

# Negotiators' Information Sharing: The Effects of Opponent Behavior and Information about Previous Negotiators' Performance

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## Keywords

negotiations, information sharing, negotiator behavior, integrative negotiations.

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## Abstract

In this study, we investigate the effects of three factors upon negotiators' information sharing: (a) the opponent's information sharing, (b) the opponent's call for information sharing, and (c) information about previous negotiators' performance. To test the effects of the factors, we had 120 subjects participate in a laboratory experiment wherein they negotiated over three issues. The results indicate that negotiators share more information (i.e., disclose information about their BATNA and about their payoffs) when their opponents share information (i.e., disclose information about BATNA and about payoffs) and when their opponents call for the negotiators to share information. Information about the previous negotiators' performance did not affect the negotiators' own information sharing. However, the negotiators did have high aspirations when presented with a mix of information—that some previous negotiators had attained high outcomes and others had attained low outcomes.

As a general rule, the most successful man in life is the man who has the best information.

Benjamin Disraeli

In negotiations, as in many other social interactions, success is greatly dependent upon information sharing. It is quite important in integrative negotiations (Koeszegi, 2004). The negotiation literature indicates that, in most cases, integrative negotiations are superior to distributive ones because they result in agreements that are beneficial to both parties. This is especially important when parties anticipate a continued

relationship, as between family members or coworkers. However, integrative negotiations are complex because they require creativity and collaboration between the parties.

One requisite for this collaboration and creativity is the sharing of pertinent information, such as information about one's interests, payoffs, resources, or best alternative to a negotiated agreement (BATNA; Putnam & Jones, 1982; Thompson, 1991). In fact, scholars refer to such information sharing as an integrative behavior (Beersma & De Dreu, 2002) and agree that without sharing such information, individuals will have difficulty engaging in integrative negotiations and achieving integrative agreements. Consider the requisite role of information sharing in logrolling (Pruitt & Carnevale, 1993). In order for this integrative approach to be successful, the negotiators must share information that allows them to identify integrative agreements wherein the negotiator concedes on issues that have low payoffs to her and high payoffs to the other. In exchange, the opponent concedes on other issues that have low payoffs to him and high payoffs for the negotiator.

Bridging is another integrative behavior that requires information sharing. Both the negotiator and the opponent have their individual interests: the classic Carnevale example (2006) being a husband and wife planning a week-long vacation, one interested in going to the mountains for freshwater fishing, the other interested in going to the beach to play volleyball in the sand. If they share information about their interests—freshwater fishing and playing volleyball in the sand—the couple can locate a bridging solution that offers both fishing and playing volleyball. If they do not share information, they will squabble.

We could continue with examples of the role of information sharing in the integrative approaches of superordinization, resource modification, attenuation, and interest negotiation (Fisher & Ury, 1981). But we believe we have made our primary point: information sharing is a central requisite for integrative bargaining.

We can also argue that information sharing, at times, has a valuable role in distributive bargaining. For example, learning that the opponent's payoffs are equal and opposite to the negotiator's could convince the negotiator to take her own BATNA. Or learning that the opponent has a low BATNA would motivate the negotiator to raise his demands in the negotiation.

Despite the important role of information sharing in negotiations, few studies examine the determinants of such behaviors. Some studies examine the determinants of negotiators' cooperative or prosocial approach to negotiation in general (e.g., Van Lange, 1999). Others examine information sharing in particular, focusing on its outcomes, such as an integrative agreement, negotiator outcomes, and negotiator satisfaction from the process (e.g., Harinck & Ellemers, 2006). Yet very little, if any, empirical evidence exists about specific determinants of negotiators' information sharing.

Our study aims to address this deficiency by investigating the effects of two sets of factors upon the negotiator's information sharing. The first is the opponent's behaviors, which are a part of the interpersonal interaction between the parties. The second is information about previous negotiators' performance, which is an environmental factor—external to the interaction between the two parties. Because environmental factors—such as resource scarcity, constituent demands, and societal norms—are known

to affect negotiation behavior, we felt it would be worthwhile to include another, heretofore unstudied, factor in our study.

The opponent's behaviors are as follows: (a) the opponent's information sharing (i.e., the opponent's sharing information about payoffs and BATNA) and (b) the opponent's call for information sharing (i.e., the opponent requesting the negotiator to share information). The information about the previous negotiators' performance is (c) a report as to how well previous negotiators fared in similar negotiations.

As a succinct preview, we predict that the opponents' information sharing and their call for the negotiators' information sharing will enhance the negotiators' information sharing. In addition, we opine that a report that some previous negotiators had high outcomes and some had low outcomes will increase the negotiators' aspirations and information sharing.

In the sections that follow, we first discuss the outcomes: the negotiators' information sharing—that is, the disclosure of their own BATNA and payoffs. Subsequently, we turn to the three factors and develop the hypotheses, which are tested in a laboratory study. After reporting the tests of these hypotheses, we discuss the implications of the findings.

