ncmr negotiation and conflict management research
INTERNATIONAL ASSOCIATION FOR CONFLICT MANAGEMENT IACM

Understanding the cross-level effects of subjective value and negotiation behavior on negotiator satisfaction

Sixuan Yan[1], Wenqian Guo[1], Wenxue Lu[2], & Yiwei Wang[2]

1 School of Economics and Management, Beijing Jiaotong University, P.R. China
2 Department of Construction Management, College of Management and Economics, Tianjin University, P.R. China

Keywords
Satisfaction, subjective value, negotiation behavior, multi-level analysis

Correspondence
Yiwei Wang, Department of Construction Management, College of Management and Economics, Tianjin University, Tianjin 300072, P.R. China. Email: wang_yiwei@tju.edu.cn

doi.org/10.34891/agpw-ez32

Abstract

Within buyer-seller negotiation research, it is crucial to identify key antecedents of negotiator satisfaction. This study applies information processing theory to the individual, group, and cross-levels. This study aims to reveal how negotiator satisfaction is influenced by the psychological perceptions of negotiators (subjective value), behaviors of focal negotiators and opponents, and economic profits of both sides. A total of 228 seasoned business professionals engaged in two-stage simulated group-on-group negotiation and were asked to complete a research questionnaire after each negotiation stage. A multi-level model was engaged to test the hypotheses. During the first negotiation stage, negotiator satisfaction centered on the roles of relationship subjective value and instrumental subjective value; further, the seller's self-subjective value is also seen as an important source of satisfaction. In cases where the focal negotiator demonstrates integrating or forcing behavior and the opponent demonstrates compromising behavior, greater focal negotiator satisfaction is witnessed during the second stage. Conversely, yielding behavior by an opponent caused lower focal negotiator satisfaction, which should be used with caution, as concessions could cause a self-defeating outcome. Additionally, while a negotiator's profit strengthens the focal negotiator's satisfaction, the opponent's profit has the opposite effect.

Volume 18, Number 3, Pages 278-305

In society, it is compelling that while economic outcomes may be positive, negotiators remain dissatisfied. Even though a buyer and seller both sign a contract, negotiator satisfaction is vital to ensure that both parties execute the contract and maintain a long-term relationship (Chang et al., 2015). Some researchers focus on the individual differences between negotiators that can predict satisfaction, like the decision frames of the negotiators (Olekalns & Smith, 2023). Contextual factors within negotiations have also been proved, such as power or the number of negotiable issues (Naquin, 2003). Moreover, a negotiator's behavioral strategy has a significant impact on satisfaction (Fells et al., 2015).

Nevertheless, existing insights into the antecedents of negotiator satisfaction remain inadequate, particularly in the context of multi-stage and group negotiations. While past research has explored satisfaction as a static outcome in single-stage, dyadic negotiations (Curhan et al., 2006), real-world negotiations are dynamic processes that evolve across multiple stages and involve team decision-making (Jang et al., 2018). Satisfaction is not merely shaped by individual subjective value but also by shifting team dynamics, shared decision-making, and evolving counterpart behaviors (Adair & Brett, 2005). However, research remains limited in examining how satisfaction develops over time in multi-stage settings (Olekalns et al., 2003) and how group interactions shape individual perceptions (Thompson, 2015). Moreover, intergroup conflict theory provides a theoretical basis for why group-level negotiations often deviate from individual-level processes.

Specifically, groups are more likely to engage in competitive strategies because of in-group bias, depersonalization of the out-group, and heightened identity salience (Wildschut et al., 2003). These all correspond to a heightened tendency towards hostile or assertive negotiation styles like forcing, particularly when representing group interests. Consequently, group satisfaction in negotiations may not solely arise from integrative outcomes but may also stem from perceived dominance, assertiveness, or successful defense of group resources (Halevy et al., 2011; Tiedens & Fragale, 2003b). This emphasizes that group-specific motivation and behavior must be taken into account while theorizing satisfaction in multi-stage negotiations.

Prior studies primarily focus on static individual assessments, overlooking how negotiators adapt across negotiation stages and within group contexts. Addressing these gaps, this study examines how satisfaction evolves across two negotiation stages while considering how both counterpart behavior and team dynamics interact to shape these shifts. We adopt a hierarchical linear modeling (HLM) approach to capture both within-individual and between-group influences on satisfaction, reflecting the nested structure of multi-stage, group-based negotiations.

The prior research is critically limited by a singular focus on a single-tiered analytical orientation, specifically its focus on individual-level dynamics. Most negotiation scenarios used in previous studies are interpersonal processes between two negotiators (Atkin & Rinehart, 2006). For decisions involving substantial transaction amounts, intergroup negotiations are common in the buyer-seller negotiations (Woelfl et al., 2024). Research suggests that in such contexts, satisfaction is not only influenced by economic and psychological factors but also by intra-team coordination, behavioral synchrony, and perceived alignment with teammates (Thompson, 2015). Team decision-making processes play a critical role in shaping overall satisfaction, as how decisions are taken and how teammates coordinate can significantly affect the perception of fairness and the outcomes (Sanchez-Anguix et al., 2013). During such negotiations, the behavior strategy of each negotiating side is determined using collective intelligence. As such, group-level behavior and individual negotiator satisfaction constitute a cross-level issue. Moreover, achieving a positive economic outcome is a key factor in successful transactions. The assessment of negotiation success encompasses the psychological perceptions of negotiators and is not confined to short-term economic profits (Ramirez-Marin et al., 2021). However, there has been a significant lack of (Thompson, 2015) group-level negotiation behavior and economic profits on individual satisfaction.

Consequently, what is lacking at present is a more causal, comprehensive framework for negotiator satisfaction. To integrate the negotiation process, the buyer-seller relationship, and the negotiator's self-perception (Lin & Cheung, 2022), this research will contribute to the literature by illustrating how negotiator satisfaction is influenced by the psychological perceptions of negotiators, behaviors of focal negotiators and opponents, and economic profits of both parties. The psychological perceptions of negotiators can be measured using subjective value (SV). SV encapsulates the social, perceptual, and emotional consequences of one negotiation (Curhan et al., 2010). Guided by a multilevel theoretical perspective, this study examines how subjective value and negotiation behavior at both the individual and group levels interact to influence negotiator satisfaction. By leveraging HLM, we capture the nested structure of multi-stage negotiations, where individuals are embedded within groups, to explore how satisfaction evolves across stages. This approach allows us to analyze the interplay between individual perceptions, group behaviors, and economic outcomes in a more integrated and context-sensitive manner.

Guided by Adair & Brett's (2005) sequencing framework, the authors employed a two-stage negotiation design to isolate relationship-building (Stage 1) and outcome-oriented (Stage 2)

dynamics. This separation allows for clear attribution of first-stage SV effects (e.g., relational capital) on second-stage outcomes while mitigating confounding from overlapping behavioral strategies. Building on this design, the study aims to provide a multi-level analysis of the antecedents of negotiator satisfaction, incorporating both individual-level and group-level perspectives. More specifically, our study explores the following research questions:

RQ1. How does individual subjective value in the first negotiation stage influence negotiator satisfaction across both negotiation stages?

RQ2. How do the focal negotiator's and the counterpart's negotiation behaviors respectively affect individual satisfaction?

RQ3. How do cross-level dynamics between first-stage subjective value and negotiation behavior affect second-stage satisfaction in group negotiations?

Theoretical Background and Hypotheses

Subjective Value and Satisfaction

A fundamental distinction in this study lies in the group-based nature of the negotiations. Compared to individuals, groups tend to exhibit stronger competitive orientations due to factors such as group polarization, social identity salience, and collective responsibility. According to the interindividual–intergroup discontinuity effect, groups acting on behalf of their members are more likely to engage in competitive, assertive strategies to protect group interests and signal strength (Wildschut et al., 2003). These behaviors, while potentially detrimental in interpersonal contexts, may enhance satisfaction within groups by reinforcing perceptions of competence, control, and collective efficacy (Tiedens & Fragale, 2003b; Van Kleef et al., 2004). With this distinction in mind, we now turn to how subjective value evolves across negotiation stages.

Existing research predominantly examines single-stage negotiation. In reality, however, substantive negotiation practices often require multiple stages before a final agreement is reached, which are often time-consuming and extended beyond one-shot deals (Cheng et al., 2018). Traditional negotiation studies often treat satisfaction as a static construct, focusing on immediate post-negotiation assessments. Nevertheless, real-world negotiations involve iterative adjustments in expectations, bargaining power, and relational perceptions, which need a multi-stage analytical approach. The sequencing of negotiation behaviors plays a fundamental role in shaping outcomes (Adair & Brett, 2005). As such, a two-stage negotiation model may provide a more realistic format. In multi-stage negotiations, the first phase serves as a relationship-building period where parties assess counterpart intentions and establish trust—a process aligning with Jang et al.'s (2018) identification of rapport development as a precursor to economic outcomes. The second phase shifts toward outcome-oriented bargaining, where accumulated relational capital enables more substantive value claiming. The importance of multi-phase negotiation is supported by Curhan et al. (2006), who highlight how satisfaction is not a fixed construct but evolves as negotiators process information throughout the stages. This notion of satisfaction as a dynamic construct is further emphasized by Brett & Thompson (2016), who assert that information encoding in early stages (e.g., cooperative behaviors) shapes later-stage economic evaluations, which is consistent with the focus of this study on multi-stage satisfaction. Additionally, Thompson (2012) suggests that negotiators continuously update their satisfaction judgments based on new economic and relational cues, making it crucial to study satisfaction across multiple stages rather than as a one-time assessment. Recent works further support the importance of phase transitions and the

cumulative nature of negotiation satisfaction. For instance, Trötschel et al. (2015) emphasize how the progression through different negotiation stages alters satisfaction levels due to evolving relational and distributive factors. Similarly, Majer et al. (2022) highlight the dynamic interplay between negotiation phases and outcome perceptions. Elfenbein (2021) also highlights the role of relational dynamics and psychosocial factors, which evolve across multiple negotiation phases, reinforcing the need to account for both relational and economic components in multi-stage negotiations.

While traditional models have predominantly focused on individual-level satisfaction, a multilevel perspective offers a more comprehensive understanding of how negotiator satisfaction is shaped by individual behaviors as well as by group-level dynamics. In multi-stage group negotiations, individual satisfaction varies as a function of both personal strategy and observed team or counterpart group behaviors. This nested interdependence refers to how individual experience is nested in group contexts and emphasizes the requirement to measure within- and between-group variation in satisfaction development.

