Negotiation in dyads and groups: the effects of social and epistemic motives

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CHAPTER 6
General Discussion

According to the Motivated Information Processing model (De Dreu & Carnevale, 2003), the way negotiators make sense of the complex negotiation situation and make strategic choices depends on their social and epistemic motivation. Social motivation drives the kind of information negotiators search for, and it affects negotiators’ strategy during negotiations, with pro-social motivation leading to more behavior conducive to reaching collective goals and more cooperative choices than pro-self motivation. Epistemic motivation drives the depth with which negotiators process information, with higher epistemic motivation being associated with deeper and more systematic search for, and processing of information. In the eight experiments reported in this dissertation, I have attempted to advance our knowledge on how these two motivations influence negotiation behavior and outcomes. Below, I will present an overview of the research questions examined in this dissertation and the main findings reported in the previous chapters.

Summary of findings

Heterogeneity of motivation

The analysis of previous research on motivation in negotiation provided in the introduction chapter of this dissertation showed that although both social motivation and epistemic motivation have been previously investigated, several important aspects have been ignored. First, previous research has focused on dyads and groups in which all negotiators have the same motivation, thus excluding those frequently occurring situations in which parties bring different motives to a negotiation. Accordingly, we knew very little about the way heterogeneity of social motivation and epistemic motivation influences negotiation processes and outcomes. The first goal of this dissertation was to fill this void.

Heterogeneity of social motivation. Chapter 2 focused on heterogeneity of social motivation in groups: How do groups perform during negotiation and what outcomes do they achieve when some members have a pro-social motivation, while other members have a pro-self motivation? Based on work on coalition formation (e.g., Murnighan, 1978; Van Beest, Wilke, & Van Dijk, 2003), it was predicted that social motivation would interact with the majority or minority positions groups members hold, and the decision rule that is employed. Which decision rule is used, majority or unanimity, influences whether majority or rather minority factions are empowered. Majority rule enables majorities to unscrupulously push their point of
view, whereas unanimity rule gives relatively high power to the minority, as this party can veto an agreement when it is not to its liking. However, whether factions use the options thus created by the decision rule depends on their social motivation.

Results of an experiment with three-person groups negotiating face-to-face confirmed these predictions. Groups negotiating under unanimity rule achieved lower joint outcomes when the minority member had a pro-self motivation than when the minority member had a pro-social motivation, whereas the majority's social motivation did not influence the group outcomes. Moreover, groups negotiating under majority rule distributed outcomes more unevenly among their members to the advantage of the majority parties when the majority had a pro-self rather than a pro-social motivation. Under majority rule, whether the minority had a pro-self or a pro-social motive did not influence outcomes. Additional findings showed that these effects emerged because under unanimity rule, minority members with a pro-self motivation were more inclined to engage in decision blocking to avoid the acceptance of agreements that would play out unfavorably to them. Under majority rule, majorities with a pro-self motivation engaged in less problem solving behavior and were less egalitarian than majorities with a pro-social motivation.

All in all, these results reveal that it is not the number of pro-socials and pro-selves in groups per se, but rather their positions in the group in combination with the decision rule that is used, that influences negotiation behavior and outcomes. This finding is important as it shows that even if the majority of group members has a pro-social motivation, this is no guarantee for a pro-social process and integrative outcomes. Rather, what seems like a simple procedural choice, the decision rule, has an important impact on whose social motivation will "count" in influencing processes and outcomes in heterogeneously motivated groups.

*Heterogeneity of epistemic motivation.* Whereas Chapter 2 was concerned with heterogeneity of social motivation, Chapter 3 was concerned with heterogeneity of epistemic motivation. According to the motivated information processing model of negotiation (De Dreu & Carnevale, 2003), high quality agreements that integrate all parties' interests can be reached when negotiators exchange information, and thoroughly process this information. The degree to which this happens in an elaborate and systematic way depends on negotiators' epistemic motivation. The studies reported in Chapter 3 were the first to consider that the level of epistemic motivation often differs between negotiators, and were concerned with uncovering whether the collective outcome of the dyad benefits from the presence of one negotiator with high epistemic motivation, or whether instead both negotiators need to have high epistemic motivation to achieve collectively beneficial agreements.