## **Outcomes: The Negotiators' Information Sharing (Disclosure of their BATNA and Payoffs)**

Negotiator behavior is the central component of negotiation research (Graham, Mintu, & Rodgers, 1994). In the past, scholars have examined behaviors such as demands and concessions (Carnevale, 2008; De Dreu, Carnevale, Emans, & van de Vliert, 1994), response modes (Pietroni, Van Kleef, & de Dreu, 2008), apologies and promises (Atran & Axelrod, 2008; Schweitzer, Hershey, & Bradlow, 2006), display of emotions (Druckman & Olekalns, 2008; Kopelman, Rosette, & Thompson, 2006), general nonverbal communication (Griessmair & Koeszegi, 2009; Lincoln, 2000), and humor (Kurtzberg, Naquin, & Belkin, 2009; Vuorela, 2005). In the current study, we extend this work by investigating an additional, essential negotiator behavior—the sharing of information.

We now turn to the effects of the predictors: (a) the opponent's information sharing (sharing information about the BATNA and payoffs), (b) the opponent's call for the negotiator's information sharing, and (c) information about previous negotiators' performance.

## **Predictors: Opponent Information Sharing, Opponent's Call for Information Sharing, and Information about Previous Negotiators' Performance**

Consider first how the opponent's information sharing behavior (disclosure of the BATNA and payoffs) affects the negotiator's information sharing behavior. The theoretical underpinning for our prediction is the norm of reciprocity. This norm is a universal one, wherein people tend to reciprocate the behaviors of their counterparts and expect their own behaviors to be reciprocated (Gouldner, 1960). Often this norm is viewed as

subconscious, internalized by members of society (Brett, Shapiro, & Lytle, 1998; DeRidder & Tripathi, 1992). It is considered as central to any situation that involves interpersonal communication between two or more individuals, as within negotiations (Deutsch, 1973; Putnam & Jones, 1982).

Because reciprocity is a powerful, somewhat prevalent force, negotiators tend to reciprocate both cooperative and non-cooperative behaviors when interacting with an opponent. For example, fair offers are reciprocated by similar offers, and threats made by the opponent tend to be reciprocated by threats (Putnam, 1990). Research also indicates that negotiators reciprocate their counterparts' negotiation strategy (e.g., Brett et al., 1998; Frazier & Rody, 1991; Pruitt, 1981; Putnam & Jones, 1982; Rubin & Brown, 1975). For instance, when opponents use a cooperative strategy, such as making unilateral concessions, the negotiator will typically reciprocate with further concessions (Pruitt, 1981). On the other hand, when an opponent uses a competitive or distributive strategy, such as high initial demands, negotiators tend to reciprocate with high counter demands (Bartos, 1974).

Because reciprocity does seem to be in place and is influential in negotiations, we predict it will affect the negotiators' information sharing such that when the opponent engages in information sharing, the negotiator will reciprocate that behavior and also engage in information sharing (i.e., disclose the BATNA and payoffs). Accordingly, we hypothesize:

**Hypothesis 1a:** There is a positive relationship between the opponent's information sharing (i.e., disclosure of his/her BATNA and information about payoffs) and the negotiator's disclosure of the BATNA.

**Hypothesis 1b:** There is a positive relationship between the opponent's information sharing (i.e., disclosure of his/her BATNA and information about payoffs) and the negotiator's disclosure of his/her payoffs.

Consider now the effect of an opponent's *call* for negotiator information sharing. The prediction here is somewhat more complex, but also based on the norm of reciprocity. When an opponent asks a negotiator to share information, such as to disclose his/her payoffs, the negotiator—we predict—will tend to comply because he or she expects the opponent will later reciprocate that behavior. If the opponent *does* reciprocate the negotiator's behavior (which he or she had called for), a pattern of reciprocation will unfold because trust is generated between the negotiator and the opponent. Admittedly, there is a risk that the opponent will not reciprocate, in which case the negotiator will no longer comply with future calls for information sharing. Therefore, the effect of calling for information sharing can be short-lived. For example, assume the opponent asks the negotiator to disclose her payoffs and the negotiator complies. If the opponent then reveals her payoffs, the norm of reciprocity is fulfilled and the next time the opponent asks for the negotiator's information sharing, the negotiator will most likely provide it, reasoning that the opponent will reciprocate again. However, if the opponent asks the negotiator to reveal her payoffs but does not reciprocate when receiving the information, this failure will violate the negotiator's expectations and the next time the opponent asks the negotiator to share information, the negotiator will most likely refuse to do so.

In sum, we argue that when negotiators are asked by their opponents to disclose their BATNA or their payoffs, they will comply, expecting that the opponent will reciprocate that behavior, especially because the opponent called for it. Stated formally:

**Hypothesis 2a:** There is a positive relationship between the opponent's call for the negotiator to engage in information sharing (i.e., to disclose his/her BATNA and information about payoffs) and the negotiator's disclosure of his/her BATNA.

**Hypothesis 2b:** There is a positive relationship between the opponent's call for the negotiator to engage in information sharing (i.e., to disclose his/her BATNA and information about payoffs) and the negotiator's disclosure of his/her payoffs.

