a larger measure of freedom in deviating from reference group decisions. Low status negotiators in that study were presumably more fearful of deviating from original reference group decisions since such shifts would subsequently have to be defended before the higher status partner. The

greater deviation of low status negotiators in the Lamm-Kogan study very likely stemmed from their explicit rejection by their reference groups.

Particularly puzzling in the Hermann-Kogan work is the lack of evidence for loss-of-face motivation in the high status negotiators. Why is it not embarrassing for these individuals—at least those who markedly shifted from prior dyadic decisions—to confront their subordinates with such information? One often finds high status associated with responsibility and commitment, factors that would necessarily interfere with deviation from prior positions. Conceivably, the forces that make for loss of face in high status individuals vis-à-vis their subordinates were not especially salient.

The present experiment has been deliberately designed to enhance the aversiveness of leader sanctions over subordinates and the salience of loss-of-face considerations that leaders might experience in their relations with subordinates. In terms of McGrath's (1966) model of the negotiation situation, the "forces toward own reference group" have been increased at the expense of "forces toward agreement." This has been accomplished by having subordinates negotiate in the physical presence of their leaders and by having leaders negotiate in the physical presence of their subordinates. In the opinion of the authors, the foregoing experimental situation is in no sense artificial. Negotiation by subordinates under real-life circumstances may not necessarily take place in the physical presence of leaders, but the latter often monitor every step of the negotiation proceedings, thereby limiting the subordinates' freedom to exercise their own initiatives. Correspondingly, subordinates are often directly available for consultation by leaders engaged in negotiation, for subordinates may have specialized information or may have had prior negotiating experience with the subordinates of one's adversary.

It is, of course, difficult to formulate *a priori* predictions of whether subordinates will be more constrained by the presence of their leaders or leaders more constrained by the presence of their subordinates.³ This amounts

to predicting whether face-saving processes in high status individuals are more or less limiting of freedom of action than fear of sanctions in low status individuals. (The state of knowledge in the present domain is not sufficient to permit a prediction in either direction.) For that reason among others, the present investigation is aimed more at discovering relationships than at strict testing of hypotheses. A variety of negotiation process and product variables are compared in the two types of negotiating groups. These include decision time, deadlocks, desire to consult with the observers, satisfaction with decisions, and magnitude of risky shift reflected in the negotiated consensus relative to prior individual and dyadic reference-group decisions. The use of the Kogan and Wallach (1964) choice dilemmas as negotiating material in the present research allows for a further examination of the risky-shift phenomenon in a context of intergroup negotiation (see Hermann & Kogan, 1968; Lamm & Kogan, 1970). As evidence accumulates, however, indicating that the risky shift may be a special case of polarization and general choice-shift processes in groups (e.g., Doise, 1969; Moscovici & Zavalloni, 1969; Myers & Bishop, 1970), it should prove possible to generalize the outcomes of the present experiment to domains of content other than risk.

In addition to comparisons of negotiating leaders and subordinates, the design of the present investigation permits negotiator-observer comparisons. Since the observers are exposed to all of the communications passing between the negotiators, one can readily compare the impact of the group interaction on observers and negotiators at various stages in the course of the experiment. Thus, it is possible to break off the discussion at a particular point in time and to obtain private judgments from both negotiators and observers concerning preferred risk levels. Lamm (1967) has shown that an observer unacquainted with a discussion group will manifest as much of a risky shift as the group itself following a period of discussion.

present. Regrettably, limitations of time, funds, and subjects ruled out the implementation of such a "complete" design. Note that negotiation without observers present would have represented a replication of the Hermann-Kogan methodology.

³ Ideally, one would also like to examine subordinates negotiating with and without their leaders present and leaders negotiating with and without their subordinates

The present research should inform us whether comparable effects are obtained when the observers and negotiators are at different status levels and have previously interacted.

A final concern of the present research was to examine the effect of prior dyadic commitment on negotiation outcomes. This can be accomplished by having negotiators arrive at decisions for situations where there has been no prior dyadic agreement. These have been designated as "open" issues in contrast to the decision situations where dyadic positions exist (hereafter called "fixed" issues). Open issues imply that no prior team position need be defended. Discussion of such issues, therefore, has elements in common with intragroup decision making as opposed to the explicit intergroup negotiation occasioned by discussion of fixed issues. The fixed-open contrast, then, should prove informative with regard to the relative contribution of commitment to specific team positions and more generalized role obligations as leader or subordinate. Druckman (1967, 1968) has claimed that the former is the major cause of bargaining failures. Vidmar (1971), on the other hand, found that the representational role obligations of negotiators were detrimental to negotiation effectiveness. In the context of risk taking, Lamm and Kogan (1970) observed that general role obligations were of greater importance than specific team commitments in respect to negotiation outcomes. The present experiment offers a further examination of the issue.