Negotiator satisfaction measures the overall affective response of one party to the outcome immediately after the negotiation concludes (Geiger, 2014). In two-stage negotiations, satisfaction recorded after the first stage relates to the temporary outcome seen at the end of that stage. Satisfaction is measured after the second stage and relates to the ultimate negotiation outcome. The information processing theory provides a cognitive-based rationale for why different stages of negotiation correspond with dynamically different levels of satisfaction (Bazerman & Neale, 1993). While static models entertain the notion that satisfaction is formed at the end of negotiations, the IPT views negotiators as continuously encoding, storing, and reprocessing information throughout negotiations as behaviors and economic conditions of the other party fluctuate (Brett & Thompson, 2016). This application of IPT in multi-stage negotiations better explains why first-stage satisfaction may not fully predict second-stage satisfaction, as ongoing interactions add in new social and economic information that changes perception over time.

Although subjective value and economic gains may generally be an indicator of high satisfaction (Curhan et al., 2006), their precise relationship is, as yet, an open question. If satisfaction were purely economic, the negotiator realizing the highest gain would indeed be the best satisfied. Yet, when it comes to absolute profits, satisfaction may decrease due to the perceived relative gain of counterparts, as Galinsky et al. (2002a) state. Regret or distrust arising from excessive counterpart concessions also decreases satisfaction. Furthermore, satisfaction builds through stages—initial impressions are never due to time and new information, reshaping evaluations. Thus, on multi-stage dynamics, whereas economic outcome and SV constitute a basis for the development of satisfaction, they do so within the parameters set by behaviors during the negotiation process, the interaction with the negotiation counterpart, and shifts through time.

The psychosocial outcome perceived by negotiators is crucial as negotiators often lack sufficient information to assess their negotiation position and strategic leverage accurately. Looking beyond economic outcomes, psychosocial outcomes have a greater impact on future relationships between negotiators and reflect negotiators' traits (Curhan et al., 2010). Negotiators' feelings about themselves and their overall subjective value are influenced by multiple factors in the negotiation process, such as fake anger (Hunsaker et al., 2023). When prior experience and objective reference points are unavailable, negotiators can make decisions based on subjective judgments (Schuster et al., 2020). This happens because situations can affect the perceptions and judgment of negotiators. The psychological perceptions of negotiators can be measured using SV, which falls into four categories. Instrumental SV is the negotiator's internal assessment that the

economic settlement is profitable and equitable and respects the principles of legality and tradition. Self SV is the feeling that one is competent and has behaved appropriately without losing face. Process SV is about the negotiator's experience of feeling heard, receiving fair treatment, and perceiving the process as efficient. Relationship SV fosters positive impressions and trust, laying the groundwork for potential future collaboration.

In multi-stage negotiations, SV reflects a negotiator's multifaceted psychological evaluation of the negotiation process, encompassing perceptions of outcome fairness, relational quality, and self-worth (Curhan et al., 2006). Although SV and satisfaction are correlated, they represent distinct constructs: SV focuses on domain-specific evaluations during negotiation, whereas satisfaction captures an overall affective response to the negotiation experience (LePine et al., 2005; Oliver, 1993). Notably, previous-stage SV has been shown to predict future behavioral intentions such as willingness to re-engage with the same counterpart (Curhan et al., 2010) and correlates with relational capital across negotiation rounds (Cheng, 2020). When negotiators perceive that they have achieved relational or procedural quality in earlier stages, this contributes positively to their summary satisfaction at the end of the negotiation (Halpert et al., 2010). Furthermore, evaluations of fairness and process effectiveness serve as key psychological mechanisms linking stage-specific SV to overall satisfaction (Kwon & Weingart, 2004). Thus, rather than treating SV and satisfaction as interchangeable, this study positions changes in SV as an antecedent to final satisfaction outcomes.

H1a. The four dimensions of subjective value (instrumental SV, self SV, process SV, and relationship SV) are positively correlated with satisfaction after the first negotiation stage.

H1b. Satisfaction after the first stage is positively correlated with satisfaction after the second stage.

The Role of Negotiator and Opponent Behaviors

Negotiation behavior encompasses the strategies and tactics that negotiators employ to manage conflicts and seek resolutions during the negotiation process. Although the primary focus of this study is on satisfaction changes across negotiation stages, group negotiations introduce additional layers of complexity that may influence this process. Prior research suggests that in team-based negotiations, individual perceptions of satisfaction are shaped not only by direct counterpart interactions but also by intra-team coordination, shared strategy development, and behavioral alignment with teammates (Backhaus et al., 2008; Polzer, 1996). While our study does not directly test these intra-team dynamics, acknowledging the group context is essential, as negotiators evaluate their outcomes within a broader team structure rather than in isolation. While some studies have divided negotiation behavior into competitive and cooperative categories (Boyer et al., 2009), the authors adopted a widely accepted classification scheme presented by the Dual Concern Model. It includes integrating, compromising, forcing, yielding, and avoiding behaviors to explain negotiator and opponent behaviors (Butt et al., 2005; De Dreu et al., 2001). According to the Dual Concerns model, negotiators' behaviors reflect the underlying motivations for self-interest and other-concern. For instance, those high in self-concern but low in concern for others are more likely to use forcing behaviors, employing purely distributive tactics such as threats or extreme claims to maximize personal gain. On the contrary, those who prioritize the interests of others over their own usually manifest yielding behaviors, granting value to save face. Moderately balancing the concerns leads to compromising behaviors, accepting suboptimal splits for a quicker resolution. The intersection of high self and other-concern drives integrating behaviors, where

parties collaboratively explore trade-offs through open information exchange. Finally, minimizing both concerns leads to avoiding behaviors and withdrawing from active engagement through silence or topic deflection (Butt et al., 2005).

The differential impact of negotiation behaviors on satisfaction emerges as a critical function of temporal progression within multi-stage interactions. During initial negotiation phases, the absence of prior behavioral interaction data compels negotiators to anchor their satisfaction evaluations predominantly on objective economic outcomes and perceived equity metrics rather than behavioral pattern analyses (Curhan et al., 2006). As negotiations advance longitudinally, the accumulation of behavioral observables enables sophisticated cognitive processing through information encoding mechanisms and episodic memory retrieval (Bazerman & Neale, 1993), facilitating dynamic recalibration of satisfaction metrics. This phased cognitive adaptation elucidates the non-significant behavioral influence on first-stage satisfaction versus its critical predictive power in subsequent stages (Brett & Thompson, 2016). Specifically, first-stage satisfaction manifests as transaction-oriented outcome appraisal, whereas second-stage evaluations incorporate multidimensional assessments of relational capital and strategic alignment - dimensions inherently contingent on behavioral cue integration over time.

For negotiators to adopt an integrating or compromising approach, they should first consider taking a problem-solving stance, as such an approach is conducive to smooth negotiations. Specifically, better information exchanges and solution-finding lead to greater satisfaction (Fells et al., 2015). Forcing negotiators are more likely to share information in multiple ways than their yielding opponents (Wiltermuth et al., 2015). As such, negotiators who take a forcing approach are relatively active in their problem-solving and never retreat from negotiations. Although forcing negotiators to ignore the interests of their opponents, negotiators with tough strategies typically achieve greater profits. As such, these negotiators tend to be more satisfied with the outcome of their negotiations than their yielding opponents (Kong et al., 2014). This tendency may be particularly salient in group negotiations. Drawing on intergroup conflict theory, and consistent with analytic findings, group members are more likely to adopt assertive or competitive strategies to protect group interests and demonstrate loyalty or competence (Wildschut et al., 2003). In such contexts, forcing behaviors may be interpreted as a strategic defense of group outcomes rather than selfishness, potentially increasing perceived satisfaction among group members. An avoidance strategy is often used to circumvent problems that are difficult for both parties to negotiate. This is a passive strategy that negotiators are forced to adopt, and it reduces satisfaction with the outcome. Consequently, this study proposes the following two hypotheses.

H2a. If a negotiator adopts a strategy of high concern for self, such as forcing or integrating behaviors, the negotiator's satisfaction increases.

H2b. If a negotiator adopts a strategy of low concern for self, such as yielding or avoiding behaviors, the negotiator's satisfaction decreases.

Ultimately, both parties seek agreement. Based on social information processing theory, focal negotiator satisfaction is predicted not only by their negotiation behavior but also by the behavior of their opponent. Consequently, dyadic interaction within negotiation cannot be ignored (Mazei et al., 2021). In the buyer-seller negotiation, focal negotiator satisfaction is influenced by the content of the agreement and the relationship established with the opponent. If an opponent uses an integrating or compromising approach, focal negotiators may believe that their opponents are, indeed, solving any negotiation problems to safeguard the interests of both parties. As such, focal negotiators experience greater satisfaction (Alexander et al., 1994). However, if an opponent

avoids a problem and does not pay attention to the interests of the focal negotiator or themselves, this negativity can give focal negotiators the impression that the negotiation has been relatively unsuccessful and cause their satisfaction to drop. Dominance complementarity findings indicate that a display of submission in response to dominant behavior facilitates interpersonal appreciation (Tiedens & Fragale, 2003a). Largely, when opponents are forced to pay more attention to the interests of focal negotiators than they are to their own, focal negotiators consider their opponents to be sincere and credible and become more satisfied with negotiation outcomes. Conversely, if an opponent is uncooperative or shows a forcing stance (Atkin & Rinehart, 2006), these competitive behaviors can trigger a competitive response from the focal negotiator, causing a spiral of negotiation conflict, lowering profit, and increasing deadlock. If an opponent is competitive, the focal negotiator will experience lower satisfaction levels (Saorín-Iborra & Cubillo, 2019). Consequently, this study presents the following two hypotheses.

H3a. If the negotiation opponent adopts a strategy of high concern for the other, such as integrating or yielding behaviors, the focal negotiator's satisfaction increases.

H3b. If the negotiation opponent adopts a strategy of low concern for the other, such as forcing or avoiding behaviors, the focal negotiator's satisfaction decreases.

