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Chapter 6

General Discussion

Every day in the media we read, see, and hear about conflicts between individuals. Also at work and among spouses and friends, we encounter conflicts on a regular basis. Some of these conflicts escalate and turn violent, and may have harmful consequences for those involved. In this dissertation, I have examined the consequences of conflicts that arise within groups, and focused especially on groups in which group members are pursuing a common group goal. Examples of such groups are top management teams, whose members are together trying to maximize an organization's revenues, or research and development teams developing a new product. In such groups, conflicts may arise for various reasons, such as different opinions about the content and outcomes of the task being performed (a task conflict), about the logistics of task accomplishment, such as the delegation of tasks and responsibilities (a process conflict), or about interpersonal issues, such as personality differences or differences in norms and values (a relationship conflict; Jehn & Bendersky, 2003).

Traditionally, scholars thought of such intragroup conflicts as impediments to successful group functioning (Argyris, 1962; Blake & Mouton, 1984; Pondy, 1967). Disagreements among group members were assumed to confiscate precious time and energy, and to reduce team effectiveness by making group members less committed to their group (Argyris, 1962; Blake & Mouton, 1984; Brown, 1983; Pondy, 1967). Soon, however, researchers started to embrace a more positive view of intragroup conflict. Theorizing, as well as empirical evidence, began to suggest that although relationship conflicts may be detrimental for group outcomes, task conflicts may actually lead to superior performance by preventing premature consensus and stimulating more critical thinking (e.g., Amason, 1996; Eisenhardt & Schoonhoven, 1990; Jehn, 1995, 1997; Pelled, Eisenhardt, & Xin, 1999; Tjosvold, 2008; Van de Vliert & De Dreu, 1994). Yet, in contrast to this popular belief that groups may benefit from conflict, a meta-analysis of the intragroup conflict literature by De Dreu and Weingart (2003b) revealed that intragroup conflict, including task conflict, generally tends to be negatively related to group outcomes. Since then, a variety of studies have been conducted to better understand the circumstances under which intragroup conflicts may promote or hold back group outcomes (e.g., Bayazit & Mannix, 2003; Bradley, Postlethwaite, Klotz, Hamdani, & Brown, 2012; De Dreu, 2006; Farh, Lee, & Farh, 2011; Gamero, Gonzalez-Roma, & Peiro, 2008; Goncalo,

Polman, & Maslach, 2010; Mannes, 2009; Parayitam & Dooley, 2007; Shaw, Zhu, Duffy, Scott, & Shih, 2011; Tekleab, Quigley, & Tesluk, 2009; Wilkens & London, 2006).

The aim of this dissertation was twofold. The first aim was to utilize this new set of studies to provide an updated, expanded and yet more fine-grained meta-analysis of the intragroup conflict literature, investigating the associations between relationship-, task-, and process conflict and various group outcomes such as group member satisfaction, group member commitment, and group performance. In addition, the meta-analysis aimed to examine possible moderators of these associations, such as differences between studies in terms of context (e.g., task type) and methodology (e.g., the way in which conflict was measured). The findings of the meta-analysis were presented in Chapter 2, and acted as a springboard for the next chapters, which addressed the second aim of this dissertation, which was to improve our understanding of the contextual and individual factors that shape how people deal with task conflicts. More precisely, I examined how group members respond to task conflict when they also experience a relationship conflict (Chapter 3), and how they respond to task conflict when they exhibit an adaptive (i.e., “challenge”) or a maladaptive (“threat”) stress profile during a task conflict (Chapters 4 and 5). This final chapter provides an overview of the results of the research in this dissertation, and a discussion of its theoretical, practical, and methodological implications and contributions.

