Modeling Counteroffer Behavior in Dyadic Distributive Negotiation

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Abstract

An experiment on dyadic distributive negotiation is presented that analyzes the role of the market price as a credible reference point in a bargain between a human buyer and a computerized seller implementing a contingent negotiation strategy. The market price had strong effects on the initial reservation and aspiration prices, and indirectly affected the settlement price and the number of negotiation cycles, but not the agreement likelihood. An explicit frame-related manipulation, induced by the instructions, did not yield significant effects. Two simulative models of the offer formation process, grounded on the behavioral decision approach, were proposed and evaluated. The results support the view of the negotiator as a limited information-processing decision-maker, and suggest the possibility of contingent selection of reference points.

Introduction

Behavioral decision research on negotiation has highlighted various aspects of the bargaining process (Bazerman, Curhan, Moore, & Valley, 2000; Carnevale & Pruitt, 1992) identifying some of the factors that influence it (Neale & Bazerman, 1991). Significant attention, in particular, has been devoted to the reference points used by negotiators. Several researchers investigated the role of the initial offer and of the market price (Kristensen & Gärling, 1997a), of the negotiators' reservation (White, Valley, Bazerman, Neale & Peck, 1994; Kristensen & Gärling, 1997b) and aspiration price (White & Neale, 1994), and of the reservation price of the opponent (Kristensen & Gärling, 1997c). An anchoring and adjustment process has been proposed to explain the counteroffer behavior of the negotiators, and the effect of reference points (Kahneman, 1992; Kristensen & Gärling, 1997d).

According to the cognitive approach (Carroll, Bazerman & Maury, 1988; Carroll & Payne, 1991), the negotiator is considered as a decision-maker with limited processing resources. Under this perspective, it is therefore important to be able to specify what kind of information is processed, and what cognitive operations are performed in the various negotiation stages. This task is difficult, due to the relevant individual differences among negotiators (Rubin & Brown, 1975), and to the effects of different settings and negotiation strategies (Raiffa, 1982).

In the paper we present an experiment that analyzes the negotiation process at a fine grained level in a high self-concern context (Carnevale & Pruitt, 1992). The experiment assessed the effect of the market price as a credible reference point, and collected the participants' judgments and estimates in various stages of the transaction. Experimental data were used to build and evaluate two simulative models of counteroffer formation and cognition updating, the first focused on the buyers' reservation price, the second on the their aspiration price. As far as we know, these are the first simulative models of the counteroffer formation process in dyadic bargaining directly derived from behavioral decision research.

The Experiment

In the experiment we investigated the role of market price in a dyadic distributive negotiation. To this purpose, we arranged a scenario involving a computer-mediated bargain between a buyer and a seller. Participants played the role of the buyer, and were led to believe that some other person was assigned the role of the seller. The seller was in fact a computer program implementing a contingent negotiation strategy.

We adopted a procedure similar to that used by De Dreu, Carnevale, Emans, & Van De Vliert (1994) who implemented a negotiation strategy in the computer opponent that resulted in a fixed pattern of offers. In our experiment, however, the programmed seller adopted a contingent negotiation strategy, and varied its pattern of concessions according to the behavior of the human buyer.

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In an attempt to modify the effect of the implicit negative frame associated with the buyer role (Neale, Huber, & Northcraft, 1987), we manipulated the instructions given to the participants, and tried to arouse explicit gain, loss, and neutral frames.

Finally, in order to study the determinants of offer formation in the negotiation process, we collected the participants' statements about their own reservation and aspiration prices, and their estimates about the reservation and aspiration prices of the opponent.

Method

Participants Seventy undergraduates (46 females and 24 males) aged 18 to 28, enrolled in a General Psychology course participated in the experiment. None of them was suffering from any perceptual, cognitive or motor deficiency. All participants were familiar with computers and were able to use keyboard and mouse.

Procedure The experiment required participants to negotiate the purchase of some hypothetical out-of-print books that were necessary to complete a course assignment. Participants were informed about the current market price of used books as reported in the catalog of a credible and respectable nonprofit organization (a student union). They were told they had to negotiate with an interested seller connected to another computer. In addition to evaluating the seller's requests and making counteroffers, participants would be asked to rate their satisfaction with the seller's proposals, and to formulate some judgments during the deal[1]. It was highlighted that the experiment comprised several trials during which a different book had to be negotiated.

