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The Best of Both Worlds? Negotiations Between Cooperators and Individualists Provide High Economic and Relational Outcomes

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Abstract
Because negotiation is an integral part of social life, negotiators with different social motives are likely to meet. When this happens, will they be able to handle their differences constructively? We examined the relations between dyads' social motive composition (cooperative, individualistic, or mixed), negotiation behavior, and economic and relational outcomes. In a laboratory experiment, 108 simulated negotiations were audiotaped, transcribed and coded. For economic outcomes, mixed dyads achieved higher profits than cooperative and individualistic dyads did, and this effect was mediated mainly by the negotiators' problem-solving strategies. For relational outcomes, mixed and cooperative dyads experienced higher relational capital than individualistic dyads did, and this effect was mediated mainly by relationship management strategies. A follow-up survey conducted seven months later revealed that relational capital persisted over time. Overall, the results indicate that mixed-dyad negotiations between individualists and cooperators may bring out the best in both types of negotiators, making these dyads more successful than homogenous dyads.

Keywords Negotiation · Social motives · Mixed dyads · Relational outcomes

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1 Introduction

Negotiation is an integral part of social life, and can be defined as any social interaction engaged in by two or more interdependent parties using conversation to resolve a conflict of interest (Pruitt 1981). People explicitly and implicitly negotiate regularly; for example, individuals negotiate to resolve interpersonal conflict, employees negotiate with employers, buyers negotiate with sellers, and team members negotiate to coordinate teamwork. Given the prevalence of negotiation, negotiators are likely to interact frequently with others whose motives and styles differ from their own (De Dreu et al. 2000; Weingart et al. 2007). For example, some negotiators have individualistic motives and only care about their own outcomes, while other negotiators have cooperative motives and care about both parties' outcomes. How can negotiators handle these differences successfully? Shedding light to this question is of both theoretical and practical importance. Theoretically, it can help scholars better understand a core dynamic in negotiation, namely the simultaneous presence of cooperation and competition. It is also of practical importance because it may help us better understand how negotiators can approach negotiations, as recent research has shown that individual negotiation styles and learning styles are very important in negotiations (Melzer and Schoop 2016).

Unfortunately, our knowledge of the answer to the question posed above is limited. Much has been uncovered about the strong influence of negotiators' social motives on their behavior and outcomes when *both* negotiators in a given dyad have the same social motive (either individualistic or cooperative). However, relatively less is known about what happens when negotiators *differ* in their social motives (i.e., in the case of mixed dyads). The scant research on mixed social motive negotiations provides different answers regarding how they will behave and what their economic outcomes will be. Some studies argue for either competitive (Weingart et al. 2007) or cooperative convergence (Schei et al. 2011), while others argue for a distinct dyad structure (Olekalns and Smith 1999, 2003). Thus, more research is needed to understand what happens when negotiators with different social motives negotiate with each other and how they perform.

Moreover, to the best of our knowledge, no research has shed light on how the relationship between the negotiators is affected in dyads with mixed social motives. The assessment of performance in negotiations has traditionally relied on objective measures, such as the explicit terms of the agreement or profits (Thompson 1990). Obtaining a good objective economic outcome is one important component of a successful deal (Olekalns and Smith 2018). However, negotiation performance is reflected not only in short-term profits resulting from a one-time negotiation but also in the social outcomes of negotiation (Olekalns and Smith 2018) as well as the long-term maintenance of successful relationships (Brooks and Rose 2004; Graham 1986). Relational outcomes therefore constitute an important performance indicator. They include the social-psychological consequences of negotiation, such as relational capital. Relational capital is similar to social capital—the goodwill that is accumulated in a social network of relationships (Adler and Kwon 2002)—except that relational capital entails the goodwill accumulated in a dyadic relationship.

That is, relational capital refers to the favorable elements, such as trust, liking, and perceived relationship quality, of a dyadic relationship (Curhan et al. 2006; Gelfand et al. 2006). Importantly, research has shown that, as compared to economic outcomes, relational outcomes of a negotiation better predict long-term outcomes, including willingness to negotiate again with the same counterpart, higher salary, and greater job satisfaction (Curhan et al. 2009, 2010). In line with this, several researchers (e.g., Bazerman et al. 2007) have called for more attention to be devoted to relational outcomes of negotiations.

Consequently, the current research investigates economic and relational outcomes of mixed dyads, as compared to homogenously cooperative and individualistic dyads, and aims to contribute to negotiation theory and practice by studying the relations between dyad composition, negotiation strategies and economic and relational outcomes. Therefore, our research is motivated by two general research questions. First, how does the social motive composition of a negotiation dyad (i.e., individualistic, cooperative, or mixed) affect dyad members' negotiation strategies and outcomes? Second, how are economic outcomes (i.e., profits) versus relational outcomes (i.e., relational capital) affected differently by different dyad compositions?

2 Social Motives in Negotiation

Social motives refer to individuals' preferences regarding the distribution of outcomes between themselves and another party (McClintock 1972; Messick and McClintock 1968). In other words, social motives indicate the relative importance individuals ascribe to their own outcome, another party's outcome and the joint outcome (Weingart et al. 2007). A number of social motives can be found in social life, including altruistic, competitive, individualistic, and cooperative motives (MacCrimmon and Messick 1976). Individualistic and cooperative social motives are particularly relevant in negotiations (Schei and Rognes 2005). An individualistically motivated negotiator has a goal of maximizing his or her own outcome, whereas a cooperatively motivated negotiator has a goal of maximizing both his or her own outcome and the joint outcome in negotiation.

Social motives can be based on stable individual differences called traits, such as social value orientation (i.e., prosocial vs. proself orientation; Messick and McClintock 1968). Alternatively, they can be induced by transient, situational demands called states, such as instructions from management (e.g., Deutsch 1960), incentive structures (e.g., De Dreu et al. 1998), and expectations of future interaction (e.g., Ben-Yoav and Pruitt 1984). Two meta-analytic review papers (Druckman 1994; De Dreu et al. 2000) concluded that state-based and trait-based social motives have similar effects on behavior. In this paper, we focus on state-based social motivation because of its practical and managerial relevance (i.e., state-based social motivation can be manipulated by the management through, e.g., incentive structures or instructions, whereas trait-based social motivation is difficult to be influenced by the management).

Previous research has shown that social motivation is a key determinant of negotiation processes and outcomes (De Dreu et al. 2000) in homogenous dyads, i.e.

those dyads consisting of either two cooperators negotiating with each other or two individualists negotiating with each other. In the following section, we discuss how such motives are likely to influence the negotiation process and economic and relational outcomes under different social motives compositions. We start with homogenous dyads. We then discuss mixed dyads, i.e. those dyads where an individualist negotiates with a cooperator.

2.1 Cooperative Versus Individualistic Dyads

Previous research on the effect of social motives on negotiation outcomes has mostly focused on homogenously cooperative versus homogenously individualistic dyads and groups. The findings of this research stream suggest that *individualistic* negotiators show little concern for their counterparts' welfare and thus tend to compete to defend their own interests and try to gain short-term profits by using contentious strategies (e.g., making positional commitments, using threats). Their use of such contentious strategies, in turn, impedes both economic and relational gains in negotiation (De Dreu et al. 2000).

On the other hand, *cooperative* negotiators emphasize the relational component of negotiations (Olekalns and Smith 1999). They try to reach agreements that are fair and mutually acceptable. They also try to build favorable relationships by using relationship-building and compromise strategies (e.g., making concessions, trying to build a positive climate). Somewhat ironically, however, cooperative negotiators face the risk of premature closure (Olekans and Smith 1999) or simple compromises, thus preventing them from achieving high joint profits. That is, they tend to experience a more positive relationship, but sometimes at the expense of economic gains—a phenomenon termed relational accommodation by Curhan et al. (2008) and relational satisficing by Gelfand et al. (2006).

Consistent with this reasoning, Pruitt and Rubin's (1986) Dual Concern Theory suggests that cooperative dyads achieve higher joint profits compared to individualistic dyads, but only under conditions where cooperators have high resistance to yielding (e.g., high aspirations), which, in turn, leads to problem solving behavior. In other words, when cooperative dyads have low resistance to yielding, parties tend to either accept the other party's demands or settle on easy 50–50 compromises. When cooperative dyads have high resistance to yielding, on the other hand, they face the dilemma of wanting good outcomes for the other party but not at their own expense. As a result, they engage in various kinds of problem solving to promote the discovery of high joint profits (Ben-Yoav and Pruitt 1984). In their meta-analysis, De Dreu et al. (2000) found strong support for Dual Concern Theory, in that cooperatively rather than individualistically motivated dyads engaged in more problem solving (e.g., information exchange) and achieved higher joint profits, whereas individualistically motivated dyads engaged in more contentious behaviors (e.g., information withholding, persuasive arguments, threats, and positional commitments) and achieved lower joint profits. These findings, however, only applied in situations where cooperators' resistance to yielding was high rather than low (De Dreu et al. 2000).