We also predict an interaction in which the effect of opponent's call for the negotiator's information sharing will be stronger when the opponent also shares information. This interaction unfolds because the opponent's own sharing of information (which he or she calls for) increases the trust between the parties (Pruitt & Lewis, 1977). This trust, in turn, will encourage the negotiator to cooperate with the opponent and to comply with the opponent's call for information sharing. There will be no such trust when the opponent calls for the negotiator's information sharing but does not share information herself. Accordingly, we hypothesize that there is an interaction effect between the opponent's call for information sharing and the opponent's information sharing on the negotiator's information sharing. Specifically:

**Hypothesis 3a:** The relationship between the opponent's call for information sharing and the negotiator's sharing of BATNA is stronger when the opponent shares information.

**Hypothesis 3b:** The relationship between the opponent's call for information sharing and the negotiator's disclosure of payoffs is stronger when the opponent shares information.

To this point, we have focused on the effect of the opponent's disclosure of information and the call for the negotiator to disclose his or her information. When considering additional factors that determine negotiator's information sharing, it is worthwhile to consider those which reside in the environment outside of the interaction with the opponent. One that does so and can be expected to have an effect is information about previous negotiators' performance. We predict it produces an effect via its impact upon the negotiators' goals or aspirations.

The negotiation literature reports that one of the core elements affecting negotiator behavior is the negotiators' aspirations (Kimmel, Pruitt, Magenau, Konar-Goldband, & Carnevale, 1980; White & Neale, 1994). This literature, however, does not indicate how feedback on other negotiators' performance affects these goals. When considering this effect, we note that according to social comparison theory, individuals—in order to achieve and/or to preserve a positive self-evaluation—have a need to evaluate themselves and to determine whether they are as good as or better than others in terms of abilities, traits, or outcomes (Festinger, 1954). At the core of this theory is the assumption that individuals, in the absence of an objective standard, compare their performance to that of others, usually successful others, and this comparison alters their aspirations.

This theory can be applied to negotiations because the negotiations involve social interaction by which individuals tend to evaluate their negotiation outcomes. And

because negotiations vary dramatically, the negotiators lack an objective standard of good performance. This being the case, previous negotiators' performance can be a relevant standard to which negotiators can compare and evaluate their performance.

When they form self-evaluations, individuals may make upward comparisons, in which they compare themselves to top performers, or downward comparisons, in which they compare themselves to poor performers (Festinger, 1954). Which comparison will negotiators most likely make?

Research indicates that most individuals wish to boost their self-worth or self-evaluations. Therefore, it is reasonable to predict that they will aspire to the performance levels of others who are considered successful in a relevant area. This self-evaluation/aspiration is not a passive variable; rather, it affects one's performance. Consider that Johnson and Stapel (2007) found that there is a close link between self-evaluation and performance. These authors found that individuals tend to make upward social comparisons in attempts to boost their performance and to achieve a high self-evaluation. In the context of negotiation, this self-enhancement is predicted to boost the performance goal or aspirations of negotiators and engender more information sharing so as to attain the goals/aspirations.

To summarize, we predict that negotiators will make upward comparisons when given information about previous negotiators, some of whom have performed very well and some of whom have performed very poorly in the past. As a result, these negotiators will set high aspirations in terms of the outcomes for the negotiation. In turn, they will reveal their BATNA and their payoffs more frequently, attempting to boost their performance to match that of successful negotiators in similar past negotiations.

Note, we predict that negotiators will *not* average the information presented to them, reasoning that some previous negotiators did well and some did poorly and therefore, their goal will be to achieve an average of what previous negotiators obtained. Rather, we predict they will peg their aspirations to the accomplishments of the high performers. As a result, negotiators provided with both high- and low-performance information will set higher goals—we predict—than will negotiators who are given information that previous negotiators attained moderate outcomes.

**Hypothesis 4a:** Negotiators presented with information indicating that some previous negotiators achieved high outcomes and some netted low outcomes will develop higher goals/aspirations than will those given information of moderate previous outcomes.

**Hypothesis 4b:** The aspirations of negotiators receiving information about previous negotiators' performance are positively related to their disclosure of their BATNA.

**Hypothesis 4c:** The aspirations of negotiators receiving information about previous negotiators' performance are positively related to their disclosure of their payoffs.

## Method

### Research Design

In order to test the hypotheses, we utilized a  $2 \times 2 \times 2$  between-subject experimental design with two levels of opponent's information sharing (information sharing vs. no

information sharing); two levels of opponent's call for information sharing (call for information sharing vs. no call for information sharing); and two levels of information about previous negotiators' performance (information about high and low outcomes vs. information about average previous outcomes).

As for the negotiation scenario, we used a slightly modified version of Arnold and O'Connor's (1999) exercise that entails a negotiation between a job applicant and a prospective employer—a student-run organization that arranges social events—over three job conditions: frequency of salary increases, frequency of task rotation, and benefits (discounts and free admissions to events held by the employer). We selected this scenario because of its simplicity and because it involves a student-run organization, a context with which students were likely to be familiar. This exercise, we felt, would appeal to students in general as well as to business majors in particular and would motivate them to take the negotiation seriously.