In sum, the major purpose of the research reported here was to compare the negotiating behavior of leaders and subordinates under circumstances rendering salient the forces that typically inhibit the making of concessions at the two status levels—maintenance of "face" in leaders and fear of sanctions for excessive deviation in subordinates. A secondary goal of the present work was to examine the degree to which negotiators and their observers manifest a meeting of minds. Is there a greater harmony of views when leaders are negotiators and subordinates are observers, or vice versa? Finally, the present research explores the extent to which any of the foregoing comparisons are affected by the presence or absence of prior team commitments to specific negotiating positions.

METHOD

Subjects

A sample of 192 male student volunteers from the University of Mannheim (West Germany) served as paid subjects. Twenty-four experimental sessions were conducted, each involving 8 subjects.

Decision-Making Instrument

At a testing session several weeks prior to the experiment proper, the subjects filled out a 10-item version of the Kogan and Wallach (1964, Appendix E) Choice-Dilemmas Questionnaire (translated and, where necessary, adapted to the German cultural context). The original instrument contains 12 hypothetical life-like situations in which a protagonist has to choose between a more risky and a more conservative alternative. A subject's score on each item is the minimum odds of success (from 10% to 100% in the German version) he would demand for the more desirable risky alternative before recommending that it be chosen. These item scores are then summed to yield the total risk-taking score (smaller values reflecting greater risk-taking preferences). The two items that have consistently yielded cautious shifts—Numbers 5 and 12—were dropped in the present study. The manner in which particular items were changed in adapting them to the German cultural context is discussed in Lamm and Kogan (1970). Only 2 of the 10 items employed—Numbers 4 and 6—were substantially modified.

Procedure

Intragroup (dyadic) negotiation. Upon arrival at the laboratory, the subjects were given the choice-dilemmas booklets they had filled out previously and were given the opportunity to review their earlier decisions preparatory to the negotiation phase. Each set of eight subjects was then randomly paired off into four dyads, and each dyad was then taken to a separate cubicle. Written instructions were provided for each dyad explaining that they constituted a leader-subordinate team. Leader and subordinate status was assigned on a random basis. As a first assignment, each dyad was instructed to establish a team position on five of the choice-dilemmas problems. The experimenter informed the leaders that they were expected to guide the discussion, soliciting the views of the subordinate in arriving at a team decision but reserving for themselves the right to make a unilateral decision in the event of disagreement. Dyads were asked to avoid spending more than 5 minutes per item prior to decision. Upon reaching a decision (1 of the 10 possible probability values on the choice dilemmas), each member of the dyad recorded it on sheets provided for the purpose. Private ratings were also obtained from each dyadic partner concerning his perceived influence in the dyad and his satisfaction with the team position following the discussion of each item. The results of these private responses were scored on 5- and 7-point rating scales, respectively.

Intergroup Negotiation

Initial orientation. After all dyads had concluded their assignment, they were reassembled in a large room. Half of the subjects—either the four leaders or the four subordinates (depending on experimental condition)—were seated around a conference table in the center of the room. They constituted the active participants (negotiators). The other subjects (observers) were seated in the periphery of the room opposite to their respective team partners. It was felt that the negotiator-observer pairs should be able to see one another in order to maximize the effect of the latter's presence. The negotiators were told that their task was to negotiate with one another—to have an exchange of views and reach a common position—on each of the five issues (choice-dilemmas problems) that they had just discussed within their respective teams. The instructions further specified that the negotiators should represent their team's position, but at the same time try to find an optimal solution to each problem. The latter objective was stated in order to provide some justification for departures from team positions; no optimal solution existed in fact. In the interest of enhancing team motivation, team partners were informed that they would have a final postexperimental meeting to discuss their negotiation experience.

Negotiators' activities. Four minutes were allotted for the first phase of negotiation on each choice-dilemmas problem. During this phase, the negotiators presented their respective team positions and entered into a discussion of the problem intended to prepare the ground for an eventual agreement. The negotiators were specifically instructed not to try to achieve a consensus in this first phase, however.

At the conclusion of this initial phase, the negotiators privately recorded the positions that they currently favored for their respective teams. The subsequent phase consisted of a 3-minute consultation between each negotiator and his observer partner. It was not required that the negotiator explicitly inform his team partner (observer) of his private preconsultation decision. In this first consultation, each dyad was given the opportunity to formulate a revised team position (if it wished to do so) on the problem under negotiation. No explicit statement of a reaffirmed or revised team position was required, however. In this way, we hoped to preserve some flexibility for each negotiator in his subsequent confrontation with the other negotiators. The leader-subordinate role relation was maintained during the consultation period; that is, the leader again guided the discussion and had the final say in case of disagreement. Consultation was included as an integral part of the study design in order to provide a better simulation of "real world" negotiation and also to preclude resentment on the part of observers who would otherwise have played a totally passive role for an extended period of time.

