Chapter 4

Coping with intragroup conflict: Why a threat state during a task conflict may be detrimental for group decision-making[8]

A popular assumption holds that task-related disagreements during group decision-making may enhance decision quality because they guarantee that multiple decision alternatives are brought to bear. Ample research shows, however, that task conflict often causes inferior group decision-making. To reconcile this paradox of task conflict, in three studies we apply the biopsychosocial model of challenge and threat (BPSM; J. Blascovich, 2008) to examine how the impact of a task conflict on decision making varies when group members display a challenge or a threat motivational state. Across the three studies we find that threat (rather than challenge) is related to a greater rigidity among group members in holding on to initial viewpoints, as well as to a greater bias in information processing. The results were found using multiple methods, including a threat/challenge-prime (Study 1), self-reported threat/challenge challenge states (Studies 2 and 3), and cardiovascular markers of threat/challenge states (Study 3). The results highlight a consistent relationship between threat and rigidity and provide new insights that may help to solve the paradox regarding the impact of task conflict on group decision-making.

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During group decision-making, a conflict may arise when group members prefer different decision alternatives. Members of top management teams, for instance, may experience a conflict when they disagree about certain merger or acquisition decisions. Likewise, a group of doctors may experience a conflict when they disagree about the decision to operate on a patient, and jury members may experience a conflict when they disagree about whether or not the accused is guilty. A popular theoretical assumption holds that such task-related disagreements may facilitate superior group decision-making because they stimulate group members to think more critically about their initial viewpoints (e.g., Amason, 1996; Jehn, 1994). Research shows however that task-related conflicts pose a paradox for group decision-making: in addition to stimulating critical thinking, they also tend to reduce group member satisfaction and to complicate group functioning (De Dreu & Weingart, 2003b; De Wit, Greer, & Jehn, 2012).

Despite the large number of studies investigating the consequences of task-related conflict, surprisingly little is known about the circumstances that may determine when a task conflict will have a positive or negative impact on group decision-making. In this chapter, we aim to fill this void by examining an often-neglected aspect of intragroup conflict: group members' ability to cope with an intragroup conflict. The key question that is addressed in this chapter is whether the impact of a task conflict on group decision-making depends on whether individuals are in a threat or challenge motivational state during the conflict. According to the biopsychosocial model of arousal regulation (BPSM; Blascovich, 2008; Blascovich & Mendes, 2010; Blascovich & Tomaka, 1996), threat and challenge states are the outcome of an evaluation of the demands of the situation (in terms of required effort, uncertainty, and danger) and the person's resources to deal with the situation (available skills, knowledge, and support, and personality). A threat state occurs when individuals evaluate situational demands as exceeding their personal resources, whereas a challenge state occurs when individuals evaluate resources as matching or exceeding situational demands (e.g., Blascovich & Mendes, 2010; Blascovich & Tomaka, 1996; Tomaka, Blascovich, Kelsey, & Leitten, 1993). In this chapter, we intend to integrate the principles from the BPSM with recent developments in conflict research

(e.g., De Wit, Scheepers, & Jehn, 2012; Halevy, Chou, & Galinsky, 2012; Jehn, Rispens, & Thatcher, 2010). We propose that group members are more likely to hold on to their initially-preferred opinion, and therefore are more likely to make inferior decisions, when they exhibit a threat state during a task conflict rather than a challenge state.

We tested this hypothesis across three studies, and together these studies aim to make several contributions to the existing literature. First, by examining one of the circumstances that may moderate the link between task conflict and group decision-making, these studies address a frequently heard call of conflict researchers to move beyond a uniform conflict-performance relationship, and to identify individual and group characteristics that may shape the relation between task conflict and group decision-making (e.g., Behfar & Thompson, 2007; De Dreu, 2008; De Dreu & Weingart, 2003a; De Wit et al., 2012; Jehn & Bendersky, 2003). Secondly, by investigating the impact of stress and coping appraisals during intragroup conflict, the studies extend and contribute to recent research integrating the conflict literature with the stress literature (e.g., Dijkstra, Van Dierendonck, & Evers, 2005). Finally, earlier research on conflict and group decision-making (e.g., Amason, 1996; Jehn, 1994) implicitly assumed that all group members perceive a task conflict in the same way, neglecting the fact that parties often experience a conflict differently (cf. Jehn & Chatman, 2000; Jehn et al., 2010). In this chapter, we not only extend recent attempts to examine the differences among individuals in how they perceive and experience a task conflict (e.g., De Wit et al., 2012; Halevy et al., 2012; Jehn et al., 2010), we also examine how these individual differences may determine the impact of a task conflict on decision making.

Coping with Task Conflict

In line with past research, we define task conflict as any disagreement among group members arising from differences in opinions, ideas, and viewpoints about the content of the task (e.g., Jehn, 1995; Shaw, Zhu, Duffy, Scott, & Shih, 2011). To benefit from task conflict, it is important that group members dare to share and defend their own opinion, yet also that they are willing to consider other viewpoints and refrain from trying to "win" disagreements at all costs. The latter especially is often a stumbling block. Research shows that group members

often fail to adequately utilize each other's information. Indeed, group members often show a strong preference for their own information and their own initial viewpoints, even when the topic of the discussion is unimportant or when individuals do not have a vested interest in the outcome of the discussion (De Dreu & Van Knippenberg, 2005; Schulz-Hardt & Greitemeyer, 2003).

As a result of this preference for an initial viewpoint, group members are easily tempted to argue for their initial viewpoint as a goal in itself during a task conflict, rather than to try to develop a more accurate understanding of the decision at hand (e.g., Brodbeck, Kerschreiter, Mojzisch, & Schulz-Hardt, 2007). This may especially be true for individuals who feel threatened when their own initial viewpoint is scrutinized by other group members during a task conflict. Research on ego-defensiveness (e.g., Bushman & Baumeister, 1998), for example, suggests that individuals who feel threatened by negative feedback tend to respond defensively and sometimes even aggressively to others (e.g., Fischer et al., 2011; Hart, Albarracín, Eagly, Lindberg, Merrill, & Brechan, 2009; Stucke & Spore, 2002). Hence, when group members exhibit a threat state during a task conflict, it is likely that they will demonstrate defensive and competitive cognitions and behaviors, such as retaliatory responses, disparagement of the viewpoints of others, and attitude polarization (De Dreu and Van Knippenberg, 2005).

Although these defensive and competitive cognitions and behaviors may serve as a protection in maintaining a positive self-concept (e.g., Bushman & Baumeister, 1998), they are likely to be dysfunctional when it comes to group decision-making. That is, it will be more complicated for group members to find a mutually agreeable solution when group members merely focus on defending their initial viewpoints, and only utilize information that supports initially preferred decision alternatives, while disregarding information that is inconsistent with their initial viewpoints (e.g., Fisher et al., 2011). Indeed, as a result of behaving so defensively to exigent viewpoints and information, and by focusing on more accommodating, but possibly low-quality information, individuals exhibiting a threat state during a task conflict may fail to notice possibilities for integrating different perspectives (e.g., Brodbeck et al., 2007). Likewise, they may neglect information that would make their own

preferred decision alternative obsolete, or another decision-alternative evidently superior.