In the current research, we do not study resistance to yielding per se. Hence, our predictions should be considered applicable to situations where resistance to yielding is not particularly mentioned and can thus be considered unknown. When resistance to yielding is not mentioned, research shows that results are similar to those found when resistance to yielding is low (Ben-Yoav and Pruitt 1984). On this basis, we expect that cooperative dyads will not necessarily achieve higher profits compared to individualistic dyads but will have higher relational capital.

2.2 Mixed Dyads

Although the effects of different social motives in negotiation have been under-researched to date, related research streams can clearly be helpful when forming conjectures about mixed dyads. We present three mutually exclusive hypotheses about how economic and relational outcomes might be affected when individualists and cooperators meet at the negotiation table. Based on previous related research, we argue that mixed dyads may either (1) experience competitive convergence and resemble individualistic dyads because cooperators assimilate to individualists (Kelley and Stahelski 1970a, b), (2) experience cooperative convergence and resemble cooperative dyads because individualists assimilate to cooperators (Deutsch 1949, 1960, 1980), or (3) experience non-convergence and develop a distinctive style of their own (Olekalns and Smith 1999, 2003) defined by problem solving behavior. The following section explains these three alternative arguments in detail.

2.2.1 Competitive Convergence

In their classic work on the Triangle Hypothesis, Kelley and Stahelski (1970b) studied situations in which prosocial individuals played an experimental game with no communication with proself individuals and found that prosocial individuals were more sensitive to their counterparts' motives and behaviors than proself individuals were. As a result, they found that prosocial individuals switched more easily from cooperation to defection when confronted with proself individuals, whereas proself individuals switched less easily from defection to cooperation when confronted with prosocial individuals. The authors concluded that the underlying reason for this asymmetry is the risk of exploitation. That is, prosocial individuals have a strong motive for self-protection against the risk of exploitation, making them wary of their counterparts' motives and behavior. Proself individuals, on the other hand, do not have such a motive (Kelley and Stahelski 1970a, b; Parks and Rumble 2001). This asymmetry results in behavioral assimilation on the part of the cooperator.

Applied in a negotiation context, competitive convergence findings suggest that proself motives are more likely than prosocial motives to dominate and survive in mixed dyads. There is some support for this conclusion in group negotiation research. Weingart et al. (2007) found that in four-person negotiation groups

(including cooperative, individualistic, and mixed groups), cooperative negotiators adjusted their use of behavioral strategies (e.g., problem solving and contentious strategies) and increased their reliance on contentious strategies in response to their counterparts' social motives, whereas individualistic negotiators did not. Although Weingart et al. (2007) did not report the effects of these strategies on negotiation outcomes in their research, one may, based on their findings, expect individualistic and mixed negotiation dyads to achieve lower profits and lower relational capital compared to cooperative negotiation dyads, because individualistic and mixed negotiation dyads engage in more contentious strategies than do cooperative dyads.

2.2.2 Cooperative Convergence

In his work on Cooperation Theory, Deutsch (1949, 1960, 1980) argued and found that individualists were more sensitive to situational factors than cooperators were, because the former can adopt either cooperative or competitive behavior to reach their aim of maximizing their personal outcomes, whereas the latter are limited to cooperative behavior in order to reach their aim of maximizing joint outcomes. Consequently, Cooperation Theory predicts cooperation from cooperators, but both cooperation and competition from individualists, depending on external cues (e.g. how their opponent behaves).

Applied in a negotiation context, cooperative convergence findings suggest that cooperative motives are more likely than individualistic motives to influence negotiators' behavior in mixed dyads. There is also some support for cooperative convergence in negotiation research. For example, Schei et al. (2011) found that both cooperative and mixed dyads experienced more positive negotiation processes and outcomes than individualistic dyads did. Their findings also revealed that, in mixed dyads, the cooperator was more likely than the individualist to initiate integrative processes. The authors reasoned that this integrative initiation led mixed dyads to experience positive processes and outcomes. Consequently, based on Schei et al.'s (2011) findings, one may expect cooperative and mixed negotiation dyads to achieve higher profits and higher relational capital compared to individualistic negotiation dyads.

2.2.3 Non-convergence

Another line of reasoning, derived from negotiation research, suggests that mixed negotiation dyads do not necessarily resemble individualistic or cooperative dyads but rather constitute a distinct dyad structure. Olekalns and Smith (1999, 2003), for example, on their work on mixed dyads' negotiation strategies reported no evidence of behavioral assimilation in their research; rather, they found that mixed dyads displayed a pattern of strategy use that was neither purely integrative nor purely distributive but rather represented a distinct and separate style. In a more recent conceptual paper, Olekalns and Weingart (2008) proposed that when negotiators have incongruent goals, as in mixed dyads, negotiators' goal strength and/or the context can be expected to shape the negotiators' strategies and outcomes. That is, in strong structural contexts (e.g., power asymmetry and accountability issues), negotiators with

incongruent goals can be expected to experience behavioral assimilation, whereas in other contexts they can be expected to adopt a more distinct and multi-dimensional approach. The current research takes place in negotiations without a particularly strong structural context (e.g., power asymmetries or accountability issues), which is an ambiguous mixed-motive situation wherein parties simultaneously experience motivations to cooperate and to compete (Schelling 1960). Therefore, based on Olekans and Weingart's (2008) reasoning one may expect mixed dyads to have a distinct dyad structure.

In fact, another stream of negotiation research suggests that mixed dyads can be productive in distinct ways. For example, the burgeoning literature on the effect of diversity on negotiation outcomes suggests that groups that are heterogeneous with respect to ability level and personality achieve higher outcomes compared to homogenous groups (e.g., Bowers et al. 2000; Scholten et al. 2007). This finding is generally explained by the motivating force of diversity of group members' preferences in stimulating information processing and problem-solving behavior. Applied in a social motivation context, diversity research in negotiation suggests that dyads that are diverse in their social motives (i.e., mixed dyads) can be expected to achieve higher profits compared to dyads that are not diverse in their social motives (i.e., cooperative or individualistic dyads) due to differences in their information processing and problem-solving behaviors. Mixed dyads' intensive use of problem solving behaviors can also be expected to have a positive effect on the dyads' relational capital, because high joint outcomes use the available resources in an optimal way, produce satisfaction among negotiators, are stable over time, and help negotiators build relationships (Pruitt 1983; Pruitt and Carnevale 1982, 1993; Pruitt and Rubin 1986).

3 Summary of Hypotheses

In summary, we expect that members of cooperative dyads will tend to use compromise and relationship-building strategies to accommodate their counterparts, resulting in inferior profits but superior relational capital. On the other hand, we expect that members of individualistic dyads will have both low relational capital and low profits, as they tend to use contentious strategies, which neither accommodate their counterparts to build relational capital nor lead to high profits. Thus, comparing the cooperative and the individualistic dyads, we suggest:

H1 Cooperative dyads will engage in more relationship-building, be more compromising, and less contentious, and, in turn, achieve higher relational capital than individualistic dyads.

We have also presented three alternative sets of hypotheses regarding how profits and relational capital may be affected in mixed dyads. First, based on the Triangle Hypothesis (Kelley and Stahelski 1970a, b), one may expect mixed dyads to resemble individualistic dyads through the experience of competitive

convergence and thus to achieve lower profits and lower relational capital compared to cooperative dyads. Second, based on Cooperation Theory (Deutsch 1949, 1960, 1980), one may expect mixed dyads to resemble cooperative dyads due to cooperative convergence and thus, to achieve higher profits and higher relational capital compared to individualistic dyads. Third and finally, based on the recent findings in negotiation research, one may expect mixed dyads to constitute a distinct dyad structure and engage in intensive problem-solving strategies, which, in turn, lead to higher profits than those generated in either individualistic or cooperative dyads, as well as relational capital as high as that experienced in cooperative dyads. Hence, we suggest three alternative hypotheses about mixed dyads:

H2a (*competitive convergence*) Mixed dyads will be more contentious and, in turn, achieve lower profit and relational capital than cooperative dyads.

H2b (*cooperative convergence*) Mixed dyads will be more problem-solving and, in turn, achieve higher profit and relational capital than individualistic dyads.

H2c (*distinct structure*) Mixed dyads will be more problem-solving and, and in turn, achieve higher profits than cooperative dyads and higher profit and relational capital than individualistic dyads.