Summary of Main Findings

The meta-analysis described in Chapter 2 was conducted to better understand the relation between intragroup conflict and group outcomes, and to address the discrepancies in past research on this relation. As shown in Chapter 2, the meta-analysis examined 8880 groups across 116 studies (484 effect sizes) and suggested that despite the large variety in past research findings, some relatively stable associations exist. More specifically, relationship and process conflict were found to be negatively related to each of the group outcomes that I examined, including group performance, the quality of intragroup relations, and group members’ satisfaction and willingness to work for the group. These negative associations were found to be generalizable to different groups, contexts, and outcome variables: Whether the study examined student teams or

professional teams, whether a team involved blue-collar workers or executives, or whether performance was measured objectively or subjectively, the meta-analysis showed a negative relation between relationship and process conflict on the one hand and group outcomes on the other across all the different studies investigating intragroup conflict.

The meta-analysis further showed that, compared to process and relationship conflict, the relationship between task conflict and group outcomes (including group performance) was less strong, yet also more complex. Analyses of main effects as well as moderator analyses revealed that, overall, task conflict was neither negatively nor positively related to group performance but that the direction and strength of this relationship depends on several moderating variables. For example, moderator analyses showed that task conflict was more positively related to group performance in studies where the association between task and relationship conflict was relatively weak. In addition, task conflict was more positively related to group performance in studies conducted among top management teams than non-top management teams, as well as in studies where performance was measured in terms of financial performance or decision quality rather than general performance.

The Damaging Effect of Relationship Conflict

In line with earlier reviews and theorizing, one of the main findings of the meta-analysis suggested that task conflict may either benefit or hurt group outcomes but that this is contingent on specific contextual characteristics (De Dreu, 2008; De Dreu & Weingart, 2003a; Jehn & Bendersky, 2003). In Chapters 3, 4, and 5, I built further on this finding, and investigated several factors that may influence the way individuals deal with task conflict. In Chapter 3, I presented two studies in which I investigated whether and how relationship conflict impairs the link between task conflict and group decision-making. As mentioned above, one of the main findings of the meta-analysis was that groups are more likely to benefit from a task conflict when at the same time there is no or little relationship conflict among the group members (see also De Dreu & Weingart, 2003b; Shaw et al., 2011). Yet, because meta-analyses can only make study-level inferences, the meta-analysis could not provide any direct evidence for this “damaging effect” of relationship conflict, nor investigate the different underlying processes. In Chapter 3, I therefore

examined whether relationship conflict indeed inhibits the potentially beneficial effect of task conflict.

We hypothesized that relationship conflicts may encourage hostile interpretations by group members of each other's task-related viewpoints, and that instead of approaching a task-related debate with an open mind, the presence of relationship conflict may reduce people's willingness to consider and use the viewpoints of their fellow group members (e.g., Shaw, et al., 2011). To examine these ideas, I developed an experimentally controlled situation in which all participants were confronted with exactly the same task conflict. A task conflict was created by means of two confederates who openly disagreed with the participants' preferred decision alternative, and who made it clear that they preferred another alternative. In both studies, the initially preferred decision alternative of the participants was always incorrect. Participants could only derive the correct decision when they used the information of their group members and let go of their initially preferred decision alternative. To measure the tendency of group members to use the viewpoints of their fellow group members, I made sure that participants were able to stick to their initial opinion, or change their initial opinion and adopt the viewpoints of their group members in their decision making.

The results presented in Chapter 3 indicated that the misinterpretation of task conflict as relationship conflict (Study 1), as well as the presence of a relationship conflict alongside the task conflict (Study 2), inhibits the potentially beneficial effect of task conflict. In both cases, a relationship conflict made it more likely that group members would rigidly hold onto their initially preferred decision alternative during a task conflict. In both studies I found a bias in information processing to mediate this effect: those who perceived relatively high levels of relationship conflict (Study 1) and those who had just encountered a relationship conflict (Study 2) were less likely to use the information provided by others which, in turn, explained why they were more likely to stick to their initial opinion. The reasons underlying this bias and rigidity appeared to be both motivational and emotional in nature. It was both a reduced motivation to use their group members' information and the anxiety caused by a relationship conflict that mediated the effect of relationship conflict on individuals' information processing and decision making. In sum, Chapter 3 showed that group members are less likely to

choose the correct decision alternative when a task conflict co-occurs with a relationship conflict. This happens because they are less motivated to systematically process information and feel less able to manage the task conflict. This, in turn, leads them to overlook other group members' information and to hold on to suboptimal initial viewpoints.