Hence, we propose that when group members exhibit a threat state during a task conflict, they are likely to show a bias towards their initially preferred decision and will fail to adequately utilize the information central to their diverging viewpoints. This hypothesis is consistent with the biopsychosocial model (e.g., Blascovich, 2008) as well as with research on the threat-rigidity hypothesis (e.g., Staw, Sandelands, & Dutton, 1981), both of which build upon Lazarus's earlier work on coping and stress (e.g., Lazarus, 1966) to argue that threat may narrow individuals' field of attention and reduce the information channels used. Indeed, recent work on the biopsychosocial model has shown a negative relationship between physiological markers of threat and cognitive adjustment to initial anchors (e.g., Kassam, Koslov, & Mendes, 2009). Likewise, recent work on the threat-rigidity hypothesis (e.g. Staw, et al., 1981), which states that people limit their level of information processing when they feel threatened, has shown that in the face of financial or physical hazards, 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, Gaillard, & Vogelaar, 2011). In sum, during task conflict, a threat state may reduce the capacity for information processing, and cause a "closed-mindedness" towards other's opinions (e.g., Thorisdottir & Jost, 2011).

Although threat states thus seem to be related to inflexibility and defensive responses, a growing body of literature suggests that a challenge response enables more functional cognitive processing. For example, several studies have shown that individuals who exhibited a challenge (rather than a threat) state performed better during complex cognitive tasks, such as arithmetic tasks (Schneider, 2004; Tomaka et al., 1993) and problem-solving tasks (e.g., Chalabaev, Major, Cury, & Sarrazin, 2009). Likewise, a challenge-state has been related to increased cognitive flexibility, more openness towards other's opinions, and greater adjustments to initial anchoring points compared to threat states (e.g., De Wit et al., 2012; Kassam et al., 2009). Hence, individuals who exhibit a challenge state during a conflict are likely to reflect more adequately, and more thoroughly, on dissenting ideas and opinions than individuals exhibiting a threat state.

Overview of Studies

The above analysis suggests that during a task conflict, a threat-state is likely to be related to an unwillingness to modify initial viewpoints, and a greater focus on information that is related to an initial decision. A challenge state, on the other hand, is likely to be related to greater cognitive flexibility, and a greater willingness to process the information and perspectives of others. In general, a task conflict therefore is likely to have a more beneficial effect on group decision-making when individuals exhibit a challenge rather than a threat motivational state during the task conflict. Across the three studies, we expect that the tendency to hold on to initial decision alternatives will occur to a greater extent under threat compared to challenge (Hypothesis 1). We also expect that under threat (vs. challenge) group members will show a greater bias towards their own unique information (Hypothesis 2). To examine these hypotheses, in Study 1 we made use of an experimental manipulation of threat and challenge states, in combination with a task conflict scenario which participants are asked to read and respond to. In Studies 2 and 3, we experimentally induced a task conflict during a hidden profile task (see Stasser & Titus, 1985; Toma & Butera, 2009) and subsequently examined how conflict-related threat and challenge states are related to group members' information processing and decision making.

Study 1

We conducted the first study to examine the relationship between experimentally induced threat and challenge states, and subsequent reactions to a task conflict. We induced the threat and challenge states by means of a short writing task, after which participants were asked to read a task conflict scenario and to report how they would behave in the depicted conflict situation. We expected to find that participants in the threat condition would indicate being more rigid in trying to hold onto their initial viewpoint (Hypothesis 1), and being more biased in their information processing (Hypothesis 2) than the participants in the challenge condition.

Participants and Design

A total of 40 participants volunteered to participate in this study. The sample included 23 women and 17 men (M_{age} = 36.18 years) who

were recruited at Leiden University and the Leiden community. The participants were randomly assigned to either a threat or a challenge condition.

Procedures and Independent Variable

We told all participants that the purpose of the first part of the experiment was to examine how people remember stressful situations from their past (see Rutjens, Van Harreveld, & Van der Pligt, 2010). Therefore, in both the threat as well as the challenge condition, participants were asked to write about a stressful event they had recently experienced. In line with the BPSM, the difference between the threat and challenge condition was based on whether participants felt their resources for coping with the stressful event were outweighed by the demands of the event (or vice-versa). More specifically, in the threat condition, we asked the participants to recall a recent stressful incident or situation during which they lacked a feeling of control. In the challenge condition, we asked the participants to recall a recent stressful incident or situation during which they still felt in control. In both conditions, participants were asked to summarize and write down the event using approximately 100 words.

After inducing the threat and challenge states, we presented participants with the following task conflict scenario which was intended to overlap with the hidden profile task used in Studies 2 and 3: "Imagine a situation where you and two co-workers work together on an important project. Also imagine that you have to make a difficult decision. There are 4 possible decisions you can make: A, B, C, or D. It appears that you disagree on the subject matter. You think you should go for decision A, whereas your two teammates respectively prefer decision B and C."

Measures

Manipulation check. To check our manipulation of threat and challenge states, right after the writing task, and before reading the conflict scenario, participants were asked to indicate the stressfulness of the event they had described, and the amount of control they had over the situation using Likert scales ranging from 1 (not at all) to 7 (very much). In line with the BPSM, our expectation was that in both conditions participants would describe the event as stressful, but that those in the threat

condition would differ from those in the challenge condition in how much control the felt during the event.

Decision making and information processing. After reading the scenario, participants were asked to rate their agreement with seven questions aimed at measuring rigidity during group decision-making (e.g., "In this situation, to what extent would you try to hold on to your own opinion?," "In this situation, to what extent would you try to defend your own viewpoint as much as possible?," $\alpha = .82$). Likewise, participants were asked to rate their agreement with three items aimed at measuring biased information use. The items were: (1) "In this situation, to what extent would you weigh your own information more heavily than information from other group members when forming your final opinion?" (2) "In this situation, to what extent would you base your final opinion as much as possible on your own information?" and (3) "In this situation, to what extent would you ignore the information from the other group members when forming your final opinion?" ($\alpha = .72$). Participants rated their agreement with the items on Likert scales ranging from 1 (totally disagree) to 7 (totally agree).

Results

Checks

As expected, the manipulation checks showed that participants in both the threat and the challenge condition regarded the situation as stressful ($M = 6.10$, $SD = 1.07$; and $M = 5.80$, $SD = 1.01$ respectively), $F(1, 39) = .83$, $p = .37$. Yet, in line with the BPSM, those in the threat condition ($M = 2.85$, $SD = 1.73$) differed from those in the challenge condition ($M = 5.95$, $SD = .60$) with regard to the control they felt over the stressful situation, $F(1, 39) = 57.51$, $p < .001$.

Hypothesis Testing

In line with Hypothesis 1, participants in the threat condition indicated that they would react more rigidly ($M = 4.62$, $SD = .82$) than did those in the challenge condition ($M = 3.86$, $SD = .89$), $F(1, 39) = 8.07$, $p < .01$. Likewise, in line with Hypothesis 2, participants in the threat condition indicated that they were more likely to use their own (instead of other group members') information during decision making ($M = 3.97$,

SD = 1.11) than did those in the challenge condition (*M* = 3.17, *SD* = .87), $F(1, 39) = 6.46$, $p = .02$. We did not find any effect for gender.

Discussion

These results suggest that individuals are more inclined to hold onto their own opinion when they exhibit a threat state compared to a challenge state during a task conflict. That is, when they were primed with a threat-state, people responded with greater affirmation to statements that they were going to defend their own initial position during a task conflict than when they were primed with a challenge-state. Additionally, individuals expressed a greater tendency to use their own information over the information of others during a task conflict when they were primed with a threat state rather than a challenge state.