4 Methodology

4.1 Design and Participants

Participants were international students at a leading European business school. A total of 216 business students ($M_{age} = 24.44$, $SD_{age} = 4.75$; Female: 50%) participated in the study as a part of a larger set of studies ran at the laboratory, for which they were awarded 15 euros. The sample size was determined before any data analysis.[1]

We used a one-factor (social motive: cooperative vs. individualistic) between-subjects research design at the individual level. Participants were randomly assigned to the experimental social motive conditions resulting in 108 cooperators who were randomly matched with 108 individualists, leading to three conditions at the dyad level: cooperative ($N = 29$), individualistic ($N = 28$), and mixed ($N = 51$).

[1] We did not use power analysis to come up with the particular sample size. Instead, the sample size was determined by the number of students who signed up to participate in the Study. However, based on the results of a power analysis conducted by G*Power (Faul et al. 2009), the dyad level analyses had 90% power to detect a critical F value of 3, with a 95% confidence interval.

4.2 Negotiation Task

The negotiation task was a widely-used multi-issue negotiation task placed in the context of a buyer–seller interaction about a patent license contract agreement (original version developed by Pruitt and Lewis 1975). The task required pairs of participants to take the role of company representatives in the pharmaceutical industry (i.e., one as a buyer and the other one as a seller).

The aim of the negotiation was to reach an agreement on three issues: patent license fee, duration of license, and royalty percentage. Each of these issues had nine possible settlement points, resulting in $9^3 = 729$ different combinations of possible agreements; participants were informed that they could agree on any of these combinations. Negotiators received a profit chart providing information about their own profits associated with the settlement points but not about their counterparts' profits. The negotiation task had integrative potential; that is, the negotiators could reach mutually beneficial agreements (i.e., win–win agreements) by trading off issues that were of different importance to the parties. For example, the most valuable issue to the buying company (i.e., royalty percentage) was the least valuable to the selling company. Table 1 provides details of the negotiators' profit charts.

4.3 Procedure

Information about "a paid study of buyer–seller negotiations" was made available to the students through various channels (e.g., e-mail, social media, brochures, and in-class announcements). Volunteers signed up on a participant recruitment website. Only two participants (i.e., one dyad) were scheduled for a negotiation session at one time.

Upon their arrival at the laboratory, participants were seated at different tables, where the experimenter welcomed them and gave them each a folder containing a consent form, information about their role in the negotiation as either the buyer or the seller, and their profit chart. The experimenter informed the participants that they would have 25 min for negotiation, during which they could talk about anything they chose, including their profit points; however, they were not permitted to physically show their profit charts to one another. The experimenter also emphasized that a failure to reach an agreement would result in zero profits for both negotiators. The experimenter acquired written consent from all participants to audiotape their negotiation and use the data for research. After the 25-minute negotiation (or sooner, in the event of early agreement), the experimenter entered the laboratory room and handed out a questionnaire. After completing this questionnaire, the participants took part in another study, after which they were debriefed[2] and paid for their participation.

[2] In the debriefing, the participants were told that they participated in a series of laboratory studies on that day, and that in the negotiation study we were interested in capturing the impact of various managerial instructions on negotiation behaviors and results.

Table 1 Negotiators' profit chart

Patent license fee			Duration of license			Royalty percentage		
Alternative	Buyer's profits	Seller's profits	Alternative	Buyer's profits	Seller's profits	Alternative	Buyer's profits	Seller's profits
A: 2000	800	0	A: 10 years	1200	0	A: 2%	2000	0
B: 2100	700	250	B: 9 years	1050	150	B: 3%	1750	100
C: 2200	600	500	C: 8 years	900	300	C: 4%	1500	200
D: 2300	500	750	D: 7 years	750	450	D: 5%	1250	300
E: 2400	400	1000	E: 6 years	600	600	E: 6%	1000	400
F: 2500	300	1250	F: 5 years	450	750	F: 7%	750	500
G: 2600	200	1500	G: 4 years	300	900	G: 8%	500	600
H: 2700	100	1750	H: 3 years	150	1050	H: 9%	250	700
I: 2800	0	2000	I: 2 years	0	1200	I: 10%	0	800

Negotiators were shown only their own profit charts

Three dyads, one cooperative and two mixed, that did not reach an agreement within the time allotted were excluded from further analyses, in line with previous research (e.g., Schei et al. 2011). However, including these dyads in the analyses did not change the direction of the hypotheses test results. The final sample consisted of 210 participants (i.e., 105 dyads: 28 individualistic, 28 cooperative and 49 mixed).

4.4 Manipulation of Social Motives

Following previous research, social motives were manipulated through written instructions from management (e.g., De Dreu et al. 2006; Deutsch 1960; Pruitt and Lewis 1975; Schei et al. 2011; Weingart et al. 2007). Two different types of social motive manipulation were used (adapted from Weingart et al. 2007). The instructions used to induce *individualistic motivation* stated:

> The agreement you reach today will have a major impact on your salary and on the profitability of your company. Therefore, you should only be concerned with how much profit you make. In today's negotiation you should act purely out of self-interest. Your primary objective should be to maximize the profits you make. You are to get the best agreement you can.

The instructions used to induce *cooperative motivation* stated:

> The agreement you reach today will have a major impact on your salary and on the profitability of your company. However, you should be concerned with how much profit your counterpart makes as well as how much profit you make. In today's negotiation you should not act purely out of self-interest. Your primary objective should be to maximize the joint profits you and your counterpart make. You are to get the best agreement you can.

Participants were not informed about the instructions given to their negotiation counterpart. To strengthen the social motive manipulation, the participants were informed about a tablet computer lottery in which their chances of winning would be proportional to their success in the negotiation. It was also made clear that their success criterion was based on the instructions given by their management. In other words, in the cooperative social motive condition, participants' chances of winning the tablet computer depended on the joint profits they and their counterparts made, whereas in the individualistic social motive condition, participants' chances of winning the tablet computer depended on their individual profits as a result of the negotiation.

4.5 Dependent Variables

The outcome variables were the economic outcome (i.e. profits) of the negotiation and negotiators' relational capital. *Economic outcome* was measured as the sum of the profits achieved by the two negotiators in a dyad (see Table 1), as reported by the parties themselves in the post-negotiation questionnaire. The profits included

in Table 1 can be interpreted as monetary payoffs. For example, if the negotiators agreed on alternative E on patent license fee, alternative C on duration of license, and alternative G on royalty percentage, the buyer would get a profit of $400+900+500=1800$ and the seller would get $1000+300+600=1900$, with a total profit of 3700.

Relational capital was measured in the post-negotiation questionnaire by using the four items that constitute the relationship subscale of the Subjective Value Inventory (Curhan et al. 2006). The participants answered the following questions on a 7-point rating scale (1 = not at all, 7 = perfectly): "What kind of overall impression did your counterpart make on you?", "How satisfied are you with your relationship with your counterpart as a result of this negotiation?", "Did the negotiation make you trust your counterpart?", and "Did the negotiation build a good foundation for a future relationship with your counterpart?" ($\alpha = .88$; $M = 4.99$, $SD = 1.16$). The relational capital scores of the negotiators were aggregated to the level of the dyads ($M = 9.97$, $SD = 1.79$) for dyad-level analyses.

4.6 Process Variables

4.6.1 Data Coding

The process variables included negotiators' four types of strategies—problem solving, contention, compromise, and relationship building—as derived through the content analysis of the transcripts of the audiotaped negotiations. Professional transcribers and two coders, all of whom were blind to the research hypotheses, were used for this purpose. Transcribers identified each speaker by role and speaking turn. Building on coding procedures used in previous research (De Dreu et al. 1998; Pruitt and Carnevale 1982; Weingart et al. 1993, 1996, 2007), we developed a coding scheme consisting of various behaviors to be coded, corresponding to four negotiation strategies. Overall, the coding scheme included 25 different negotiation behaviors. Table 2 lists the negotiation strategies, their corresponding codes, and illustrative examples from our transcriptions.

