The paradox of intragroup conflict

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Chapter 1
The paradox of intragroup conflict: An introduction

This chapter is based on: De Wit, F. R. C., Jehn, K. A., & Scheepers, D. T. (forthcoming). Coping with intragroup conflict. In N. M. Ashkanasy, O. B. Ayoko, & K. A. Jehn (Eds.), *Handbook of Research in Conflict Management.* Edward Edgar Publishing, UK

Humans are social animals. Whether it is at work, at home, or during leisure time, people tend to spend most of their time in the presence of other human beings. Being around other people and working together is not always easy, however. Worldwide, employees spend more than two hours every week – approximately one day a month – dealing with workplace conflicts (CPP, 2008). These conflicts may range from simple quarrels to disputes that have to be resolved in court, and may involve individuals, groups, or even whole departments.

In this dissertation I focus on the consequences of conflicts that occur within groups. More specifically, I investigate the consequences of conflicts that arise within a group of individuals that shares the same goal, and has a mutual interest in obtaining this goal. Examples of such groups are top management teams trying to maximize revenues, and research and development teams developing a new product, but also sports teams trying to defeat the opposing team, or political parties striving to extend their number of seats in parliament. Within these groups, conflicts may arise from diverging opinions or ideas, and may involve a wide range of issues including the group's core objectives, the division of responsibilities, preferences for different decision alternatives, or simply personal incompatibilities.

Understanding the consequences of such conflicts is essential for effective group and organizational performance and, therefore, intragroup conflict has received a considerable amount of research attention already (for reviews, see Jehn & Bendersky, 2003; De Dreu & Weingart, 2003b). Past research on intragroup conflict suggests that intragroup conflict poses a paradox for group functioning because groups may benefit from as well be hurt by it. That is, on one hand, conflict may stimulate critical thinking among group members and facilitate superior group performance (e.g., Amason, 1996; Jehn, 1995; Tjosvold, 2008), while, on the other hand, conflicts may deter group functioning, for example, due to interpersonal animosity and loss of time (e.g., De Dreu, 2008; Hinds & Mortensen, 2005; Lovelace, Shapiro, & Weingart, 2001). Thus far, and in spite of many decades of research, much remains to be understood however about whether and when groups will benefit from or be hurt by disagreements among group members.

The aim of this dissertation is to provide a better understanding of the consequences of intragroup conflict, and to examine how these

consequences differ across individuals, contexts, and types of conflict. In doing so, it will review and address the paradoxical findings of past research that have linked conflict to inferior, but also to superior, group outcomes. In this first chapter, the primary aim is threefold. The first aim is to show the paradox that exists in past research on intragroup conflict. The second aim is to show how this paradox can be partly resolved by controlling for contextual and individual factors that affect how people respond to conflicts. The third, and final, aim is to introduce the different studies presented in this dissertation, and to explain how they address and investigate possible resolutions to the paradox of intragroup conflict.

Research on Intragroup Conflict: A Short History

Intragroup conflict can broadly be defined as the process emerging from perceived incompatibilities or differences among group members (De Dreu & Gelfand, 2008). Traditionally, scholars thought of intragroup conflicts as a hindrance to effective group functioning (Argyris, 1962; Blake & Mouton, 1984; Pondy, 1967). Conflicts were assumed to confiscate precious time and energy, and to reduce team effectiveness by making group members more dissatisfied and less committed to their group (Argyris, 1962; Blake & Mouton, 1984; Brown, 1983; Pondy, 1967). In support of this pessimistic view of intragroup conflict, empirical evidence showed that group members' satisfaction with their group was higher in low-conflict groups compared to high-conflict groups (Gladstein, 1984; Wall & Nolan, 1986) and that low-conflict groups performed better at the group, as well as the individual level (Evan, 1965; Gladstein, 1984).