These results provide initial support for our hypotheses. Yet, this study has two important limitations. First, the participants responded to a hypothetical conflict-scenario. Hence, there was not an actual difference of opinion, nor was there any information exchange or actual decision-making. Secondly, the threat and challenge states that we induced in this study were not directly linked to the conflict itself. The question therefore remains whether threat/challenge states that arise from the conflict itself (rather than arising from an external source) show a similar pattern with respect to rigidity and selective use of information. In Studies 2 and 3 we address these two limitations by having participants face an actual task conflict during a decision-making task. This allows us to measure actual rigidity in decision making as well as actual biases in information use. Moreover, it allows us to measure threat/challenge states arising from the conflict itself, rather than by inducing them externally to the conflict.

Study 2

To examine actual information processing and decision making, in Study 2, we had participants work on a hidden-profile task (see Stasser & Titus, 1985; Toma & Butera, 2009). A hidden profile task offers a good possibility to examine both the extent to which individuals use other group members' information in their decision making as well as to examine individuals' rigidity in holding onto initial decision preferences. That is, in a hidden profile task, part of the information needed to solve the task is shared among group members whereas other pieces of

information are unshared. When all information available to the group is considered, group members should be able to derive the correct solution to the task. Yet, no group member can identify this best solution on the basis of only his or her own individual information. Instead, group members are directed to a suboptimal decision alternative by the subset of the information they receive. Therefore, the use of each other's information, as well as the disconfirmation of group members' initial preferences is required to derive the correct solution (Schulz-Hardt et al., 2006).

To create a task conflict during the hidden-profile task, we used experimentally controlled reactions by two confederates, who stated their disagreement with the participant's solution and their preference for another solution to the task. To enable participants to solve the hidden-profile task, the experimentally controlled reactions contained all the unshared information necessary to derive the correct solution (see Greitemeyer & Schulz-Hardt, 2003 for a similar procedure). The main aim of Study 2 was to examine how the extent to which individuals reported feeling threatened or challenged by this task conflict affected their decision making and their use of their group members' information. In line with Study 1, we expected that the more group members exhibited a threat state (compared to a challenge state) during the task conflict, the more likely they would be to rigidly hold onto their initial viewpoint (Hypothesis 1), and the more likely they would be to show a bias in their information processing (that is, that they would make relatively more use of their own information compared to that provided by other group members) (Hypothesis 2).

In addition to the impact of threat and challenge states, we also examined whether the task conflict, in general, had a beneficial effect during the hidden profile task. For that reason we included a control condition, in which there was no overt task conflict among the group members and where individuals' initial viewpoints were not being disputed by other group members. We expected that in this control condition, individuals would be less likely to reconsider, or think critically about, their initial solution. Therefore we expected that in this control condition individuals would show a relatively strong inclination to hold on their suboptimal initial viewpoint, and that compared to the task conflict condition, they would be less likely to derive the correct decision.

Participants and Design

A total of 117 undergraduates volunteered to take part in this study in return for a monetary award (6 euros) or partial course credit. The sample included 87 women and 30 men (M_{age} = 20.73). Participants were randomly assigned to the task conflict condition or the control condition.

Decision Task

Participants worked on the hidden profile task developed by Toma and Butera (2009), which concerns a road accident investigation. Ostensibly, the participants had to work together with two other participants with whom they formed a group. Four persons are potential suspects in this accident; based on a specific set of nine clues three of them can be exonerated (Mr. X, Mrs. Y, and Mr. Z) and the fourth (Mr. X's son) incriminated. The task contained 28 items of information: 19 of them were shared and 9 were unshared among the group members (see Toma & Butera, 2009). The 19 shared items describe the circumstances of the accident and some specific characteristics of the suspects. On the basis of the 9 unshared items, participants could identify Mr. X's son as the guilty person. A hidden profile was constructed by allocating three critical unshared items to each of the group members. Based on the three unshared items they received, each group member was oriented to a specific initial preference (Mr. X, Mrs. Y, or Mr. Z). To derive the correct solution, participants were required to use the unshared information of the other group members and to disconfirm their own initial preferences. To have experimental control over the level of task conflict, in our study all participants were directed to the same initial solution (Mr. X), whereas two confederates were asked to argue for Mrs. Y and Mr. Z respectively (for more details see below and appendix A).

Procedures and Independent Variable

When participants arrived in the lab, they were told that they were going to work on a decision-making task with two other participants who were yet to arrive. Participants were seated in separate cubicles and told that they would work on the task as a group via the computer system. The participants were instructed to first study the road accident case individually and to decide whom they identified as the guilty person. They were provided with the 19 shared items along with 3 unshared items that

oriented them towards a specific suspect (Mr. X). Participants were given 2.5 minutes to find a solution. Next, they were invited to present their decision in front of the webcam, and give a clear motivation why they made this decision (recording 1). They were told that (a) their statement would be recorded, (b) the other group members would watch their video-recording, (c) the other group members would give a reaction to their video-recording, and (d) they [the participants] would be able to read the reactions of the other group members to make a final decision. This set-up (as opposed to a real discussion) was used to control the task situation and to standardize it across participants (see Greitemeyer & Schulz-Hardt, 2003 for a similar procedure).

After providing their own decision, in the task conflict condition, we induced the task conflict by having participants read the reaction of the two confederates, who stated their disagreement with the participant's solution, and provided the participants each with three unshared items. In the control condition, the bogus group members also provided the participants each with three unshared items, but instead stated that they agreed with the participant's solution. After this, participants were asked to present their individual final decision by means of a webcam recording and to provide an explanation for why they came to this decision (recording 2). Finally, participants were asked to provide a final rank-order of the four persons in order of likelihood of being the culprit (Mr. X, Mrs. Y, Mr. Z, or the son of Mr. X), after which they were debriefed, paid, and thanked for their participation.

Manipulation of Task Conflict

The unshared items that participants received directed them to suspect Mr. X (see appendix A). We therefore expected participants to argue that Mr. X was the culprit in their video message to the other team members (recording 1). After they announced their decision, and after a short waiting period, participants then read the reaction of the first of the other two group members, who in the task conflict condition disagreed and instead opted for Mrs. Y, whereas in the control condition they agreed and opted for Mr. X (the specific reactions are shown in Appendix A). Thereafter, a reaction from the second of the other two group members followed. In the control condition, this person also agreed and opted for Mr. X. In the task conflict condition, the person disagreed and

opted for Mr. Z. In both conditions, all the previously unshared information was shared by the other two group members. Moreover, participants knew which of their own items were shared and which items were unshared, and were aware that the other two group members would receive different unshared items. This transparency was important because such explicit knowledge allowed participants to deliberately choose not to use the other group members' unshared information in their decision making (Toma & Butera, 2009).

Measures

Reported threat/challenge state. In line with the BPSM, for the participants in the task conflict condition we examined their threat/challenge state by calculating the difference between their perceived demands and their perceived resources to cope with the task conflict. More specifically, directly after they had read the reactions of the other group members, participants were asked to rate their agreement with four statements adapted from Tomaka et al., 1993). Two items concerned the perceived demands of the task conflict (e.g., "I think it is stressful that our solutions differ from each other"). The other two items concerned the perceived recourses to manage the task conflict (e.g., "I think I am able to resolve the difference between our solutions"). Participants gave their responses on 7-point Likert scales with "strongly disagree" (1) and "strongly agree" (7) as endpoints. We determined individuals' threat/challenge state by subtracting the average of the perceived resources from the perceived demands (and so higher values indicated relative threat, while lower values indicated relative challenge).