### Participants and Procedure

We recruited 120 undergraduate students from upper-level undergraduate management classes in a major Midwestern university. Of these 120 students, 77 were males and 43 were females. We invited participants to participate in a study on “negotiation and decision making.” Upon arrival, participants were randomly assigned to one of the eight experimental conditions. Participants then received written instructions describing the negotiation scenario and the task they were about to perform, which included information about the performance of previous participants.

The instructions indicated that participants were about to participate in a negotiation role-play with another student. Participants read that they were randomly assigned to assume the role of a student seeking employment at On Campus Entertainment, a student-run organization that organizes social events for students. The negotiation was limited to three job-related issues: frequency of salary raises, frequency of task rotation, and amount of free admissions to company events. Participants would have 30 min to complete the negotiation, after which the experimenter will stop the negotiation. The instructions referred participants to an attached table (the Appendix) which had the agreement options, their dollar value, and the options they should assume they have already been offered by a competing company (in bold). To motivate the participants to take the negotiation seriously, the instructions indicated that all participants would receive the dollar amount for the payoffs they settled for within the timeframe of the role-play.

To manipulate the information about the previous performance variable, the current participants in the high–low-performance condition were given information that one-half of the participants in the previous year had attained outcomes of \$11 and that one-half had attained outcomes of \$3. In the average performance condition, the current participants were told that the previous participants had attained outcomes of \$7. Participants were also given an agreement form they were instructed to sign as proof of settlement, and a consent form.

After the participants had read their instructions, the experimenter informed them that negotiators can engage in information sharing behaviors such as disclosing one's

payoffs or one's alternative (BATNA). This was necessary in order to introduce this option to all participants, many of whom had not had prior experience with negotiations.

We employed seven MBA students as confederates who served as the participants' opponent and manipulated the "opponent's information sharing" and "opponent's call for information sharing" factors. Prior to the study, the experimenter trained the confederates by providing them with a description of the negotiation scenario and instructions as to how they were to implement the manipulations. In a nutshell, the confederates were trained to perform the appropriate manipulation to each participant. That is, they were instructed to follow a script that indicated which manipulation should be introduced by negotiation round. For example, the confederates in the call for information sharing and information sharing condition were instructed to make their own offers and to request information about the participants' payoffs at round 2 of the negotiation, and to reveal their payoffs and to ask the negotiator to reveal his/her payoffs. Each experimental condition had a unique script.

To avoid biasing the confederates' behavior during negotiations, the experimenter did not reveal any hypotheses or the theoretical background of the study to them. Rather, the experimenter told them that the study was about information sharing in negotiations.

Prior to the negotiation, the experimenter asked each participant to complete a prenegotiation questionnaire designed to measure the manipulation of information about the previous negotiators' performance and to ensure that participants understood the task at hand.

After completing the prenegotiation questionnaire, participants were randomly paired with a confederate, and the negotiations began. Confederates—serving as the opponent—manipulated the opponent's information sharing and opponent's call for information sharing factors according to their script. They also recorded, throughout the negotiation, both their own actions and those of the participants. To avoid raising the participants' suspicions regarding the confederates' note-taking, each participant was given scrap paper for note-taking, and a barrier was in place between the participants and the confederates, allegedly to protect the confidentiality of both parties' notes.

At the end of each negotiation, the participants completed a posttreatment questionnaire designed to measure their goals and perceptions of their opponent's behaviors. After they had completed the questionnaires, the participants were debriefed and were paid for their participation according to the settlement they achieved.

## **Manipulations**

The three manipulated independent variables were the opponent's information sharing, the opponent's call for information sharing, and information about previous negotiators' performance.

### ***Opponent's Information Sharing***

This factor has two levels—information sharing and no information sharing—and was manipulated by the confederates. In the opponent's information sharing condition, the



confederates disclosed their BATNA and payoffs. In the no opponent information sharing condition, confederates did not disclose this information.

### ***Opponent's Call for Information Sharing***

This factor has two levels—call for information sharing or no call for information sharing—and was also manipulated by the confederates. In the call for the information sharing condition, confederates asked the participants to disclose their BATNA and payoffs. In the no call for information sharing condition, confederates did not ask participants to disclose this information.

As noted previously, to ensure that all the participants in each condition received the same treatment for both opponent information sharing and opponent call for information sharing, confederates were trained and followed a script which designated the statements they were to make.

### ***Information about Previous Negotiators' Performance***

Recall this factor had two levels. Participants learned of negotiators who had previously achieved a very high or very low outcome (level 1) or of previous negotiators who had achieved an average outcome (level 2). We introduced this manipulation at the end of the participant instruction sheet. Participants in the high- and low-performance condition read the following statement: "For your information, we conducted this role play last year. Students who performed the same role as you in the Fall 2007 semester achieved an excellent outcome of \$11 or more. On the other hand, students in the Winter 2008 semester achieved a low outcome of \$3 or less."

Participants in the average condition read the following statement: "For your information, we conducted this role play last year. Students who performed the same role as you will in the 2007–2008 academic year achieved an outcome of \$7, which is an average outcome."

## **Measure of Negotiators' Information Sharing**

We measured negotiator information sharing (the number of times the participants disclosed their BATNA or payoffs) by tallying the recordings of the confederates (who had logged the participants' disclosures).