Although compromising has been excluded from the core predictions based on the dual concern model, it remains one of the most commonly used strategies in negotiation and may exert distinct psychological effects depending on which party enacts it. Prior research suggests that when individuals themselves adopt compromising strategies, they may interpret this as a concession of personal value or control, potentially lowering satisfaction due to perceptions of loss, inefficacy, or reduced agency (Curhan et al., 2010). In contrast, compromising by the counterpart may be interpreted as a prosocial gesture that signals goodwill and a willingness to reach common ground (De Dreu, 2004; Tomlinson et al., 2004). These role-based distinctions suggest that the same behavior—compromising—may lead to divergent psychological outcomes: it may undermine satisfaction when self-enacted, but enhance it when initiated by the counterpart.

H4a. Compromising behavior by the focal negotiator is negatively correlated with satisfaction.

H4b. Compromising behavior by the counterpart is positively correlated with satisfaction.

Comparing Negotiator's Profit and Opponent's Profit

Negotiation profit is a fundamental indicator of the economic outcome of a negotiation. It refers to the difference between the negotiated prices for each party and their respective reservation points. It is acceptable for sellers when the agreed-upon price is above their reservation point; similarly, buyers are content when the price is below their reservation point (Thompson et al., 2012). Existing research has presented several factors that determine negotiator's profit. For instance, negotiators who engage in assertive or problem-orientated tend to secure better economic outcomes (Chen & Ayoko, 2012), while opponents with forcing behavior and anger have been seen to reduce negotiator's profit (Butt et al., 2005).

A principal antecedent of negotiator satisfaction resides in the economic attainment secured through bargaining processes. According to expectation disconfirmation theory, negotiators engage in comparative evaluations between realized outcomes and pre-negotiation reference points (Galinsky et al., 2002a). Positive disconfirmation—wherein outcomes surpass initial expectations—elicits elevated satisfaction through cognitive reappraisal mechanisms. Empirical evidence further demonstrates that satisfaction appraisals predominantly derive from absolute

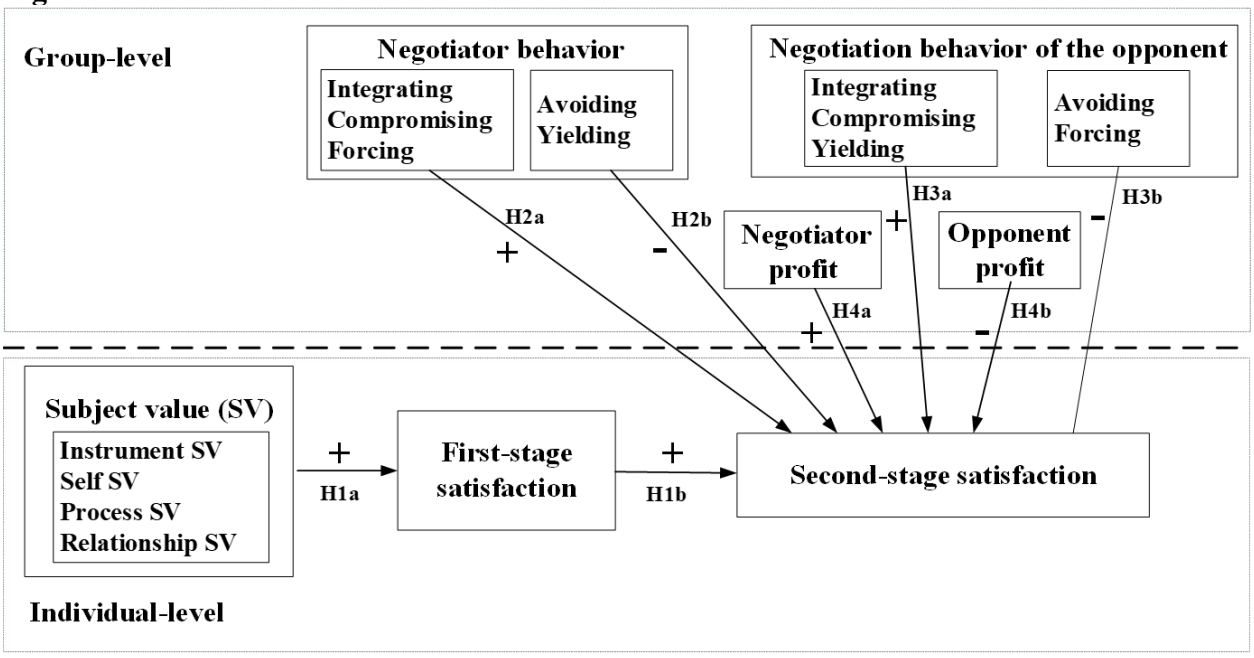
economic attainment rather than relativistic assessments (Curhan et al., 2006). Enhanced profitability reinforces self-perceived negotiation competence, bolsters task-specific self-efficacy, and activates positive affective states, collectively elevating satisfaction levels (Thompson, 2012). Thus, the authors hypothesize:

H5a. Focal negotiator's profit is positively correlated with their second-stage satisfaction.

Notably, while absolute gains dominate satisfaction calculus, negotiators systematically engage in referential outcome evaluations against counterpart performance metrics. Social Comparison Theory (Festinger, 1957) elucidates how self-evaluative judgments emerge through dual referents: personal outcome benchmarks and comparative performance assessments. This phenomenon intensifies in zero-sum negotiation contexts characterized by fixed-pie perceptions, where counterpart gains are construed as personal opportunity costs (Geiger, 2014). Substantial evidence documents the inverse relationship between counterpart profitability and focal negotiator satisfaction. Larrick & Blount's (1997) seminal work revealed diminished satisfaction when counterparts secured disproportionately favorable economic attainment, notwithstanding objectively favorable personal outcomes. Complementary studies demonstrate that negotiators perceiving relative parity or disadvantage—even amidst substantial absolute gains—systematically devalue outcome favorability (Babcock et al., 1996; Blount & Larrick, 2000). This comparative discounting effect originates from status preservation motives, equity violation perceptions, and the inherent adversarial framing of distributive bargaining contexts. Thus, we hypothesize:

H5b. Opponent's profit negatively correlates with the focal negotiator's second-stage satisfaction.

Figure 1. Illustration of the research framework



Method

Scenario analysis is widely used to examine negotiation dynamics by integrating multiple influencing factors (Haggenmüller et al., 2022). This study employs a simulated two-stage negotiation model, which better reflects real-world negotiation processes. The procedures and participant instructions for the simulation are detailed in Appendix A. Intergroup negotiations were chosen to allow negotiators to analyze information collectively, leveraging group decision-making to enhance strategic reasoning (Penttilä, 2020). Given the variability in psychological perceptions within groups, we incorporated both individual- and group-level data to enable a comprehensive cross-level analysis of negotiator satisfaction (Wolter et al., 2021).

Participants

Over 8 months, we conducted five two-stage negotiation simulations involving a total of 228 Chinese professionals with substantial business experience. The simulated negotiations were conducted by 181 males and 47 females with a mean age of 34.11 years and a standard deviation of 7.37. The negotiations utilized 69, 41, 34, 45, and 39 participants, respectively.

The Simulated Negotiation Process

The negotiation framework drew from the scenario involving Estate One and Pearl Investments (Malhotra, 2005a, 2005b) and was adapted to fit a two-stage negotiation format. The participants in both negotiation stages were identical, and the goal was the same. The end of the first stage only represented a suspension, and no final agreement was reached at this stage. In the scenario, Pearl Investments is cast as the seller, a company in the real estate investment sector with a plan to sell off a property situated in Hamilton. Estate One, positioned as the buyer, is a builder with an interest in land acquisition to open up the market. As such, the two parties begin to discuss potential cooperation and are involved in a simulated distributive negotiation over a singular issue—price. The information they have access to varies, with a significant difference being the seller's potential alternative transaction with Queens Development Company, unbeknownst to the buyer, as alternatives influence negotiation behavior and outcomes (Kang et al., 2024).

Before simulated negotiations were formally commenced, participants were grouped to remove any gender bias. Participants of the same gender were grouped, and these groups were paired against opponent groups of the same gender. There was a total of 56 groups, namely, 28 pairs. Each group is composed of 4 to 5 people, and the number of people in each pair of groups is consistent. This structure acts as a real-world negotiation environment, where negotiators rarely act alone and conduct group decisions before implementing an agreement.

It ensures that negotiators consider multiple perspectives and engage in strategic discussions before entering into formal binary bargaining, making negotiations more realistic and complex. Upon numbering, the groups with odd numbers were set as the sellers and the even-numbered ones as the buyers, which then led to a pairing for the negotiation process. Each of the pairings was provided with its negotiation room. Each simulated negotiation lasted 110 minutes. This included the distribution of background materials, preparation for negotiations, the first negotiation stage, a brief interlude, the second negotiation stage, and the feedback phase. Before the launch of the simulated negotiations, all participants were gathered together and introduced to the negotiation process and the corresponding precautions. The authors then instructed the buyer groups to enter

their negotiation rooms. Next, background information was distributed to all parties. During the negotiation preparation phase, participants were given 45 minutes to discuss the negotiation within their groups, create a plan, and elect their chief negotiators. During this phase, no inter-group communication was permitted. The preparation period was designed to allow group members to align their strategies, assign roles, and fully process the negotiation scenario before entering discussions. Research on multi-party negotiations suggests that effective pre-negotiation coordination significantly improves team decision-making and negotiation performance (Ertel, 2004). Groups that are not given sufficient time for pre-negotiation discussion often perform poorly due to misalignment or lack of internal consensus. After the negotiation preparation phase, the seller groups entered their respective negotiation rooms and began their first-stage discussions with the buyers. Each of the two negotiation stages lasted 25 minutes. While real-world negotiations often extend beyond laboratory constraints, 25 minutes provided a balance between maintaining engagement and preventing cognitive fatigue, a key consideration in negotiation experiments (Thompson, 2015). After the first negotiation stage, all participants completed a questionnaire about subject values and satisfaction. The completed questionnaires were swiftly gathered, after which the groups were prompted to devise their strategies for the forthcoming second negotiation stage. This break lasted 15 minutes. Once the 15 minutes had passed, the sellers re-entered their negotiation rooms and commenced their second-stage negotiations. After an agreement had been reached, negotiations were terminated. Deadlock was declared in instances where the negotiating parties had failed to reach an agreement within the allocated 25-minute period. Once the second stage was complete, all participants returned to their classrooms and completed a questionnaire about their negotiation behaviors and satisfaction during the second stage. Meanwhile, the authors noted the outcome of the negotiations, any deadlock situations, the focal negotiators' reservation points, and the reservation points of their opponents, as forecasted by focal negotiators. Carrying out the surveys in an orderly sequence facilitated the assembly of data corresponding to each successive stage in the original model.