Coping with Task Conflict

In the studies discussed in Chapter 4, I applied the biopsychosocial model of arousal regulation (BPSM; e.g., Blascovich & Mendes, 2010; Blascovich & Tomaka, 1996) to examine whether, and if so how, stress and conflict-related coping appraisals shape individuals' behavior during a task conflict. The key question that was addressed in Chapter 4 was whether the impact of a task conflict on group decision-making depends on whether individuals are in a challenge state or a threat state during the conflict. A threat state arises when individuals appraise the demands of a situation as greater than their personal resources, while a challenge state occurs when individuals appraise resources as matching, or as greater than, demands (e.g., Blascovich & Tomaka, 1996). I conducted three studies to examine whether during a task conflict, group members who exhibit a threat- rather than a challenge-state, are more likely to inadequately utilize the information central to their diverging viewpoints, and show a bias towards their initially preferred decision alternative.

In the first study of Chapter 4 I induced threat and challenge states by means of a short writing task that required participants to think about a stressful event in which they did or did not feel in control. After the induction of the threat or challenge state, participants were presented with a conflict situation and were asked to indicate how they would behave in the described situation. In the second study I induced a task conflict in the same way as in Chapter 3, where two other group members openly disagreed with the participants' initial opinion and opted for a different decision alternative. Based on their conflict-related coping appraisals, I determined to what extent the participants were threatened or challenged by the conflict, and how this related to the final decisions they made. In the third study I replicated and extended this second study, but, additionally, also examined cardiovascular indices of threat and challenge states.

Together, the results indicated that the more individuals exhibit a threat rather than a challenge state during a task conflict, the more likely they are to become rigid in sticking to their own viewpoint *and* the less likely they are to use their group members' information instead of their own information. An important consequence of this rigidity and bias was that the higher the level of threat (vs. challenge), the lower the probability that individuals correctly solved the dilemma. These findings, therefore, suggest that task conflict may be functional for decision making, but only when group members do not experience a threat state during the task conflict. More precisely, the likelihood of participants making the correct decision was highest when there was task conflict among the group members (compared to no conflict) and individuals exhibited a challenge rather than a threat state during the conflict.

The results of Chapter 4 point to a strong link between psychophysiological markers of threat and behavioral manifestations of rigidity during task conflict. In Chapter 5 my aim was to replicate this finding in a more complex decision-making task. Moreover, I examined whether a threat state during a task conflict could have a beneficial effect on decision quality when individuals' initial opinion is, in fact, correct. I developed a new experimental set-up in which a task conflict was induced, but where the initially preferred decision alternative of the participants was actually correct. Besides a new task, I also advanced the physiological measurements. Instead of measuring threat and challenge states during final decision-making, I examined threat and challenge states during the conflict itself, enabling us to more directly assess individuals' reactions to the conflict.

The findings presented in Chapter 5 replicate the findings of Chapter 4, showing that cardiovascular reactions during a task conflict are closely related to an individual's behavioral response to the conflict and, thus, to the outcomes of joint decision-making. I found that individuals who exhibited a cardiovascular threat state were less likely to alter their initial opinion than individuals who exhibited a cardiovascular challenge state. Additional analyses illustrated the robustness of this effect, as the cardiovascular markers of challenge or threat predicted the adjustment of the initial viewpoint, even when controlling for other important other factors in intra-group conflict such as the perceived trustworthiness of the opponent and task self-efficacy. Together, the findings of Chapters 4 and

5 underline the usefulness of adopting a psychophysiological approach to intragroup conflict. Likewise, the findings indicate the importance of taking into consideration individual-level characteristics such as cardiovascular reactivity to conflicts, to better understand how people manage conflicts during joint decision-making.