# **Results**

## **Manipulation Checks**

To check the manipulation of the opponent's information sharing, we asked participants to respond on a scale of 1 (not at all) to 7 (very often) to the following question in a postnegotiation questionnaire: "How often did your opponent reveal the dollar values of his/her settlement options or reveal his/her alternatives to negotiating this matter with you?" The participants' responses to this question indicated that this manipulation was effective. Those assigned to the "opponent information sharing" condition reported

a mean of 6.34, while those assigned to the “no opponent information sharing” condition reported a mean of 2.18 ( $F_{(1,118)} = 314.20; p < .001$ ).

To check the manipulation of the opponent’s call for information sharing, we asked participants to respond on a scale of 1 (not at all) to 7 (very often) to the following question in a postnegotiation questionnaire: “How often did your opponent ask you to reveal your dollar values for the different settlement options and/or to reveal your outside options?” The participants’ responses indicated that the manipulation was effective. Participants in the “opponent call for information sharing” condition indicated a mean of 5.98, while participants in the “no opponent call for information sharing” condition reported a mean of only 1.56 instances ( $F_{(1,118)} = 335.67; p < .001$ ).

To check the manipulation of the information about previous negotiators’ performance, we analyzed participants’ responses to the question “What total dollar amounts have people achieved in the past?” which was presented in the prenegotiation questionnaire. The analysis indicated that this manipulation was effective. Among 62 participants who were in the “high and low past performance” condition, 58 replied “either \$3 or \$11”—a correct answer—and four replied incorrectly ( $X^2 = 47.03; p < .001$ ). Among 58 participants in the “moderate past performance” condition, 55 replied “\$7 on average”—a correct answer—and three replied incorrectly ( $X^2 = 46.62; p < .001$ ).

**Hypotheses Tests**

We began our analysis by conducting a MANOVA because the two dependent variables—sharing BATNA and sharing payoffs—were correlated ( $r = .42; p < .01$ ). The analysis revealed that indeed the independent variables had a discrete effect on each dependent variable (for information sharing: multivariate  $F = 38.84; p < .01$ ; for call for information sharing: multivariate  $F = 22.07; p < .01$ ). Subsequently, we conducted separate ANOVAs to test each effect separately. The means for number of negotiators’ disclosures of their BATNA and payoff are represented in Table 1. The results of the ANOVAs are presented in Tables 2 and 3 and described below in further detail.

As predicted in Hypothesis 1a, we found (Table 1) that negotiators disclosed their BATNA more frequently ( $M = 1.51$ ) when their opponents shared information about

Table 1  
*Negotiators’ Disclosure of their BATNA and Payoffs\**

	Opponent calls for information sharing	Opponent does <i>not</i> call for information sharing	
Opponent Shares Information	BATNA: 2.24 Payoffs: 5.30	BATNA: .71 Payoffs: 2.35	BATNA: 1.51 Payoffs: 3.90
Opponent Does Not Share Information	BATNA: .73 Payoffs: 1.18	BATNA: .38 Payoffs: .33	BATNA: .56 Payoffs: .61
	BATNA: 1.53 Payoffs: 3.33	BATNA: .55 Payoffs: 1.23	

\*The values for BATNA and payoffs in the table represent the average number of times the negotiators revealed their BATNA and payoffs.

Table 2  
ANOVA for Negotiators' Disclosure of BATNA

Independent Variable	<i>df</i>	MS	<i>F</i>	<i>p</i>
Opponent's information sharing	1, 118	25.39	16.61	.001
Opponent's call for information sharing	1, 118	26.23	18.03	.001
Information about previous negotiator's performance	1, 118	2.26	1.88	.174
Opponent's information sharing* Opponent's call for information sharing	1, 118	10.34	9.36	.004
Opponent's information sharing* Information about previous negotiators' performance	1, 118	3.41	2.84	.095
Opponent's call for information sharing* Information about previous negotiators' performance	1, 118	3.47	2.88	.092
Opponent's call for information sharing* Opponent's information sharing* Information about previous negotiators' performance	1, 118	5.97	4.96	.028

Table 3  
ANOVA for Negotiators' Disclosure of Payoffs

Independent Variable	<i>df</i>	MS	<i>F</i>	<i>p</i>
Opponent's information sharing	1, 118	309.70	49.44	.001
Opponent's call for information sharing	1, 118	125.01	16.12	.001
Information about previous negotiators' performance	1, 118	21.33	4.407	.038
Opponent's information sharing* Opponent's call for information sharing	1, 118	24.23	5.84	.027
Opponent's information sharing* Information about previous negotiators' performance	1, 118	11.98	2.47	.118
Opponent's call for information sharing* Information about previous negotiators' performance	1, 118	18.68	3.86	.052
Opponent's call for information sharing* Opponent's information sharing* Information about previous negotiators' performance	1, 118	12.46	2.57	.111

their BATNA and payoffs, as opposed to when their opponents did not do so ( $M = .56$ ). As Table 2 indicates, this difference is significant ( $F_{(1,118)} = 16.61$ ;  $p < .001$ ).