Over time, researchers started to embrace a more nuanced picture of intragroup conflict. They began to acknowledge the potentially positive effects of conflict on group decision-making, and started to highlight the problems that can arise when group members shy away from conflict and focus too much on maintaining intragroup consensus (Cosier & Schwenk, 1990; Janis, 1972; Mintzberg, Raisinghani, & Theoret, 1976; Schweiger, Sandberg, & Ragan, 1986). In particular, Janis's (1972) descriptions of the negative consequences of "groupthink" illustrated the potential functionality of intragroup conflict for group decision-making. Groupthink can be defined as the deterioration of mental efficiency, reality testing, and moral judgment that results from in-group pressures

and refers to the tendency for groups to become so concerned about group solidarity that they fail to critically and realistically evaluate their decisions, initial viewpoints, and assumptions (e.g., Mullen, Anthony, Salas, & Driskell, 1994; Park, 1990). Janis's most famous example of groupthink is the "Bay of Pigs fiasco," referring to the landing of 1,500 Cuban exiles at the Bay of Pigs in southern Cuba in 1961 in an attempt to overthrow the regime of Fidel Castro. The invasion was approved and supported by US President John F. Kennedy but was a clear and dismal failure. Not only were none of the military objectives achieved, the invasion worsened diplomatic relations between the US and Cuba (as well as the USSR) and almost instigated a nuclear war.

Janis's (1972) analysis of the fiasco highlighted that similarly to other highly cohesive groups, Kennedy's cabinet faced strong pressures to maintain "esprit de corps," causing a lack of internal debate about the support for the invasion. This, in turn, interfered with critical evaluation of their decisions and plans, and led to inadequate reality testing, and the unconscious development of shared illusions about their invulnerability as well as the advantages of the invasion (Janis, 1972). Although empirical research on groupthink has been limited (cf. Turner & Pratkanis, 1998) and Janis's analyses have been criticized (e.g., Kramer, 1998), groupthink theory has had a strong influence on how researchers, as well as practitioners, have approached group decision-making. By stressing the potential risks of too much consensus-seeking, and a lack of debate and conflict among group members, groupthink theory set the way for a more positive view of intragroup conflict.

Another, and related, stream of research also began to highlight the potentially positive effects of intragroup conflict. Research on group decision making showed that groups often make inaccurate decisions because group members neglect to exchange information that before the discussion is known to only one (or only a few) individual group member(s) (for overviews see Stasser, 1992; Wittenbaum & Stasser, 1996). Instead of exchanging this so-called "unshared information", it was found that group members have a tendency to discuss and make use of information that is already known and accessible to all group members. This focus on so-called "shared information" makes biased and inaccurate decisions more likely. More specifically, because group members neglect to share their "unshared" information, they fail to present information

that could challenge pre-dominant viewpoints and help groups to make more accurate decisions.

Conflicts came to be seen as an antidote to groupthink and biased information processing. Disagreements amongst group members were thought to ensure that different decision alternatives would be brought to bear, and that group members would consider different decision alternatives more critically and thoroughly. Soon, researchers began to examine whether groups could indeed benefit from stimulating debate between group members. Research on the "devil's advocacy" procedure (Herbert & Estes, 1977), for example, started to examine whether groups performed better when one group member (the "devil's advocate") would present counterarguments to the solutions that the other group members came up with. The assumption was that this debate (that is, conflict) would help group members to recognize all the limitations and disadvantages of their initial solutions, which would then, in turn, stimulate them to come up with more superior and creative solutions (e.g., Schwenk, 1984, 1990; Schwenk & Cosier, 1993). Several empirical studies indeed demonstrated that devil's advocacy, and other interaction techniques that compel group members to debate and disagree about different decision alternatives, facilitate superior decision-making. Groups employing one of these techniques were consistently shown to make better and more accurate decisions than groups using a consensus procedure (Schweiger et al., 1986; Schweiger, Sandberg, & Rechner, 1989; Schwenk & Cosier, 1993; Schwenk & Valacich, 1994).