Decision making. The first dependent variable was the final decision that was made, a categorical measure expressing whether participants chose the decision reflecting rigidity (Mr. X), the correct decision (Son of Mr. X), or a decision reflecting yielding (Mrs. Y or Mr. Z). Mr. X is considered as the rigid decision, because participants who make this decision stick with their initial solution, despite the disagreements with the other group members and the unshared information items they received from them which should have directed them to the correct decision. Mrs. Y and Mr. Z are considered as the "yielding" decision, because participants who make this decision "yield" by agreeing with (one of) the other group members even though their

own unshared information and the information they receive from the other group members directs them to a different solution.

Information Processing. For each participant, two independent coders content-analyzed the video recordings to determine the number of shared and unshared items that participants used to support their final decision. A distinction was made between the three unshared items that participants had received themselves and the six unshared items that were provided to them through the confederates. To examine the bias in information processing, the coders determined the proportion of participants' own versus the other group members' unshared information that was used to support the final decision. Discrepancies between the codings were resolved by reaching consensus via discussion.

Manipulation check and control variable. To check whether the debate with the other group members was indeed perceived to be a task conflict (or not), participants were asked to rate their agreement with two items adapted from Jehn, Greer, Levine, and Szulanski (2008) on 7-point Likert scales (1 = strongly disagree to 7 = strongly agree, r = .85). The items were "The solutions of my team members differ from my own solution" and "The culprit that my team members have in mind differs from my the culprit I have in mind." The items were presented right after participants had received their group members' reactions. Finally, we controlled for gender because we anticipated that male and female participants might react differently to the reaction of the confederates (e.g., Carli, Lafleur, & Loeber, 1995).

Results

Checks

To facilitate our manipulation of the task conflict, participants initially received unshared information that directed them to one specific answer category (Mr. X). To check whether participants indeed initially opted for Mr. X, we content-analyzed the video-recordings to identify their initial solution. The results showed that except for three participants, all of the 117 participants initially thought that it was Mr. X who caused the accident. The three participants who did not choose Mr. X were excluded from further analyses as their answers made the manipulation of task conflict irrelevant.

For the remaining 114 participants, the manipulation of task conflict was successful. The average level of reported task conflict in the task conflict condition was significantly different from that in the control condition, $F(1,113) = 532.27$, $p < .001$. More specifically, in the task conflict condition, the average level of reported task conflict was high and significantly higher than the midpoint on the scale (i.e., 4)($M = 6.51$, $SD = .87$), $t(61) = 22.68$, $p < .001$, while in the control condition the average level of reported task conflict was low and significantly lower than the midpoint on the scale, ($M = 1.84$, $SD = 1.28$), $t(51) = -12.18$, $p < .001$.

Decision making

We first examined whether the participants in the task conflict condition differed from those in the control condition with respect to the decisions they made. We therefore estimated a logistic regression predicting the answer categories, with the presence of task conflict (vs. control) as a predictor variable. Results showed that the task conflict manipulation affected decision making, $\chi^2 = 4.74$, $p < .05$. In line with the expectation that in the face of task conflict individuals will more critically evaluate their initial solution, participants were more likely to change these initial decisions in the task conflict condition, compared to the control condition. This had two implications. First, the task conflict facilitated superior decision making: participants in the task conflict condition were 3.38 times more likely than participants in the control condition to derive the correct solution rather than sticking to their incorrect initial solution, $B = 1.22$, $p = .005$, $Wald = 7.773$. Secondly, participants in the task conflict condition were 3.26 times more likely than participants in the control condition to adopt one of the solutions of the other group members (Mrs. Y or Mr. Z; i.e., yielding) instead of holding on to their initial viewpoint, $B = 1.18$, $p = .031$, $Wald = 4.675$.

Concentrating only on the task conflict condition, we next examined our first hypothesis, that individuals' tendency to rigidly hold onto their initial viewpoint is positively related to the extent to which they exhibit a threat state during the task conflict. To that end, we estimated a logistic regression analysis predicting the answer categories, with the reported threat/challenge state as a predictor variable, and gender as a control variable.

Table 4.1. *Multinomial Logistic Regressions Examining The Decisions Made In Study 2.*

	Final Decision			
Predictor	*B*	*SE*	OR	*Wald*
Incorrect 'Rigidity' Solution (Mr.X) versus				
Intercept	-.45	.50		.80
Gender	1.61*	.81	5.02	3.96
Perceived threat of task conflict	.68***	.18	1.97	14.47
Incorrect 'Rigidity' Solution (Mr.X) versus Incorrect 'Yielding' Solution (Mrs.Y)				
Intercept	-.07	.52		.02
Gender	1.42	.87	4.16	2.68
Perceived threat of task conflict	.48**	.18	1.62	7.19
Incorrect 'Yielding' Solution (Mrs.Y or Mr.Z) versus Correct Solution (Son of Mr. X)				
Intercept	-.38	.47		.66
Gender	.19	.74	1.21	.07
Perceived threat of task conflict	.20	.15	1.22	1.71
Chi-square	24.75***			
df	4			
-2 log likelihood	72.90			
Cox and Snell pseudo R^2	.33			
Sample size	62			

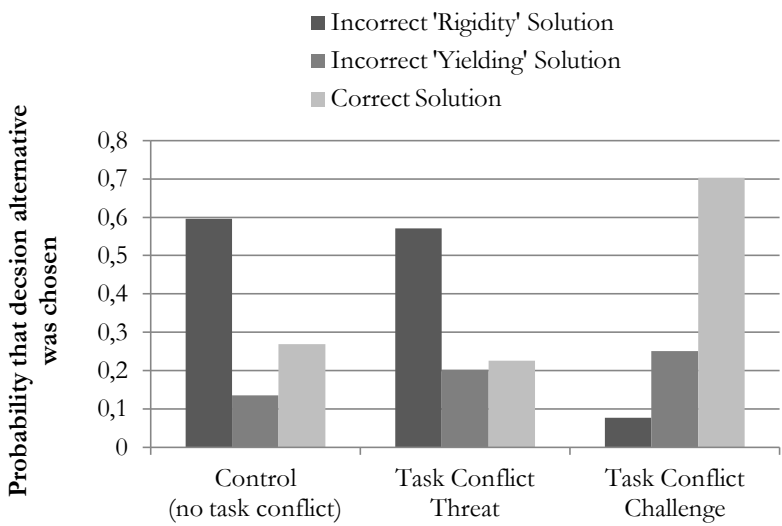
Note. OR = odds ratio, * p < .05, . ** p < .01, *** p < .001.

Table 4.1 shows that, in line with Hypothesis 1, the extent to which group members perceived the task conflict as a threat had a significant influence on their decision making, $\chi^2 = 24.75$, $df = 4$, $p < .001$. Specifically, in line with Hypothesis 1, participants were 1.97 times more likely to hold on to their incorrect initial solution (i.e., rigidity), instead of choosing the correct solution, with every one-point increase in the extent to which they reported a threat state during the task conflict. Similarly, with every one-point increase, participants were 1.62 times more likely to adopt one of the solutions of the other group members (Mrs. Y or Mr. Z; i.e., yielding) instead of holding on to their initial viewpoint.[10]

[10] The results also showed that male participants were 5 times more likely to stick to their incorrect initial solution instead of choosing the correct solution than female participants, $B = 1.61$, $p = .047$, $Wald = 3.96$.