Implications and Contributions

Theoretical Implications and Contributions

One of the most prominent questions in conflict research is whether conflicts between members of a group can have a positive effect on group performance. It has long been assumed that conflicts can indeed have a positive impact, provided that they are task-related and not about more personal or relationship issues (e.g., Amason, 1996; Jehn, 1995). The belief underlying this assumption was that task-related conflicts will lead to more innovative and more informed decisions because they challenge group members to think more critically about their divergent viewpoints. The results of De Dreu and Weingart's (2003b) meta-analysis of the intragroup literature offered little support for this idea, however. Their results suggested that task-related conflicts, like relationship conflicts, are also negatively related to group outcomes. In recent years, many new studies have been conducted, re-examining the consequences of conflict for group performance. The results of these studies were sometimes in line with the conclusions of De Dreu and Weingart's meta-analysis, but sometimes they were not. One of the most important contributions of this dissertation is that in Chapter 2 this large body of new studies on intragroup conflict is reviewed by means of a meta-analysis, and an overview is given of how different types of conflicts, considered in different types of studies, are related to group outcomes. Moreover, in Chapters 3, 4, and 5, this dissertation provides several new insights regarding contextual (e.g., presence of relationship conflict) and individual characteristics (threat/challenge states) that influence the link between task conflict and group decision-making.

Starting with the consequences of relationship and process conflict, the meta-analysis suggested that it is safe to conclude that in addition to relationship conflict, process conflict is also consistently negatively related to group outcomes. With regard to relationship conflict, these findings are

perfectly in line with prior work, which over and over has shown a negative association between relationship conflict and group outcomes (e.g., Amason, 1996; Jehn, 1995). For process conflict, the results of the meta-analysis were somewhat unexpected, because prior theorizing suggested that process conflict may sometimes lead to superior group performance by facilitating a re-evaluation of group members' roles and tasks within the team (e.g., Jehn & Bendersky, 2003; Jehn & Mannix, 2001). The meta-analysis, however, does not support this more positive view of process conflict. One explanation for the negative association between process conflict and group outcomes is that the issues central to process conflicts, such as task delegation or role assignment, are delicate and may carry personal connotations, such as, implied capabilities or respect within the group (cf. Jehn & Bendersky, 2003). For instance, group members who disagree with their task assignments may feel that being assigned the task is a personal insult. In this way, process conflicts may become exceedingly personal and have short-term, as well as long-term, harmful effects on group functioning (Greer & Jehn, 2007; Greer, Jehn, & Mannix, 2008; Jehn, Northcraft, & Neale, 1999; Thatcher, Jehn, & Zanutto, 2003; Vodosek, 2007).

With regard to task conflict, the findings support a more complex picture. Although earlier research on intragroup conflict often assumed a uniform relation between task conflict and performance, neglecting potential moderators of the conflict-outcome relationship, conflict-researchers have long urged taking on a contingency approach to studying the effects of task conflict. In support of this contingency approach, the meta-analysis in Chapter 2, revealed the importance of taking into account "macro-level" characteristics, which are characteristics that operate at the study level of analyses, such as the type of teams that are being examined in a particular study, or how a study operationalizes group performance. Likewise, Chapters 3, 4, and 5 revealed the importance of taking into account more "micro-level" characteristics, which operate at the group or individual level of analyses. Chapter 3, for example, illustrated the crucial role of relationship conflict, which can prevent a task conflict from having the desired positive impact on decision-making quality because it causes group members to become more rigid in sticking to their own opinion during the task conflict. Furthermore, Chapters 4 and 5 highlighted the importance of taking into account the stress that people exhibit during a

conflict, showing that people who are involved in a task conflict and exhibiting a threat state are much more likely to hold to an initial opinion than individuals exhibiting a challenge state.