These studies, thus, supported a more positive view of conflict. Yet, a closer look at the results showed several negative consequences inherent to intragroup conflict. For example, in groups that stimulated intragroup disagreements, group members showed less acceptance of the decision (e.g., Schweiger, et al., 1989), were less satisfied with the group, and also were less committed to the group (Schweiger et al., 1986; Schwenk, 1990; Schwenk & Cosier, 1993). Intragroup conflict, thus, seemed to pose a paradox: While it appeared to be important for high-quality decisions, it also appeared to be an impediment to group members' morale and acceptance of decisions, which could hurt group functioning especially in the long run (Amason, 1996).

Distinguishing Different Types of Intragroup Conflict

A solution to this paradox was sought in distinguishing different forms of conflict (e.g., Jehn, 1994; Pinkley, 1990; Rahim, 1983; Wall & Nolan, 1986). The negative effects of conflict were attributed to *relationship conflicts*, which involve disagreements among group members about interpersonal issues, such as personality differences or differences in norms and values, and which tend to be relatively emotional in nature (e.g., Amason, 1996; Guetzkow & Gyr, 1954; Jehn, 1994). The more beneficial effects of conflict were ascribed to *task conflicts*, which entail disagreements among group members about the content and outcomes of the task being performed.

Due to their more personal and emotional nature, relationship conflicts were assumed to be difficult to manage and more likely to escalate (e.g., Brehmer, 1976; Cosier & Rose, 1977; Priem & Price, 1991; Torrance, 1957). Relationship conflicts were also assumed to foster avoidance, cynicism, mistrust, and counter-efforts aimed at obstructing other group members (e.g., Amason, 1996). Likewise, the anxiety produced by relationship conflict was thought to inhibit cognitive functioning (e.g., Jehn, 1995; Jehn & Mannix, 2001). Hence, relationship conflict was assumed to reduce group members' satisfaction and willingness to work for the group, and to undermine group functioning, also because the time group members spent responding to relationship conflict could have been spent more efficiently on task accomplishment (Evan, 1965).

In contrast to relationship conflict, task conflict was assumed to have more beneficial consequences. Task-related disagreements were assumed to facilitate superior decisions but also to enhance creativity and innovation. For example, researchers argued that when a task conflict would arise over different decision-alternatives, it would stimulate a more critical evaluation by group members of each team member's ideas, thereby facilitating an increased understanding of the task at hand, and preventing premature consensus and confirmatory biases in group decision-making (e.g., Jehn, 1995; Pelled, Xin, & Eisenhardt, 1999; Schweiger et al., 1986; Schwenk, 1990; Van de Vliert & De Dreu, 1994). Moreover, given that task conflict facilitates group members voicing their own opinions, task conflict was assumed to aid the affective acceptance of group decisions and improve group members' commitment to these

decisions (e.g., Amason, 1996; Amason, Thompson, Hochwater, & Harrison, 1995; Nemeth, 1995).

In addition to relationship conflict and task conflict, later evidence was found for a third type of conflict: process conflict, entailing disagreements among group members about the logistics of task accomplishment, such as the delegation of tasks and responsibilities (e.g., Jehn & Bendersky, 2003; Jehn, Northcraft, & Neale, 1999). In contrast to task conflicts, which are about the content of the task itself, process conflicts are about the means to accomplish the specific tasks, such as the strategies for dealing with the task (Jehn & Bendesky, 2003). Examples of process conflicts are disagreements about who will be responsible for certain task requirements, or disagreements about when certain tasks need to be finished. For instance, when members of a top management team disagree about a certain investment decision, they are facing a task conflict. When they disagree about who will be responsible for setting the investment in motion, they are facing a process conflict.

Contrary to the assumed uniformly positive effects of task conflict and negative effects of relationship conflict, the impact of process conflict on group outcomes was assumed to be less straightforward. On the one hand, process conflicts were assumed to improve group outcomes and group performance in particular, because they may facilitate critical reevaluations of processes, standards, and task and resource assignments (e.g., Jehn & Mannix, 2001). On the other hand, process conflicts were assumed to diminish group outcomes, because the issues at the heart of process conflicts, such as task delegation or role assignment, often carry personal connotations in terms of implied capabilities or respect within the group (cf. Jehn & Bendersky, 2003). For example, when a process conflict arises over the delegation of tasks, members who disagree with their task assignments may feel the task is below them and feel that being assigned the task is a personal insult. In this way, process conflicts may become highly personal (cf. Greer & Jehn, 2007) and may have long-term negative effects on group functioning (Greer, Jehn, & Mannix, 2008).