To illustrate the impact of the reported threat during a task conflict on rigidity in decision making, we estimated the predicted probability of each answer category when participants reported relative threat (+1 *SD*) or relative challenge (−1 *SD*). As shown in Figure 4.1, the probability that participants would hold onto their initial incorrect viewpoint was roughly the same for participants in the control condition and for participants who exhibited a threat state during the task conflict. Similarly, the probability that participants would derive the correct solution was highest for those who exhibited a challenge state during the task conflict, and lowest for both the participants in the control condition and for participants who exhibited a threat state during the task conflict.

Figure 4.1. Probability of each decision-alternative when there was no task conflict or when there was task conflict and when the level of threat (vs. challenge) caused by a task conflict was perceived to be high (+1 SD, labeled as threat) or low (−1 SD, labeled as challenge) (Study 2).



Biased Information Processing

We first examined whether the participants in the task conflict condition differed from those in the control condition with respect to the information they used when presenting their final decision. We therefore estimated an ANOVA predicting the (relative) use of participants' own

and their group members' unique information, with the presence of task conflict (vs. control) as a predictor variable. Results showed that in the task conflict condition (M = 1.86, SD = 1.14), the use of the information provided by other group members was significantly higher than in the control condition (M = 1.08, SD = 1.11), $F(1,106) = 12.94$, $p < 0.001$. The same results were found when examining the use of the other group members' information, relative to participants' own unique information, (i.e., respectively M = .52, SD = .23; and M = .37 SD = .34), $F(1,106) = 6.412$, $p = .01$. These results show that in the face of task conflict, people are less biased towards their own information than when task conflict is absent.

To test our second hypothesis, that the extent to which individuals exhibit a threat state during a task conflict is negatively related to individuals' use of the unshared information provided by others, we regressed the (relative) use of participants' own and their group members' unique information on the reported threat/challenge state during the task conflict. In support of Hypothesis 2, the use of the information provided by other group members was negatively related to the threat exhibited during the task conflict; both in absolute terms, $\beta = -.33$, $t(55) = -2.603$, $p = .012$, $R^2 = .11$, as well as relative to their own unique information, $\beta = -.35$, $t(54) = -2.732$, $p = .008$, $R^2 = .12$. These results show that in the face of task conflict, individuals' bias towards their own information is higher, the more they exhibit threat during the task conflict.

Discussion

In line with Study 1, the results of Study 2 support the hypothesis that during a task conflict, people are more likely to hold onto their initial viewpoint the more they exhibit a threat rather than a challenge state. An important consequence of this rigidity was that the degree of threat (vs. challenge) was negatively related to the probability that subjects made the correct decision. More specifically, the more threat people reported during the task conflict, the more likely they were to hold on to their initial decision alternative, and the less likely they were to find the correct solution to the task. In addition to these performance-effects, the results also support the hypothesis that in a task conflict situation, people are more likely to become selective in their use of information the more they exhibit a threat rather than a challenge state. That is, individuals were less

likely to use their group members' information during decision making, and instead were more likely to rely on their own information, the more they exhibited a threat state during the task conflict. Finally, when comparing the task conflict condition with the control condition, the results show that the likelihood of individuals holding onto an initial suboptimal decision-alternative was roughly the same for those exhibiting a threat state during the task conflict and those in a conflict-free situation. Therefore, the results of Study 2 imply that a task conflict may be functional for decision making, but only when group members experience a challenge state during the task conflict.

According to the BPSM, it is possible to examine threat and challenge states not only by demands and resource appraisals, but also by specific patterns of cardiovascular reactivity (e.g., Blascovich & Tomaka, 1996). The use of cardiovascular measures presents several advantages over conventional methods. For example, due to the richness of stimuli and the dynamic nature of conflicts during group decision-making, people may often not be aware of the specific motivational state they are in. Moreover, the threat or challenge states might transform over time, making cardiovascular measures of challenge and threat (which can be measured continuously and unobtrusively) particularly useful during conflict situations (e.g., Blascovich, 2008). The goal of the third study, therefore, was to examine whether we could replicate the findings of this second study, using cardiovascular measurements in addition to self-reported demands and resource appraisals to examine threat and challenge states.

Study 3

The aim of Study 3 was to examine whether cardiovascular indicators of threat and challenge states are related to decision making and information processing in the same way as the self-reported measures we applied in Study 2. In line with Studies 1 and 2, we expected that cardiovascular indices of threat and challenge states during a task conflict would predict individuals' tendency to hold onto initial decision alternatives, and that the tendency to rigidly hold onto their initial viewpoint would occur to a lower extent under challenge compared to threat. We expected the same to be true for the biases in information processing. More specifically, we expected that the cardiovascular

reactivity to the task conflict would predict individuals' tendency to use the information provided by other group members, and that the relative use of their own unshared information vs. that provided by other group members would occur to a greater extent under threat compared to challenge.

Participants and Design

A total of 51 undergraduates (45 women, 6 men, M_{age} = 20.11, SD_{age} = 2.27) took part in this study in return for a monetary award (6 euros) or partial course credit. All participants were presented the same task conflict situation as in Study 2. As the independent variables, we measured both self-report as well as physiological markers of threat and challenge states in response to the task conflict.

Procedures and Independent Variable

The study employed the same hidden profile task and procedures as in Study 2. The exceptions were that we attached the sensors for the cardiovascular (CV) recordings to the participant, recorded baseline CV responses for five minutes at the start of the study, and used video- instead of text-messages during the task conflict manipulation, to increase task engagement, which is a prerequisite for using cardiovascular measurements of threat and challenge states (e.g., Blascovich, 2008). Gender was again entered as a control variable.

Physiological measurements

During motivated performance situations, threat and challenge can be distinguished through specific patterns of cardiac output (CO, the amount of blood pumped by the heart during one minute), and total peripheral resistance (TPR; a measure of the resistance of the arterioles). In absolute terms, challenge is related to an increase in CO and a decrease in TPR (compared to baseline), whereas threat is related to little or no change in CO and no change or an increase in TPR. In relative terms, higher CO and lower TPR are signs of relatively greater challenge or lesser threat (Blascovich et al. 2003, p. 235).

To determine CO and TPR, throughout the study, impedance-cardiographic signals (ICG), electrocardiographic signals (EKG), and blood pressure were continuously measured using a Biopac MP150 system

(Biopac Systems Inc., Goleta, CA). We used Acknowledge software (Biopac Systems, Goleta, CA) to record and store the physiological data and scored the data using Matlab and AMS-IMP software (Free University, Amsterdam, the Netherlands). Other than CO and TPR, we determined heart rate (HR) and pre-ejection period (PEP; a measure of ventricular contractility). A decreased PEP, and an increased HR (compared to baseline) indicate task engagement, which is a requirement to use CO and TPR as indicators of threat and challenge states (e.g., Seery, Weisbuch, Hetenyi, Blascovich, 2010).