The instructions explained that a substantial reward (consisting in extra credits for the course) would be given to the 10% top scoring participants. Participants were informed that only their best performance would be taken into account for reward. Finally, they were taught that it was better to break a negotiation than to accept an unsatisfactory deal.

After reading the instructions, participants went through a warm-up trial to familiarize themselves with the apparatus and the procedure. The experiment required four negotiation trials to be performed, during which the market price of a different book was varied.

Each negotiation trial comprised a variable number of cycles. At the beginning of each cycle the market price of the book was shown on the computer screen. After that, the seller's offer was displayed, and the participants had to rate it on a five-point scale (ranging from "very unsatisfied" to "very satisfied"). Then they were asked about their reservation price (i.e., "the maximum amount of money [they] were willing to spend") and aspiration price (i.e., "the best outcome [they] could reasonably expect from the negotiation"), and were requested to provide an estimate of the seller's reservation price (rephrased as "the minimum amount of money the seller will be willing to accept") and aspiration price. Finally, the participants had to reply to the sellers offer by (a) accepting it, (b) breaking the negotiation trial, or (c) making a counteroffer.

Participants had been informed that only their reply would be conveyed to the seller, while the satisfaction ratings and the price estimates were kept confidential. After an interval ranging from 10 to 30 s, a new seller's offer was presented, and another negotiation cycle started again by asking the buyer to rate it.

There were different ways to end a negotiation trial. The participant could accept the seller's last offer, or decide to break the negotiation. On the other hand, the computer seller could accept the buyer's offer or it could make a final, not negotiable proposal.

The experiment lasted 20 to 50 min. An informal debriefing session ensued with the participant requested to comment upon the negotiating strategy of the opponent. None of the participants revealed any doubt about the human nature of their opponent. A week after the conclusion of the experiment, during a class meeting, the rationale of the experiment was explained, and the identity of the seller was disclosed.

The Computer Negotiation Strategy An important aspect of the experiment is constituted by the strategy followed by the computer seller. The strategy had in fact to produce a pattern of concessions that looked sensible and natural to the human buyer. A second requirement was that the strategy should be robust and give reasonable results independently of any behavior shown by the opponent. A final requirement for the strategy was to be free from weak points that could be exploited by a keen (or malicious) negotiator.

The strategy is based on the following assumptions (Carnevale & Pruitt, 1992: Raiffa, 1982): (a) the seller's concessions progressively decrease; (b) the amount of the seller's concessions is related to that of the buyer's; (c) a contentious attitude of the buyer is reciprocated by the seller.

A critical part of the strategy is represented by the choice of the function to be used in formulating the seller's request during the "negotiation dance". Other issues the strategy had to take into account were the

[1] The effects of judgments and estimations were tested in an experiment in which four versions of the program were used by different groups of participants. A version was identical to that adopted in the present study, while the others required only judgments about the buyer, only judgments about the seller, or no judgment at all. The results did not show any statistically significant difference related to the judgment procedure on the negotiation behavior and outcome.

criteria to be followed in accepting a buyer's offer, and in proposing an ultimate deal.

The program follows three different policies to formulate its requests. The basic function used to compute the requested price is given by $R_n=IR\cdot e^{-n/k}$, where R_n is the amount of money requested by the seller, *IR* is the initial seller's request, *n* is the negotiation cycle within the trial, and *k* is a constant (set to 10 in the current implementation). The value of R_n is then incremented or decreased by a further 2% according to concessions made by the negotiating parts. More precisely, the concessions made by the buyer and the seller are given by the difference between the offers they made in the previous two cycles (i.e., *n-1* and *n-2*). If the buyer's concession is greater, in absolute value, than the seller's, the value of R_n is reduced by 2%. The value of the request is augmented by the same percentage in case the seller made the bigger concession. In this way, a contingent negotiation pattern is implemented that softens the seller's position when the buyer is willing to concede, and tightens it when confronted with an uncooperative partner.

A different criterion is followed when the concession made by the seller in the last cycle outweighs that of the buyer (i.e., when the difference between the concessions exceeds a given threshold, currently set to 3,000 Italian lire). In this case, the program averages between its previous request (i.e., R_{n-1}) and the request it would have done by following the previous procedure, thus asking for a higher amount of money. In other words, when the difference between the concessions made by the parts is small, the behavior of the program is controlled by the $R_n \pm 2\%$ criterion, when the program notices that it concedes more than the opponent, it resorts to a more conservative policy.