Measures

The retrospective questionnaires were based on those used in previous studies and were slightly revised in terms of their expression. The complete set of items used in the study is provided in **Appendix B**. Unless specified otherwise, the survey employed a 7-point Likert scale for participant responses, spanning from *strongly disagree* (1) to *strongly agree* (7).

Subjective value (SV). This study uses the scale of Guo et al. (2022) to measure SV, dividing SV into four dimensions: instrumental SV, self SV, process SV, and relationship SV. The negotiators responded to these particular items after the first negotiation stage, preventing any negotiator behavior from influencing the answers during the second stage.

Negotiation behavior. On the basis of the scale of De Dreu (2001), the items have been adjusted to suit the negotiation scenario of this study. These particular items were delivered to the negotiators after the second negotiation stage. At the same time, participants were repeatedly reminded to answer questions based on their perception of the second negotiation stage.

Satisfaction. Following Naquin (2003), negotiator satisfaction within each negotiation stage was measured using a single item: "I am very satisfied with the outcome of this negotiation stage". This item measured satisfaction after the first and second stages.

Negotiation profit. The negotiator's profit is calculated by measuring "the difference between the negotiated price reached by both sides and the negotiator's reservation point". Opponent's

profit is "the difference between the negotiated price reached by both sides and the opponent's reservation point, as forecasted by the focal negotiator". For sellers, profit represents the negotiated price minus the seller's reservation point (true or forecasted). For buyers, profit represents their reservation point (true or forecasted) minus the negotiated price. Of note, negotiation profit is a group-level variable. This is because, once the negotiation agreement is reached, the buyer group and seller group will reach an agreement price. After all, each group has only one reservation point.

Control variables. Age and gender were selected as control variables as many studies have indicated that these two factors influence negotiation behaviors and outcomes. For instance, it has been proven that the older a negotiator is, the more likely they are to cooperate (Alexander et al., 1994). Existing research has formed specific gender stereotypes, suggesting that women are more likely to compromise and that men are more dominant. However, female negotiators are also sensitive to contextual factors, meaning that the influence of gender could reduce or even reverse these existing stereotypes (Bowles & Flynn, 2010). Nevertheless, these two factors cannot be ignored, and it was important for us to ensure that they did not influence the study.

Results

Reliability and Validity

To reduce the possible effect of common method bias, the authors informed participants at the beginning of the study that they should consider the simulated negotiations to be real business negotiations and that they should treat the simulated negotiations as real business dealings and respond honestly to the questions. Furthermore, they were assured that their responses would remain anonymous and be used solely for academic research. This study used Harman's single-factor test to verify common method bias using exploratory factor analysis (EFA). Data suitability was first evaluated using the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity. The KMO value of all items was 0.841, exceeding the threshold requirement of 0.5. Low significance was seen during Bartlett's test (0.000), which suggested that the data was adequate for the performance of EFA. The results also showed that the top factors accounted for 63.01% of the total variance, with the largest factor accounting for 17.48% of the total variance. These results suggested that common method variance was not a significant issue for the study. Cronbach's alpha (α) was used to assess the internal consistency and reliability of the scale. As **Table 1** shows, while the lowest Cronbach's α was 0.649, the values of other multiple-item constructs were above 0.70. This indicated that the multiple-item scale demonstrates ample and satisfactory internal consistency and reliability.

Table 1 Reliability and Validity Analysis

Constructs		Cronbach's α	CR	SFL
Subjective value (SV)	Instrumental SV	0.752	0.759	0.740 0.667 0.682 0.560
	Self SV	0.761	0.761	0.678 0.682
	Process SV	0.807	0.808	0.789 0.712 0.723 0.715
	Relationship SV	0.887	0.888	0.714 0.788 0.826 0.764
Negotiation behavior	Integrating	0.798	0.800	0.881 0.606 0.701 0.735
	Compromising	0.649	0.679	0.597 0.687 0.768 0.673
	Avoiding	0.835	0.839	0.474 0.652 0.686 0.830
	Yielding	0.825	0.826	0.730 0.668 0.649 0.664
	Forcing	0.719	0.727	0.713 0.669 0.610 0.517 0.616 0.654 0.509 0.737

Further, the authors conducted confirmatory factor analysis (CFA) to test the validity of the multiple-item scale. **Table 1** shows that while the minimum value of standard factor loading (SFL) was 0.474, the value for all other constructs exceeded the 0.5 cut-off, indicating acceptable convergent validity. The construct reliability (CR) values of all multiple-item constructs were above 0.7, except for one CR value of 0.679. Based on these results, the convergent validity of the scale was found to be acceptable. **Table 2** shows the summary statistics and intercorrelations between the variables. Given the high correlation between process SV and relationship SV, the authors took steps to ensure that no single SV dimension was driving the results of any other. To do so, the authors statistically controlled one form of SV when testing the effects of another. For instance, when examining process SV, they controlled relationship SV, and vice versa.

Table 2 Means, Standard Deviation, and Pearson Correlation Coefficient Matrix

	Mean	S.D.	1	2	3	4	5	6	7	8
1. Instrumental SV	4.08	1.39								
2. Self SV	5.24	1.22	0.377**							
3. Process SV	4.58	1.47	0.643**	0.473**						
4. Relationship SV	4.17	1.46	0.729**	0.308**	0.739**					
5. Integrating	5.36	0.97	0.105	0.176**	0.055	0.087				
6. Compromising	5.17	1.16	0.175**	0.175**	0.117	0.178**	0.497**			
7. Avoiding	4.68	1.37	0.123	-0.044	0.159*	0.158**	0.251**	0.296**		
8. Yielding	4.18	1.06	0.059	-0.046	0.059	0.094	0.239**	0.326**	0.463**	
9. Forcing	5.26	0.97	0.231**	0.214**	0.217**	0.245**	0.266**	0.209**	0.097	-0.010

*Note: * Significance level: $p < 0.05$ (two-tailed); ** Significance level: $p < 0.01$ (two-tailed).*

Analysis of the Hypotheses

Before hypothesis testing, the authors examined the descriptive statistics of key outcome variables, as **Table 3** shows. The average negotiator's profit was 435.80 (SD = 503.53), ranging from –1100 to 1850. The average opponent's profit was 434.30 (SD = 505.15), ranging from –1100 to 1850Satisfaction after the first stage had a mean of 4.92 (SD = 1.31), while satisfaction after the second stage averaged 5.59 (SD = 1.18). These values suggest generally positive evaluations and sufficient variability to warrant further analysis.

Table 3 Descriptive Statistics of Key Outcome Variables

Variables	N	Mean	S.D.	Min	Max
Negotiator's profit	200	435.80	503.53	-1100	1850
Opponent's profit	200	434.30	505.15	-1100	1850
Satisfaction after T1	200	4.92	1.31	1.00	7.00
Satisfaction after T2	200	5.59	1.18	2.00	7.00

Table 4 ANOVA between the Seller and Buyer

Test variables	F-statistic	Significance
Instrumental SV	0.679	0.411
Self SV	0.700	0.404
Process SV	4.656	0.032*
Relationship SV	0.040	0.841
Integrating	1.615	0.205
Compromising	0.052	0.820
Avoiding	0.896	0.345
Yielding	1.564	0.212
Forcing	1.583	0.210
Satisfaction after the first stage	1.149	0.285
Satisfaction after the second stage	0.001	0.981

*Note: * Significance level: $p < 0.05$.*

As the simulated negotiations were divided into buyer and seller roles, before performing any data analysis, the authors first checked whether there were any pronounced differences between the buyers and sellers in terms of their perceptions of SV, five kinds of negotiation behavior, or satisfaction after the two negotiation stages. One-way analysis of variance (ANOVA) was used to test whether variables were affected to any statistically significant extent by the role of the negotiator. The results only indicated a significant difference between buyers and sellers in terms

of process SV (F=4.656, P=0.032<0.05), as **Table 4** shows. This indicated that the buyer and seller data needed to be separated whenever process SV was involved.

Satisfaction after the First Stage

SV measures the perception of each negotiator, and negotiators cannot possibly know the psychological perceptions of others. As such, measurement of SV at an individual level provides more accurate data. H1a was verified using hierarchical regression analysis. The variance inflation factor (VIF) values of the independent and control variables were all under 10, ranging between 1.002 and 3.654. The indicators showed no multicollinearity to problematize the analysis results.

Since the buyer and seller had pronounced differences in terms of process SV, the authors first divided the individual data into two parts. The first part represented the buyer and the second the seller. Hierarchical regression analysis was conducted through SPSS 22.0, examining the impact of buyer or seller SV on satisfaction after the first negotiation stage. Two models (Model 1 and Model 2) were constructed, designed to respectively examine the impacts of four SV dimensions on seller and buyer satisfaction. The two models were split into two steps. In Step 1, two control variables were introduced to the models, creating Model 1a and Model 2a. In Step 2, the four dimensions of SV were then added to these two models, creating Model 1b and Model 2b. **Table 5 and Table 6** illustrate the results of these empirical models.

Changes of R^2 (ΔR^2) and F were used to assess the model fit when adding new variables. Models 1b and 2b reflected that SV positively affects satisfaction after the first negotiation stage. SV increased the predictive power of Models 1b ($\Delta R^2 = 0.682$, $F = 44.350$, $p = 0.000$) and 2b ($\Delta R^2 = 0.557$, $F = 35.632$, $p = 0.000$). Moreover, irrespective of whether the individual was a seller or buyer, instrumental SV (seller: $\beta = 0.274$, $p < 0.001$; buyer: $\beta = 0.204$, $p < 0.05$) and relationship SV (seller: $\beta = 0.575$, $p < 0.001$; buyer: $\beta = 0.603$, $p < 0.001$) both showed a positive effect on satisfaction after the first stage. Process SV, however, had no significant effect. Furthermore, when sellers self SV ($\beta = 0.151$, $p < 0.01$) was higher, sellers were seen to be more satisfied with the outcome of first-stage negotiations.