4.6.2 Data Handling

Each behavior in a given speaking turn was coded according to its theme. In cases where more than one theme was represented in a given speaking turn, the speaking turn was coded multiple times. The first coder coded all of the transcripts, generating approximately 14,600 coded speaking turns, whereas the second coder coded a subset of the transcripts (approximately 20% of the total sample across different experimental conditions), generating approximately 2800 coded speaking turns. Inter-coder reliability was high; inter-coder agreements (Cohen's kappa) for coded items varied between .79 and .90. Disagreements between the coders were resolved through discussions mediated by the first author. Consistent with previous research (e.g., Schei et al. 2011; Weingart et al. 2007), we used relative frequencies

Table 2 Summary of coded behaviors and strategies

	Strategy	Behavioral examples associated with strategy	Examples from transcripts
	Contention		
1		Makes a win-lose remark	I will lose if I give you "A"
2		Expresses conflict	We have a problem here
3		Makes threats, warnings, and/or aggressive remarks	I will leave if you don't give me "A"
4		Makes positional commitments	I cannot go below "A"
5		Calls for one-sided concessions	Why don't you lower your "A"?
6		Uses argumentation	I cannot give you that price because then I won't make a profit
7		Makes a single issue offer	I offer "A" on price
8		Mentions power	My company does not need you
	Compromise		
9		Tries to find the middle ground	Why don't we go for "E–E–E"?
10		Mentions fairness	I want a fair agreement
11		Makes a compromise process suggestion	Why don't we both compromise on "A"?
12		Makes unilateral concessions	OK, I will give you the price you want
	Problem-solving		
13		Makes a win–win remark	We can both win
14		Openly discusses issues at hand	I want to be honest with you
15		Provides priority information	X is the most important issue to me
16		Asks for priority information	What is the most important issue for you?
17		Trades off issues (logrolling)	I will give you "A" in return for "I"
18		Asks for trading-off of issues (logrolling)	Why don't you give me "A" in return for "I"?
19		Makes a multi-issue offer	How about "A, E, I"?
20		Makes an integrative process suggestion	Why don't we consider all three issues together?
	Relationship management		
21		Shows interest in counterpart's welfare	We care about your company

Table 2 (continued)

Strategy	Behavioral examples associated with strategy	Examples from transcripts
22	Makes remarks about future relationship	We want to work with you in the future too
23	Mentions trust	I trust you
24	Expresses appreciation of, or contention with, the counterpart	We are happy that we are working together
25	Uses "we" to refer to the relationship with the counterpart	We can work together on this

of behavior—calculated by dividing the absolute frequencies of behavior by the total number of speaking turns in the dyad—to control for differences in verbosity.

4.7 Follow-up Survey

Based on previous research (e.g., Bazerman et al. 2007; Curhan et al. 2006, 2010; Greenhalgh and Chapman 1995, 1998), in our conceptual development we have argued that studying relational capital is as important as studying profits in negotiation, as relational outcomes successfully predict positive outcomes in the long run. To test this, we examined whether relational capital persisted after the study and whether it could predict negotiators' future behavioral intentions.

We contacted the participants for a follow-up questionnaire 7 months after they had participated in the negotiation experiment. The survey included the following items, all of which were measured on a 7-point rating scale (1 = not at all, 7 = perfectly): (a) relational capital (the same 4 items used in the original post-negotiation questionnaire, $\alpha = .84$, $M = 4.5$, $SD = 1.22$); (b) the participants' willingness to negotiate with the same counterpart again (1 item: "I would like to negotiate with the same counterpart again", $M = 5.09$, $SD = 1.02$); (c) how well the participants remembered the facts of the negotiation (1 item, $M = 4.84$, $SD = 1.19$); and (d) how well they remembered their feelings about the negotiation (1 item, $M = 5.29$, $SD = 1.13$).

The follow-up survey was sent to all the participants ($N = 216$) from the original sample. Because most of our participants were international students who had since returned to their home countries, the response rate was moderate. After two reminders, 87 participants completed the questionnaire (40% response rate). Of these, 85 were included in the analyses as these respondents were among those participants who had reached an agreement in the negotiation.

4.8 Analyses

We tested the alternative hypotheses on the effect of dyad composition (cooperative, individualistic, mixed) on negotiation outcomes (profits and relational capital) using Analysis of Variance (ANOVA). We tested the significance of the hypothesized indirect effects of the four negotiation behaviors (problem solving, contention, compromise, relationship building) on negotiation outcomes using 95% bias-corrected confidence intervals from 5000 bootstrap samples (Preacher and Hayes 2008; Hayes and Preacher 2014).

Moreover, extant research shows that in some situations, the dyad-level efficiency of the process and outcome may not be sufficient to assess the quality of negotiations (Jehn et al. 2010; Thompson and Loewenstein 1992). Rather, it should be balanced with the individual-level efficiency of the process and outcomes. Thus, we also conducted auxiliary individual-level analyses to present a more complete picture of the findings.

5 Results

5.1 Manipulation Check

In the post-negotiation questionnaire, we asked the participants whether their primary goal in the negotiation was to maximize (a) their individual profits in the negotiation, (b) their own and their counterparts' joint profits in the negotiation, or (c) other. A total of 193 out of 210 participants answered the manipulation check question correctly (92.3%), indicating that the social motive manipulation was successful. We ran all following analyses on the whole sample. As an additional robustness check, we also ran the analyses while restricting the sample to those dyads in which both participants answered the manipulation check correctly, and the results remained unchanged.

5.2 Descriptive Statistics and Correlations

Table 3 provides (dyad-level) inter-correlations for the dependent variables and process variables. Consistent with prior research on the dissociation between relational and economic negotiation outcomes (Curhan et al. 2009, 2010), profits did not correlate significantly with relational capital ($p > .3$).

5.3 Main Effects

5.3.1 Dyad Composition and Outcome Variables

Table 4 shows the results of the one-way ANOVA testing the effects of dyad composition on economic and relational outcomes. Regarding *economic profit*, the one-way ANOVA results revealed a significant difference between the three groups, F (2, 102) = 3.28 $p = .042$. Planned contrasts showed that mixed dyads achieved significantly higher profits ($M = 4725.51$, $SD = 472.49$ than either

Table 3 Descriptive statistics and correlations

Variable	Mean	S.D.	Joint profits	Relational capital	Problem solving	Contention	Compromise	Relationship management
Joint profits	4596.19	494.81	-	.10	.33***	−.37***	−.28**	−.09
Relational capital	9.97	1.79		-	.27***	−.29***	.05	.29***
Problem solving	.085	.032			-	−.32***	.04	.23*
Contention	.077	.033				-	.16*	.05
Compromise	.022	.015					-	.00
Relationship management	.089	.041						-

$N = 105$; *$p < .1$; **$p < .05$; ***$p < .01$

Table 4 ANOVA results for testing mean differences across different dyad compositions

Variable	Individualistic dyads (N = 28)		Cooperative dyads (N = 28)		Mixed dyads (N = 49)		F-value (2, 102)	Eta-squared
	Mean	SD	Mean	SD	Mean	SD		
Joint profits	4483.93[a]	470.43	4482.14[a]	517.69	4725.51[b]	472.49	3.28**	.060
Relational capital	9.16[a]	2.04	10.64[b]	1.56	10.06[b]	1.61	5.26***	.093
Problem Solving	.078[a]	.030	.073[a]	.025	.095[b]	.034	5.14***	.091
Contention	.090[a]	.027	.072[b]	.036	.073[b]	.034	2.85*	.053
Compromise	.026	.013	.020	.016	.022	.014	1.10	.021
Relationship management	.074[a]	.036	.110[b]	.043	.086[a]	.039	6.14***	.107

$N = 105$; *$p < .1$; **$p < .05$; ***$p < .01$

Means in the same row with differing superscripts differ at $p < .05$

cooperative ($M = 4482.14$, $SD = 517.69$), t (102) = 2.12, $p = .036$, or individualistic dyads ($M = 4483.93$, $SD = 470.43$), t (102) = 2.11, $p = .038$.

Regarding *relational capital*, the one-way ANOVA results revealed a significant difference between the three groups, F (2, 102) = 5.26, $p = .007$. Planned contrasts showed that cooperative ($M = 10.64$, $SD = 1.56$) and mixed dyads ($M = 10.06$, $SD = 1.61$) scored equally well, t (102) = 1.43, $p = .156$. However, individualistic dyads ($M = 9.16$, $SD = 2.04$) scored lower than both cooperative, t (102) = − 3.21, $p = .002$, and mixed dyads, t (102) = − 2.19, $p = .031$. Figures 1 and 2 depict the effects of dyad composition on the outcome variables.

5.3.2 Dyad Composition and Process Variables

Table 4 further shows the results of the one-way ANOVA testing the effects of dyad composition on each of the four process variables.

There was a significant effect of dyad composition on the frequency of *problem-solving* strategies for the three conditions, F (2, 102) = 5.14, $p = .007$. Further planned contrasts showed that problem-solving strategies were used more frequently in mixed dyads ($M = .095$, $SD = .034$) than in cooperative ($M = .073$, $SD = .025$), t (102) = 2.91, $p = .004$, or in individualistic dyads ($M = .078$, $SD = .030$), t (102) = 2.32, $p = .023$. There were no significant differences between cooperative dyads' and individualistic dyads' use of problem solving strategies, t (102) = .522, $p = .60$.