In the second negotiation period, the discussion was resumed under instructions to try, if at all possible, to achieve consensus within a 3-minute period. If consensus was not reached within the time allotted, a second 1-minute consultation with one's partner was

permitted. The negotiators then returned to the conference table for a third and final negotiation session of 1-minute (maximum) duration. If consensus was not achieved at the end of this period, a deadlock was declared, and each negotiator noted his preferred team position at that point. Following the termination of negotiations for each of the choice dilemmas, the negotiators privately recorded their satisfaction (on a 7-point rating scale) with the outcome (group decision or deadlock).

Observers' activities. The observers overheard all of the oral instructions given to their negotiating team partners and were able to see and hear everything that transpired in the actual negotiation. Some of the decisions and ratings made by the negotiators were also required of the observers. Thus, the latter recorded their preconsultation decision—that is, the position recommended for their team at the end of the first phase of negotiation. The observers then took part in the consultations described above, observed the second negotiation period, conferred with their partner (if necessary) in a second consultation, and in such case observed the final negotiation period. At the conclusion of negotiation on a problem, the observers recorded their preferred final position (which could differ from the position reached by the negotiators). Finally, the observers indicated their satisfaction with the outcome of the negotiations on the same 7-point rating scale used by the negotiators.

Open issues. The sequence of activities just described was repeated for each of the five choice dilemmas on which the teams had initially established dyadic positions (fixed issues). Upon completing their negotiation on these issues, the five additional choice dilemmas were offered for negotiation. No team positions existed for these items, but the subjects had provided individual decisions at the preliminary testing session several weeks before. The two five-item sets were counterbalanced over the 24 experimental sessions so as to eliminate item content as a confounding source of differences.⁴ Negotiation instructions on open issues paralleled those for the fixed issues, though it should be noted that the negotiators were representing personal rather than team positions in the first phase of the negotiation. Hence, the position favored by one's dyadic partner could only be learned during the consultation period.

Behavioral observations by experimenters. Two female experimenters were in the conference room throughout the intergroup negotiations. One recorded the duration of each phase of the negotiations and the occurrence of deadlocks. The other concentrated on verbal participation rate—the number of utterances emitted by each of the negotiators. The latter data are not treated in the present article.

⁴ Since a major purpose of the present experiment was to maximize the salience of prior reference group positions for all participants, it appeared advisable to have fixed issues uniformly discussed first. The disadvantage of this feature of the design concerns a possible order effect for fixed versus open issues.

leader observers. No comparison of leader versus subordinate observers was undertaken given the different inputs (discussions) to which they were exposed.

Except for individual-dyadic shifts, data analyses have been carried out with the negotiating or observing group as the unit. Since many of the dependent variables can only be expressed as group scores (e.g., final negotiated decision), all other scores have been converted into group form for analytic purposes by using the average of the four individuals comprising a group.

RESULTS

Individual-Dyadic Shifts

Both leaders and subordinates showed statistically significant risky shifts ($t = 2.44$, $p < .01$, and $t = 1.74$, $p < .05$, one-tailed, respectively) from the initial individual decision to the final dyadic (team) position. The difference in the magnitude of shift between the two status groups was negligible ($t = .26$). There is no evidence to suggest, then, that the leaders imposed their individual positions on their subordinate partners. At the same time, it is important to show that the experimental manipulation—assignment of leader and subordinate roles—was effective. Evidence for such effectiveness can be found in the ratings of perceived influence in the dyadic discussion and of satisfaction with the dyadic decision. To the extent that the leader-delegate status induction is successful, one should obtain higher influence and satisfaction ratings for leaders than for delegates. Such differences were in fact obtained ($t = 4.30$, $p < .001$ for influence; $t = 3.97$, $p < .001$ for satisfaction), indicating that the status induc-

TABLE 2
COMPARISONS BETWEEN LEADER AND SUBORDINATE
NEGOTIATORS ON NEGOTIATION VARIABLES

Variable	Leaders		Subordinates	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Negotiation time (third period)*				
Fixed issues	41.91	25.64	51.83	28.46
Open issues	41.62	16.69	60.36	31.71
Use of second consultation				
Fixed issues	1.50	.90	2.83	.94
Open issues	1.08	1.00	1.42	.67
Deadlocks				
Fixed issues	.58	.51	1.75	.87
Open issues	.25	.62	.67	.65

* $n = 11$ and 12 groups for leaders and subordinates, respectively, on fixed issues, and $n = 8$ and 11 groups for leaders and subordinates, respectively, on open issues. Omitted groups did not use the third negotiation period (second consultation). Values represent total negotiation time divided by the number of third periods used.

tion appears to have worked. Leaders perceived themselves to be more influential than delegates and expressed greater satisfaction with the dyadic decisions.