Task, Relationship, and Process Conflict: Initial Research Findings

Early research on the different types of intragroup conflict mainly examined the consequences of task and relationship conflict. The first findings supported the belief that the task vs. relationship conflict

distinction would "solve" the paradox of intragroup conflict. Specifically, multiple studies showed that relationship conflict was indeed negatively associated with group outcomes such as decision quality (Amason & Mooney, 1999), overall performance (e.g., Jehn, Chadwick, & Thatcher, 1997), group members' satisfaction (De Dreu & Van Vianen, 2001) and affective acceptance of decisions (Amason, 1996). Task conflict, on the other hand, was found to be positively associated with decision quality (Amason, 1996), cognitive task performance (Pelled et al., 1999), and performance more generally (Jehn, 1994) whereas the general association between process conflict and group outcomes was consistently negative (e.g., Jehn et al., 1999; Jehn & Mannix, 2001; Thatcher, Jehn, & Zanutto, 2003).

Despite these results, theoretical as well empirical issues remained, especially regarding the potential positive effects of task conflict. Jehn (1995), for example, found that the positive effects of task conflict were restricted to groups working on non-routine tasks, during which conflict may have helped group members' understanding of the task at hand. Groups working on routine tasks, on the other hand, were found to suffer from task conflict, presumably because the potential benefits were outweighed by the potential costs associated with the conflict (for instance, the time spent on discussing different task-related viewpoints). Likewise, Lovelace et al. (2001) found that across 43 cross-functional new product teams, the level of task conflict was negatively related to the groups' level and quality of innovations. Moreover, several studies showed task conflict to be negatively related to group member satisfaction (DeChurch & Marks, 2001; Jehn, 1995).

To examine this heterogeneity in research findings, De Dreu and Weingart (2003b) performed a meta-analysis of 30 empirical studies on task and relationship conflict, to examine the associations amongst relationship conflict, task conflict, group performance, and group member satisfaction. Consistent with the assumed negative effects of relationship conflict, the results revealed a strong negative association between relationship conflict and both team performance and team member satisfaction. Contrary to the assumed beneficial effects of task conflict, their results, however, also showed that the overall associations amongst task conflict, group satisfaction, and group performance were strongly negative. Not only was the association between task conflict and group

performance negative, it also was just as strong as the association between relationship conflict and group performance. De Dreu and Weingart therefore concluded that "it seems safe to stop assuming that, whereas relationship conflict is detrimental to team performance, task conflict improves team performance" (De Dreu & Weingart, 2003b, p. 748).

In sum, intragroup conflicts pose a paradox for group functioning: disagreements among group members may have both detrimental and beneficial consequences for group performance and group member morale. Researchers sought the solution to this paradox in distinguishing among different forms of conflict (i.e., process, relationship, and task conflict). While relationship conflict, and to a lesser extent process conflict, were assumed to negatively affect group outcomes, task conflict was assumed to facilitate superior group outcomes (e.g., Amason, 1996; Jehn, 1994; Jehn & Bendersky, 2003; Pelled et al., 1999). Yet, reviews of the literature suggest that a distinction between conflict types does not solve the paradox. In contrast to what was generally assumed, the general association between each of the three types of conflict and group outcomes was consistently negative (e.g., De Dreu & Weingart, 2003b; Jehn et al., 1999; Jehn & Mannix, 2001; Thatcher, et al., 2003).