Across two experiments, evidence was found for the idea that one member with high epistemic motivation suffices to increase the intergrativeness of negotiated
agreements. Results of Experiment 3.1 revealed that dyads in which at least one member had high dispositional epistemic motivation (i.e., low need for structure) obtained higher joint outcomes than dyads in which both members had low epistemic motivation, and did not differ from dyads in which both members had high epistemic motivation.

Because participants in Experiment 3.1 did not know each other's preferences prior to the negotiation, the higher quality agreements in dyads with at least one member with high epistemic motivation had to be due to specific processes that took place during the negotiation. These negotiation processes were the core focus of Experiment 3.2. Results for negotiated outcomes were consistent with those obtained in Experiment 3.1: When both dyads members had low epistemic motivation (induced by making them high or low process accountable), collective outcomes were lower than when at least one member had high epistemic motivation. Furthermore, results revealed that when negotiators lacked information about their counterpart's preferences, they actively searched for it by asking preference related questions when they had high, rather than low epistemic motivation, and it was this information exchange that accounted for the higher joint outcomes among dyads with at least one member with high epistemic motivation. All in all, the results of the experiments reported in Chapter 3 enhance our knowledge of heterogeneity of epistemic motivation by showing that dyads in which at least one member has high epistemic motivation reach higher joint outcomes than dyads in which both members have low epistemic motivation, and this was due to increased information search. Furthermore, in both experiments, dyads in which both members had high epistemic motivation did not obtain better collective outcomes than mixed dyads, in which only one member had high epistemic motivation.

Competitive motivation

The second goal of this dissertation was to increase our knowledge about competitive motivation in negotiation. Although it has often been shown that individuals view negotiation as a competitive process (McClintock & McNeel, 1966; Pruitt, 1981; Thompson & Hrebec, 1996), relatively few studies have systematically addressed competitive motivation. For example, the motivated information-processing model (De Dreu & Carnevale, 2003) distinguishes between pro-social and pro-self motivation, but is unclear about the role of competitive motivation—it is implicitly assumed that competitive motivation has similar effects as individualistic motivation. Furthermore, early research already demonstrated that competitive tendencies are based on two distinct motivations (i.e., getting ahead versus not losing), and this critical distinction has not received much theoretical or empirical attention.
Chapter 4 and 5 focused on these two distinct competitive motivations: *Appetitive competition*, or the motivation to win, and *aversive competition*, or the motivation not to lose. Experiment 4.1 showed that whereas aversive competitors were equally satisfied with equal outcome distributions as with advantageous inequality, appetitive competitors were not. Satisfaction was significantly higher for appetitive competitors for advantageous inequality than for equality. Moreover, results revealed that appetitive competitors were more optimistic and less anxious than aversive competitors.

Experiment 4.2 showed that aversive competitors were more strongly influenced by their counterparts' concession pattern (i.e., making large concessions when their counterpart did, while making small concessions when their counterpart made small concessions), than appetitive competitors, who did not mimic their counterpart's concession rate. These findings seemed to suggest that aversive competitors are more risk-averse than appetitive competitors and are inclined to "play it safe" by making large concessions when they feel it's safe to do so, and by making small concessions when they feel a particularly tough counterpart might exploit them. This idea was further examined in Experiment 4.3 and 4.4 in which apart from competitive motivation it was also manipulated whether or not negotiators knew their counterpart's motivation was similar to theirs (Experiment 4.3) or whether or not they had full information about own and other's outcomes (Experiment 4.4). The idea was that aversive competitors will be influenced by these manipulations as they allow or, in contrast, prevent them from "calculating" whether they fall behind or not and when they uncover they do not, relax and may even seek out deals that provide equality and high joint outcomes. Likewise, appetitive competitors will use this information to "calculate" whether they are winning or not and when they uncover that this is unlikely, escalate the conflict into an impasse.

Together, the results of Experiment 4.3 and 4.4 provided good support for this reasoning. Experiment 4.3 revealed that appetitive dyads reached more impasses and lower joint outcomes than aversive dyads when dyad members knew their counterpart shared their motivation of winning. Conversely, when dyad members did not know their counterpart shared their motivation, appetitive dyads reached less impasses and higher joint outcomes than aversive dyads. Experiment 4.4 likewise showed that when dyad members were provided with information about their counterpart's preferences and priorities, aversive competitors impassed less often and obtained higher joint outcomes than appetitive dyads. This pattern was reversed when dyad members did not know each other's preferences and priorities.