A third criterion, implementing the third theoretical assumption, is used when the buyer makes the same offer in successive negotiation cycles, or withdraws a previous offer by proposing a smaller bid. In this case the program keeps its request fixed for two negotiation cycles. In the third cycle, to show its bona fide and its willingness to negotiate, it lowers the request according to the $R_n \pm 2\%$ criterion. In case the buyer does not cooperate, the program makes an ultimate request.

Finally, the program follows some simple rules to end a negotiation cycle. It is willing to accept a buyer's offer when it is equal or higher than the request it would have made in the following cycle. It makes an ultimate request in the case of sustained non-cooperation or, however, after six negotiation cycles.

The seller strategy was developed through a series of empirical tests, and its psychological plausibility was evaluated in a final pilot study.

Apparatus A Compaq Deskpro EP/SB PC with a Pentium II processor, 120 MB of RAM and Windows 98 as the operating system was used for the experiment. A program implementing the human-machine interface and the seller negotiating strategy was written using the Java language. The program presented the seller's requests and recorded the satisfaction ratings, the price estimates, and the offers made by the participants. Participant gave estimates and offers by typing in text fields that were automatically on-focus, while ratings and final decisions (i.e., "accept" and "break") required pushing screen buttons. No other communication between the human and the computer was requested.

Experimental Design Two independent variables**,** one between-subjects (instruction type) and one within-subjects (market price of the used book), were manipulated in a 3x4 mixed design. Participants were randomly assigned to three experimental groups, and received instructions emphasizing the fact that they had to maximize their gain, minimize their expense, or make a good deal, respectively. During each negotiation trial, a different market price (95,000, 100,000, 110,000, and 115,000 Italian lire) was randomly assigned to the book to be purchased. The initial seller's offer was kept fixed for each trial and set to 105,000 lire. This was also the market price of the book used in the warm up trial.

Results

Initial Satisfaction At the beginning of the experiment, the participants had to rate on a five-point scale how much they were satisfied with the seller's initial offer. A main effect ($F(3,201)=22.21$, $MSE=5.26$, $p<.00001$) of the market price of the book on the ratings was found, with satisfaction increasing with the price. In evaluating this result it should be taken into account that, because the initial offer was kept fixed at 105,000 lire, in the first two conditions a sum higher than the market price was asked, while the opposite was true in the last two conditions. A post hoc analysis[2] showed that the only non significant difference was that between the 95,000 and 100,000 conditions. No main effect of the instructions was found nor any interaction between instruction type and market price.

Reference Points Judgments Table 1 reports the judgments given by the participants of their own initial reservation (B-RP) and aspiration (B-AP) prices, and of the reservation and aspiration price of the seller (S-RP and S-AP, respectively). For every potential reference point, a significant effect of the market price was found with values increasing with an increase in the price. The ANOVA yielded the following results: $F(3,201)=3.39$, $MSE=73791400$, $p<.05$ for the buyer's reservation price; $F(3,201)=41.94$, $MSE=29477000$, $p<.00001$ for the

[2] All post-hoc analyses were carried out with the Tukey HSD test adopting an alpha level of 0.05.

buyer's aspiration price; $F(3,201)=48.05$, $MSE=35537100$, $p<.00001$ for the seller's reservation price, and $F(3,201)=43.17$, $MSE=50987600$, $p<.00001$ for the seller's aspiration price. Only the main effect of the market price was significant, with the exception of a two-way interaction Price x Instruction ($F(6,201)=2.38$, $MSE=17601900$, $p<.05$) concerning the seller's reservation due to the fact that, with "neutral frame" instructions, the judgments for the 110,000 and 115, 000 lire conditions did not differ.

Table 1: Mean initial values of the reservation and aspiration prices.

	95,000	**100,000**	**110,000**	**115,000**
B-RP	68.900	72,600	91,000	84,400
B-AP	62,900	65,300	72,700	77,000
S-RP	70,600	71,700	81,000	85,000
S-AP	88,600	92,900	103,700	106,500

Negotiation Cycles per Trial The market price (and only the market price) had also a significant effect ($F(3,201)=5.94$, $MSE=6.99$, $p<.001$) on the number of negotiation cycles per trial. The mean number of cycles in the different price conditions were 4.06, 4.10, 3.84, and 3.41, respectively. A higher market price brought forth a lower number of negotiation cycles per trial. A post hoc analysis showed significant differences between the 95,000 vs. 115,000, and between the 100,000 vs. 115,000 conditions. No difference in the number of cycles was found between trials ending with an agreement vs. trials in which the negotiation had been broken [3].