In line with the BPSM we calculated average levels of HR, PEP, CO, and TPR for the last minute of the baseline, and the first minute of the individual decision-making speech. In line with standard practice (e.g., Tomaka et al., 1993), reactivity scores were created by subtracting baseline scores from the mean scores during the decision-making speech. Descriptive statistics for each of the reactivity scores can be found in Table 4.2. Finally, to simplify the analyses and because changes in CO and TPR can be seen as two related measures of the same underlying threat/challenge states, we also derived a single threat challenge index (TCI) (Blascovich, Seery, Mugridge, Norris, 2004). The TCI was calculated by converting individuals' TPR and CO values into z-scores, then allocating the CO scores a weight of +1 and TPR a weight of -1 and summing them so that larger values point towards a level of reactivity indicative of greater challenge (e.g., Seery et al., 2010).

Results

Checks

Induction of task conflict. To check whether participants initially opted for Mr. X, we content-analyzed the video-recordings to identify their initial solution. The results showed that 48 of the 51 participants initially thought that it was Mr. X who caused the accident. The three participants who did not choose Mr. X were excluded from further analyses as our induction of task conflict requires individuals to initially opt for Mr. X. For the remaining 48 participants the results showed that the induction of task conflict was successful; the average level of reported task conflict was high and significantly higher than the midpoint on the scale (i.e., 4; $M = 6.53$, $SD = .75$), $t(47) = 23.27$, $p < .001$.

Cardiovascular measures. Before calculating cardiovascular markers of challenge and threat, we established that the task conflict qualified as a motivated performance situation and individuals were indeed engaged in the task conflict (e.g., Blascovich & Mendes, 2010). T-tests show that the speech task indeed qualified as a motivated performance situation; both HR reactivity, $t(45) = 7.54$, $p < .001$, and PEP reactivity, $t(42) = -2.29$, $p = .027$, differed significantly from zero[11].

Analyses

Table 4.2 shows the correlations, means, and standard deviations of the variables included in this study.

Rigidity in decision making. To test our first hypothesis, that group members' tendency to rigidly hold onto their initial viewpoint is positively related to the extent to which they exhibit a threat state during a task conflict, we estimated two logistic regressions predicting the answer categories, with respectively the reported threat/challenge state (Table 4.3, model 1) or the threat challenge index as a predictor variable (Table 4.3, model 2).[12] In line with Hypothesis 1 and the results of Studies 2 and 3, participants were 1.61 times more likely to hold onto their incorrect initial solution (i.e., rigidity), instead of choosing one of the other decision alternatives, with every one-point increase in the extent to which they reported feeling threatened, $B = .22$, $SE = .11$, $p = .046$. Similarly, model 2 in Table 4.3 shows that participants were .61 times more likely to hold on to their incorrect initial solution (i.e., rigidity), instead of choosing one of the other decision alternatives, with every one-point increase in the extent to which they showed a cardiovascular pattern indicating challenge rather than threat in response to the task conflict, $B = -.49$, SE = .25, $p = .041$. The effects of appraisals and physiological reactions had independent effects on decision making; when they were entered together in a binary logistic regression analyses, the effect of physiological threat/challenge reactions remained significant, $B = -.62$, SE = .31, $p = .044$ and that of the threat/challenge appraisals, $B = .27$, $SE = .14$, $p = .055$ did as well, although marginally.

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[11] For technical reasons it was not possible to score the ICG recordings from 5 participants and for 2 of these 5 participants neither were the ECG recordings. For 3 additional participants it was not possible to score their BP recordings. As a result, the remaining sample size is 46 for the HR analyses, 43 for the PEP and CO analyses, and 40 for the TPR analyses.

[12] We only report the results for the analyses using the threat challenge index (TCI). Please note that similar results are obtained when using CO and TPR as the cardiovascular indicators of threat/challenge states.

Table 4.2 *Means, standard deviations, and correlation matrix, Study 3 (N = 48)*

	1	2	3	4	5	6	7	8	9	10	11
Adjustment of initial viewpoint (Non-Rigid=0, Rigid=1)	–										
Use of other's unique information	-.31*	–									
Use of own unique information	-.00	.14	–								
Relative use of own versus other's unique information	-.36*	.91***	-.42**	–							
Gender (male = 0, female = 1)	-.11	.16	.19	.08	–						
Perceived threat of task conflict	.29*	-.11	.14	-.19	.09	–					
Heart rate reactivity	-.28†	.15	.11	.15	.09	-.07	–				
Pre-ejection period reactivity	.12	.09	.01	.05	-.11	.18	-.52***	–			
Cardiac output reactivity	-.29†	.09	-.07	.17	-.12	-.22	.55***	-.57***	–		
Total peripheral resistance reactivity	.32*	-.27†	-.09	-.31†	.09	-.01	-.32*	.26	-.67***	–	
Threat Challenge Index	-.33*	.18	.03	.25	-.12	-.11	.47**	-.42**	.91***	-.92***	–
Mean	.52	1.15	1.56	35.63	0.87	-0.70	10.56	-3.99	0.14	352.92	-.02
SD	.50	1.17	0.80	26.09	0.33	2.96	9.51	11.41	0.48	566.76	1.82
N	48	48	48	42	48	48	46	43	43	40	40

† $p \leq .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 4.3. *Binary Logistic Regressions Examining The Decisions Made In Study 3*

	Model 1				Model 2				Model 3			
Predictor	*B*	*SE*	OR	*Wald*	*B*	*SE*	OR	*Wald*	*B*	*SE*	OR	*Wald*
Intercept	1.82	1.85		0.96	2.57	2.24		1.32	3.87	2.59		2.24
Gender (male = 0, female = 1)	-0.92	0.97	0.40	0.90	-1.32	1.17	0.27	1.27	-1.90	1.33	0.15	2.04
Perceived Threat of Conflict (PTC)	0.22*	0.11	1.25	4.00					0.47*	0.19	1.60	5.93
Threat Challenge Index (TCI)					-0.49*	.24	0.61	4.17	-0.91*	0.39	0.40	5.57
PTC x TCI									-0.19*	0.10	0.82	3.93
Chi-square	5.08				6.00				15.21			
Sig.	.079				.05				.004			
df	2				2				4			
-2 log likelihood	61.38				49.35				40.23			
Cox and Snell pseudo R^2	.10				.14				.32			
Sample size	48				40				40			

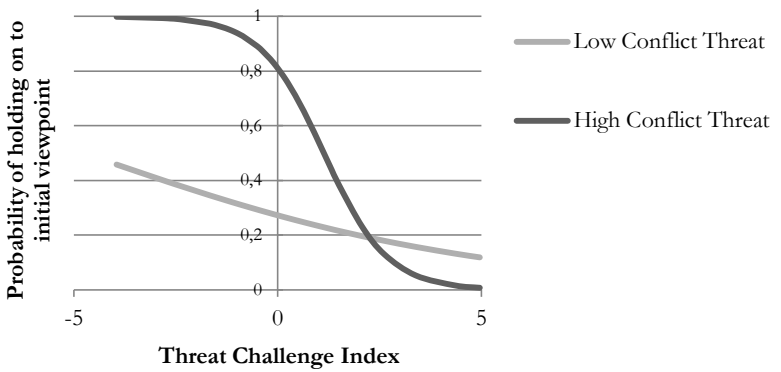
* = $p \leq .05$ *Note.* The level of perceived threat of conflict was mean centered.