Experiments 4.1 to 4.4 together show that appetitive and aversive competition are fundamentally different motivations that each affects negotiation processes and outcomes in their own way. Aversive competition makes negotiators
anxious and risk averse, whereas appetitive competition makes them (over)confident. Therefore, aversive competitors would be more likely to impasse and achieve lower negotiation outcomes. However, this changes when information comes into play. Aversive negotiators used strategic information that became available to them (i.e. about the concessions of their counterpart, about their counterpart's motivation, and about their counterpart's interests) to a greater extent than appetitive competitors and in Experiments 4.3 and 4.4 this led them to better collective outcomes than appetitive competitors, whose negotiation performance only decreased when information became available to them. Whereas information plays the role of restoring trust for aversive competitors, leading to better agreements, it only ruins the unrealistic confidence of which appetitive competitors base their negotiation success, leading to impasses and suboptimal agreements for them.

The results reported in Chapter 5 built on these findings in two critical ways. First, it showed that when negotiators were presented with a cooperative profile of their counterpart, they made larger concessions than when they were presented with a competitive profile, but only when they had an aversive competitive motivation. Furthermore, this happened especially when negotiators had low epistemic motivation (i.e., high need for cognitive closure), and thus were less motivated to process information thoroughly—they based their behavior on initial cues and not on more diagnostic new information that would become available in the course of the negotiation.

The findings summarized thus far, and more extensively described in the previous chapters allow for the following conclusions. First, this dissertation shows that knowledge about group negotiation can benefit tremendously from work in other domains, such as work on coalition formation. The present dissertation demonstrates that it is not merely the more pro-socials in a group, the better, but rather that as long as the social motivation of group members fits with their position in the group and the decision rule that they use, negotiation can end successfully. Second, the presence of one negotiator who is highly motivated to exchange and process information in a thorough, systematic way will benefit the dyad as a whole and ensures a high quality agreement. Finally, this dissertation shows that contrary to popular belief, competition does not need to end in impasse or low quality outcomes but rather can produce equality and successful negotiation. When negotiators' competitive motivation is based on a desire not to fall behind, providing them with the right information will diminish distrust and increase the likelihood of reaching a high quality outcome. Implications of these conclusions, along with some critical comments regarding the empirical support, will be discussed in the next section.
Implications

Group negotiation

In contemporary organizations individuals are increasingly working in groups, and have to negotiate with other group members about the distribution of tasks and responsibilities, budgets, time allocations, and so on (Pfeffer, 1998). It is therefore not surprising that in the last decade or so, negotiation scholars have increasingly shifted their attention from dyadic negotiation to group negotiation (Kramer, 1991; Mannix, Thompson, & Bazerman, 1989; Thompson, Mannix, & Bazerman, 1988). Accordingly, the study of social motivation in negotiation has been expanded to negotiating groups as well (Beersma & De Dreu, 1999; Weingart, Bennett, & Brett, 1993). The results of previous studies have shown that, just as in dyadic negotiation, groups reach better collective outcomes when all negotiators share a pro-social motivation than when all negotiators share a pro-self motivation (Beersma & De Dreu, 1999; Beersma, De Dreu, & Ten Velden, 2005; De Dreu, Weingart, & Kwon, 2000).

These findings from both dyadic negotiation research and group negotiation research may have given rise to the view that the more pro-socials there are in a group, the better it is (e.g., Weingart, Brett, & Olekalns, 2005). As group negotiation differs from dyadic negotiation in several important ways, such a conclusion would be overly simplistic. For example, in group decision making in general and group negotiation in particular there is often a need for an implicit or explicit decision rule that structures the decision making or negotiation process (e.g., Miller, 1985). Furthermore, in groups, possibilities for coalition formation and exclusion arise. Oftentimes, group negotiations are asymmetrical in structure, in that the majority of group members have preferences that oppose those of a minority. Unfortunately, up till now negotiation research rarely considered the dynamics of these asymmetrical situations. From a theoretical perspective this means that conflict and negotiation theory remained one-sided and concerned with purely symmetrical situations. From an applied perspective this means that we did not know how to structure and manage groups in which asymmetrical negotiations emerge.