This dissertation therefore makes an important contribution to conflict theory by providing a more specific answer to the question when conflicts between group members may be positively related to group performance. In line with theory on the distinction between task, process, and relationship conflict, this dissertation shows that only task conflict is likely to be positively related to group outcomes. Yet, in contrast to popular theorizing, the relationship between task conflict and group performance is not uniformly positive, and groups will only benefit from task conflict when specific conditions are met. In line with the information-processing perspective (e.g., Carnevale & Probst, 1998), this dissertation shows that important factors determining whether a conflict will have a positive effect, are factors that interfere with cognitive flexibility and creative thinking. That is, in line with this information perspective, Chapters 3 and 4 show that task conflict may stimulate information processing, but as soon as a task conflict is misinterpreted as a relationship conflict, or when individuals exhibit a threat state, information processing may be obstructed, and decision quality is likely to drop again.

Stress and intragroup conflict. Another contribution of this dissertation is that it integrates the management literature with the biological psychology literature, and thereby brings together two different research disciplines. Although conflicts are often considered to be stressful and have been linked to physical and mental illnesses (Spector & Jex, 1998), to date very little research attention has been paid to the question whether, and if so how, stress affects the outcome of conflicts. In this dissertation I have tried to fill this gap in the literature. I investigated how cardiovascular stress profiles that people exhibit during a conflict relate to how they react behaviorally to the conflict. I found there was a strong and generalizable relation between the extent to which people showed a maladaptive stress response (“threat”) and their tendency to stick to their own opinion. In most real-life situations, this would imply that a task conflict will have more negative consequences when individuals react threatened to it. That is, when individuals exhibit a threat state and,

therefore, are less receptive to diverging opinions, this increases the likelihood that a conflict will become intractable or that it will escalate.

The fact that psychophysiological markers of threat and challenge states are related to rigidity and biased information use during intragroup conflict also has implications for the biopsychosocial model. So far, most of the research that follows the BPSM has focused on possible antecedents of threat and challenge states, such as when someone exhibits a threat state during a social interaction (Blascovich, Mendes, Hunter, Lickel, & Kowai-Bell, 2001) or intergroup competition (Scheepers 2009). There are only a handful of studies which have investigated the association between threat/challenge states and behavioral or performance outcomes (e.g., Blascovich, Seery, Mugridge, Norris, & Weisbuch, 2004; Seery et al., 2011). This dissertation therefore provides an important contribution to the BPSM by illustrating the potential consequences that threat and challenge states can have for the use of conflicting information and opinions. It also reinforces the findings of previous research that psychophysiological markers of a threat state are linked to rigidity and inflexibility (Kassam, Koslov, & Mendes, 2009).

Methodological Implications and Contributions

This dissertation addresses important limitations of previous conflict research. First, in research on group processes such as conflict, it is customary to ask individual group members to report how much conflict they experience in their group. Based on these individual perceptions, an average score for that group is determined, and this average is then used to examine, for example, the relationship between conflict and group outcomes. The implicit assumption in this type of research is that group members perceive more or less similar amounts and types of conflict (e.g., Amason, 1996; Jehn, 1994). This dissertation shows, however, that one and the same conflict is often experienced very differently, and more importantly, that these differences play an important role in how people react and deal with conflict. These findings, therefore, are an important extension of recent work on “conflict asymmetries,” which refers to the differences that exist among conflict parties in the level and type of conflict that are experienced and perceived (cf. Jehn, Rispens, & Thatcher, 2010). This dissertation extends this research by illustrating differences among people in their psychophysiological stress

patterns in response to conflict (i.e., threat or challenge states) and by demonstrating how differences in psychophysiological stress patterns may shape the outcomes of conflicts. Together these findings urge researchers to consider the fact that the group members who are involved in a conflict may not perceive and experience the conflict in the same way.

Another contribution of this dissertation is that it introduces two experimental inductions of task conflict. Despite the vast literature on task conflict, as far as I know there have not been any attempts to create a task conflict experimentally. There have been studies on devil's advocacy and dialectical inquiry in which one person creates a task conflict by challenging the other group members' opinions. Yet, these conflicts were not held constant across the groups and individuals involved, and therefore it is difficult to cancel out alternative explanations for the results that were found. The experimental inductions of task conflict presented in this dissertation were held constant across individuals and therefore enabled us to cancel out possible alternative explanations, such as the level of acquaintanceships among group members, the intensity of the conflicts, or differences in the length of a discussion.