There was a marginally significant effect of dyad composition on the frequency of *contentious* strategies for the three conditions, F (2, 102) = 2.85 $p = .062$. Further planned contrasts revealed that *contentious* strategies were used more frequently in individualistic dyads ($M = .090$, $SD = .027$) than in cooperative ($M = .072$, $SD = .036$), t (202) = 2.06, $p = .042$, or in mixed dyads ($M = .073$, $SD = .034$, t

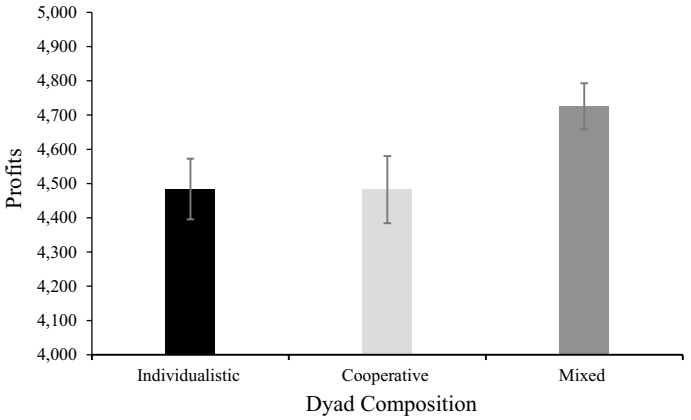

Fig. 1 Profits as a function of dyad composition (bars represent standard errors)

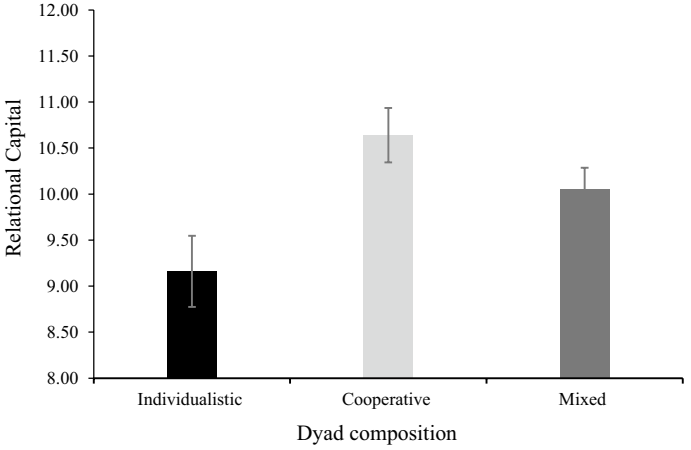

Fig. 2 Relational capital as a function of dyad composition (bars represent standard errors)

(202) = 2.16, $p = .033$. Cooperative and mixed dyads did not differ in their use of contentious strategies, t (102) = -.163, $p = .871$.

Regarding *compromise* strategies, there were no significant differences across conditions, F (2, 102) = 1.10, $p = .336$. Individualistic ($M = .026$, $SD = .013$), cooperative ($M = .020$, $SD = .016$), and mixed dyads ($M = .022$, $SD = .014$) did not differ from one another in frequency of compromise strategies (all t-values < 2, and all p values > .10 in planned contrasts.)

Finally, there was a significant effect of dyad composition on the frequency of *relationship management* strategies for the three conditions, F (2, 102) = 6.14, $p = .003$. Further planned contrasts showed that relationship management strategies

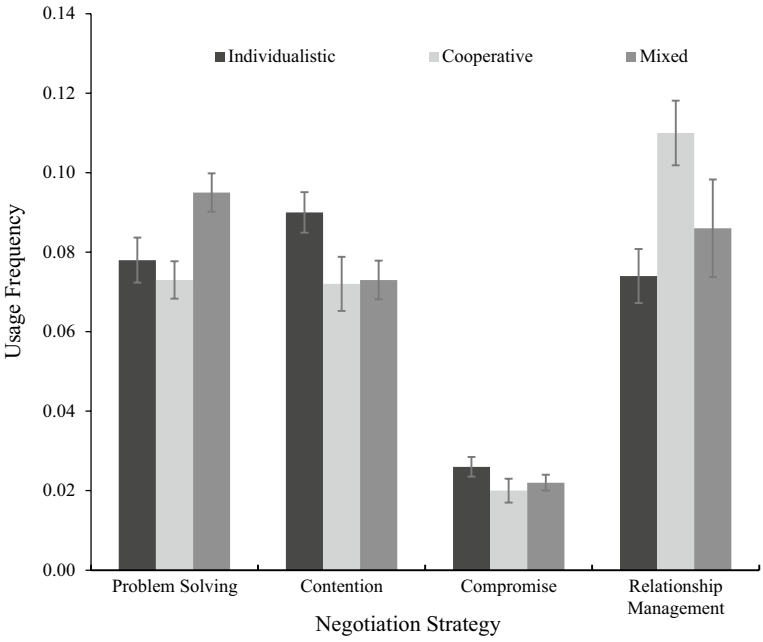

Fig. 3 Usage frequency of negotiation strategy as a function of dyad composition (bars represent standard errors)

were used more extensively in cooperative dyads ($M = .110$, $SD = .043$ than in mixed ($M = .086$, $SD = .039$), $t\ (102) = 2.56$, $p = .012$, or in individualistic dyads ($M = .074$, $SD = .036$), $t\ (202) = 3.42$, $p = .001$. Individualistic and mixed dyads did not differ significantly in their use of relationship management strategies, $t\ (102) = -1.29$, $p = .199$. Figure 3 displays the effect of dyad composition on the process variables.

5.4 Indirect Effects

We ran mediation analyses to identify and explain the mechanisms underlying the observed relations between dyad composition and outcome variables. Because our independent variable (i.e., dyad composition) was multicategorical, we computed relative indirect effects (Hayes and Preacher 2014), estimating how much a particular dyad composition differed from another dyad composition on an outcome variable as a result of that dyad composition's influence on that outcome variable through our process variables. While running mediation analysis, to increase the interpretability of the results, we used standardized scores of our process variables and joint profits. In line with Fiedler et al.'s recommendation (2018), in order to reduce bias in the interpretability of the results of the mediation analyses, we ran the mediation analyses with all of the four alternative negotiation behaviors we acquired through our extensive coding process, instead of limiting our mediation analyses to one or few of these behaviors.

Regarding *mediation of the effect of dyad composition on profits*, the bootstrap analyses showed that problem-solving strategies mediated the relationship between composition and profits, such that relative to the other dyad compositions, mixed dyads had higher profits as a result of their use of problem-solving behavior. The 95% bias-corrected confidence intervals of the relative indirect effect of problem solving for mixed dyads, compared to cooperative and individualistic dyads, excluded zero (.039; .393 and .014; .366, respectively). That is, problem-solving behavior explained why mixed dyads achieved higher profits than did cooperative and individualistic dyads.

The bootstrap analyses also revealed that contentious behaviors mediated the relationship between dyad composition and profits, such that relative to the other dyad compositions, individualistic dyads used more contentious behaviors, which in turn negatively affected their profits. The 95% bias-corrected confidence intervals of the relative indirect effect of contentious behavior for cooperative dyads and mixed dyads, compared to individualistic dyads, excluded zero (.008; 0.368; .016; .318, respectively). That is, individualistic dyads' use of contentious strategies hurt their profit outcomes.

Compromise and relationship management behaviors did not have significant indirect effects on the relationship between dyad composition and joint profits, as the 95% bias-corrected confidence intervals of their indirect effects included zero. However, compromise behavior had a significant negative main effect on profits, independent of dyad composition, $F\ (2, 102) = -2.85$, $p = .01$. Table 5 lists the confidence intervals for all indirect effects. Figure 4 summarizes all the significant (standardized) beta coefficients and standard errors revealed by the bootstrap analyses.

Regarding *mediation of the effect of dyad composition on relational capital*, we first examined whether profits mediated this link, but they did not (95% bias corrected CI for all indirect effects included zero). Therefore, it will not be discussed further.

Next, we included the four negotiation strategies as mediating variables in the regression analysis on the effect of dyad composition on relational capital. Results showed that negotiators' relationship management strategy mediated the relationship between cooperative dyad composition and relational capital. The 95% bias-corrected confidence intervals of the relative indirect effect of relationship management for cooperative dyads, compared to individualistic and mixed dyads, excluded zero (.016; .408, and .006; .335, respectively). Therefore, cooperative dyads' success in achieving high relational capital was explained through their higher use of relationship management strategies.