Intragroup Conflict: The Current State of Research

Since the meta-analysis by De Dreu and Weingart (2003b), more than 80 new empirical studies on intragroup conflict have been conducted to better understand the circumstances under which intragroup conflicts may either benefit or inhibit group outcomes (e.g., Bayazit & Mannix, 2003; De Dreu, 2006; Farh, Lee, & Farh, 2010; Gamero, Gonzalez-Roma, & Peiro, 2008; Goncalo, Polman, & Maslach, 2010; Langfred, 2007; Mannes, 2009; Mohammed & Angell, 2004; Olson, Parayitam, & Bao, 2007; Parayitam & Dooley, 2007; Rispens, Greer, & Jehn, 2007; Tekleab, Quigley, & Tesluk, 2009; Wilkens & London, 2006). Several of these studies showed relationships between intragroup conflict and group outcomes that were inconsistent with the conclusions of De Dreu and Weingart (2003b). For example, contrary to the findings of De Dreu and Weingart (2003b), experimental studies (Schulz-Hardt, Brodbeck, Mojzisch, Kerschreiter, & Frey, 2006) as well as field studies linked (moderate) levels of task conflict to superior innovation and creativity, as

well as group performance (e.g., Bayazit & Mannix, 2003; De Dreu, 2006; Farh, et al., 2010; Wilkins & London, 2006). Likewise, some studies even showed a positive association between relationship conflict and group performance (Jehn, Greer, Levine, & Szulanski, 2008; Parayitam & Dooley, 2007).

Many of these studies moved beyond the assumption of a uniformly positive or negative association between conflict and group outcomes, and investigated more complex relationships between conflict and group outcomes. The impact of intragroup conflict, for example, was shown to be contingent on characteristics such as the timing of the conflict (Farh et al., 2010; Jehn & Mannix, 2001), the intensity of the conflict (De Dreu, 2006), the interaction between types of conflict (Shaw, Zhu, Duffy, Scott, & Shih, 2011), and norms facilitating the expression of different viewpoints (Bradley, Postlethwaite, Klotz, Hamdani, & Brown, 2012). Moreover, in addition to performance and satisfaction, which were the two main outcome variables studied by De Dreu and Weingart (2003b), these studies examined the association between intragroup conflict and other group outcomes such as group members' commitment and intention to continue working for the group.

To examine these developments in the conflict literature, I decided to conduct a new meta-analysis, which is presented in Chapter 2 of this dissertation. The aim of the meta-analysis was to utilize this new wave of studies to re-examine the association between relationship, task, and process conflict and a broader set of group outcomes. Moreover, the meta-analysis aimed to investigate how these relationships are moderated by differences between studies in terms of context (e.g., task type or cultural context) and methodology (e.g., the way in which conflict was measured). Finally, I also aimed to examine different outcomes, and I focused not only on indicators of group performance, such as innovation, productivity, and effectiveness (Ancona & Caldwell, 1992; Van der Vegt & Bunderson, 2005) but also on the motivational and affective states of groups, such as intragroup cohesion, trust, group members' intention to remain working in the group, and group member satisfaction and commitment (Balkundi & Harrison, 2006; Barrick, Stewart, Neubert, & Mount, 1998; Hackman & Wageman, 2005; Marks, Mathieu, & Zaccaro, 2001).

As shown in Chapter 2, the meta-analysis examined 8880 groups across 116 studies (484 effect sizes). To address the variety in research findings and to better understand the effects of intragroup conflict on group outcomes, the meta-analysis examines a broad array of possible moderators. Moreover, in addition to task and relationship conflicts, the chapter provides a first meta-analysis of the effects of process conflict on group outcomes. Finally, to enable a more general comparison of the effects of conflict on a variety of group outcomes, it expands on the work of De Dreu and Weingart (2003b) by examining the relationships between intragroup conflict and a wider array of group outcomes.

The meta-analysis presented in Chapter 2 shows that distinguishing among different types of conflict only solves part of the paradox of intragroup conflict. The distinction between different types of conflict has helped to identify conflicts that have a tendency to hurt group outcomes (i.e., relationship and process conflict) and conflicts that have the potential to help group outcomes (i.e., task conflict). Yet, additional research is needed to identify the specific individual, situational, and conflict-specific characteristics that determine how intragroup conflict, and task conflict in particular, affects group outcomes. In response to this, in Chapter 3, 4 and 5, I report on six studies in which I examined how contextual characteristics (i.e., relationship conflict, considered in Chapter 3) and individual characteristics (i.e., psychophysiological coping appraisals, considered in Chapters 4 and 5) affect the association between task conflict and group performance.