The first of the two inductions of task conflict featured a task-related disagreement during a hidden-profile task. The strength of this induction of task conflict is that it enables researchers to examine three different responses to conflict. That is, participants can respond to the conflict by sticking to their initial solution, by adopting the solution of another group member, or by combining the different viewpoints to derive the correct solution. An additional strength is that it allows researchers to examine biases in information use by considering the extent to which individuals use their own information relative to the information they receive from the other group members during the conflict. The second induction of task conflict is imbedded in a more complex decision-making task, and its strength lies in the fact that it offers a continuous measurement of individuals' tendency to change an initial opinion in deference of another group member. It thus allows researchers to examine the relative extent to which individuals change their opinion in response to a conflict, instead of the categorical outcome measure in the first induction of task conflict (which measures behavior in terms of "change vs. no change of an initial opinion").

These two inductions of task conflict may provide other conflict-researchers with a useful tool to examine individual and contextual characteristics that affect individuals' management of task conflicts. The first of the two inductions also provides a useful tool for researchers using hidden profile situations to study group decision-making. The majority of the research on hidden profile situations has concentrated on the failure of groups to share and discuss important information possessed by only one or only a few group members. That is, research shows that because groups fail to share some privately held, but important, information they often are unable to derive the correct solution to a task (e.g., Stasser, 1992; Wittenbaum & Stasser, 1996). This dissertation shows that even when all information is shared and known, groups often find it hard to derive the correct solution (see also Greitemeyer & Schulz-Hardt, 2003). One reason for this is the so-called "individual preference effect" which refers to group members' tendency to hold onto their initial suboptimal viewpoints even though all information is shared (Brodbeck, Kerschreiter, Mojzisch, & Schulz-Hardt, 2007). This dissertation shows that the co-occurrence of a task and relationship conflict augments this initial preference effect because it undermines group members' motivation to process information systematically and causes group members to focus too much on their own information. Additionally, this dissertation shows that the individual preference effect is augmented when individuals exhibit a threat state, rather than a challenge state, during the discussion of diverging information and viewpoints. These findings therefore provide important insights that help us to understand why groups may still make incorrect decisions, even when all the information is shared and available to all group members.

Practical Implications and Contributions

Intragroup conflicts are ubiquitous in organizational life, and often may have detrimental consequences. Organizations therefore need to understand how the different types of intragroup conflict may affect group members' morale and also how they may affect group performance. In this dissertation, some clear patterns have emerged. It is clear, for example, that, in general, intragroup conflict is negatively related to group members' satisfaction and commitment to working for the group. This is especially true for process conflict and relationship conflict. Hence, when

organizations want to assure themselves that group members are committed and satisfied, it is important to keep disagreement about the logistics of task accomplishment, such as the delegation of tasks and responsibilities, to a minimum, and prevent disagreements about interpersonal issues, such as personality differences or differences in norms and values.

Importantly, the meta-analysis showed that task conflict is also negatively related to group members' morale, yet to a lesser extent than process conflict and relationship conflict. Moreover, the meta-analysis showed that, on the study level of analyses, the association between task conflict and group member satisfaction strongly depends on the correlation between task and relationship conflict. More specifically, task conflict was (more) positively related to group member satisfaction in studies where the correlation between task and relationship conflict was relatively weak. This suggests that group members' satisfaction with their group may not suffer from the presence of task conflicts as long as task conflicts do not co-occur with relationship conflicts. Hence, when groups are able to keep a task-related disagreement from becoming personal, it will enable group members to voice their own perspectives *and* increase their task commitment and satisfaction with the group (Behfar, Mannix, Peterson, & Trochim, 2011).