Negotiation Variables

The comparisons described below concern negotiating leaders and subordinates exclusively, since observers were not directly involved in the negotiation proceedings. The relevant means and standard deviations are presented in Table 2, and the outcomes of the analyses of variance are shown in Table 3. Given the nature of the distributions for the variables shown in Table 2, variance-equaliz-

TABLE 3
ANALYSES OF VARIANCE FOR NEGOTIATION VARIABLES

Source	Negotiation time ^a			Second consultation ^b			Deadlocks ^b		
	<i>df</i>	<i>MS</i>	<i>F</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>df</i>	<i>MS</i>	<i>F</i>
Between subjects	18			23			23		
Status (A)	1	.280	2.89	1	5.33	7.43*	1	8.14	12.82**
Error	17	.097		22	.72		22	.64	
Within subjects	19			24			24		
Issues (B)	1	.056		1	5.90	14.16***	1	6.97	14.43***
A × B	1	.007		1	.68	1.64	1	.67	1.39
Error	17	.073		22	.42		22	.48	

^a Log transformation applied to the data.

^b Freeman and Tukey (1950) transformation applied to the data.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

ing transformations were applied to the data as indicated in Table 3.

Negotiation time. Since time limits were imposed for the first and second negotiation periods, it is not surprising that both leaders and subordinates used virtually all of the time available. For that reason, the time scores for the first two periods are not shown in Table 2. When the third (optional) negotiation period was corrected for the frequency of use of that period, no significant time differences were found between leaders and subordinates for either fixed or open issues. It should be recognized, of course, that the 1-minute time limit imposed on the final negotiation period necessarily restricted the extent of time variation that could be expected.

Frequency of use of second consultation. It will be recalled that negotiators could meet with their team partners for a second consultation if a consensus was not reached by the end of the second negotiation phase. Hence, the frequency of second consultations can be considered an index of "preliminary deadlock." As Tables 2 and 3 show, subordinates exceeded leaders in the desire for a second consultation before the final effort to achieve agreement. It can also be seen that the negotiators more often required a second consultation for fixed than for open issues.

Frequency of deadlock. As Tables 2 and 3 demonstrate, subordinates were more likely than leaders to deadlock as opposed to reaching consensus. In addition, the fixed issues encouraged more deadlocking than did the open issues. It should be noted that deadlocking is not entirely independent of the use of a second consultation, for the option of ending

negotiations in deadlock was available only in the third and final negotiating phase. Hence, the probability of deadlock necessarily increased with the use of a second consultation. Nevertheless, it is of interest that the ratio of deadlocks to opportunities for deadlock was higher for subordinates than leaders. On fixed issues, the relevant values were 86% and 67%; on open issues, these percentages were 71 and 58 for subordinates and leaders, respectively. In sum, subordinates placed in the negotiator role experienced somewhat greater difficulty in achieving agreement than did leaders occupying that role.

Risk-Taking Shifts

It should first be noted that differences in base-line risk levels were nonsignificant for both leader-subordinate and negotiator-observer comparisons. This was in line with expectations, of course, since status and participation roles had been randomly assigned.

For fixed issues, shifts in risk taking were assessed by subtracting preconsultation decisions from prior dyadic decisions. For open issues, dyadic decisions were not required, and prior individual decisions hence were employed as a base line. The extent of both kinds of shifts is represented in Table 4. Any further shifts from preconsultation to final negotiated decisions were also examined in the case of both fixed and open issues. All analyses were carried out on group scores (group decisions or group averages).

It can be seen that all of the shifts were in the risky direction, seven of eight significantly so. The one nonsignificant shift was found in the leader negotiators for open issues. Of interest

TABLE 4
SHIFTS IN RISK TAKING FROM PRIOR^a TO PRECONSULTATION DECISIONS

Group	Fixed issues			Open issues		
	$\bar{D}$	SE_D	t^b	$\bar{D}$	SE_D	t^b
Leader negotiators	1.77	.62	2.85**	.48	1.01	.48
Subordinate observers	2.56	.38	6.66***	3.25	.79	4.10***
Subordinate negotiators	1.69	.52	3.23**	2.44	1.09	2.23*
Leader observers	1.04	.50	2.07*	2.29	.90	2.54*

^a Dyadic decisions for fixed issues and individual decisions for open issues.

^b One-tailed tests were used since only shifts toward risk are predicted.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

also is the patterning of the mean shifts across the cells of Table 4. For both fixed and open issues, observing leaders relative to their negotiating subordinates preferred *smaller* shifts toward risk, whereas observing subordinates relative to their negotiating leaders preferred *larger* shifts toward risk. However, as the analyses of variance in Table 5 indicate, only the difference between leader negotiators and subordinate observers was statistically significant. A separate analysis of variance which focused on the difference between leader and subordinate negotiators yielded no significant status effect.

A possible basis for the significant difference in shift levels between negotiating leaders and observing subordinates is that the latter may have felt less influential in the dyadic reference group and hence more dissatisfied with the team position. It will be recalled that subordinates in general felt less influential and satisfied than their respective leaders in the dyadic decision-making process. The critical data in the present instance, however, concerns the correlation between extent of shift by observing subordinates and their dyadic influence and satisfaction ratings. These coefficients were .17 and $-.31$, respectively, both negligible and nonsignificant. There is no reason to believe, then, that the stronger shifts manifested by observing subordinates relative to negotiating leaders reflected the former's dissatisfaction with the original reference group positions.