Table 5 Hierarchical Linear Models Predicting Satisfaction After the First Stage

	1. Satisfaction after the first stage			
	Model 1a (Seller)	Model 1b (Seller)	Model 2a (Buyer)	Model 2b (Buyer)
Control variables				
Age	0.155	-0.091	-0.294***	-0.003
Gender	-0.040	-0.038	-0.177*	-0.042
Independent variables				
Instrumental SV		0.274****		0.204**
Self SV		0.151***		-0.026
Process SV		0.021		0.066
Relationship SV		0.575****		0.603****
R^2	0.027	0.709	0.113	0.671
Adjusted R^2	0.010	0.693	0.097	0.652
$\triangle R^2$		0.682****		0.557****
F	1.573	44.350****	6.956****	35.632****

*Note: * Significance level: p < 0.1; ** Significance level: p < 0.05; *** Significance level: p < 0.01; **** Significance level: p < 0.001*

Table 6 Hierarchical Linear Models Predicting Satisfaction After the Second Stage

Dependent variable model	2. Satisfaction after the second stage		
	Null	Individual	Group
Satisfaction after the first stage		0.266****	0.162***
Group-Integrating (self)			0.323**
Group-Compromising (self)			-0.020
Group-Avoiding (self)			0.023
Group-Yielding (self)			-0.151
Group-Forcing (self)			0.316***
Group-Integrating (opponent)			-0.034
Group-Compromising (opponent)			0.252*
Group-Avoiding (opponent)			-0.000062
Group-Yielding (opponent)			-0.257*
Group-Forcing (opponent)			-0.116
Negotiator's profit			0.000491***
Opponent's profit			-0.000444***
Negotiator-level variance (σ^2)	1.054	0.943	0.965
Change in variance ($\Delta\sigma^2$)		0.111	-0.022
Group-level variance (τ)	0.350	0.330	0.00299
Change in variance ($\Delta\tau$)			0.32701

*Note: * Significance level: $p < 0.1$; ** Significance level: $p < 0.05$; *** Significance level: $p < 0.01$; **** Significance level: $p < 0.001$*

Satisfaction after the Second Stage

Whether researchers analyze multi-level data at the individual level or aggregate data to the collective analysis level, both methods ignore group commonalities or individual variations (Little et al., 2000). Hence, it is preferable to view group-on-group negotiation as a multi-level phenomenon which simultaneously integrates individual and collective processes (Butt et al., 2005). A focal negotiator's behavior, the opponent's negotiation behavior, the focal negotiator's profit, and the perceived opponent's profit are all group-level variables. Satisfaction after the first and second negotiation stages are both individual-level variables. Multi-level modeling techniques provide a suitable analytic strategy for investigating the influence of both low-level and high-level factors on low-level outcome variables (Wang et al., 2011). As such, to test H1b-H5b, the authors chose HLM 6.06 for its flexibility in modeling two-level nested data in multi-level models.

During the empirical data acquisition phase, three negotiation dyads (comprising six groups and 28 participants) exhibited failure to attain mutual agreement, consequently generating incomplete data points for critical team-level profit metrics and perceived opponent profit variables. To maintain analytical rigor in hierarchical linear modeling, these non-convergent cases were systematically excluded from subsequent analysis. The final analytical cohort consequently consisted of 25 completed negotiation dyads (representing 50 discrete groups and 200 participants), thereby ensuring robust measurement of cross-level interactions between individual satisfaction constructs and collective performance indicators.

To test individual-level and group-level processes, the authors implemented a trio of models for each dependent variable, including the null model devoid of predictors, the individual-level model, and the group-level models. The null model apportions the variance into the negotiator and the group. Since group-level equations require the presence of systematic inter-group variation in the outcome, group-level models are tested only when there is a statistically significant group-level variance (τ) (Butt et al., 2005). Table 6 shows the results of the HLM analyses that predicted

negotiator satisfaction after the second stage.

As Table 6 shows, the variance partitioning results of the first set of HLM models suggested that 24.929% (0.350/ [0.350+1.054]) of the total satisfaction variance after the second stage could be attributed to inter-group differences. This variance was seen to be statistically significant (τ=0.350, $\chi 2(49) = 113.913$, $p = 0.000 < 0.001$). Such group-level variation indicates that satisfaction after the second stage should be regarded as a collective phenomenon.

Next, the individual-level predictor (satisfaction after the first stage) was entered. Negotiator satisfaction after the first stage was seen to increase significantly after the second stage ($\beta = 0.266$, $p < 0.001$). This result supports H1b.

In the final stage, group-level predictors were entered. To create the group-level predictors, the authors aggregated behavior variables (five kinds of negotiation behavior and five kinds of opponent negotiation behavior) using the mean of each group. The negotiator's profit and the opponent's profit were both group-level variables. The group-level equation revealed that integrating behavior ($\beta = 0.323$, $p<0.05$) and forcing behavior ($\beta = 0.316$, $p<0.01$) within the negotiating group had a positive influence on negotiator satisfaction after the second stage. This result supports H2a. However, neither opponent integrating ($\beta = –0.034$, n.s.) nor yielding behavior ($\beta = –0.257$, $p < 0.1$) showed a positive effect, indicating that H3a was not supported. The results also did not support H2b and H3b. Regarding H4a and H4b, the results indicate that compromising behavior enacted by the negotiator had no significant effect on satisfaction ($\beta = –0.020$, n.s.), while compromising behavior by the opponent had a marginally significant positive effect ($\beta = 0.252$, $p < 0.1$). These findings partially support H4b but not H4a, suggesting that compromising is more positively received when initiated by the counterpart. Finally, after a two-stage negotiation, the greater the focal negotiator's profit ($\beta = 0.000491$, $p < 0.01$) or the lower the opponent's profit ($\beta = -0.000444$, $p < 0.01$), the greater the focal negotiator's satisfaction was seen to be. This result supports H5a and H5b.

Discussion

Although buyer-seller negotiations typically take a group-on-group form, once an agreement is reached, the contract is normally executed by an individual. As such, it is more appropriate to focus on satisfaction at the individual level. To date, research on negotiator satisfaction has focused primarily on individual differences between negotiators. Besides, existing research often focuses on the antecedents of different negotiation behaviors, such as bargaining power (Lu et al., 2020), but the effectiveness of negotiation behaviors has not received adequate attention. There is a gap in the research when considering the roles of negotiation behaviors, the negotiator's perceptions, and negotiation profit from a cross-level perspective. Building on recent advances in negotiation research, this study examines two-stage negotiations, using a simulated group negotiation method to study the antecedents that influence satisfaction after two negotiation stages.

Objective economic outcomes in negotiations and subjective psychological outcomes for the negotiators are closely related, and the latter is often affected by the former (Hart & Schweitzer, 2022). Specifically, negotiation profit reflects economic outcomes, and satisfaction reflects psychological outcomes. The greater the negotiator's profit, the more satisfied they will be (Ma et al., 2002). This is consistent with the research indicating that economic and relational benefits (having a satisfied opponent) do not have to be mutually exclusive in distributive negotiations (Schaerer et al., 2020). While negotiators often estimate the reference points of their opponents, they also often evaluate their opponent's profit once an agreement has been reached. Negotiators

compare their profit with that of their opponents. If the opponent's profit is high, the negotiator's satisfaction will be reduced. The findings lend support to information processing theory, which holds that negotiators dynamically update satisfaction judgments in the integration of new information—such as changes in counterparts' behaviors or shifting economic conditions—over multiple stages. Initial satisfaction may serve as an anchor; however, to the extent that negotiators continue interacting with one another, they can reinterpret the outcomes of negotiations based on real-time cues (Brett & Thompson, 2016), which is problematic for static evaluation models. Therefore, there is a need for a multi-stage framework representing how satisfaction evolves as negotiators adapt to contextual changes in support of IPT, which focuses on cognitive updates during dynamic negotiations.

The factors that showed the closest link with satisfaction were final profit, subjective perceptions, and negotiation behaviors. A two-stage negotiation model can better simulate real-world buyer-seller negotiations than a single-stage model. Negotiators indicated that they were satisfied with the outcome of each stage for distinct reasons. The results show that negotiator satisfaction in the first stage predicts satisfaction within the second unless the negotiating parties make significant changes in the second-stage negotiations. Consequently, the antecedents of satisfaction for the first stage should be examined. However, our findings suggest that absolute outcomes do not solely drive satisfaction. Instead, relative comparisons and perceived fairness play a critical role, aligning with prior research showing that negotiators who perceive their counterpart as gaining disproportionately may report lower satisfaction, even when their profit is high (Galinsky et al., 2002b). The results of this study show that instrumental subjective value in the first stage (buyer and seller) and the seller's self-subjective value all increase satisfaction after the first stage. The observed difference in process SV between buyers and sellers can be explained primarily by information asymmetry and expectation disconfirmation theory. Sellers tend to possess better informational control (e.g., knowledge about asset facts, rival bids) that allows them to focus on end economic outcomes rather than procedural fairness (Bazerman & Neale, 1993). In contrast, buyers face higher uncertainty and rely more on process fairness and transparency to decide their satisfaction (Thompson et al., 2012). This corroborates the expectation disconfirmation theory, which suggests that buyers' satisfaction is a result of whether the negotiation process confirms or disconfirms their expectations, whereas sellers, who enjoy higher control in the negotiation, derive satisfaction from the conditions of the final agreement (Galinsky et al., 2002b). These role differences highlight the asymmetrical way that negotiators view subjective value, emphasizing the importance of considering role-specific perceptions in predicting negotiation outcomes. While these findings stress individual perceptions and behaviors, they also recognize the need to explore how these factors operate within the broader context of team-based negotiations. With a multilevel analytical approach, we are able to account for within-individual variation and between-group dynamics that affect satisfaction across stages. This perspective captures the evolving interplay between a negotiator's own strategy and the collective behaviors surrounding them, offering a richer understanding of satisfaction development in multi-stage negotiations.

The most critical factor affecting satisfaction after the first stage is relationship subjective value. This may be because the outcome of the first stage does not represent the final situation. A good first-stage relationship with an opponent could indicate that the second-stage negotiation will generate more personal benefits. This reinforces the idea that satisfaction is dynamic rather than static—if it were fully determined by first-stage outcomes, the authors would expect stability across stages, yet shifts in counterpart behavior and new information often reshape negotiators'

perceptions. These findings highlight the need to study satisfaction as an evolving process rather than a fixed outcome, particularly in multi-stage negotiations where expectations and relational dynamics fluctuate over time.