Hypothesis 1b predicted that negotiators divulge their own payoffs more frequently when their opponents share similar information as opposed to when their opponents do not. This hypothesis was supported. As Table 1 indicates, negotiators whose opponents shared information disclosed their payoffs more frequently ( $M = 3.90$ ) than did negotiators whose opponents did not share information ( $M = .61$ ). The difference is significant ( $F_{(1,118)} = 49.44$ ;  $p < .001$ ; Table 3).

Hypothesis 2a predicted that negotiators will disclose their BATNA more frequently when their opponents call for information sharing (i.e., ask them to disclose information about payoffs and BATNA) as compared to when their opponents do not call for information sharing. This hypothesis was supported. As Table 1 indicates, negotiators in the call for information sharing condition disclosed their BATNA more frequently ( $M = 1.53$ )

than did their counterparts in the no call for information sharing condition ( $M = .55$ ). And as Table 2 indicates, this difference is significant ( $F_{(1,118)} = 18.03; p < .001$ ).

Turning to Hypothesis 2b, we predicted that negotiators will disclose their payoffs more frequently when their opponents call for information sharing (i.e., ask them to disclose information about payoffs and BATNA) as compared to when their opponents do not call for information sharing. This hypothesis was supported. As Table 1 indicates, negotiators in the opponents' call for information sharing condition disclosed their payoffs more frequently ( $M = 3.33$ ) than did their counterparts in the no call for information sharing condition ( $M = 1.23$ ), a difference that is also significant ( $F_{(1,118)} = 16.12; p < .001$ ; Table 3).

In Hypothesis 3a, we predicted an interaction effect between the two factors: opponent's call for information sharing and opponent information sharing. We expected the opponent's call for information sharing would have a stronger effect on the negotiators' disclosure of their BATNA whenever the opponent herself engaged in information sharing. This hypothesis was supported. As indicated in Table 1 and Figure 1, the effect of the opponent's call for information sharing was greater when the opponent also shared information (2.24 vs. .71; a difference of 1.53) in contrast to when the opponent did not share such information (.73 vs. .38; a difference of .35). As Table 2 indicates, this interaction is significant ( $F_{(1,118)} = 9.36, p < .01$ ).

Hypothesis 3b predicted an interaction effect between opponent's call for information sharing and opponent information sharing upon sharing information about negotiators' payoffs. We expected the opponent's call for information sharing would have a stronger effect on the negotiators' disclosure of their payoffs whenever the opponent herself engaged in information sharing. This prediction was supported. As Table 1 and Figure 2 indicate, the effect of the opponents' call for information sharing had a larger impact upon the negotiators' disclosure of their payoffs when the opponent also shared information (5.30 vs. 2.35; a difference of 2.95) as opposed to when the opponent did not share his or her own information (1.18 vs. .33; a difference of .85). As Table 3 indicates, this interaction is significant ( $F_{(1,118)} = 5.84, p < .05$ ).

Hypothesis 4a predicted that negotiators presented with a mix of information about the high *and* low performance of previous negotiators will have higher aspirations than

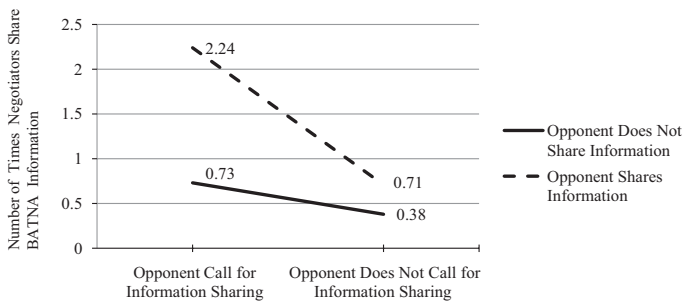


Figure 1. The 2-way interaction between opponent call/no call for information sharing and opponent sharing/no sharing of information upon negotiator's sharing of BATNA.

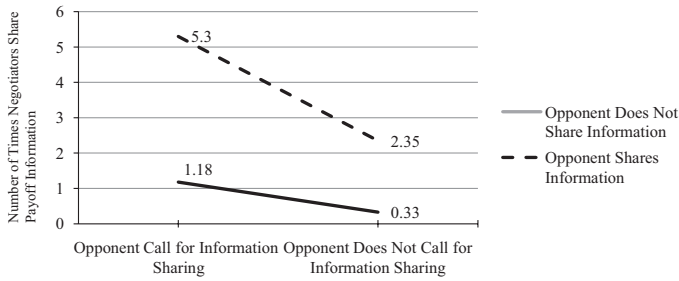


Figure 2. The 2-way interaction between opponent call/no call for information sharing and opponent sharing/no sharing of information upon negotiator’s sharing of payoffs.

will negotiators who received information of moderate previous performance. This hypothesis was supported. We found that participants in the “high and low” condition had aspirations averaging \$11.43 and those in the “moderate” condition had aspirations of obtaining only \$10.04 ( $F_{(1,118)} = 7.51; p < .01$ ).