Note further that no significant issue effect was obtained. This finding is of importance because the experimental design dictated that discussion of open issues always followed discussion of fixed issues. Hence, it can be claimed that the shifts on open issues partially reflected the experiential factor of previous negotiation experience on fixed issues. Two varieties of evidence can be invoked that run counter to the foregoing claim. First, discussion of open issues employed the standard group-discussion paradigm of risky-shift experimentation, and the mean shifts obtained here are comparable in magnitude to those reported in the relevant literature (with the exception of the leader negotiators). Second, sequential shifts from the first to the fifth item within the sets of both fixed and open issues gave no indication of a systematic carryover

TABLE 5
ANALYSES OF VARIANCE FOR RISKY-SHIFT COMPARISONS

Source	Leader negotiators versus subordinate observers			Subordinate negotiators versus leader observers		
	df	MS	F	df	MS	F
Between subjects	11			11		
Within subjects	36			36		
Status (A)	1	38.07	8.86*	1	1.88	
Error	11	4.30		11	5.12	
Issues (B)	1	1.10		1	12.00	1.09
Error	11	10.75		11	11.05	
A $\times$ B	1	11.75	2.46	1	.75	
Error	11	4.77		11	2.57	

* $p < .05$.

effect from fixed to open issues in regard to direction or magnitude of shift.

Shifts from the preconsultation phase to the negotiators' public decision were in the risky direction, but they were uniformly nonsignificant. It will be recalled that the observers' final decisions were made privately following the termination of negotiations. These private postdiscussion decisions could correspond to the consensus or deviate from it. Comparison of these postdiscussion decisions by observers with their prior preconsultation decisions again yielded nonsignificant differences.

Finally, we examined the negotiators' shifts from preconsultation to postexperimental private decisions. For subordinates, these shifts were negligible. For leaders, a near-significant shift on open issues was obtained ($t = 2.09$, $p < .10$, two-tailed). It will be noted in Table 4 that the leader negotiators on open issues manifested the weakest tendency toward a risky shift. This depression of the shift was maintained at the level of public consensus, but in subsequent private decisions the forces toward enhanced risk taking began to emerge.

In sum, with the possible exception of the case just described, the major portion of the risky shift occurred in the first round of group discussion. The actual negotiated decisions and subsequent postdiscussion judgments simply incorporated the shifts that had taken place earlier.

TABLE 6
SELF-RATINGS OF SATISFACTION WITH NEGOTIATED OUTCOMES

Condition	Leader negotiators		Subordinate observers		Subordinate negotiators		Leader observers	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Fixed issues	25.29	2.71	23.29	2.71	24.22	3.09	23.31	3.60
Open issues	28.00	1.52	24.67	2.81	27.29	3.24	25.06	2.71

Note.—Higher values reflect greater satisfaction. Ratings on 7-point scales were obtained after discussion of each of five items. The subject's score is the sum of the five ratings. Cell means are group scores consisting of the averages of the four subjects' individual scores.

Ratings

Extent of satisfaction with the outcomes of the intergroup negotiation is shown in Table 6, and the accompanying analyses of variance are presented in Table 7. The results were quite clearly in the direction of greater satisfaction on the part of negotiators as opposed to observers, irrespective of whether leaders or subordinates filled those roles. Note further that the satisfaction level was consistently and significantly lower for fixed than for open issues. This suggests that the participants were less dissatisfied when giving up personal positions than when forced to relinquish prior team positions. Finally, a separate analysis of variance comparing satisfaction levels of leader and subordinate negotiators yielded no significant status effect.

DISCUSSION

Where the negotiation variables are at issue, the pattern of results clearly favors monitored leaders over monitored subordinates in the capacity to avoid deadlock and reach consensus. Subordinates are more prone than

leaders to depend on a second consultation with their team partners, but such consultation, by and large, seems to reinforce prior reference group positions rather than smooth the way toward a consensual agreement. Relative to the earlier Hermann and Kogan (1968) finding of no leader-subordinate difference in deadlocking, the imposition of constraints on leaders and subordinates of the sort used in the present study exerts a more powerful effect on subordinates. Evidently, the presence of leaders is more inhibiting of concession making for subordinates than is the presence of subordinates for negotiating leaders.⁵

Whereas the effects of leaders' presence on subordinates is manifested directly in terms of difficulty of achieving agreement, other evidence points to certain subtle effects on negotiating leaders of having their subordinates physically present. These latter effects are expressed through the phenomenon of the risky shift. In the Hermann-Kogan research, leaders exhibited the risky shift, while subordinates did not. Interpretation of that result emphasized the differential power implied by leader and subordinate status, the latter having more reason than the former to expect sanctions for sizable deviation from reference group positions.