Biased Information Processing. To test our second hypothesis, that the extent to which group members use the unshared information provided by others is negatively related to the level of threat exhibited during the task conflict, we regressed (the relative) use of participants' own and their group members' unique information on the extent to which people exhibited a threat or challenge state. The use of the information provided by other group members was not significantly related to the extent to which participants perceived the task conflict as a threat, either in absolute terms, β = -.12, $t(45)$ = -.84, p = .41 or relative to the participants' own unique information, β = -.19, $t(39)$ = -1.23, p = .23. Likewise, the use of the information provided by other group members was not related to the extent to which participants were physiologically challenged, either in absolute terms, β = .20, $t(37)$ = 1.27, p = .21 or relative to the participants' own unique information, β = .27, $t(33)$ = 1.57, p = .13.

Additional Analyses

We also examined whether the reported threat/challenge states and the cardiovascular markers of threat/challenge states interacted, by including an interaction effect of the reported threat/challenge states and the threat/challenge index, as shown in Table 4.3, model 3. The interaction between the threat/challenge appraisals and the threat/challenge reactions had a significant effect on decision making, B = −.19, SE = .10, p = .047. As shown in Figure 4.2, simple slope analyses following the procedure suggested by Aiken and West (1991) revealed that those who reported a threat state (1 SD above the mean) were more likely to hold on to their opinion when they exhibited a cardiovascular pattern indicating threat rather than challenge, B = -2.34, SE = 1.04, $Wald$ = 5.03, OR = .10, p = .025. This was not the case for those who reported a challenge state during the task conflict (1 SD below the mean), B = -.37, SE = .44, $Wald$ = .68, OR= .69, p =.41. These results imply that in addition to the main effects of the reported and the physiologically exhibited threat/challenge states, there is an additive effect, such that individuals become particularly likely to hold on their initial decision alternative when they both report a threat state during the conflict *and* exhibit a physiological pattern of threat.

Figure 4.2. Probability of holding on to an incorrect initial viewpoint for low (−1 SD) and high (+1 SD) perceived threat of conflict and levels of threat vs. challenge reactivity (Study 3).

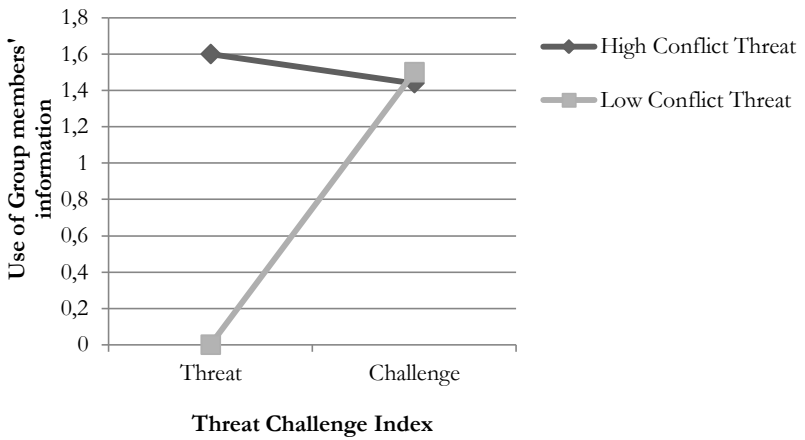


We performed the same analysis for the use of the information provided by other group members, both in absolute terms, as well as relative to the participants' own unique information. The interaction between the threat/challenge appraisals and the threat/challenge reactions had a significant effect on the absolute use of the other group members' information, $B = .08$, $SE = .03$, $p = .015$. As shown in Figure 4.3, simple slope analyses revealed that those who reported a threat state (1 *SD* above the mean) were less likely to use the information provided by the other group members when they reacted as physiologically threatened instead of challenged, $B = .72$, $SE = .27$, $t(39) = -2.69$, $p = 0.011$. Again this was not the case for those who perceived the conflict as a challenge (1 *SD* below the mean), $B = -.09$, $SE = .20$, $t(39) = -.46$, $p = 0.65$. These results imply that individuals were least likely to use the information provided by others when they reported a threat state during the conflict *and* exhibited a physiological pattern of threat.

Discussion

In line with Studies 1 and 2, the results support the hypothesis that people are more likely to hold on to their initially preferred decision-alternative the more they exhibit a threat rather than a challenge state during a conflict. That is, the likelihood that individuals held on to an

Figure 4.3 Use of the information provided by other group members for low (−1 SD) and high (+1 SD) perceived threat of conflict and low (−1 SD) and high (+1 SD) threat vs. challenge reactivity (Study 3).



initial decision-alternative was negatively related to self-reported as well as cardiovascular indicators of threat (rather than challenge). Additional to these main effects, the results also showed an interaction between the self-reported and cardiovascular indicators of threat/challenge states. More specifically, the results showed that individuals were most likely to hold onto their initial viewpoint when both their cardiovascular as well as self-reported indicators of a threat or challenge state indicated a threat state. This suggests that rigidity during a task conflict is most likely to occur when a person experiences a threat state psychologically as well as physically.

With respect to the relationship between threat and challenge states and biases in information processing, the results were less straightforward than those reported in Studies 1 and 2. In contrast to the expected main effects, the results showed an interaction effect of the self-reported and cardiovascular indicators of threat/challenge states on information processing. A possible explanation for the lack of main effects could be that compared to Study 2, in the current study participants were generally much less prone to use their group members' information. The reason for this is likely to be that the interaction took place via video messages instead of text messages. Individuals may,

therefore, have experienced greater difficulties with processing the information they received from their group members. This because the video messages were much more stimuli-rich than the text messages. Yet, although we did not replicate the main effect of self-reported or cardiovascular threat states on information use, the significant interaction between the two is in line with the idea that threat is linked with a greater use of one's own information. That is, individuals were most likely to show a bias towards their own information when there were both cardiovascular and self-reported indications of a threat state. In line with the above results for decision making, this suggests that biases in information use during a task conflict are most likely to occur when a person experiences a threat state physically as well as psychologically.

General Discussion

Across three studies we examined how threat and challenge states during a task conflict relate to individuals' tendency to change their initial viewpoint. We used multiple methods, including a threat/challenge-prime (Study 1), self-reported threat/challenge states (Studies 2 and 3), and cardiovascular markers of threat/challenge states (Study 3). The results showed a consistent pattern: group members who exhibited a threat state during a task conflict were more likely to hold onto their incorrect initial viewpoint than group members who exhibited a challenge state. Moreover, compared to challenged individuals, threatened individuals tended to make less use of the information provided by the other group members in their decision making. Together these results indicate that psychological as well as physiological threat and challenge states play an important role in the link between task conflict and decision making.

Implications

One of the implications of this study is that distinguishing threat from challenge states contributes to solving the paradox of task conflict. In contrast with the commonly held belief that task conflict can enhance group decision quality through the debate and exchange of divergent viewpoints, two meta-analyses suggested that a consistent and generalizable positive relationship between task conflict and decision-making quality does not exist (De Dreu & Weingart, 2003b; De Wit et al., 2012). More specifically, whereas some studies did indeed find that

intragroup disagreement enhances group functioning (Jehn, 1994; Li & Hambrick, 2005; Pelled, Eisenhardt, & Xin, 1999), several others found conflict to be a liability for group performance (e.g., Jehn, Northcraft, & Neale, 1999) or found neither a positive nor a negative relationship (e.g., Barsade, Ward, Turner, & Sonnenfeld, 2000). The current results shed more light on the controversial relationship between task conflict and group decision-making. The findings show that when a task conflict is perceived as a threat rather than a challenge, group members show more biased information-processing and are more likely to hold on to suboptimal solution alternatives. Considering the fact that to benefit from a task conflict, group members need to be willing to process all available viewpoints, the findings imply that the potential positive impact on group decision-making may be limited to task conflicts that are perceived and physiologically experienced as a challenge, rather than a threat. Identifying the conditions under which people perceive a conflict as a challenge or a threat can, therefore, help groups to make better use of diverging task-related viewpoints and, in the end, to make superior group decisions.