The results reported in Chapter 2 enhanced our understanding of these asymmetrical situations by showing that motivational variables (social motivation) interact with structural variables (minority versus majority position and decision rule) to influence negotiation processes and outcomes. In addition, it enhanced our knowledge on heterogeneity of social motivation by showing that it is not merely the number of pro-socials or pro-self in a group that matters, but rather the majority or minority position that negotiators with a pro-social or pro-self motivation hold and
the decision rule that they use. The contribution of Chapter 2 is that it shows that to
determine whether pro-social motives of group members will have a positive effect,
or whether pro-self motives of group members will have a negative effect on the
negotiation process and outcomes, one needs to take into account the interests
positions of the respective negotiators. Whereas a pro-self minority may endanger
effective negotiation processes when unanimity rule is used, he or she may be
relatively harmless when the group uses a majority rule to make decisions. Likewise,
whereas a pro-social majority may have beneficial effects on the fairness of
negotiation outcomes under majority rule, under unanimity rule such a majority will
be far less influential. For future work on group negotiation, this implies that
research can benefit from insights gained from work on distinct, but related fields of
research such as work on coalition formation and the use of decision rules in group
decision making.

**Motivated information processing**

This dissertation contributes to our knowledge on motivated information
processing in negotiation in several ways. First of all, it expands existing knowledge
on epistemic motivation. Past research concerned with epistemic motivation has
shown the beneficial effects of high epistemic motivation at the individual, the
dyadic, and at the group level (e.g., De Dreu, Koole, & Oldersma, 1999; De Dreu,
Koole, & Steinel, 2000; De Grada, Kruglanski, Pierro, & Mannetti, 1999). As
epistemic motivation can be rooted in individual differences such as need for
structure (Thompson, Naccarato, Parker, & Moskowitz, 2001) and need for closure
(Kruglanski, 1989), as well as be induced by features of the situation such as process
accountability, noise, or time pressure (Kruglanski & Webster, 1996; Kruglanski,
Webster, & Klem, 1993; Tetlock, 1992) it is highly likely that those within a
negotiating dyad or group have different levels of epistemic motivation. Therefore, it
is unfortunate that the study of epistemic motivation at the dyadic and group-level
has been limited to situations in which all negotiators have the same high or low
epis tomic motivation. I set out to redress this current state of our knowledge in
Chapter 3. The results reported in this chapter showed that the view "the more, the
better" does not apply to epistemic motivation; epistemic motivation positively
affects negotiation outcomes, but to reach a high quality agreement it is not required
that both dyad members have high epistemic motivation. When one member of a
pair of negotiators has high epistemic motivation the dyad as a whole benefits and
reaches higher joint outcomes. Furthermore, these findings were consistent across
two experiments in which epistemic motivation was measured by need for structure
(Experiment 3.1) and induced through process accountability (Experiment 3.2). 
Thus, the ideas and findings put forward by work on motivated information
processing that epistemic motivation has beneficial effects through information
processing at the individual, as well as the dyadic and group level also holds for heterogeneous dyads, in which members differ in their level of epistemic motivation.

In addition, Chapter 3 contributed to our understanding of the specific processes through which epistemic motivation affects the quality of agreements. Past research has shown that epistemic motivation affects information processing (e.g., De Dreu et al., 1999; Kruglanski & Webster, 1996), but results also suggest that when individuals with high epistemic motivation lack relevant information about the task they search for it (e.g., Chaiken & Trope, 1999). The results reported in Chapter 3 indeed revealed that negotiators with high epistemic motivation search information about their counterpart's preferences and priorities, process this information and share the insight by proposing mutually beneficial, integrative solutions.