Final Buyer Offer The mean values of the buyer's final offer in the different market pri ce conditions were 80,200, 81,400, 82,700, and 86,400 lire, respectively. Only a main effect ($F(3,201)=11.68$, $MSE=50104000$, $p<.00001$) of the market price was found, with the value of the final offer increasing with price. A post-hoc analysis showed significant differences between the 115,000 and the other conditions. Significant differences at the Mann-Whitney *U* test were found between trials ending with an agreed-upon price vs. a break in the 100,000 and in the 115,000 lire conditions ($U=175.50$, $z=-2.945$, $p<.01$, and $U=119$, $z=-2.381$, $p<.05$, respectively). In these conditions, the final offer was lower for agreements (the mean differences being 12,100 and 9,600 lire, respectively).

[3] A high proportion of negotiation cycles ended with an agreed-upon price. The percentages of agreements were as follows: 81% in the 95,000 and 100,000 conditions, 91% in the 110,000, and 89% in the 115,000 condition. The differences were not significant at the Cochran test. The instructions did not have any effect on the agreements, too.

Negotiation Strategies There is evidence for the use of different negotiation strategies by participants. The buyers followed generally a concessive strategy (70% of the trials), consisting of progressive increases in the offers. Two other strategies seem to be used: the Boulware (Raiffa, 1982) strategy i.e., keeping the counteroffer constant (9% of trials), and a "withdraw" strategy (21%) probably induced by the need to correct an ill-calibrated offer. It is also important to note that 63% of the participants adopted a single strategy in all the negotiation trials (81% concessive, 5% Boulware, and 14% withdraw). The concessive strategy was the predominant one, being used by 63% of the participants.

Cognition Updates The analysis of the negotiation traces with at least two cycles ($N=251$) showed a slight increase in the buyer's reservation price (Wilcoxon test, $T=7849.5$, $z=3.28$, $p<.01$, $M=1{,}200$), a major increase of the buyer's aspiration price ($T=4654$, $z=7.15$, $p<.001$, $M=4{,}400$), and a substantial decrease of the seller's estimated aspiration price ($T=2627$, $Z=9.68$, $p<.001$, $M=-12{,}300$). The seller's estimated reservation price remained constant ($M=-300$).

Discussion

In the experiment we manipulated two independent variables: (a) the instructions given to the participants, and (b) the market price of the book to be purchased. While the former had practically no influence on the participants behavior, the latter had a significant effect on all the dependent variables taken into account.

As previously remarked, the very fact of playing the buyer role elicits an implicit negative frame that was not substantially changed by the explicit instructions to "maximize the gain" or "make a good deal". It is known (e.g., Bazerman, Magliozzi, & Neale, 1985; Carnevale & Pruitt, 1992; De Drue, Carnevale, Emans & Van De Vliert, 1994) that people under a negative frame make lower concessions, and are less likely to come to an agreement. In our experiment, the negative frame associated with the buyer's role could be responsible for the very low satisfaction ratings given to the initial buyer's offer. A manipulation based exclusively on the instructions was unable to affect this implicit frame.

The most important outcome of the experiment is to provide another case for the role of the market price in dyadic negotiation. The findings support the statement that "External information, such as market prices, may be mostly useful in the prenegotiation stage when the parties determine their own aspirations and reservation prices." (White et al., 1994 p.438). We demonstrated that, when the market price is perceived as a reliable estimate, it could play a crucial role in the negotiation process through the definition of the initial reservation and aspiration prices, indirectly affecting the settlement price and the negotiation extent.

By focusing only on the experimental data, however, we cannot identify the determinants and the mechanisms of the offer participants make in each negotiation cycle. To clarify this issue, we ran a simulation in which different explanatory models were compared.

The Simulation

Two models of the buyer's counteroffer, encoded as ACT-R (Anderson & Lebiere, 1998) production sets, were used in the simulation. Both the models rely on the idea of the negotiator as a decision-maker with limited processing resources: "When juggling multiple pie ces of information relevant to the negotiation, the negotiator streamlines and simplifies to focus primarily upon one performance reference point." (White et al., 1994, p 442). The models use therefore a simple Markovian mechanism for updating the negotia tor's preferences and estimates, and generate the counteroffer by a process that combines the previous offer and a core reference point.