Hypothesis 4b predicted that the negotiators’ enhanced aspirations would increase their willingness to reveal their BATNA so as to fulfill these aspirations. And similarly, Hypothesis 4c predicted that the enhanced aspirations would lead to a more frequent disclosure of payoff information. Neither of these predictions was supported.

When analyzing the data, we also detected an interesting, significant, 3-way interaction among the three factors that affected the negotiators’ revealing of their BATNA (Table 2). This interaction reveals (see Figure 3) that within both of the previous perfor-

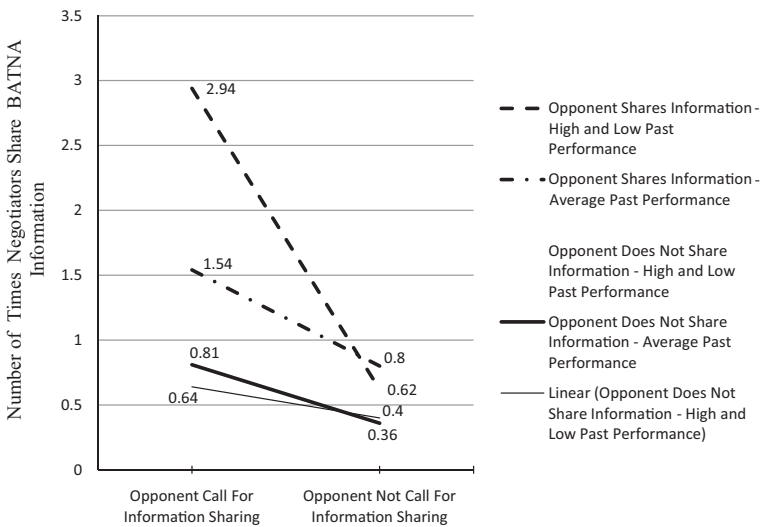


Figure 3. 3-Way Interaction among opponent share/not share information, opponent call/not call for information sharing, and high and low/average past performance affecting number of times negotiators shared BATNA.

mance conditions, the effects of the opponents' call for information sharing had a larger impact upon the negotiators' disclosure of their BATNA when the opponent shared information. However, this 2-way interaction effect was much stronger in the high–low previous performance condition.

The explanation for this 3-way interaction seems rather straightforward. When the negotiators received information that some previous negotiators had received high outcomes and others had received low outcomes, they developed high aspirations. High aspirations usually increase individuals' motivation to succeed in negotiations. As part of that elevated motivation negotiators are more alert and active in negotiations. Therefore, we suggest that negotiators in high–low previous performance condition, who had higher aspirations, were very sensitive to the incongruity of the opponents' not sharing information when he or she had called for sharing. When the negotiators learned that the previous negotiators had moderate outcomes, the negotiators had lower aspirations and thereby were less sensitive to the incongruity.

## Discussion

As noted in the introduction, information sharing is a key element in negotiations; however, few studies investigate its determinants. Rather, investigations and theory developments tend to focus on the effects of information sharing or on the effects of information sharing propensity. In this study, our goal was to address this deficiency so as to enhance our understanding of the negotiation process.

Given our findings, we can maintain that negotiators are apt to share pertinent information when their opponents call for information sharing or engage in information sharing themselves. And negotiators are quite willing to share information when the opponent concomitantly calls for information sharing and shares his/her own information. We can also deduce that negotiators consider the performance of previous negotiators and aspire to perform like top performers; however, the enhanced aspirations do not spawn information sharing.

### Opponent's Information Sharing and Opponent's Call for Information Sharing

More specifically, our results indicate that negotiators' information sharing behaviors are significantly affected by those of their opponents. Negotiators reciprocate the opponent's information sharing behaviors in negotiations just as they reciprocate communications, demands, concessions, and threats (Brett et al., 1998). Specifically, negotiators disclose information about their outside options and about their payoffs more often when their opponents disclose their own outside options and/or their payoffs. Negotiators also disclose more information about payoffs and outside options more often when their counterparts ask them to do so. Finally, we found that negotiators engage in substantially more information sharing when their counterparts ask them to both engage in information sharing and engage in information sharing themselves.

While the primary contribution of our study is to investigate the determinants of information sharing—an essential process for integrative negotiation—our work also

contributes to the understanding of reciprocity and its application to negotiation. In the general context of interpersonal interaction, past research has demonstrated that individuals expect their counterparts to reciprocate their behaviors (e.g., Zhang & Epley, 2009) and it indicates that reciprocation occurs in negotiations (e.g., Brett et al., 1998; O'Connor & Arnold, 2001). Specifically, scholars have found that negotiators reciprocate both positive and negative behaviors and emotions of their counterparts. For example, negotiators have been found to reciprocate concessions, offering higher concessions upon receiving similarly high offers from their counterparts (Putnam & Jones, 1982; Weingart, Thompson, Bazerman, & Carroll, 1990). Negotiators are also known to reciprocate negative behaviors, such as threatening an opponent who behaved similarly (Brett et al., 1998). And there is evidence that negotiators reciprocate emotions, displaying emotions similar to those displayed by their counterparts (Hatfield, Cacioppo, & Rapson, 1992). However, prior to this study, there has been no evidence as to the determinants of negotiators' reciprocation of information sharing—one of the key integrative behaviors—or that this reciprocation enhances the effect of the opponents' call to share information.