Negotiation is a buyer-seller game. Most studies focus on one side's behavior and satisfaction. For instance, negotiators' competitive tactics are inversely correlated, and cooperative tactics are positively correlated with the subjective perception of the negotiation (Parlamis et al., 2020). Meanwhile, it is vital to consider the opponent's behavior as well as that of the focal negotiator. Wong and Howard (2018) conclude that the opponents' door-in-the-face tactic (making an initial, extreme, and often unacceptable demand) reduces the degree to which negotiators find their counterparts trustworthy. The findings show that the more integrating and forcing the behavior of a negotiating group, or the more compromising the opponent, the greater focal negotiator satisfaction will be. At odds with the hypothesis, if an opponent concedes, this act will jeopardize focal negotiator satisfaction. A possible explanation for this contradictory result is that the opponent's concession is thus attributed to their incompetence or indifference rather than any strength or strategy on the part of the focal negotiator. Focal negotiators may consider that their opponent's blind concession has prevented them from realizing their full potential, thus causing them dissatisfaction. The potential mechanisms for this theory would need additional research.

Given the combined impact of both sides' behaviors, a forcing focal negotiator can encourage the opponent's concession and prevent arbitrary behaviors from occurring. Such a behavioral pattern, however, may paradoxically reduce the dominant negotiator's own satisfaction. Moreover, integrating negotiators do not necessarily elicit yielding responses from opponents, yet they promote positive relational climates that facilitate mutually beneficial outcomes. These findings underscore that the effectiveness of a given negotiation strategy cannot be evaluated in isolation but must be understood in light of the behavioral responses it elicits. By modeling both focal and opponent behaviors at the group level, the study captures the interaction patterns that shape satisfaction in dynamic, multi-stage negotiations.

Conclusion and Implications

Theoretical and Practical Implications

This study contributes to negotiation theory by integrating and expounding several seminal models. Building on sequencing theory (Adair & Brett, 2005) and information processing theory (Bazerman & Neale, 1993), it empirically tests a dynamic, cross-level model of negotiator satisfaction. By differentiating between relational and distributive phases and tracing their independent impacts, the study demonstrates how satisfaction evolves through ongoing encoding and reinterpretation of behavioral and economic cues. Also, it extends social information processing theory beyond intraorganizational settings to the interorganizational setting of buyer-seller negotiations, identifying individual- and group-level information sources that impact satisfaction. The cross-level model links team-level variables (e.g., economic outcomes, group action) to individual-level perceptions, offering an advanced understanding of how intergroup processes affect personal attitudes (Panke et al., 2021). This study shows that satisfaction in multi-stage negotiations is not only driven by individual behavior but is also significantly influenced by the counterpart's actions. By incorporating both focal and opponent behaviors in a multilevel model, the findings demonstrate how certain strategies, such as opponent yielding, can have counterintuitive effects on satisfaction. Interestingly, the study also challenges common sense by

showing that negotiator satisfaction is influenced not only by one's behavior but also by the counterpart's. In particular, the negative effect of opponent yielding behavior shows that excessive concession-granting can have the opposite effect, which highlights the need to rethink excessively accommodating negotiation strategies in negotiation theory.

This study provides guidance for business practitioners engaged in the buyer-seller negotiation, which is a real-life process that almost all commercial activity passes through in society. While the economic outcomes for negotiators are important, negotiators' perceptions should not be ignored. The practical significance of this study is threefold. Firstly, it shows that while numerous factors influence negotiator satisfaction, to satisfy opponents and cultivate long-term cooperation, negotiators should carefully consider their behavior during negotiations. For instance, negotiators cannot simply retreat if their opponent has a forcing strategy. Blind concessions will not always pave the way for opponent satisfaction; in some cases, they could even prevent it. If a focal negotiator adopts an integrating strategy or the opponent displays compromising behavior, the satisfaction of the focal negotiator can increase. Secondly, despite these numerous influential factors, satisfaction has a notably strong correlation with negotiation profit. Not only does a negotiator's profit impact satisfaction, but negotiators also subconsciously compare their profit with that of their opponent. Essentially, if the opponent's profit is comparatively higher, the focal negotiator will be less satisfied. Finally, in two-stage negotiations, each stage has an enduring impact on negotiator satisfaction. As such, negotiators cannot relax their vigilance during any stage of the negotiation. It is wise for negotiators to adapt their strategies according to the situation, to overcome the stereotypes of first-stage perception, and to balance any conflict of interest. Notably, this study highlights that the relationship between the two parties plays a vital role in determining negotiator satisfaction. Further, satisfaction is influenced by the perceived economic gains of the current stage. For sellers, self-realization is also an important source of satisfaction.

Limitations and Future Research

Firstly, although the data was collected in China, the relationships examined in this research are founded on arguments that transcend cultural constraints, bolstering the belief in the model's cross-cultural viability. It is essential for subsequent research to explore the broader applicability of these findings. To further confirm the insights of this study, similar studies should be conducted in other cultures, thus confirming that the conclusions are internationally applicable. Secondly, simulated negotiations cannot completely replicate true negotiations. Alternative explanations of negotiator satisfaction cannot be ignored, such as information asymmetries and power dynamics. For instance, the negotiators used in the study had no pre-existing cooperative relationships or mutual understanding. In real business transactions, negotiating parties may already have a certain level of understanding or even a long-term relationship. Negotiator satisfaction may be influenced by any previous cooperation between the two parties or future cooperation opportunities. As such, the authors hope that the conclusions of this study can be verified in future research.

Conclusion

This study verifies the key factors affecting negotiator satisfaction using two-stage simulated negotiations between buyer and seller groups. First, irrespective of the buyer or seller, satisfaction is mainly shaped by relationship subjective value and instrumental subjective value. For sellers, self-subjective value also generates better negotiator satisfaction. Second, the negotiation behavior

of both parties has a notable impact on satisfaction. If the behavior of a focal negotiator is integrating or forcing and that of their opponent is compromising, the focal negotiator's satisfaction will increase. However, yielding opponent behavior will weaken focal negotiator satisfaction. Finally, negotiator satisfaction also depends on the relationship between the negotiator's profit and the opponent's profit. The greater the negotiator's profit or the lower the opponent's profit, the more satisfied the negotiator will be.

Author Note

The data that support the findings of this study are available from the corresponding author upon reasonable request. We have no known conflicts of interest to disclose. The authors would like to thank the National Natural Science Foundation of China for its financial support (Grant number 72301024) and all participants of the simulated negotiation.

References

Adair, W. L., & Brett, J. M. (2005). The negotiation dance: Time, culture, and behavioral sequences in negotiation. Organization science, 16(1), 33-51. https://doi.org/10.1287/orsc.1040.0102

Alexander, J. F., Schul, P. L., & McCorkle, D. E. (1994). An assessment of selected relationships in a model of the industrial marketing negotiation process. Journal of Personal Selling & Sales Management, 14(3), 25-41. https://doi.org/10.1080/08853134.1994.10753991

Atkin, T. S., & Rinehart, L. M. (2006). The effect of negotiation practices on the relationship between suppliers and customers. Negotiation Journal, 22(1), 47-65. https://doi.org/10.1111/j.1571-9979.2006.00085.x

Babcock, L., Wang, X., & Loewenstein, G. (1996). Choosing the wrong pond: Social comparisons in negotiations that reflect a self-serving bias. The Quarterly journal of economics, 111(1), 1-19. https://doi.org/10.2307/2946655

Backhaus, K., Van Doorn, J., & Wilken, R. (2008). The impact of team characteristics on the course and outcome of intergroup price negotiations. Journal of Business-to-Business Marketing, 15(4), 365-396. https://doi.org/10.1080/15470620802325773

Bazerman, M. H., & Neale, M. A. (1993). Negotiating rationally. Simon and Schuster. https://doi.org/10.1146/annurev.psych.51.1.279

Blount, S., & Larrick, R. P. (2000). Framing the game: Examining frame choice in bargaining. Organizational behavior and human decision processes, 81(1), 43-71. https://doi.org/10.1006/obhd.1999.2866

Bowles, H. R., & Flynn, F. (2010). Gender and Persistence in Negotiation: A Dyadic Perspective. Academy of Management Journal, 53(4), 769-787. https://doi.org/10.5465/amj.2010.52814595

Boyer, M. A., Urlacher, B., Hudson, N. F., Niv-Solomon, A., Janik, L. L., Butler, M. J., Brown, S. W., & Ioannou, A. (2009). Gender and negotiation: Some experimental findings from an international negotiation simulation. International Studies Quarterly, 53(1), 23-47. https://doi.org/10.1111/j.1468-2478.2008.01522.x

Brett, J., & Thompson, L. (2016). Negotiation. Organizational behavior and human decision processes, 136, 68-79. https://doi.org/10.1016/j.obhdp.2016.06.003

Butt, A. N., Choi, J. N., & Jaeger, A. M. (2005). The effects of self-emotion, counterpart emotion, and counterpart behavior on negotiator behavior: a comparison of individual-level and dyad-level dynamics. Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 26(6), 681-704. https://doi.org/10.1002/job.328

Chang, H. H., Tsai, Y.-C., Chen, S.-H., Huang, G.-H., & Tseng, Y. H. (2015). Building long-term partnerships by certificate implementation: a social exchange theory perspective. Journal of Business & Industrial Marketing, 30(7), 867-879. https://doi.org/10.1108/JBIM-08-2013-0190

Chen, M. J., & Ayoko, O. B. (2012). Conflict and trust: the mediating effects of emotional arousal and self-conscious emotions. International journal of conflict management, 23(1), 19-56. https://doi.org/10.1108/10444061211199313

Cheng, J. (2020). Bidirectional relationship progression in buyer–seller negotiations: evidence from South Korea. Group Decision and Negotiation, 29(2), 293-320. https://doi.org/10.1007/s10726-020-09657-3

Cheng, J. J., Huang, Y. M., & Su, Y. (2018). Culturally varied relationality in buyer-supplier negotiations: a multi-session simulation. International journal of conflict management, 29(1), 47-69. https://doi.org/10.1108/ijcma-03-2017-0018

Curhan, J. R., Elfenbein, H. A., & Eisenkraft, N. (2010). The objective value of subjective value: A multi-round negotiation study. Journal of Applied Social Psychology, 40(3), 690-709. https://doi.org/10.1111/j.1559-1816.2010.00593.x

Curhan, J. R., Elfenbein, H. A., & Xu, H. (2006). What do people value when they negotiate? Mapping the domain of subjective value in negotiation. Journal of personality and social psychology, 91(3), 493. https://doi.org/10.1037/0022-3514.91.3.493

De Dreu, C. K. (2004). Motivation in negotiation: A social psychological analysis. The handbook of negotiation and culture, 114, 135.