Contentious strategies also had a mediating effect on relational capital. Specifically, the 95% bias-corrected confidence intervals of the relative indirect effect of contentious behavior for cooperative dyads and mixed dyads, compared to individualistic dyads, excluded zero (.002; .338, and .009; .287, respectively). That is, individualistic dyads' use of contentious strategies hurt their relational capital.

Problem solving had a significant indirect effect on relational capital for mixed dyads, compared to individualistic dyads. That is, mixed dyads had higher relational capital than did individualistic dyads, partly due to the former's higher use of

Table 5 Relative indirect effects of various negotiation strategies on profits

Contrasts		b	se	LLCI	ULCI
Cooperative versus individualistic	Problem solving	− .034	.062	− .185	.066
	Contention	**.129**	**.087**	**.008**	**.368**
	Relationship management	− .097	.089	− .336	.032
	Compromise	.094	.091	− .019	.347
Mixed versus individualistic	Problem solving	**.133**	**.085**	**.014**	**.366**
	Contention	**.120**	**.073**	**.016**	**.318**
	Relationship management	− .032	.039	− .169	.011
	Compromise	.070	.068	− .018	.260
Mixed versus cooperative	Problem solving	**.167**	**.087**	**.039**	**.393**
	Contention	− .009	.063	− .158	.110
	Relationship management	.064	.065	− .013	.261
	Compromise	− .024	.071	− .197	.091

Analyses based on 5000 bias-corrected bootstrapped samples. Confidence intervals set to 95%. Confidence intervals excluding zero (denoted in bold) indicate statistically significant indirect effects

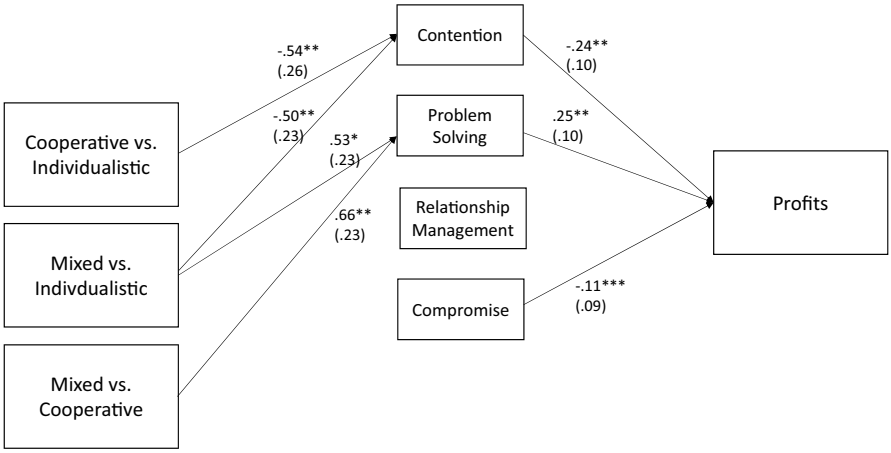

Fig. 4 Results of the indirect effect models positing negotiation strategies as mediators between dyad composition and profits. Only significant coefficients are included in the figure. Standard errors are given in brackets. Path coefficients are standardized. *$p < .10$; **$p < .05$; p*** $< .001$

problem-solving behavior. The 95% bias-corrected confidence intervals of the relative indirect effect of problem solving for mixed dyads, compared to individualistic dyads, excluded zero (.001; .299). Therefore, mixed dyads' usage of problem-solving strategies enabled these dyads to build higher relational capital, as compared to individualistic dyads.

Compromise strategies did not have any significant relative indirect effects on relational capital, as their 95% bias-corrected confidence intervals included zero.

Table 6 Relative indirect effects of various negotiation strategies on relational capital

Contrasts	Strategy	b	se	LLCI	ULCI
Cooperative versus individualistic	Problem solving	−.024	.050	−.183	.038
	Contention	**.111**	**.080**	**.002**	**.338**
	Relationship management	**.169**	**.099**	**.016**	**.408**
	Compromise	−.001	.054	−.122	.106
Mixed versus individualistic	Problem solving	**.093**	**.071**	**.001**	**.299**
	Contention	**.104**	**.067**	**.009**	**.287**
	Relationship management	.057	.051	−.011	.206
	Compromise	−.001	.041	−.093	.081
Mixed versus cooperative	Problem solving	.117	.083	−.001	.344
	Contention	−.008	.058	−.150	.089
	Relationship management	**−.112**	**.080**	**−.335**	**−.006**
	Compromise	.001	.033	−.054	.092

Analyses based on 5000 bias-corrected bootstrapped samples. Confidence intervals set to 95%. Confidence intervals excluding zero (denoted in bold) indicate statistically significant indirect effects

Table 6 displays the relative indirect effect of the process variables on the relationship between dyad composition and relational capital. Figure 5 summarizes all the significant (standardized) beta coefficients and standard errors revealed by the bootstrap analyses.

Overall, the results were consistent with H1 and H2c. Cooperative dyads, relative to individualistic dyads, were more relationship-building (but not more compromising), less contentious, and achieved higher relational capital (H1). Dyad composition also had an indirect effect on relational capital via the process variables. Regarding the mixed dyads, the results are in line with our alternative distinct dyad structure hypothesis (H2c): Mixed dyads were more problem-solving and achieved higher profits than the other dyad compositions, and higher relational capital than the individualistic dyads. Analyses of the indirect effects indicated that the favorable economic and relational outcomes in the mixed dyads were due to their high problem-solving and low contentious strategies.

5.5 Auxiliary Individual-Level Analyses

In addition to the dyad level analyses described above, we also examined the effects of self (i.e., the individual's own) social motive and counterpart's social motive on outcome and process variables. Naturally, however, the data provided by two negotiation counterparts in a given dyad are not theoretically independent from one another (Little et al. 2008). Rather, they are both influenced by a common influence of their interdependent, dyadic relationship. Statistically, we checked for the non-interdependence of data within dyads by computing the partial intraclass correlations. As expected, there were significant partial intraclass correlations between dyad members' profits ($r = .287$, $p < .001$) and relational capital ($r = .141$, $p < .05$),

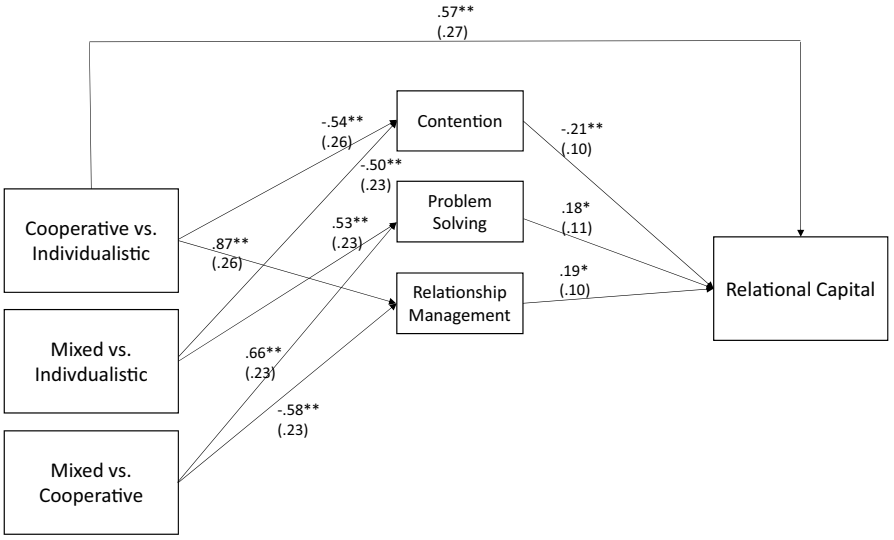

Fig. 5 Results of the indirect effect models positing negotiation strategies as mediators between dyad composition and relational capital. Only significant coefficients are included in the figure. Standard errors are given in brackets. Path coefficients are standardized. *$p < .10$; **$p < .05$

even after controlling for the experimental manipulations of negotiators' self and counterpart social motives. Based on these theoretical and statistical reasons, and following previous research (e.g., Butt et al. 2005), we analyzed our individual-level data using hierarchical linear modelling (HLM; also called mixed model, nested model, actor-partner independence model; Kenny et al. 2006). This model included the dyad as the highest unit of analysis, with individual negotiators nested within the dyad. By using HLM, we were able to calculate how a negotiator's independent variable (i.e., social motive) influenced his or her own dependent variables (i.e., an actor effect), as well as his or her negotiating partner's dependent variables (i.e., a partner effect; Campbell and Kashy 2002).