Our findings have a practical implication for negotiators. They indicate that asking an opponent to disclose important information can be effective for obtaining such information and setting the stage for reciprocation, especially if one is willing to share one's own information. However, to ask for information but not share, it is not recommended.

### **Information about Previous Negotiators' Performance**

The prediction about the effect of previous negotiators' performance was partially supported: participants who were told that previous negotiators did either very well or very poorly had higher aspirations than did participants who were informed that previous negotiators achieved a moderate outcome. This finding suggests that negotiators focus on top performers and aspire to perform as well as they did, rather than mentally computing an average of the top and low performance and then aspiring to an average performance level.

This finding is consistent with past research that indicates individuals compare themselves to others when they evaluate their own abilities (Festinger, 1954). Typically, individuals prefer to compare themselves to individuals who perform well because they need to obtain a positive self-evaluation, self-enhancement, and closure (Kruglanski & Maysel, 1990; Suls, Martin, & Wheeler, 2002).

Future research should investigate why high aspirations, which usually increase individuals' motivation and activeness, do not engender more information sharing. It is possible that some participants with high aspirations conclude that the route to high outcomes is competition. Therefore, they withhold their information. Alternatively, given that information sharing is risky, perhaps it requires a higher degree of aspirations and motivation than we artificially created in our experiment. In other words, perhaps aspiration levels in our study did not increase *enough* to result in more information sharing.

## Study Limitations

Like all studies, this one has some limitations. Because it was a laboratory experiment, the generalizability to nonexperimental settings may be limited. This is attributable to the mechanisms employed in the laboratory setting, such as using confederates to manipulate experimental conditions, applying an artificial scenario, and limiting participants to the facts in the scenario. Also, utilizing confederates and having them follow a script may limit the generalization of the results to a “natural” setting. However, this procedure was necessary in order to study the relationships among the variables of interest.

Another limitation of the experiment stems from having undergraduate students as participants. Negotiation is a fairly complex process, and most undergraduate students have very limited experience with negotiations owing to limited work or business experience. This inexperience may pose an alternative explanation to Hypotheses 2a and 2b, which predict a relationship between opponent *call* for information sharing and negotiator information sharing.

It could be that inexperienced negotiators engage in more information sharing when they are asked to do so simply because the call for information sharing guides the negotiators within an uncertain situation. Even if this alternative explanation is valid, the results of this study may still generalize to similar populations of inexperienced negotiators, such as students, young professionals, scientists, and others who have little to no negotiation experience.

A more serious shortcoming of the study was our failure to probe into the emotional states and reasoning of the participants. Had we done so we may have been able to determine whether the participants felt the opponents in the “call for information but not share information” were hypocritical and whether the participants were angered by this behavior.

Perhaps a probing would also have allowed us to understand why the high aspirations in the “high–low previous negotiators’ performance” condition did not lead to higher levels of information sharing. Probes could also have revealed why the participants/negotiators shared payoff information twice as often as they shared BATNA information (Table 1).

In closing, we come full circle, noting that information sharing is a crucial element in integrative negotiations and at times in distributive negotiations. This being the case, scholars should investigate the causes of information sharing as well as its effects. With this study, we have taken some modest steps forward by looking at three antecedents: the opponents’ information sharing, their calls for information sharing, and information about previous negotiators’ performance. Our study indicates that negotiators are more likely to share pertinent information about their BATNA and payoffs to their counterpart when asked to do so, as a reciprocation to similar revelations by their counterparts, and especially when their counterpart both asked for the information *and* shared such information. Our study also indicates that negotiators’ aspirations as to the outcome of the negotiation are influenced by the environment. They have higher aspirations when they are told that previous negotiators achieved high or low outcomes, as opposed to when they are told previous negotiators achieved a moderate outcome.



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## Appendix: Issue Chart for Employees

### Issue 1: Raises

Option	Value
Every 1 Month	\$6
Every 2 Months	\$5
Every 4 Months	\$4.5
Every 6 Months	\$4
Every 8 Months	\$3.5
Every 10 Months	\$3
Every 12 Months	\$2
<b>*Every 14 Months</b>	<b>\$1</b>
Every 60 Months	\$0

### Issue 2: Task Rotation

Option	Value
Twice a week	\$4
Weekly	\$3.5
Every 2 weeks	\$3
Every 3 weeks	\$2.5
Monthly	\$2
<b>*Every 5 weeks</b>	<b>\$1.5</b>
Every 6 weeks	\$1
Every 7 weeks	\$0.5
No task rotation	\$0

### Issue 3: Benefits

Option	Value
Free events	\$3.5
15 free events	\$3
10 free events	\$2.5
5 free events	\$2
50% discount on all events	\$1.5
50% discount on 15 events	\$1
50% discount on 10 events	\$0.75
<b>*50% discount on 5 events</b>	<b>\$0.50</b>
No discount	\$0

\*The text in boldface indicates you have already received an offer for this settlement option elsewhere.

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