As the results of the present study have shown, negotiation by leaders and subordinates in one another's presence markedly alters the pattern of risk-taking shifts observed in the Hermann-Kogan work. Differences between

TABLE 7
ANALYSES OF VARIANCE FOR SATISFACTION RATINGS

Source	Leader negotiators versus subordinate observers			Subordinate negotiators versus leader observers		
	<i>df</i>	<i>MS</i>	<i>F</i>	<i>df</i>	<i>MS</i>	<i>F</i>
Between subjects	11			11		
Within subjects	36			36		
Status (A)	1	85.33	14.93**	1	29.69	7.06*
Error	11	5.72		11	4.21	
Issues (B)	1	50.02	5.41*	1	69.48	7.91*
Error	11	9.26		11	8.79	
A × B	1	5.33	4.76	1	5.17	2.05
Error	11	1.12		11	2.53	

* $p < .05$.

** $p < .01$.

⁵ Statistical comparison of absolute levels of deadlocking in the two studies is not warranted given the subject nationality difference. For descriptive purposes, it can be noted that leaders and subordinates exceeded their counterparts in the Hermann-Kogan study in frequency of deadlock by a factor of approximately 1.5 and 2.0, respectively.

leader and delegate negotiators no longer obtain. In fact, the one instance of a nonsignificant shift concerns the leaders discussing the open issues.

The most interesting aspect of the risky-shift results is the negotiator-observer discrepancy in risky-shift magnitude. Recall that these are shifts occurring prior to consultation, and hence are not influenced by any direct communication between negotiators and observers. Where subordinates negotiate and leaders observe, the extent of shift in the two groups is of approximately equal magnitude. This is not the case when leaders negotiate and subordinates observe; the latter manifest significantly larger risky shifts. Since it is the discussion of the leaders that constitutes the stimulus input for the observing subordinates, it can safely be assumed that the drift of the discussion favors enhancement of risk taking. It will be recalled that the leader groups in the Hermann-Kogan study did in fact shift toward greater risk taking. The subordinates in the present study, then, may well have anticipated a risky shift on the part of their leaders and altered their former positions accordingly.

The foregoing finding represents the first time that observers have yielded stronger risky shifts than the groups under observation. Kogan and Wallach (1967b) using tape recordings of group risk discussions found that listeners manifested shifts about half the magnitude of the taped groups. When the observers could see as well as hear through the use of a one-way screen, their shift approximated that of the interacting groups being observed (Lamm, 1967). How then can one explain risky shifts in observers that exceed those generated by the groups under observation?

Of the four subgroups created by the experimental conditions, the subordinate observers are lowest in power and responsibility. Though they can offer advice, the leaders are not compelled to accept it. Conceivably, the combination of low status and passive role enables subordinate observers to focus directly on the arguments raised in the first negotiation period in a context of little responsibility and accountability. The negotiating leaders, in contrast, bear ultimate responsibility for the defense of their team positions. One might

wonder, of course, why suppression of risky shifts by leaders should have been necessary when the recommended decision was rendered privately. Since such private decisions were made just prior to consultation with one's subordinate partner, however, it is hardly surprising that a leader would not wish to face him in consultation with a proposal for a drastic shift from an earlier dyadic position or from a position advocated at the beginning of the discussion. This would imply that the other leaders have reached better decisions and hence would engage loss-of-face motivation. It should be noted here that the final public negotiated decision differed but slightly from the private preconsultation risk levels, a finding consistent with the view that loss of face should, if anything, be a more potent influence on public than on private decisions. That active suppression of shifts toward risk might have occurred in leader negotiators is supported by the postconsensus private risky shifts observed in the case of open issues. These private decisions were obtained at the conclusion of the experimental session when one would expect loss-of-face considerations to be minimized.

The foregoing results bear some resemblance to the outcomes of the Lamm and Kogan (1970) study. In that investigation, elected representatives with ultimate responsibility for a decision (equivalent in some respects to the leaders of the present study) did not manifest the risky-shift effect, whereas nonrepresentatives defending the same team positions did produce significant risky shifts. As extent of accountability to one's reference group increased, differential concessions became more difficult, and, as a consequence, risky shifts were rendered less likely. The claims of one's team or reference group took precedence over the variety of forces that contribute to the risky-shift phenomenon. A dissonant element in the picture is the presence of a significant risky shift for leader negotiators on fixed issues in the present study, though this shift was somewhat smaller than that yielded by the observing subordinates.