Similarly, this dissertation shows that people who wish to improve group performance by stimulating a conflict among group members should first of all ensure that the conflict is task-related (rather than process- or relationship-related). However, making sure that the conflict is task-related is not enough. In Chapters 3 and 4, I showed that for groups to benefit from a task conflict, it is crucial that group members be willing to consider viewpoints that oppose their initial viewpoint, and that group members do not try to "win" the disagreement at all costs. During debates and conflict, however, most people show a strong preference for their initial viewpoint, and often have difficulty letting go of it (e.g., Brodbeck, et al., 2007; Greitemeyer & Schulz-Hardt, 2003). When individuals hang onto their initial viewpoint, and argue for it as a goal in itself, regardless of any underlying interests, then on most occasions it is unlikely that a group will be able to benefit from the task conflict because group members will fail to adequately utilize the different information and perspectives.

Hence, for groups to benefit from a task conflict, the challenge is to suppress this preference for initial opinions.

This dissertation offers several insights on how to do so. For example, groups should make sure there is no relationship conflict among the group members. In the presence of a relationship conflict, or when people misinterpret a task conflict as a relationship conflict, group members tend to become defensive and are more likely to hang onto their initial viewpoint. Likewise, the preference for an initial opinion is greater when people feel that they are unable to cope with the demands of a conflict and, for that reason, manifest a “threat” state. For groups to benefit from a task conflict it is, therefore, important that the conflict be purely task-related, and that a situation be created in which people do not take criticism of their viewpoint personally, and feel they can handle the difference of opinion (see also Bradley et al., 2012).

Finally, in addition to individual and group level circumstances that may determine whether task conflict will be found to help group performance, Chapter 2 provided several more “macro-level” factors. The meta-analysis showed that task conflicts were more likely to be positively related to performance among top management teams, compared to teams lower in the organizational hierarchy. Likewise, the relationship between task conflict and group performance was found to be more positive among studies in which group performance was measured in terms of decision quality, or financial performance, rather than more general performance. Managers, therefore, should consider what type of performance improvement they are after, and be aware that when performance can be quantified in a relatively objectively manner (for instance, in terms of decision quality or financial performance), it is more likely that task conflict will make a positive contribution to group performance, compared to when there are only subjective performance measurements.

Limitations and Future Research

The studies that I have presented in this dissertation have numerous strengths, but also some limitations which call for further research. For example, one of the limitations is the experimental nature of the empirical studies presented in this dissertation. The task conflicts in these studies were created by using confederates who openly disagreed

with the initial opinion of the participant and clearly stated that they preferred a different decision alternative. The participants could respond only once, however, and there was no possibility for further discussion. Hence, the conflict over the decision to be taken consisted of only one round of discussion, in which everyone could speak only once. This setup provided many advantages. For example, I would have lost considerable experimental control if I had tried to induce a task conflict consisting of several rounds of discussion. More specifically, given the information that I provided the participants, I could predict their initial opinions, and experimentally control the response of the confederates to the participants' initial opinions. It was, however, impossible to predict the participants' subsequent reaction to the confederates' response, as these reactions could vary from a simple "I agree" to an overt disagreement in which participants would elaborate on all the information they were given. Therefore, it was difficult to come up with an experimentally controlled second response of the confederate that would apply to *all* participants. Given this limitation, an important question for future research is whether the findings can be generalized, and the same results will be found outside the lab, within organizational teams, for example, where task conflicts are often more complex, with a greater variety of opinions, more people involved, and more lengthy discussions. I expect, however, that threat states and the presence of relationship conflict are likely to obstruct decision making in such situations as well, and may even cause conflicts to escalate because not one, but multiple group members, may rigidly hold onto an initial viewpoint, and to fail to consider other group members' viewpoints.

In line with the above, future research should apply a more dynamic approach to understanding the conflict-performance relationship. In terms of task conflict, future research could examine whether rigidity during a task conflict may be more dysfunctional when the task conflict occurs in the relatively early stages of a group task. That is, research has shown that during the early stages of a group task, it is important to approach different viewpoints with an open-mind (Paulus & Dzindolet, 1993), while in later stages of a group task, commitment to a certain decision-alternative may be more helpful. This implies that the damaging effect of relationship conflict, as well as that of threat states, during a task conflict may be more significant during the early stages of a group task.