Furthermore, to specifically test the additional contribution of the actual factors (self social motive and counterpart social motive) being studied, we also conducted a likelihood ratio test (deviance in $-2 \times \log$) by comparing the intercept-only baseline model (with dyad effects only) to the more complex model (with dyad effects as well as the individual effects of self social motive, counterpart social motive, and the interaction between the two). The additional contribution of the more complex model was significantly better than the baseline model, both for profits $\Delta - 2log(3) = 9.081$, $p = .03$ and relational capital $\Delta - 2log(3) = 10.833$, $p = .013$. Overall, these results clearly support the use of a HLM with self social motive, counterpart social motive, and their interaction.

Table 7 provides the cell means and standard deviations used in the HLM analyses, as well as planned comparisons results.

Table 7 Outcome and process variables as a function of self social motive (cooperative vs. individualistic) and counterpart's social motive (cooperative vs. individualistic)

Self	Cooperative		Individualistic		Overall
Counterpart	Cooperative	Individualistic	Cooperative	Individualistic	
N	56	49	49	56	210
Profits	2241.07[a]	2272.45[a]	2453.06[b]	2241.96[a]	2298.10
	(404.64)	(313.76)	(402.13)	(494.04)	(417.81)
	2255.71		2340.48		
	(363.70)		(463.58)		
Relational Capital	5.32[a]	5.03[a]	5.03[a]	4.58[b]	4.99
	(1.01)	(1.16)	(1.00)	(1.33)	(1.16)
	5.19[a]		4.79[b]		
	(1.09)		(1.20)		
Problem Solving	.037[a]	.048[b]	.047[b]	.039[a]	.042
	(.016)	(.018)	(.018)	(.017)	(.018)
	.042		.043		
	(.018)		(.019)		
Contention	.036	.036	.037	.045	.039
	(.020)	(.018)	(.020)	(.016)	(.018)
	.036[a]*		.041[b]*		
	(.019)		(.018)		
Compromise	.010	.011	.011	.013	.011
	(.011)	(.011)	(.008)	(.008)	(.010)
	.010		.012		
	(.011)		(.008)		
Relationship Management	.056	.044	.042	.037	.045
	(.023)	(.024)	(.022)	(.021)	(.023)
	.050[a]		.039[b]		
	(.024)		(.022)		

Standard deviations are given in brackets. Cell means with different superscripts in a given row differ from each other at $p < .05$; * significant at $p < .10$

Individual-level outcomes We first checked and controlled for any possible role (i.e., buyer/seller) effects on individual-level outcome variables, but found no such effects either on profits ($p > .1$) or on relational capital ($p > .6$); therefore, role effects will not be discussed further.

Regarding *individual-level profits*, neither self social motive nor counterpart's social motive had any significant main effects on individual profits (p values $> .1$). However, the interaction between self social motive and counterpart's social motive significantly affected profits, $F\ (1,\ 102) = 6.57$, $p = .012$. Planned comparisons

revealed that counterpart's social motive had a significant effect on individualistic negotiators' profits, F (1, 193.99) = 8.09, p = .005, but not on cooperative negotiators' profits, F (1, 193.27) = .17, p = .68. Therefore, individualistic negotiators achieved higher profits when their counterparts had a cooperative (vs. individualistic) social motive, whereas the counterpart's social motive did not make any difference in cooperative negotiators' profits. More specifically, in mixed dyads, individualistic negotiators obtained higher individual profits than their cooperative counterparts, F (1, 50.51) = 4.54, p = .038.

Regarding *individual-level relational capital*, both self-social motive and counterpart's social motive had significant effects. That is, cooperative negotiators, compared to individualistic negotiators, experienced significantly higher relational capital, F (1, 202.64) = 6.54, p = .01, and negotiating with a cooperative (vs. individualistic) counterpart increased relational capital, F (1, 202.64) = 5.34, p = .02. The interaction did not significantly affect relational capital, F (1, 102.02) = .18, p = .67. Regarding the mixed dyads, we found no difference in relational capital between the individualists and the cooperators (F < 1, p > .5).

Individual-Level Processes Regarding *individual-level problem solving strategy*, neither self social motive nor counterpart's social motive had significant effects (F's < 1, p's > .5). However, the interaction did significantly affect problem-solving strategies, F (1, 102.02) = 9.93, p = .002. Planned comparisons revealed that cooperators increased their usage of problem-solving strategies when their counterparts had an individualistic (vs. cooperative) social motive, F (1, 125.60) = 6.78, p = .01, whereas individualists increased their usage of problem-solving strategies when their counterparts had a cooperative (vs. individualistic) social motive, F (1, 127.60) = 5.28, p = .02. That is, both individualistic and cooperative negotiators used higher problem-solving strategies when they were in mixed dyads, than they did in homogenous dyads. Interestingly, there were no differences between the individualists' and the cooperators' use of problem solving strategies in the mixed dyads, F (1, 49.82) = 1.32, p = .256.

Regarding *individual-level contentious strategy*, self social motive and counterpart's social motive had marginally significant main effects. Negotiators with an individualistic social motive relied more on contentious strategies than cooperators did, F (1, 150.97) = 2.94, p = .09, and negotiating with an individualistic counterpart increased the use of contentious strategies, F (1, 150.97) = 3.27, p = .07. There was no significant interaction between self social motive and counterpart's social motive, F (1, 101.96) = 1.51, p = .22.

Regarding the *individual-level compromise strategy*, self social motive, counterpart's social motive, or their interaction, did not have any significant effects (F's < 1, p's > .5). Finally, regarding the *individual-level relationship management strategy*, self social motive, F (1, 167.51) = 10.72, p = .001, and counterpart's social motive, F (1, 167.54) = 6.92, p = .01, had significant main effects; cooperators relied more on relationship management strategies than individualists did, and having a negotiation counterpart with a cooperative social motive had a positive significant effect on reliance on individual relationship management strategies. The interaction was not significant, F (1, 102) = .62, p = .43.

5.6 Long-Term Outcomes: The Follow-Up Survey

To address the long-term outcomes of the negotiations, a follow-up survey was administered seven months after the laboratory experiment. Table 8 gives mean values and standard deviations of the relational outcome variables measured in the follow-up survey as a function of self social motive and counterpart's social motive.

Dyad-Level Long-Term Relational Outcomes Regarding *relational capital*, compared to the members of individualistic dyads ($M = 3.96$, $SD = 1.17$), the members of cooperative dyads ($M = 4.97$, $SD = 1.14$), F (2, 82) = 3.16, $p = .007$, and mixed dyads ($M = 4.60$, $SD = .85$), F (2, 82) = 2.40, $p = .02$, reported higher relational capital in the follow-up. Similarly, regarding *willingness to negotiate again*, the members of both cooperative dyads ($M = 5.62$, $SD = .93$), F (2, 82) = 4.13, $p < .001$, and mixed dyads ($M = 5.17$, $SD = .88$), F (2, 82) = 3.15, $p = .002$, reported higher willingness to negotiate again with the same counterpart in the follow-up survey than the members of individualistic dyads did ($M = 4.37$, $SD = 1.09$).

Individual-Level Long-Term Relational Outcomes We also conducted individual-level HLM analyses on the follow-up survey results. They showed that self social motive had a significant main effect on relational capital and willingness to negotiate again with the same counterpart. Cooperative negotiators reported higher relational capital than individualistic negotiators did, F (1, 75.59) = 5.20, $p = .025$. Also, negotiators who negotiated with cooperative counterparts reported higher relational capital than negotiators who negotiated with individualistic counterparts did, F (1, 75.59) = 4.53, $p = .037$.

Cooperative negotiators reported a higher behavioral intention to negotiate with the same counterpart than individualistic negotiators did, F (1, 74.67) = 7.78, $p = .007$. Moreover, negotiators who negotiated with cooperative counterparts had

Table 8 Follow-up survey (conducted 7 months after the negotiation study) results as a function of self and counterpart's social motive

Self	Cooperative		Individualistic		Overall
Counterpart	Cooperative	Individualistic	Cooperative	Individualistic	
N	19	23	23	20	85
Relational Capital	4.97	4.59	4.62	3.96	4.54
	(1.14)	(.94)	(.77)	(1.17)	(1.05)
	4.78[a]		4.31[b]		
	(.96)		(1.02)		
Willingness to negotiate again with the same counterpart	5.62	5.16	5.17	4.37	5.08
	(.93)	(.96)	(.80)	(1.09)	(1.03)
	5.37[a]		4.80[b]		
	(.97)		(1.02)		

Standard deviations are given in brackets. Cell means with different superscripts in a given row differ from each other at $p < .05$

higher willingness to negotiate again with the same person than negotiators who negotiated with individualistic counterparts did, F (1, 74.65) = 9.59, p = .003. The interactions between self social motive and counterpart's social motive did not significantly affect relational capital or willingness to negotiate again with the same counterpart (all F's < 2, p values > .2). All in all, long-term relational outcomes, assessed by the follow-up survey, were very similar to the short-term relational outcomes, assessed by the post-negotiation questionnaire.