The Damaging Effects of Relationship Conflict

The meta-analysis in Chapter 2 brings to light a strong need to identify the circumstances that may help or hinder the potential beneficial effect of task conflict on group performance (see also Behfar & Thompson, 2007; Jehn & Bendersky, 2003; De Dreu & Weingart, 2003a). One particularly important circumstance appears to be the presence of relationship conflict (see also Shaw et al., 2011). That is, in line with the meta-analysis of De Dreu and Weingart (2003b), the meta-analysis presented in Chapter 2 shows that the association between task conflict and group performance tends to be more positive in studies where the correlation between task and relationship conflict is relatively weak, or even negative. This finding suggests that groups are more likely to benefit

from a task conflict when at the same time there is little or no relationship conflict among the group members. However, neither of the two meta-analyses provides any direct evidence for this "damaging effect" of relationship conflict. That is, the meta-analyses draw inferences at the study level of analyses and, thus, are not able to examine what has truly taken place within the groups. Neither meta-analysis, therefore, can investigate the different processes that underlie this potentially damaging effect of relationship conflict (cf. Lau & Cobb, 2010).

To fill this void, in Chapter 3, I investigate whether and how relationship conflict impairs the link between task conflict and group decision-making. I hypothesize that relationship conflict inhibits the potentially beneficial effect of task conflict due to an increased tendency of group members to rigidly hold on to their suboptimal initial decision-preferences (e.g., Brodbeck, Kerschreiter, Mojzisch, & Schulz-Hardt, 2007; Greitemeyer & Schulz-Hardt, 2003). That is, when people misinterpret a task conflict as a relationship conflict, it means they take the conflict "personally" and that their "ego" gets involved. Due to the misinterpretation of a task conflict as a relationship conflict, individuals may, therefore, become defensive (e.g., Baumeister, Smart, & Boden, 1996), which may cause an escalation of commitment and even positional bargaining in which individuals cling to a certain task-related viewpoint and argue for it as a goal in itself, regardless of any underlying interests (Fisher & Ury, 1981).

Yet, relationship conflicts may also occur independently from a task conflict, rather than arising through misinterpretations of task conflict. For example, besides being involved in a task-related disagreement, group members may also disagree about more personal matters, such as political or artistic preferences. This type of relationship conflict, which is not directly related to the task at hand, is likely to cause rigidity during a task-related debate as well. That is, when debates about more personal matters create friction, negative emotions, and interpersonal animosity, this may easily spill over, and determine the way group members react to a task-related debate. The presence of a relationship conflict, for example, may encourage hostile interpretations by group members of each other's task-related viewpoints, thereby creating "a self-fulfilling prophecy of mutual hostility and conflict escalation" (Simons & Peterson, 2000, p.104). Thus, instead of

approaching a task-related debate with an open mind, the presence of relationship conflict may cause group members to be more competitive during a task conflict and this may reduce their willingness to consider and use the viewpoints of their fellow group members (e.g., Janssen, Van de Vliert, & Veenstra, 1999). In sum, both the misinterpretation of a task conflict as a relationship conflict, as well as the co-occurrence of a task conflict with a relationship "conflict, are likely to augment group members' rigidity in group decision-making.

In Chapter 3 I examine these ideas across two studies. In both studies, I confronted participants with exactly the same task conflict. The task conflict involves two other group members who openly disagree with the participants' initial opinion during a group decision-making task, and who both opt for an alternative solution to the task. In the first study, I examine the extent to which individuals misinterpret the task conflict as a relationship conflict. In the second study I manipulate the presence (vs. absence) of a relationship conflict in addition to the task conflict. To measure the level of rigidity, I examine individuals' tendency to change their initial viewpoint in response to the task conflict; in this case, participants are able to choose between sticking to their initial opinion and changing their initial opinion by adopting the viewpoints of their group members. The main research question in Chapter 3 is whether misinterpretation of task conflict as relationship conflict, or the presence of a relationship conflict, indeed inhibits the potentially beneficial effects of task conflict, and whether it does so due to an increased tendency of group members to rigidly hold on to their suboptimal initial decision preferences.