**Competitive motivation**

Taken together, the experiments reported in Chapter 4 and 5 make an important contribution to research on the effects of social motivation in negotiation in general, and the rather scarce literature on competitive motivation in negotiation in particular. With the exception of early research on experimental games (e.g., Messick & Thorngate, 1967) the different tendencies underlying competitive motivation have not been studied extensively. This is all the more surprising as results of this early work on choice behavior in experimental games suggested that competitive tendencies may in fact be more often based on a motivation to avoid losing, than a motivation to win. Interestingly however, when using the term "competitive motivation" researchers often refer to a motivation to maximize relative gain, i.e., to win. Even the much-used Social Value Orientation measure (Kuhlman & Marshello, 1975) does not distinguish between the two types of competitive motivation. In Chapter 4 and 5 of this dissertation it was established that this distinction is in fact very meaningful, and can have far reaching effects on the processes and outcomes of negotiations.

Thus, one of the contributions of the research reported in Chapters 4 and 5 is that competitive motivation is more complex than was previously assumed. The common view that competitive motivation can be described as a desire to win (e.g., Pruitt & Carnevale, 1993) is too simplistic and fails to take into account that individuals can be motivated not to lose. This raises the question how we need to interpret dispositional competitive motivation, often measured as social value orientation. As the commonly used definition of competitive motivation fails to differentiate between aversive and appetitive competition, we need to exercise caution when interpreting findings, as they might pertain to appetitive competition only.

**Regulatory Focus**
Finally, Chapters 4 and 5 offer contributions to research on regulatory focus (Crowe & Higgins, 1997; Higgins, 1998). As was explained in Chapter 4, aversive and appetitive competition bear some resemblance to promotion and prevention focus from regulatory focus theory. Regulatory Focus Theory (Higgins, 1998) distinguishes between goals related to aspirations and accomplishments (promotion focus), and goals related to protection, safety and responsibility (prevention focus). These two goals elicit different strategic inclinations that are directed towards a desired end state: People with a promotion focus are sensitive to the presence or absence of positive outcomes, while people with a prevention focus are concerned with the presence or absence of negative outcomes (Higgins, Roney, Crowe, & Hymes, 1994). Thus, the critical difference between regulatory focus and appetitive versus aversive competition can be found in the direction of the positive outcomes: Whereas promotion focus refers to any positive outcome, appetitive competition refers to the positive outcome of outperforming a counterpart. Similarly, prevention focus refers to avoiding any negative event, while aversive competition refers to avoiding the negative event of losing.

These differences between appetitive and aversive competition and regulatory focus theory notwithstanding, implications for regulatory focus theory can be derived from the findings reported in this dissertation. First of all, those with a promotion focus may be more risk tolerant and optimistic, which may help them reach agreement in negotiation as well as in other situations, such as social decision-making settings. Second, those with a prevention focus may be characterized by their lack of confidence, high anxiety and risk aversion, which may hamper them in decision making. All in all, Chapters 4 and 5 contribute to our understanding of related constructs, and emphasize the important knowledge that can be gained from incorporating more general theories such as regulatory focus theory into the negotiation realm.

Practical implications

As was stressed throughout this dissertation, negotiation is a pervasive aspect of everyday life, and occurs at all levels of society. As such, this dissertation makes several contributions to practice. First of all, it showed the importance of the interplay between the positions negotiators hold, and the decision rule that they use. This finding shows the potential consequences of choosing a decision rule for those involved in negotiation. On a more general level, it pertains to the importance of preparation in negotiation: Once negotiators have a good grasp of the possible coalitions that may exist in a group, a suitable decision rule may help them use these coalitions to their advantage. Conversely, the results reported in this dissertation suggest that when negotiators find themselves in a minority position, using unanimity rule is their best option.
Second, the finding that it takes one highly motivated negotiator to secure good outcomes for all parties involved has important implication for professionals concerned with training negotiators. Based on the current findings, trainers should emphasize the importance of information search: Even when only one negotiator would engage in this behavior the negotiation might end successfully. Providing even one negotiator with instructions that emphasize the importance of thinking deeply might increase the information exchange necessary to reach high quality, integrative agreements.