De Dreu, C. K., Evers, A., Beersma, B., Kluwer, E. S., & Nauta, A. (2001). A theory-based measure of conflict management strategies in the workplace. Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 22(6), 645-668. https://doi.org/https://doi.org/10.1002/job.107

Elfenbein, H. A. (2021). Individual differences in negotiation: A relational process model. Organizational Psychology Review, 11(1), 73-93. https://doi.org/10.1177/2041386620962551

Ertel, D. (2004). Getting past yes: negotiating as if implementation mattered. Harvard Business Review, 82(11), 60-68, 148. https://doi.org/10.1177/2041386620962551

Fells, R., Rogers, H., Prowse, P., & Ott, U. F. (2015). Unraveling Business Negotiations Using Practitioner Data. Negotiation and Conflict Management Research, 8(2), 119-136. https://doi.org/https://doi.org/10.1111/ncmr.12050

Festinger, L. (1957). Social comparison theory. Selective Exposure Theory, 16(401), 3. https://doi.org/10.4135/9781446249215.n23

Galinsky, A. D., Mussweiler, T., & Medvec, V. H. (2002a). Disconnecting outcomes and evaluations: The role of negotiator focus. Journal of personality and social psychology, 83(5), 1131. https://doi.org/10.1037//0022-3514.83.5.1131

Galinsky, A. D., Seiden, V. L., Kim, P. H., & Medvec, V. H. (2002b). The dissatisfaction of having your first offer accepted: The role of counterfactual thinking in negotiations. Personality and Social Psychology Bulletin, 28(2), 271-283. https://doi.org/10.1177/0146167202282012

Geiger, I. (2014). Media Effects on the Formation of Negotiator Satisfaction: The Example of Face-to-Face and Text Based Electronically Mediated Negotiations. Group Decision and Negotiation, 23(4), 735-763. https://doi.org/10.1007/s10726-012-9317-3

Guo, W., Lu, W., & Gao, X. (2022). Exploring configurations of negotiating behaviors in business negotiations: A qualitative comparative analysis. Journal of Business Research, 147, 435-448. https://doi.org/10.1016/j.jbusres.2022.04.028

Haggenmüller, S., Oehlschläger, P., Herbst, U., & Voeth, M. (2022). Time for change? Scenario analysis on buyer–seller negotiations. Journal of Business & Industrial Marketing, 38(5), 1215-1242. https://doi.org/10.1108/jbim-11-2021-0511

Halevy, N., Y. Chou, E., & D. Galinsky, A. (2011). A functional model of hierarchy: Why, how, and when vertical differentiation enhances group performance. Organizational Psychology Review, 1(1), 32-52. https://doi.org/10.1177/2041386610380991

Halpert, J. A., Stuhlmacher, A. F., Crenshaw, J. L., Litcher, C. D., & Bortel, R. (2010). Paths to negotiation success. Negotiation and Conflict Management Research, 3(2), 91-116. https://doi.org/10.1111/j.1750-4716.2010.00051.x

Hart, E., & Schweitzer, M. E. (2022). When we should care more about relationships than favorable deal terms in negotiation: The economic relevance of relational outcomes (ERRO). Organizational Behavior and Human Decision Processes, 168, 104108. https://doi.org/10.1016/j.obhdp.2021.104108

Hunsaker, D. A., Zhang, T., & Rees, M. (2023). An Angry Face and a Guilty Conscience: The Intrapersonal Effects of Fake Anger in Negotiation. Negotiation and Conflict Management Research, 16(3), 211-229. https://doi.org/10.34891/2022.607

Jang, D., Elfenbein, H. A., & Bottom, W. P. (2018). More than a phase: Form and features of a general theory of negotiation. Academy of Management Annals, 12(1), 318-356. https://doi.org/10.5465/annals.2016.0053

Kang, S. H., Hur, J. D., & Kilduff, G. J. (2024). Beating the Rival but Losing the Game: How the Source of Alternative Offers Alters Behavior and Outcomes in Negotiation. Journal of Applied Psychology, 109(3), 386-401. https://doi.org/10.1037/apl0001154

Kong, D. T., Dirks, K. T., & Ferrin, D. L. (2014). Interpersonal trust within negotiations: Meta-analytic evidence, critical contingencies, and directions for future research. Academy of Management Journal, 57(5), 1235-1255. https://doi.org/10.5465/amj.2012.0461

Kwon, S., & Weingart, L. R. (2004). Unilateral concessions from the other party: concession behavior, attributions, and negotiation judgments. Journal of applied Psychology, 89(2), 263. https://doi.org/10.1037/0021-9010.89.2.263

Larrick, R. P., & Blount, S. (1997). The claiming effect: Why players are more generous in social dilemmas than in ultimatum games. Journal of personality and social psychology, 72(4), 810. https://doi.org/10.1037/0022-3514.72.4.810

LePine, J. A., Podsakoff, N. P., & LePine, M. A. (2005). A meta-analytic test of the challenge stressor–hindrance stressor framework: An explanation for inconsistent relationships among stressors and performance. Academy of Management Journal, 48(5), 764-775. https://doi.org/10.5465/amj.2005.18803921

Lin, S., & Cheung, S. O. (2022). Intention to Settle as an Indispensable Element of Negotiated Construction Dispute Settlement. Journal of construction engineering and management, 148(10). https://doi.org/10.1061/(asce)co.1943-7862.0002383

Little, T. D., Schnabel, K. U., & Baumert, J. (2000). Modeling longitudinal and multilevel data: Practical issues, applied approaches, and specific examples. Lawrence Erlbaum Associates Publishers.

Lu, W., Wei, Y., & Wang, R. (2020). Handling inter-organisational conflict based on bargaining power. International journal of conflict management, 31(5), 781-800. https://doi.org/10.1108/ijcma-06-2019-0092

Ma, Z., Wang, X., Jaeger, A., Anderson, T., Wang, Y., & Saunders, D. (2002). Individual Perception, Bargaining Behavior, and Negotiation Outcomes: A Comparison Across Two Countries. International Journal of Cross Cultural Management, 2(2), 171-184. https://doi.org/10.1177/1470595802002002865

Majer, J. M., Zhang, K., Zhang, H., Höhne, B. P., & Trötschel, R. (2022). Give and take frames in shared-resource negotiations. Journal of Economic Psychology, 90, 102492. https://doi.org/10.1016/j.joep.2022.102492

Malhotra, D. (2005a). Hamilton Real Estate: Confidential Role Information for the CEO of Estate One (BUYER). Harvard Business School Exercise 905-052.

Malhotra, D. (2005b). Hamilton Real Estate: Confidential Role Information for the Executive VP of Pearl Investments (SELLER). Harvard Business School Exercise 905-053.

Mazei, J., Zerres, A., & Hüffmeier, J. (2021). Masculinity at the Negotiation Table: A Theory of Men's Negotiation Behaviors and Outcomes. Academy of Management Review, 46(1), 108-127. https://doi.org/10.5465/amr.2017.0570

Naquin, C. E. (2003). The agony of opportunity in negotiation: Number of negotiable issues, counterfactual thinking, and feelings of satisfaction. Organizational behavior and human decision processes, 91(1), 97-107. https://doi.org/10.1016/S0749-5978(02)00532-0

Olekalns, M., Brett, J. M., & Weingart, L. R. (2003). Phases, transitions and interruptions: Modeling processes in multi-party negotiations. International Journal of Conflict Management, 14(3/4), 191-211. https://doi.org/10.1108/eb022898

Olekalns, M., & Smith, P. L. (2023). Decision frames and the social utility of negotiation outcomes. Current Psychology, 42(11), 9563-9576. https://doi.org/10.1007/s12144-021-02248-8

Oliver, R. L. (1993). Cognitive, affective, and attribute bases of the satisfaction response. Journal of consumer research, 20(3), 418-430.

Panke, D., Polat, G., & Hohlstein, F. (2021). Satisfied or not? Exploring the interplay of individual, country and international organization characteristics for negotiation success. Review of International Organizations, 16(2), 403-429. https://doi.org/10.1007/s11558-020-09386-x

Parlamis, J., Badawy, R., Haber, J., & Brouer, R. (2020). Exploring fear of appearing incompetent, competency pressure, tactics and perceptions in negotiations. International journal of conflict management, 31(4), 607-622. https://doi.org/10.1108/ijcma-06-2019-0094

Penttilä, V. (2020). Aspirational Talk in Strategy Texts: A Longitudinal Case Study of Strategic Episodes in Corporate Social Responsibility Communication. Business & Society, 59(1), 67-97. https://doi.org/10.1177/0007650319825825

Polzer, J. T. (1996). Intergroup negotiations: The effects of negotiating teams. Journal of Conflict Resolution, 40(4), 678-698. https://doi.org/10.1177/0022002796040004008

Ramirez-Marin, J. Y., Diaz, A. B., & Acar-Burkay, S. (2021). Is stress good for negotiation outcomes? The moderating effect of social value orientation. International journal of conflict management, 32(3), 407-421. https://doi.org/10.1108/ijcma-04-2020-0063

Sanchez-Anguix, V., Julián, V., Botti, V., & Garcia-Fornes, A. (2013). Studying the impact of negotiation environments on negotiation teams' performance. Information Sciences, 219, 17-40. https://doi.org/10.1016/j.ins.2012.07.017

Saorín-Iborra, M. C., & Cubillo, G. (2019). Supplier behavior and its impact on customer satisfaction: A new characterization of negotiation behavior. Journal of Purchasing and Supply Management, 25(1), 53-68. https://doi.org/10.1016/j.pursup.2018.03.002

Schaerer, M., Schweinsberg, M., Thornley, N., & Swaab, R. I. (2020). Win-win in distributive negotiations: The economic and relational benefits of strategic offer framing. Journal of Experimental Social Psychology, 87, 103943. https://doi.org/10.1016/j.jesp.2019.103943

Schuster, C., Majer, J. M., & Trötschel, R. (2020). Whatever we negotiate is not what I like: How value-driven conflicts impact negotiation behaviors, outcomes, and subjective evaluations. Journal of Experimental Social Psychology, 90, 103993. https://doi.org/10.1016/j.jesp.2020.103993

Thompson, L. L. (2015). The mind and heart of the negotiator. Pearson.