The current chapter also addresses important limitations of past conflict research. Many conflict researchers, for example, have implicitly assumed that all conflict parties perceive similar amounts and types of conflict (e.g., Amason, 1996; Jehn, 1994). These researchers, however, have neglected the fact that parties often experience a conflict differently and have dissimilar perceptions of both the amount and the type of conflict (cf. Jehn & Chatman, 2000). Likewise, conflict researchers have often assumed a uniform relation between conflict and performance, neglecting that the way people *perceive* and *experience* a conflict can be an important determinant of how conflicts affect team performance (e.g., Jehn, Rispens, & Thatcher, 2010). In line with previous studies that indicated that individuals differ in the way they perceive disagreements (e.g., Jehn & Chatman, 2000; Pinkley, 1990), the current study shows that people differ in their reactions to a task conflict and that these reactions (i.e., a "challenge" or a "threat" state) may affect the impact a task conflict has on group outcomes.

This chapter also contributes to the literature on hidden profile tasks. The majority of the research on hidden profile situations has focused on the dominance of shared information during group discussions and the failure of groups to exchange and discuss important

information possessed by only one or only a few group members. More recently, attention has shifted to the difficulties of group members to derive the correct solution even when all information is shared and known (e.g., Greitemeyer & Schulz-Hardt, 2003). Research, for example, shows that group members may fail to derive the correct decision when they are not accountable for the decision-making process (Scholten et al., 2007). These findings imply that when group members lack the motivation to process information systemically, they will fail to combine all the pieces of information. Instead, they are inclined to hold on to their initial viewpoint, which causes them to make inferior decisions, and to fail to derive the correct solution to the task (e.g., Greitemeyer & Schulz-Hardt, 2003). The results of the current research extend these studies, showing that threat-states augment this preference for the initial viewpoint, and make group members more reluctant to use the information they receive from the other group members.

Fourthly, and finally, the current studies provide one of the first attempts to integrate the vast literature on intragroup conflict with literature on stress and coping appraisals (see Dijkstra et al., 2005 for an exception). Despite the fact that conflicts are often considered stressful, thus far, research on intragroup conflict has failed to examine group members' appraisals of their ability to cope with conflict. The three studies presented in this chapter emphasize the importance of coping appraisals during task conflict, by showing a strong relationship between group members' ability to cope with the conflict and their tendency to hold on to an initial viewpoint. The current studies thereby extend earlier studies investigating the relationship between threat and rigidity during decision making (e.g., Kamphuis, 2010; Kassam et al, 2009), as well as recent work on threat and confirmatory information search (Fischer et al., 2011), by showing that threat is positively related to confirmatory information-processing as well as rigidity during decision making.

Limitations and Future Research

To induce a task conflict, the discussion between the group members was experimentally controlled. Future research should investigate whether in real group discussions the same processes take place and can account for the negative effects a threat state may have on decision-making quality. We want to stress that the controlled, as opposed

to a real, interaction had three important advantages. First, it enabled us to make sure that all participants were confronted with exactly the same task conflict. In this way, we could cancel out inter-group and inter-conflict differences such as the emotionality of the conflict, acquaintanceship, or duration of the debate. Secondly, the controlled interaction allowed us to make sure that all the unshared information necessary to derive the correct solution would be available to the participant. This allowed us to exclude an alternative explanation of the effects on decision making, namely whether the information was actually shared or not. Thirdly, as all the unshared information necessary to derive the correct solution was available to the participants, we could directly assess the extent to which individuals processed the information provided by other group members in their decision making.

A limitation of the chosen design was that during the task-related disagreement, participants' initial opinion was always incorrect. Therefore, "rigidity" was always dysfunctional for decision-making quality. What we do not yet know, and what future research could address, is what happens if participants' initial opinion is actually correct. When an initial opinion is correct, then rigidity (and threat for that matter) might become beneficial for decision-making quality. Finally, in addition to effects on decision making, differences in physiological reactions might also have important implications for group members' well-being. Negative health outcomes are often the result of chronically elevated cardiovascular responses (Blascovich & Katkin, 1993; Contrada, Cather, & O'Leary, 1999; Dembroski, Schmidt, & Blümchen, 1983). Repeated episodes of threat, for instance, are expected to lead to a greater susceptibility to anxiety, depression, and physical illnesses such as headaches, sleep problems, ischemic heart disease, and hypertension (Blascovich, 2008). To prevent group members' physical and mental well-being from being negatively affected by the way they react to a negotiation, organizational workgroups need to consider the antecedents of threat reactions, and develop possible interventions to overcome them.

To prevent group members from reacting as threatened, interventions can be directed at reducing the demands of intragroup conflict or at increasing group members' resources to cope with conflicts. One possible way to reduce the demands of an intragroup conflict, and thereby prevent group members from reacting as threatened, is to use

collaborative communication styles in which group members communicate their disagreement in a helpful, problem-solving, and non-punitive manner (e.g., De Dreu & West, 2001; Lovelace, Shapiro, & Weingart, 2001). Likewise, groups could ensure that there are high levels of behavioral integration. Research has shown that behavioral integration, the degree to which mutual and collective interaction exists within the group (Hambrick, 1994), increases trust among group members (e.g. Polzer, Crisp, Jarvenpaa, & Kim, 2006) as well as affording a greater understanding of each other's emotions during conflict (Yang & Mossholder, 2004). Collaborative communication styles, as well as behavioral integration, thereby reduce the demands of intragroup negotiations and enable group members to benefit from task-related disagreements (e.g., Gamero, González-Romá, & Peiró, 2008; Mooney, Holahan, & Amason, 2007).

Another possible way of ensuring group members react as challenged, instead of as threatened, to a group negotiation is through conflict management training. Additional training could help to enlarge group members "resources" by increasing their confidence in their own ability to manage a task-related disagreement. As threat and challenge responses are elicited by the relationship between perceived demands and resources, when group members' perception of their capabilities start to exceed their demands, a threat response, and thereby rigidity and avoidance, are less likely to occur. Indeed, research on work-family conflicts shows that following conflict management training, individuals and couples tend to perform and communicate better, are better able to cope with disagreements, and are less likely to suffer from burnouts (e.g. Markman, Renick, Floyd, Stanley, & Clements, 1993; Schaer, Bodenmann, & Klink, 2008).

Conclusion

In this chapter we moved beyond the view that people perceive and experience task conflict in a similar way, or that task conflicts have a uniform effect on group decision-making. Instead of the usually proposed uniform positive or negative relationship between disagreement and group decision-making, we propose a more complex picture. We recognize that people differ in their reactions to task conflict and that these different reactions may affect the impact of a task conflict on group outcomes. Our

findings show that task conflicts have a more positive impact on decision-making quality when the task conflict is perceived, and physiologically experienced, as a challenge. More research is now needed to increase our understanding of the factors that trigger and shape threat and challenge states during task conflict. Only when groups know when and how to make group members exhibit a challenge, rather than a threat, state during a task conflict, may they protect themselves against the possible detrimental effects of a task conflict, and actually reap the potential benefits of it.