**Directions for future research and Limitations**

*Adoption of decision rules by groups*

One possible direction for future research is to examine the adoption of decision rules by groups. In Chapter 2, groups were provided with a decision rule that told group members that either all group members had to agree to finalize an agreement, or that at least a majority, that is, two out of three group members, had to agree in order to close the deal. Although there are some situations in which groups do get decision rules assigned, such as unanimity rule in juror groups in the US, in reality most groups can choose a decision rule themselves. It would be an interesting avenue for future research to investigate which decision rules groups composed of members with different social motivations choose to use. One can expect that for pro-social group members the choice of a decision rule is of relative unimportance, as either majority or unanimity rule can aid them in their attempt to obtain high outcomes for all parties involved. However, this relative indifference may change when pro-social group members are confronted with a pro-self minority who, under unanimity rule, has the power to block a decision. It is interesting to examine whether pro-social group members would in this case engage in the exclusion of this group member for the benefit of the group as a whole by opting for majority instead of unanimity rule. For pro-self group members, the selection of a decision rule may be more important than for pro-social group members, as they strive to obtain the best individual outcomes. It is interesting to examine whether they base their choice for certain decision rules on their perception of their position in the group.

*Long-term effects of asymmetrical negotiations*

Another issue that would be interesting for future research to investigate is the long-term effects of asymmetrical negotiations. The results reported in this dissertation showed that under unanimity rule, pro-self minorities engaged in more decision blocking than pro-social minorities. However, behavior was examined within a limited time span only. In real life, negotiations between the same parties sometimes take place over a longer time span, involving repeated interactions (e.g.
negotiations between political parties or between unions and management representatives). This raises the question what would happen to behaviors such as decision blocking if a pro-self minority would be confronted with a majority of pro-social negotiators or the other way around in repeated interactions over a longer time span. Perhaps such a situation may induce pro-self behavior in an otherwise pro-social minority member, to avoid being exploited. Alternatively, a pro-social minority may use decision blocking when he or she feels this really benefits the group as a whole. Thus, it would be an interesting avenue for future research to investigate the possible use of decision blocking to steer a group away from a collectively sub-optimal course of action.

Task complexity

The findings reported in Chapter 3 revealed that dyads require only one member with high epistemic motivation to obtain a high quality agreement. This conclusion appears to hold for individual difference variables like personal need for structure (Thompson et al., 2001), and for situational variables like process accountability (Tetlock, 1992). In addition, different negotiation tasks were used. Despite these differences in setting I obtained highly similar results, suggesting that the effects of group composition in epistemic motivation on negotiated agreement are not tied to specific settings or operationalizations. However, it cannot be ruled out that the results obtained are limited to tasks with a certain complexity. As current results revealed that the presence of one negotiator with high epistemic motivation secured good outcomes for both parties, regardless of the level of epistemic motivation of the other party, it may be argued that the task that was used was too easy. However, the fact that in Experiment 3.2 dyads often obtained sub-optimal outcomes or failed to reach agreement within the allotted time of 35 minutes reduces this possibility. Nevertheless, future research should investigate whether the effects found in Chapter 3 also hold under increased task complexity, for instance when the negotiation task involves more issues. Although there is general agreement on the fact that negotiation in itself is a complex and cognitively demanding task (Thompson, 1990; Watkins, 1999) there is very little research available that examined the influence of complexity in negotiation directly (but see Thompson & Loewenstein, 1992 for an exception). The possible moderating role of task complexity is therefore not only relevant for the current research, but also for negotiation research in general.

Besides investigating the impact of task complexity operationalized as the number of issues, the complexity of the negotiation in terms of the number of parties in the group might also be an interesting topic for future research. Studies could examine whether one negotiator with high epistemic motivation would also be able to secure good outcomes for all parties when he or she is confronted with
several, instead of just one, counterparts with low epistemic motivation. This research could examine whether similar processes would occur in such a situation as in the dyadic studies reported in this dissertation (Experiment 3.1 and 3.2), or whether a single negotiator with high epistemic motivation in a group does not manage to find integrative agreements for example due to conformity pressures on the part of the others (Asch, 1956). Related to this, it would be interesting to integrate findings reported in Chapter 3 with those reported in Chapter 2, and examine whether it makes a difference for negotiation processes and outcomes whether negotiators with high epistemic motivation hold a majority or minority position in their group.