Predictive Power of Profits Versus Relational Capital Participants reported that they remembered their feelings about the negotiation (M = 5.29, SD = 1.13) better than they remembered the facts about it (M = 4.84, SD = 1.19), t (84) = 4.82, p < .001. Consistent with this, relational capital, as measured more than half a year after the initial study, was strongly correlated with relational capital measured right after the negotiation (r = .50, p < .001), indicating that relational capital persisted beyond the study period. In contrast, the correlation between individual profits achieved in the negotiation and willingness to negotiate again with the same counterpart—measured in the follow-up questionnaire—was weak and non-significant (r = -.040, p = .72).

Finally, when we regressed willingness to negotiate again with the same counterpart, as measured in the follow-up survey, onto the main dependent variables in the main study (i.e., profits and relational capital), profits failed to predict it, β = .00, t (82) = -.08, p = .44, whereas relational capital strongly predicted it, b = .42, t (82) = 4.82, p < .001, adjusted R^2 = .203.

6 Discussion

Although mixed dyads are common, they are relatively understudied. Moreover, research on mixed dyads is of both theoretical and practical importance. Negotiation research does not yet fully understand how mixed dyads negotiate and therefore is unable to provide practical recommendations to those who are likely to negotiate in a mixed dyad. Hence, the purpose of the current paper was to examine the relationships between dyad composition (i.e., cooperative, individualistic, and mixed), negotiators' behaviors, and economic and relational outcomes (i.e., profits and relational capital).

In summary, in our study, mixed dyads relied primarily on problem-solving behaviors; individualistic dyads relied primarily on contentious behaviors; and cooperative dyads relied primarily on relationship management behaviors. As a result of these negotiation behaviors, mixed dyads achieved higher profits than cooperative and individualistic dyads did; and, cooperative and mixed dyads experienced higher relational capital than individualistic dyads did. Importantly, relational capital had long-lasting positive effects, such that it predicted negotiators' future behavioral intentions.

6.1 Implications

The current research adds to the body of knowledge about negotiation in at least two important ways. Specifically, it demonstrates (1) the distinct processes and favorable economic and relational outcomes related to mixed dyads and (2) the dissociation between economic and relational outcomes and the latter's long-lasting effects.

Firstly, our findings show that when cooperative negotiators meet individualistic negotiators (i.e., mixed dyads), the results at the dyadic level can be fruitful from both a short-term economic and a long-term, relational perspective. Thus, the current results challenge the dominant view that all negotiators need to be cooperatively oriented in order to reach favorable outcomes. Interestingly, the results of this study indicate that mixed dyads do not necessarily behave like either individualistic or cooperative dyads. In our study, mixed dyads did not display clear signs of cooperative (i.e., cooperation theory) or competitive (i.e., triangle hypothesis) convergence. Rather, they constituted a different dyad structure, as suggested by Olekalns and Smith (1999, 2003), characterized by high levels of problem-solving and relationship building strategies, which we would also expect cooperative dyads to do if they had high resistance to yielding (De Dreu et al. 2000). As such, our results may also be akin to cooperation theory in that mixed dyads turned to cooperation-like behavior similar to that found by Schei et al. (2011). Regarding the relational outcomes, we found both mixed dyads and cooperative dyads to be more successful than individualistic dyads. Therefore, although cooperative dyads did not make higher profits than individualistic dyads, they did achieve higher relational capital.

How did mixed dyads do so well with regard to both economic and relational outcomes? Our results show that this was mainly due to their problem-solving behavior. This result is in line with the literature on the positive effect of diversity and heterogeneity on problem-solving behavior in a group context (Bowers et al. 2000; Scholten et al. 2007). In line with the diversity literature, problem-solving behavior in mixed dyads was enhanced because each of the two social motivations brought out the best in the other member of the dyad, creating an optimal mixture of cooperation and competition that drove the mixed dyads toward mutually beneficial agreements. That is, the cooperators contributed with their relational approach, and the individualists contributed with their contentious approach. When these approaches blended together, they made for a very powerful combination, resulting in problem-solving behavior. In line with this, our results show that both cooperators and individualists increased their problem-solving behavior when they met a partner with a different social motive. Probably, the individualists increased the cooperators' resistance to yielding, and cooperators elicited cooperation from the individualists. However, in terms of individual economic outcomes, the extra profits achieved in the mixed dyads went mostly to the individualist dyad member.

Secondly, however, our results show the importance of investigating relational outcomes in negotiation studies. In support of previous research on the dissociation between relational and economic negotiation outcomes (e.g., Curhan et al. 2009, 2010), we demonstrated that the economic and relational outcomes of a negotiation can be disconnected across different dyad compositions. For example, even though both cooperative and individualistic dyads made equally low profits, cooperative

dyads experienced higher relational capital than did individualistic dyads. Moreover, even though cooperative dyads made lower profits than mixed dyads, both of them achieved equally high relational capital. Thus, our results question the adequacy of considering economic outcomes as the sole criterion of negotiators' performance. In fact, as indicated by this study, relational capital is an important outcome in negotiations, especially because it seems to be quite persistent in the long term. This finding is similar to that of Curhan et al. (2006; also see 2008, p. 203; 2009, 2010), where subjective outcomes were found to have higher predictive value for future negotiations than economic outcomes had. Overall, these findings offer convergent evidence that relational capital is an important outcome in negotiation and that it predicts negotiators' future willingness to negotiate again with the same counterpart.

Finally, the current results also have practical implications. Our results point to the importance of combining different approaches in negotiations. Negotiation is a mixed-motive game, and both cooperation and competition are needed in order to exploit the potential in the situation. Neither of the two specific social motives seems to be superior to the other; rather, they seem to complement each other. Thus, cooperators must be aware of the importance of not being too relational but also engage in problem solving. Individualists, on the other hand, need to be aware of the danger of relying solely on contentious strategies and should instead seek to also engage in problem solving in order to maximize their goal of reaching a high individual outcome. Furthermore, the importance of relational capital in negotiations should not be underestimated as it has a high impact on future interactions with the negotiation partner.

Our findings imply that strategically counter-balancing the social motivation of one's negotiation counterpart may be beneficial. That is, it may stand to reason to motivate a negotiator individualistically if the counterpart is known to be motivated cooperatively, and vice versa. However it is worth noting that this might imply a kind of dilemma while selecting social motivation for a negotiator. Indeed, it would be mutually beneficial for both parties to make up a mixed dyad, yet both parties might—at least from a short-term profit maximizing perspective—also have an incentive to choose an individualistic motivation, as our results showed that the individualists got a higher individual profit than their cooperative opponents did. When the counterpart's motivation is unknown, however, it remains the case that motivating negotiators cooperatively would be beneficial from a long-term relational perspective, which may also bring long-term stream of profits resulting from the relationship.

6.2 Limitations and Future Research

Although the current research provides an enhanced understanding of mixed dyads, it still has its limitations and hence calls for further empirical research on this subject. In the current research, we studied mixed dyads in a negotiation setting with high integrative potential. Our participants were young, international students attending the same business school. Hence, one needs to be cautious while making any generalizations beyond the current research setting. Specifically, we encourage

future research to uncover the boundary conditions under which mixed dyads drive towards problem solving behavior and achieve high profits and relational capital. Various additional situation-related contingency factors, such as power balance, communication media, the integrative potential of the situation, as well as many negotiator-related contingency factors, such as negotiators' individual differences, cultural background, previous history and negotiation experience, might be of interest to investigate in further research on mixed-dyad negotiations.

For instance, a power imbalance between the cooperator and the individualist in a mixed dyad may change the direction of profits and relational capital. Although Olekalns and Weingart (2008) have argued that such situational characteristics would define the direction of behavior and outcomes in mixed dyads, they did not test this hypothesis. Other research (e.g., Schei and Rognes 2003) found that having knowledge about the counterpart's social motive changed the immediate negotiation dynamics in mixed dyads, too. It would be interesting to systematically examine such situational demands and their influence on immediate economic and long-term relational outcomes in mixed dyads in future work. Another interesting avenue for future research pertains to extending the inquiry of mixed dyads to computer mediated negotiations. In today's globalized and digitalized world, negotiations often take place electronically (Schoop et al. 2014), making the study of electronic negotiations between negotiators with differing motives timely and relevant. It would be insightful to study how mixed dyads behave and perform—both economically and relationally—when they communicate electronically (vs. face-to-face).

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