Thompson, L. L., Wang, J., & Gunia, B. C. (2012). Negotiation. Group processes, 55-84.

Tiedens, L. Z., & Fragale, A. R. (2003a). Power Moves: Complementarity in Dominant and Submissive Nonverbal Behavior. Journal of personality and social psychology, 84, 558-568. https://doi.org/10.1037//0022-3514.84.3.558

Tiedens, L. Z., & Fragale, A. R. (2003b). Power moves: complementarity in dominant and submissive nonverbal behavior. Journal of personality and social psychology, 84(3), 558. https://doi.org/10.1037/0022-3514.84.3.558

Tomlinson, E. C., Dineen, B. R., & Lewicki, R. J. (2004). The road to reconciliation: Antecedents of victim willingness to reconcile following a broken promise. Journal of management, 30(2), 165-187. https://doi.org/10.1016/j.jm.2003.01.003

Trötschel, R., Loschelder, D., Höhne, B., & Majer, J. (2015). Procedural Frames in Negotiations: How Offering My Resources Versus Requesting Yours Impacts Perception, Behavior, and Outcomes. Journal of personality and social psychology, 108. https://doi.org/10.1037/pspi0000009

Van Kleef, G. A., De Dreu, C. K., & Manstead, A. S. (2004). The interpersonal effects of anger and happiness in negotiations. Journal of personality and social psychology, 86(1), 57. https://doi.org/10.1037/0022-3514.86.1.57

Wang, M., Liao, H., Zhan, Y., & Shi, J. (2011). Daily Customer Mistreatment and Employee Sabotage Against Customers: Examining Emotion and Resource Perspectives. Academy of Management Journal, 54(2), 312-334. https://doi.org/10.5465/amj.2011.60263093

Wildschut, T., Pinter, B., Vevea, J. L., Insko, C. A., & Schopler, J. (2003). Beyond the group mind: a quantitative review of the interindividual-intergroup discontinuity effect. Psychological bulletin, 129(5), 698. https://doi.org/10.1037/0033-2909.129.5.698

Wiltermuth, S., Tiedens, L. Z., & Neale, M. (2015). The benefits of dominance complementarity in negotiations. Negotiation and Conflict Management Research, 8(3), 194-209. https://doi.org/10.1111/ncmr.12052

Woelfl, K., Ketchen, D. J., & Kaufmann, L. (2024). A Configurational Perspective on the Quality of Managers' Counterfactual Reflections. Journal of management. https://doi.org/10.1177/01492063241271244

Wolter, J. S., Donavan, D. T., & Giebelhausen, M. (2021). The corporate reputation and consumer-company identification link as a sensemaking process: A cross-level interaction analysis. Journal of Business Research, 132, 289-300. https://doi.org/10.1016/j.jbusres.2021.04.012

Wong, R. S., & Howard, S. (2018). Think twice before using door-in-the-face tactics in repeated negotiation. International journal of conflict management, 29(2), 167-188. https://doi.org/10.1108/IJCMA-05-2017-0043

Author Bios

Sixuan Yan is an undergraduate student majoring in Economics at the School of Economics and Management, Beijing Jiaotong University, China. She is currently interested in negotiation behavior, interorganizational conflict, and construction project governance. She has co-authored two manuscripts that are under review at SSCI-indexed journals, including the Journal of Business Ethics and the International Journal of Project Management. She also completed an academic exchange at Duquesne University in the United States, where she earned a top academic scholarship.

Wenqian Guo is currently a lecturer and master's advisor at the School of Economics and Management at Beijing Jiaotong University, China. She received the Ph.D. degree in management science and engineering from Tianjin University, China, in 2022. She has served as an anonymous peer reviewer for multiple academic journals, including Journal of Business Research, IEEE Transactions on Engineering Management, and International Journal of Project Management. Her recent research interests include business negotiation, interorganizational conflict management, construction project governance, organizational culture, and business management.

Wenxue Lu is Professor, Doctoral Advisor, and Vice Dean at the School of International Project Management, College of Management and Economics, Tianjin University (TJU), China. His research focuses on contract theory and project management theory, with a particular emphasis on conflict, dispute, and negotiation in project environments. He has led multiple national research projects as a principal investigator. In industry practice, he served as a contract engineer responsible for contract interpretation, variation, and claims in the MUGLAD oil exploitation project in Sudan.

Yiwei Wang is a Ph.D. candidate in Management Science and Engineering at the College of Management and Economics, Tianjin University, China. She is currently a joint Ph.D. student in the Department of the Built Environment, College of Design and Engineering, National University of Singapore, supported by the China Scholarship Council. She has served as an anonymous peer reviewer for multiple academic journals, including the Journal of Construction Engineering and Management. Her recent research interests include interorganizational relationship management, construction project governance, and project resilience.

Appendix

Appendix A: Negotiation Scenario and Participant Instructions

Business Negotiation Simulation – Instruction Manual

This simulation was conducted in a classroom setting and followed the procedures and structure outlined below.

1. Grouping and Role Assignment
All participants were divided into 14 teams (i.e., 7 negotiation dyads), with each team consisting of 4 to 5 participants. Each team appointed one chief negotiator to represent them during the negotiation. The negotiation took place in buyer–seller pairs, and teams were labeled accordingly. Buyers and sellers were assigned to separate rooms and provided with role-specific briefing materials. Participants were instructed to maintain strict confidentiality throughout the simulation:

No information exchange was permitted between buyers and sellers.
No communication was allowed between teams of the same role.
Mobile phones were to be silenced; calls and messages were strictly prohibited during the simulation.
Participants were advised not to seek or share information, even during breaks or accidental encounters.

2. Negotiation Format and Timeline
Teams were given 45 minutes for internal preparation, including strategy development and role clarification. Each dyad engaged in a two-stage negotiation, with a short break in between:

First Stage: 25 minutes
Break: 15 minutes (for internal team adjustments; seller remains in the room, buyer steps out)
Second Stage: 25 minutes

After each negotiation stage, all participants completed a post-stage questionnaire measuring subjective value and satisfaction.

3. Rules During Negotiation
Negotiations could result in either an agreement or a deadlock. The following rules were strictly enforced during the process:

No communication was allowed between teams or between participants in the same role group.
All background materials were to be interpreted independently; instructors were not permitted to offer clarification.
Participants were not allowed to enter or leave the negotiation room at will.
Seller teams entered the room only after buyer teams had received instructions and completed their internal preparation.

4. Post-Negotiation Reflection
After the negotiation, each participant completed a reflective form with the following items:

What types of preparation were undertaken by your team?
What behavioral or strategic adjustments did you make after the break?

How did you perceive your counterpart's negotiation behavior and strategy?
What aspects of your performance were effective, and what could be improved?
How satisfied are you with the outcome? (Rate from 1= Very Dissatisfied to 7= Very Satisfied)

Appendix B. Measurement Scales Used in the Study

Part 1. First-Stage Satisfaction and Subjective Value (17 items + 1 overall rating)
Participants rated their agreement with the following statements based on their experience in the first round of negotiation, using a 7-point Likert scale (1 = Strongly Disagree, 7 = Strongly Agree).

1. We believe the agreed-upon issues were fair and consistent with established norms and objective standards.
2. We believe there is a high likelihood of reaching an agreement on the unresolved issues in the next round.
3. At the end of this round, the other party's requests were acceptable.
4. At the end of this round, our requests were reasonable.
5. We felt deprived or disadvantaged in this round of negotiation.
6. We felt embarrassed during the negotiation (e.g., our pride was hurt).
7. This negotiation made us feel like competent negotiators.
8. We acted following our principles and values.
9. This negotiation had a positive impact on our self-concept and self-image.
10. We believe the other party listened to our concerns.
11. We believe the negotiation process was fair.
12. We are satisfied with the simplicity or complexity of the agreement process.
13. The other party considered our wishes, opinions, or needs.
14. The other party left a generally positive impression.
15. As a result of this negotiation, we are satisfied with the relationship between both parties.
16. This negotiation increased our trust in the other party.
17. This negotiation laid a solid foundation for future relations between the two parties.

Overall, we are satisfied with the outcome of the first-round negotiation. (1–7)

Part 2. Second-Stage Negotiation Behaviors (28 items + 1 overall rating)
Participants rated how well each of the following statements described their behavior in the second round of negotiation, using a 7-point Likert scale (1 = Not at all Descriptive, 7 = Very Descriptive).

1. We collaborated with the other party to find mutually acceptable solutions.
2. We worked with the other party to find solutions that met both parties' expectations.
3. We exchanged accurate information with the other party to solve problems together.
4. We revealed all of our concerns to resolve the dispute effectively.
5. We cooperated with the other party to reach mutually acceptable decisions.
6. We worked closely with the other party to better understand the issues.
7. We tried to integrate both sides' opinions to reach a shared decision.
8. We sought compromises to overcome deadlocks.
9. We frequently proposed middle-ground solutions to resolve impasses.
10. Our negotiations often resulted in compromise.
11. We achieved a compromise through mutual concessions.

12. We avoided arguing with the other party.
13. We refrained from directly discussing disagreements.
14. We avoided confrontations as much as possible.
15. We withheld disagreements to avoid upsetting the other party.
16. We avoided unpleasant exchanges during the negotiation.
17. We tried to meet the needs of the other party.
18. We avoided awkwardness and kept any conflicts to ourselves.
19. We modified our strategy to better align with the other party's expectations.
20. We made concessions according to the other party's expectations.
21. We were willing to concede to the other party.
22. We often agreed with the other party's suggestions.
23. We tried to meet the other party's expectations.
24. We used our influence to make our viewpoints acceptable.
25. We leveraged our power to push for decisions that favored us.
26. We used our expertise to make decisions in our favor.
27. We firmly insisted on our position regarding key issues.
28. We sometimes used our group's power to prevail in competitive situations.

Overall, we are satisfied with the outcome of the second-round negotiation. (1–7).