Where subordinates are negotiators and leaders are observers, a different set of forces prevails. Unlike subordinate observers who have neither power nor responsibility, sub-

ordinate negotiators are given responsibility under conditions where they can be observed by those who hold power—the leaders in the present case. This is a condition where one would anticipate subordinates to be closely attuned to leaders' expectations of tolerable deviation from team positions. One would also expect leaders to monitor the ongoing negotiation in a most careful manner. As we have seen, subordinate negotiators and leader observers shift to about the same degree. Observing leaders are evidently able to shift when exposed to positions riskier than their own and to arguments supporting such positions. The substantial difference in satisfaction level for leader negotiators and subordinate observers is more or less consistent with the discrepancy in risk preference. The greater dissatisfaction of subordinates evidently derives from their wish for or anticipation of decisions more risky than their leaders consider desirable. For leader negotiators, larger risky shifts would imply greater concessions on the part of certain leaders. The loss-of-face aspect of such concession making is evidently a sufficiently strong deterrent against enhanced risk to overcome whatever influence is exerted by subordinates' high risk preferences. More difficult to interpret is the evidence that subordinate negotiators are somewhat more satisfied than their leader observers with the negotiated outcomes, despite the absence of any difference in preferred risk levels. Conceivably, leaders are thereby protesting their passive role in the proceedings.

What are the implications of the present investigation for the interpretation of the risky-shift phenomenon? Two earlier studies (Hermann & Kogan, 1968; Lamm & Kogan, 1970) demonstrated that the prevailing social-value interpretation of the phenomenon (Brown, 1965) could not account for the patterning of risk-taking shifts in the context of intergroup negotiation. More recently, Pruitt (1971) has described five variants of Brown's original value interpretation—theories of social comparison, pluralistic ignorance, release, relevant arguments, and commitment. All of these have been derived from experiments in which individuals and groups made choices for themselves. The particular pressures on a negotiator representing a reference group, however, are

likely to be different from those impinging on a group member responsible to no one but himself. The latter, of course, will be more susceptible to the social value of risk; he can move with the arguments. The former must constantly ask himself what his reference group will consider acceptable.

It is possible to argue that Pruitt's (1971) "release" version of value theory can explain the subordinate observers' proneness to shift. According to that version,

The risky shift occurs in group discussion because the discovery of a group member (the *model*) who endorses high risk taking *releases* the more cautious group members from the assumed social constraints that are holding them back from risk taking. In other words, finding a high risk taker in their group gives them the "courage of their convictions" [p. 351].

It is conceivable, then, that the subordinate observers are "released" from restraints of accountability and can approximate their risk-taking ideal more closely. The fact that the negotiating leaders manifest significantly smaller shifts, however, poses problems for the "release" theory. It means that some other process would have to be invoked to account for the "inhibition" in the negotiating leaders. In short, it is the *differential* magnitude of shift that causes difficulties for release theory or any of the other variants of value theory described by Pruitt.

A special contribution of the present research has been to point to the unanticipated interaction between high versus low status on the one hand and an active versus passive role on the other. Where leaders discuss and subordinates observe, a special disharmony results from a more cautious orientation on the part of leaders relative to observing subordinates. In contrast to their subordinates' shifts, leaders probably find it difficult to make such shifts because of the loss of face entailed in making large concessions to other leaders. Observing subordinates can aim for an "optimal" decision; leader negotiators very likely cannot entertain such a decision (if it contrasts sharply with a prior position) because of a sensed loss of status.

More puzzling is the evidence for risky shifts in negotiating subordinates who are being observed by their leaders. In the Hermann-Kogan study, subordinates did not manifest risky

shifts even though they were not under observation. An important procedural distinction between the two studies might account for the observed difference. In the present experiment, leader and subordinate roles were randomly assigned. In contrast, a natural status distinction was involved in the Hermann-Kogan work, for leaders were older and of a higher college class than subordinates. The pure role-playing feature of the present work may have exercised some effect. Conceivably, the expectation of a future meeting with a leader (who also occupies superior status in the real world) holds a greater threat of sanctions than does direct surveillance by role-playing leaders who in reality are equal-status peers. Accordingly, the differential deviation necessary for risky shifts might have been less threatening for subordinates in the present study than for subordinates in the Hermann-Kogan research. Of course, these differences in the threat potential of natural status differences as opposed to peer surveillance could not have been anticipated prior to carrying out the experiment. Nor should such differences be taken as evidence for failure of the leader-subordinate status induction in the present experiment, given the manifestation of other status effects already documented in the paper.

The major implication of the subordinates' shift toward risk in the presence of leaders is the indication that disproportionate shifts from prior reference group positions do not necessarily evoke leader disapproval. Indeed, leaders appear to shift their decisions in harmony with their subordinates on the basis of the positions and/or arguments advanced during the discussion. There is no evidence for a defensive affirmation of original positions on the part of observing leaders.