Choice of paradigms

Throughout this dissertation several different research paradigms were used, such as face-to-face negotiation (Chapter 2), computer mediated negotiation between two real negotiators (Chapter 3 and 4), and computer mediated negotiation with a pre-programmed strategy (Chapter 4 and 5). Employing these different paradigms enabled me to use the right context to examine specific research questions. Nevertheless, some readers might question the generalizability of results found in experiments in which participants negotiate with a pre-programmed strategy to real life negotiations. However, the effects were congruent across paradigms, strengthening confidence in this generalizability. For example, in Experiment 4.2 and Chapter 5 a computer mediated negotiation simulation was used, but the findings of these experiments were highly congruent with those of Experiment 4.3 and 4.4 in which real interaction took place. The results of these experiments revealed that, regardless of the paradigm used, aversive competitors reported more anxiety, less optimism and were more inclined to make use of available information to safeguard their interests than appetitive competitors.

A question that is related to the choice of paradigms involves Chapter 5, which revealed that aversive competitors are unselective in their information usage and freeze on personality information received early in the negotiation. Unfortunately, the task that was employed in Chapter 5 did not allow for a measure of negotiation effectiveness, so the question remains how this behavior displayed by aversive competitors might translate into a truly interactive setting in which individual or joint outcomes can be determined. As the results showed that aversive competitors were inclined to act on initial, perhaps faulty, cues, this can be expected to harm individual as well as collective outcomes: When aversive competitors behave competitively because they perceive their counterpart to be competitive based on initial information, while disregarding actual negotiation behavior by that counterpart, this is likely to harm rather than help these negotiators. Future research should examine whether this is indeed the case.
The future of Motivated Information Processing

A final direction for future research lies in further development of the motivated information processing model of negotiation. Whereas the studies reported in this dissertation revealed beneficial effects of epistemic motivation (e.g., more information search, more integrative multi-issue offers, higher joint outcomes, less reliance on early cues) there may be situations in which high epistemic motivation hurts rather than helps negotiators. One example of such a situation may be when negotiators perceive the negotiation to be complex, whereas in reality the negotiation problem is relatively simple. One could imagine negotiators with high epistemic motivation to continue looking for ways to deal with what they might believe is a complex situation, thereby foregone a relatively easy solution. This might happen especially when all negotiators in a dyad or group have high epistemic motivation, and are therefore all motivated to process information deeply. In such situations, a group norm of thinking deeply and thorough might be developed, with less or no regard for the actual decision that needs to be made. Future research should investigate whether the presence of one or more negotiators with low epistemic motivation might help negotiators reach a decision in less complex situations.

Conclusion

This dissertation addressed motivation effects in negotiation. The findings of eight experiments revealed the pervasive effects of social and epistemic motivation on behavior, cognition, affect and outcomes in group and dyadic negotiation. First, this dissertation shows the importance of the majority and minority position negotiators hold and the decision rule that is used in groups where members have different social motives. Whereas the dominant view would predict that the more pro-socials there are in a group, the better, this dissertation shows that the situation is more complicated. When groups use unanimity rule, the social motivation of the minority member in the group affects negotiation success: Groups with a pro-social minority obtain higher outcomes than groups with a pro-self minority. When groups use majority rule, the social motivation of the majority member affects negotiation outcomes: Groups distribute outcomes more equally when the majority is pro-social instead of pro-self. Second, this dissertation showed that the view "the more, the better" also does not hold for epistemic motivation in dyadic negotiation: When one negotiator has high epistemic motivation, an increase in information search causes the dyad as a whole to benefit and reach high collective outcomes.

Finally, this dissertation shows that the study of social motivation in negotiation should not be limited to pro-social and pro-self motivation. The results
of five experiments show that the type of competitive motivation negotiators have affects the behavior of negotiators and the outcomes of the negotiation. Aversive competitors are more anxious, less confident and act more on information than appetitive competitors. Thus, whereas knowledge of a counterpart's motivation or preferences hinders appetitive competitors, it restores trust and enables aversive competitors to attain high collective outcomes. However, this reactance to information about a counterpart might have detrimental effects as well when this reactance is based on early cues rather than actual negotiation behavior by a counterpart, but these effects can be reduced when aversive negotiators have high epistemic motivation.

In sum, this dissertation adds to our knowledge about the effects of social and epistemic motivation in negotiation and our knowledge about negotiation processes in general. Although future research is needed to increase our understanding of these motivations and answer the questions that were raised accordingly. This dissertation takes a new step into a more comprehensive view of the different kinds of motivations that drive negotiation processes and outcomes.