Such a dynamic approach to understanding the consequences of conflict might also be useful for better understanding the effects of process conflict. Although the meta-analysis reported a clear and stable negative relationship between process conflict and group outcomes, research by Jehn and Mannix (2001) suggests that high performing groups may experience increasing levels of process conflict over time. A possible explanation of this finding is that during the final stages of the group task, when group members need to formalize and implement who will manage and organize certain duties, a process conflict might help to optimize the division of tasks and responsibilities, which, in turn, may help groups to finish in time for a deadline. Thus far, an experimentally controlled examination of process conflict and its relation with group performance is lacking, however, as is a direct examination of the relationship between process conflict and group performance at different points in time. To better understand whether and when process conflict may be positively related to group performance, future research should, therefore, examine the impact of process conflict on group performance more directly, and do so at different moments of a group's life cycle.

Future research could also try to discover the possible antecedents of threat and challenge states during conflicts. This dissertation has focused mainly on the relationship between threat and challenge states and the decisions people take when faced with a task conflict. I have not really dealt with the question of what factors play a role in triggering threat and challenge states (although Chapter 3 does show that the misinterpretation of a task conflict as relationship conflict tends to induce a threat state). As group members' threat and challenge states are determined by their appraisals of the demands of the conflict and their own resources for coping with it, further research needs to identify the situational or individual characteristics that make group members feel they have enough (or not enough) resources to cope with the demands of an intragroup conflict. Recent research has already started to identify some of these factors, such as levels of psychological safety (Bradley, et al., 2012), the intensity of the conflict (Farh, et al., 2011), and whether the conflict endangers the specific goals that people are pursuing (Halevy, Chou, & Galinsky, 2011). More research is needed, however, to better understand what exactly makes people exhibit a threat or a challenge state during a task conflict.

Finally, as in any research, this dissertation raises some new questions that further research should try to address. For example, the meta-analysis suggested that the association between task conflict and group performance strongly depends on how performance is operationalized. Future research could examine the underlying processes that explain why more general group performance measures tend to be more negatively related to task conflict than performance measures directed at decision quality or financial performance. Likewise, the meta-analysis showed that the relationship between task conflict and group performance was more positive among top management teams than among teams lower in the hierarchy. A possible explanation of why teams higher up in the organizational hierarchy show less negative effects of task conflict is that members of such teams are likely to be more politically savvy and better able to handle complex interpersonal situations, such as conflicts (Lazear & Rosen, 1981). Future research should examine the validity of this explanation as well as conduct a direct comparison of top management teams and teams lower in the hierarchy.

Similar questions could be answered regarding the impact of threat and challenge states on decision making. Although my studies suggest a strong link between psychophysiological reactions and individual's tendencies to change their initial solutions, several questions remain. For example, one question is whether there is a specific neurobiological pathway that underlies the relationship between cardiovascular threat/challenge states and (in)flexibility of thought. Moreover, my findings are based on correlational data instead of manipulations of threat and challenge states. Future research could therefore try to experimentally induce threat and challenge states, and examine whether a threat state is indeed related to more rigidity than a challenge state, but then also focus on the specific neurobiological processes that facilitate this link between threat and tendencies to hold onto initial thoughts and preferences.

Conclusion

Based on the findings of this dissertation, it seems safe to conclude that distinguishing different types of conflict only solves part of the paradox of intragroup conflict. That is, distinguishing among different types of conflict has helped to identify conflicts that have a tendency to hurt group outcomes (i.e., relationship and process conflict) and those

that have the potential to help group outcomes (i.e., task conflict). Yet, this dissertation reemphasizes the need for conflict research to adopt a contingency approach to better understand the relationships between conflict and group outcomes, especially when it comes to task conflict. In Chapters 2, 3, 4, and 5, I made a start with this, by examining how contextual characteristics (e.g., relationship conflict) and individual characteristics (that is, psychophysiological appraisals and reactions to conflict) affect the association between task conflict and group performance. Together, the findings presented in these chapters provide many new insights that organizations and groups can use to guard against the potential dangers of intragroup conflict, as well as reap the benefits from it.