The distinction between fixed and open issues was introduced into the experimental design to assess the relative influence on negotiation outcomes of overall role assignment and commitment to specific positions. For the negotiation and satisfaction variables, there is clear-cut evidence that prior dyadic commitment (fixed issues) contributes to a greater frequency of negotiation failure (deadlocks) and less satisfaction with the ultimate decisions reached. Elimination of the prior

commitment (open issues) facilitates agreement and satisfaction. These findings are consistent with Druckman's (1967, 1968) observations that commitments to fixed positions, not reference group loyalty as such, contribute to bargaining failures. On the other hand, it will be recalled that the magnitude of risk-taking shifts did not vary significantly across fixed and open issues. In other words, even when the negotiators in the present study were required to reach agreement on issues for which no prior team position existed, their behavior continued to reflect adherence to the various roles assigned. The elimination of prior commitment to fixed positions clearly makes agreement more likely, but it certainly does not remove all of the constraints inherent in an intergroup negotiation setting.

A final cautionary note is in order. The Hermann-Kogan research employed American subjects; the present investigation used German subjects. Though both subject samples came from institutions with high selection standards, the nationality difference nevertheless constitutes an unknown in the research program described. The Lamm-Kogan experiment cited earlier also made use of a German sample. Though the outcomes of the three investigations show congruence, only replication studies explicitly focused on the nationality comparison will show whether German and American patterns of negotiation behavior are essentially the same.

REFERENCES

- BROWN, R. *Social psychology*. New York: Free Press of Glencoe, 1965.
- CLARK, R. D., III. Group-induced shift toward risk: A critical appraisal. *Psychological Bulletin*, 1971, 76, 251-270.
- DION, K. L., BARON, R. S., & MILLER, N. Why do groups make riskier decisions than individuals? In L. Berkowitz (Ed.), *Advances in experimental social psychology*. Vol. 5. New York: Academic Press, 1970.
- DOISE, W. Intergroup relations and polarization of individual and collective judgments. *Journal of Personality and Social Psychology*, 1969, 12, 136-143.
- 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.
- DRUCKMAN, D. Prenegotiation experience and dyadic conflict resolution in a bargaining situation. *Journal of Experimental Social Psychology*, 1968, 4, 367-383.

- FREEMAN, M. F., & TUKEY, J. W. Transformations related to the angular and the square root. *Annals of Mathematical Statistics*, 1950, 21, 607-611.
- HERMANN, M., & KOGAN, N. Negotiation in leader and delegate groups. *Journal of Conflict Resolution*, 1968, 12, 332-344.
- KOGAN, N., & DOISE, W. Effects of anticipated delegate status on level of risk taking in small decision-making groups. *Acta Psychologica*, 1969, 29, 228-243.
- KOGAN, N., & WALLACH, M. A. *Risk taking: A study in cognition and personality*. New York: Holt, Rinehart & Winston, 1964.
- KOGAN, N., & WALLACH, M. A. Risk taking as a function of the situation, the person, and the group. In, *New directions in psychology, III*. New York: Holt, Rinehart & Winston, 1967. (a)
- KOGAN, N., & WALLACH, M. A. The risky-shift phenomenon in small decision-making groups: A test of the information-exchange hypothesis. *Journal of Experimental Social Psychology*, 1967, 3, 75-84. (b)
- LAMM, H. Will an observer advise higher risk taking after hearing a discussion of the decision problem? *Journal of Personality and Social Psychology*, 1967, 6, 467-471.
- LAMM, H., & KOGAN, N. Risk taking in the context of intergroup negotiation. *Journal of Experimental Social Psychology*, 1970, 6, 351-363.
- MACKENZIE, K. D. The effects of status upon group risk taking. *Organizational Behavior and Human Performance*, 1970, 5, 517-541.
- MCGRATH, J. E. A Social psychological approach to the study of negotiation. In R. V. Bowers (Ed.), *Studies on behavior in organizations*. Athens: University of Georgia Press, 1966.
- MOSCOVICI, S., & ZAVALLONI, M. The group as a polarizer of attitudes. *Journal of Personality and Social Psychology*, 1969, 12, 125-135.
- MYERS, D. G., & BISHOP, G. D. Discussion effects on racial attitudes. *Science*, 1970, 169, 778-779.
- PRUITT, D. Choice shifts in group discussion: An introductory review. *Journal of Personality and Social Psychology*, 1971, 20, 339-360.
- SAWYER, J., & GUETZKOW, H. Bargaining and negotiation in international relations. In H. C. Kelman (Ed.), *International behavior*. New York: Holt, Rinehart & Winston, 1965.
- SIEGEL, S., & ZAJONC, R. B. Group risk taking in professional decisions. *Sociometry*, 1967, 30, 339-350.
- VIDMAR, N. Effects of representational roles and mediators on negotiation effectiveness. *Journal of Personality and Social Psychology*, 1971, 17, 48-58.
- VINOKUR, A. Review and theoretical analysis of the effects of group processes upon individual and group decisions involving risk. *Psychological Bulletin*, 1971, 76, 231-250.
- ZALESKA, M., & KOGAN, N. Level of risk selected by individuals and groups when deciding for self and for others. *Sociometry*, 1971, 34, 198-213.