Coping with Intragroup Conflict

Although conflicts are often considered stressful (e.g., Jehn, 1997), in the vast literature on intragroup conflict, relatively little attention has been paid to the role of stress and coping appraisals (see Dijkstra, Van Dierendonck, & Evers, 2005 for an exception). Yet, across several research disciplines, ranging from organizational behavior (Kamphuis, Gaillard, & Vogelaar, 2011; Staw, Sandelands, & Dutton, 1981), to political science (e.g., Thorisdottir & Jost, 2011) to psychophysiology (Kassam, Koslov, & Mendes, 2009), stress has been shown to affect individuals' ability to make decisions and process diverging information.

Therefore, in Chapters 4 and 5 I examine how stress may shape the link between a conflict and decision-making.

To examine the experienced stressfulness of a conflict, in Chapters 4 and 5 I apply the biopsychosocial model of challenge and threat (BPSM; e.g., Blascovich & Tomaka, 1996; Blascovich & Mendes, 2010). The BPSM distinguishes challenge states (i.e., "adaptive stress") from threat states (i.e., "maladaptive stress") and pertains to situations that are goal relevant and require individuals to actively cope with stressors. According to the BPSM, challenge and threat states are the outcome of an evaluation of the demands of the situation (i.e., required effort, uncertainty, and danger) and the person's resources to deal with these demands (i.e., the available skills, knowledge, support, and dispositions). A threat state occurs when individuals evaluate the demands of a situation as exceeding their personal resources, while a challenge state occurs when individuals evaluate resources as matching or exceeding demands (e.g., Blascovich & Mendes, 2010; Blascovich & Tomaka, 1996; Tomaka, Blascovich, Kelsey, & Leitten, 1993). Importantly, the BPSM suggests that threat and challenge states can be measured not only by demands and resource appraisals, but also by specific patterns of cardiovascular reactivity (e.g., Blascovich & Tomaka, 1996).

The key question addressed in Chapters 4 and 5 is whether the impact of a task conflict on group decision-making depends on whether individuals are in a threat or challenge state during the conflict. In Chapter 4, I present three studies in which individuals are confronted with a task conflict, and examine how individuals respond, in terms of information processing and rigidity in holding on to their initial viewpoint, and how this differs between those exhibiting a threat or a challenge state. Across the three studies multiple methods are used. The first study applies a threat/challenge prime in combination with a conflict scenario. In the second and third study I apply the experimental induction of task conflict that is also used in Chapter 3, and examine self-reported threat/challenge states regarding the task conflict. Finally, in the third study I replicate study 2 but also cardiovascular measurements are applied to examine threat and challenge states.

Across the three studies I expected that when group members exhibit a threat state (rather than a challenge state) during the task conflict, they are more likely to fail to adequately utilize the information central to

their diverging viewpoints, and show a bias towards their initially preferred decision alternative. For example, work on the biopsychosocial model has shown a negative relationship between physiological markers of threat and cognitive adjustment to initial anchors (e.g., Kassam et al., 2009). Likewise, work on the threat-rigidity hypothesis (e.g. Staw, et al., 1981) has shown that in the face of financial or physical threats, group members start to rely more on dominant and well-learned strategies or decisions, show less attention to peripheral information, and restrict their information processing (e.g., Kamphuis, et al., 2011). Hence, I assumed that during task conflict, a threat state (compared to a challenge state) will reduce motivation, as well as the capacity for information processing, and cause a so-called "closed-mindedness" towards others' opinions (e.g., Thorisdottir & Jost, 2011).