The first model (RP) is based on the idea that the buyers' offer in each cycle depends on their current reservation price, and on the offer they made in the previous cycle. The second (the AP model) considers the offer dependent on the buyers' current aspiration price, and on the previous offer. The reservation price and the aspiration price of the buyer are also considered as dynamic quantities that vary during the negotiation process. In each cycle they are computed by taking into account the previous offer, and the previous reservation and aspiration price, respectively.

Essentially, the models attribute a different importance to the variables they take into account, and combine them linearly. The model's parameters have therefore a clear symbolic meaning: they are interpreted as weights people use to scale the variables' values. They are similar to the weights used in decision-making strategies, such as the WADD (Payne, Bettman & Johnson, 1993). For this reason we decided to estimate the parameters from data, using a randomly selected subset of trials.

For each relationship among the models' variables we estimated a corresponding simple or multiple regression model (the intercept was set to zero). Then we used the regression parameters as simulation parameters. This estimation method has the advantage of avoiding any parameter tuning. Furthermore, it is analogous to the statistical modeling methods used in judgment tasks to identify relevant factors and quantify their weights (Dawes, Faust, & Meehl, 1989).

The AP model and the RP model consist essentially in the same productions with the exception of the empirically derived parameters ruling the estimation of the reservation and aspiration price, and the quantification of the counteroffer.

We constructed two variants for each model. The first one implements a perfect-retrieval memory process (PM), which is always able to correctly retrieve the previous offer and reference point. The second is a "real" ACT-R model (AM), using the default values for the ACT-R parameters, in which the retrieval from memory is guided by the activation-based mechanisms embedded in the memory architecture.

We considered in the simulation all the traces (*N*=85) with more than two cycles in which the last counteroffer was greater than the first one (i.e., those possibly associated with the predominant concessive strategy we wanted to model), and that had not been used for the parameter estimation. We executed 500 runs of the AM models on all the traces to obtain a reliable evaluation of their performance.

Results and Discussion

The results of the simulation of the buyer's counteroffer are presented in Table 2. The unit of analysis is the single negotiation trial: the r^2 and the mean absolute difference (MAD) between the model offer and the human offer were computed for each negotiation trial, and their means and the standard errors for each model are reported. It is important to underline that we performed a very strict test of the models, running them through a "generative" procedure. An alternative way to evaluate their performance, in a typical sequential task like a negotiation, is to adopt the model-tracing method. To investigate whether the use of this technique could affect the simulation results, we utilized it to evaluate the PM model and presented the results in Table 2 with the label PM-mt.

Table 2: Simulation results for the models. The dependent variable is the counteroffer.

Model	Type of Memory	R^2 M	R^2 SE	MAD M	MAD SE
RP	AM	.43	.001	4,500	17
	PM	.57	.026	18,800	1,197
	PM-mt	.46	.024	14,300	940
AP	AM	.47	.001	4,500	17
	PM	.62	.027	20,300	1,263
	PM-mt	.68	.022	11,900	906

The main finding is that the AP model obtains a better result than the RP model. The mean variance explained is quite satisfactorily, given the high variability usually associated with the negotiation tasks. The second basic result deals with the difference in the MAD between the PM and the AM models. The PM models have a higher mean absolute difference than the the corresponding AM models, whose values, in absolute terms, are quite low. The last finding is that the use of the model -tracing method did not produce different results.

These results support a model based on the buyer's aspiration price. They are in compliance with the studies that have highlighted the significance of the aspiration price in two-party bargaining (White & Neale, 1994). The difference between the AM models and the PM models on the MAD can be accounted by the specific nature of the human-computer interaction in our negotiation task. Over many negotiation cycles, it is reasonable to assume that proactive interference could have had some negative influence on the participants' capacity to retrieve from memory their previous offers and aspiration prices. Retrieving an older offer or reference point yields the formulation of a new offer that is lower than the one predicted by the perfect-memory model and closer to the experimental data. This hypothesis is supported by the empirical observation that the perfect-memory model overestimates the buyers' real offers. The cognitively grounded ACT-R (AM) models are able to capture this memory-related effect, thus obtaining a lower MAD.