When Threat during Task Conflict May Facilitate Superior Decision-making

The findings presented in Chapter 4 suggest that psychological as well as physiological threat states during a task conflict are negatively related to decision-making quality. That is, Chapter 4 suggests that individuals exhibiting a threat state are more likely to make an incorrect decision because they are more likely to rigidly hold onto an incorrect initial viewpoint than individuals exhibiting a challenge state. This finding raises an interesting question, however. What happens when an individual's initial opinion is, in fact, correct? When, in such a case, individuals behave more rigidly, and defend and hold on to their initial answer, does that mean that a threat state can be beneficial for decision quality?

Chapter 5 aims to answer this question. To that end, I developed a new experimental induction of a task conflict in which the initially preferred decision alternative of the participants is actually correct. That is, the task used in Chapters 3 and 4 is a so-called hidden profile task, in which the initial opinion of the group members is inherently incorrect and only by falsifying an initial viewpoint and by using each other's information can group members solve the task. Therefore, in Chapter 5 I had to make use of another task in which participants' initial decision was correct. In addition, the task should make it possible to create a debate among group members and to measure the level of rigidity and the quality

of the decision that was made. The task I found to meet these requirements was the NASA dilemma (see Cammalleri, Hendrick, Pittman, Blout, & Prather, 1973), a joint decision-making task in which participants are presented with a moon-landing scenario and a set of 14 objects. It was the participant's task to order these items in terms of their usefulness for survival on the moon. The NASA dilemma, like similar tasks such as the "Lost at Sea" and "Desert Survival" dilemmas, is often used as tools to study and educate people in group decision-making techniques. In a pretest I identified several objects that most of the participants correctly considered to be crucial (or not) for survival on the moon. Based on these results, I developed an induction of task conflict, in which a confederate openly disagrees with the participants' correct initial solution, and provides several reasons for why she believes another ordering of the 14 items would be more appropriate.

In addition to introducing a novel task and task conflict, in Chapter 5 I also improve our physiological measurements by measuring threat and challenge states during the conflict itself, rather than during final decision-making. In this way, I was able to measure more directly how people react to task conflicts. In line with Chapter 4, in Chapter 5 I theorize that the outcomes of the NASA dilemma task are related to people's cardiovascular reactions when they and another group member disagree about the decision to be taken. More specifically, I expect that individuals whose cardiovascular pattern is indicative of relative threat (lower levels of cardiac output and higher levels of total peripheral resistance) are less likely to change their initial opinion than individuals whose cardiovascular pattern is indicative of relative challenge.

Summary and Overview

The aim of this dissertation is twofold. The first aim is to shed more light on the different forms of intragroup conflict and their relationship with group outcomes. To do so, Chapter 2 presents a meta-analytic review of the intragroup conflict literature in which I review 116 studies on intragroup conflict to examine the association between relationship, task, and process conflict and proximal group outcomes (i.e., emergent states, such as trust, and group viability, such as group member satisfaction and group member commitment) as well as distal group outcomes (i.e., group performance). The meta-analysis also examines how

these associations are moderated by differences between studies in terms of context (e.g., task type or cultural context) and methodology (e.g., the way in which conflict was measured).

The second aim of this dissertation is to better understand how contextual and individual characteristics determine how individuals deal with intragroup conflicts. To do so, I experimentally induced a task conflict during group decision-making tasks. Chapter 3 builds upon one of the main findings of the meta-analysis, and presents a series of experiments in which I investigated how the presence of a relationship conflict influences individuals' responses to a task conflict in terms of information processing and rigidity in holding onto initial viewpoints. Using the same design, Chapter 4 makes use of insights from the biopsychosocial model of challenge and threat (BPSM) to investigate how coping appraisals and physiological responses relate to individual responses to task conflict. I again examine the effects on information processing and rigidity in holding on to initial viewpoints. In Chapter 5 I used an alternative induction of a task conflict to replicate the findings of Chapter 4, but with the aim of demonstrating that physiological markers of threat may be linked to superior decision-making quality when rigidity is the functional response to a task conflict. Finally, Chapter 6 presents a general discussion that provides an overview of the results and a consideration of the practical and scientific relevance of this dissertation.