Conclusions

The experimental results showed a strong effect of the market price in a high self-concern negotiation context. The market price had strong effects on the initial reservation and aspiration prices, and indirectly affected the settlement price and the number of negotiation cycles, but not the agreement likelihood. An explicit frame-related manipulation, induced by the instructions, did not yield significant effects. We described a simple cognitive ACT-R model of the counteroffer formation process that was able to obtain satisfying results in the simulation of the negotiation task. Further work should investigate whether models with these basic features could be generalized to other negotiation contexts, characterized by different scoring systems or opponent's strategies. Other important issues in the research agenda are to establish whether the reference points are selected in a contingent way, and to extend the research approach to modeling the seller's behavior.

References

Anderson, J. R. & Lebiere, C. (1998). *The atomic components of thought.* Hillsdale, NJ: Erlbaum.

Bazerman, M. H., Curhan, J. R., Moore, D. A. & Valley, K. L. (2000). Negotiation. *Annual Review of psychology, 51,* 279-314.

Bazerman, M.H., Magliozzi, T., & Neale, M.A. (1985). Integrative bargaining in a competitive market. *Organizational Behavior and Human Decision Processes*, *35*, 294-313.

Bottom, W. P. & Paese, P. W. (1999). Judgment accuracy and the asymmetric cost of errors in distributive bargaining. *Group Decision and Negotiation, 8,* 349-364.

Carnevale, P. J. & Pruitt, D., G. (1992). Negotiation and mediation. *Annual Review of Psychology, 43,* 531-582.

Carroll, J. S. Bazerman, M. H. & Maury, R. (1988). Negotiator cognitions: A descriptive approach to negotiators' understanding of their opponents. *Organizational Behavior and Human Decision Processes*, *41*, 352-370.

Carroll, J. S. & Payne, J. W. (1991). An information processing approach to two-party negotiations. In M. H. Bazerman, R. J. Lewicki & B. H. Sheppard (Eds.), *Research on negotiation in organizations.* Vol. 3. Greenwich, CT: JAI.

Dawes, R. M., Faust, D., & Meehl, P. E., (1989). Clinical versus actuarial judgement. *Science*, *243*, 1668-1673.

De Dreu, C. K. W., Carnevale, P. J. D., Emans, B. J. M. & Van De Vliert, E. (1994). Effects of gain-loss frames in negotiation: Loss aversion, mismatching, and frame adoption. *Organizational Behavior and Human Decision Processes*, *60*, 90-107.

Kahneman, D. (1992). Reference points, anchors, norms and mixed feelings. *Organizational Behavior and Human Decision Processes*, *51*, 296-312.

Kristensen, H. & Gärling, T. (1997a). Adoption of cognitive reference points in negotiations. *Acta Psychologica*, *97*, 277-288.

Kristensen, H. & Gärling, T. (1997b). The effect of anchor points and reference points on negotiation process and outcome. *Organizational Behavior and Human Decision Processes*, *71*, 85-94.

Kristensen, H. & Gärling, T. (1997c). Determinants of buyers' aspiration and reservation price. *Journal of Economic Psychology*, *18*, 487-503.

Kristensen, H. & Gärling, T. (1997d). Anchor points, reference points, and counteroffers in negotiations. *Göteborg Psychological Reports*, *27*, 1-12.

Neale, M. A. & Bazerman, M. H. (1991). *Cognition and rationality in negotiation*. New York: Free Press.

Neale, M. A., Huber, V. L., & Northcraft, G. B. (1987). The framing of negotiations: contextual versus task frames. *Organizational Behavior and Human Decision Processes*, *39*, 228-241.

Payne, J. W., Bettman, J. R., & Johnson, E. J. (1993). *The adaptive decision maker*. New York: Cambridge University Press.

Raiffa, H. (1982). *The art and science of negotiation*. Cambridge: Harvard University Press.

Rubin, J. Z. & Brown, B. (1975). *The social psychology of bargaining and negotiation*. New York: Academic Press.

White, S. B. & Neale, M. A. (1994). The role of negotiator aspirations and settlement expectancies on bargaining outcomes. *Organizational Behavior and Human Decision Processes*, *57*, 91-108.

White, S. B., Valley, K. L., Bazerman, M. H., Neale, M. A. & Peck, S. R. (1994). Alternative models of price behavior in dyadic negotiations: Market prices, reservation prices, and negotiator aspirations. *Organizational Behavior and Human Decision Processes*, *57*, 430-447.