

The Paradox of Intragroup Conflict: A Meta-Analysis

Frank R. C. de Wit
Leiden University

Lindred L. Greer
University of Amsterdam

Karen A. Jehn
University of Melbourne

Since the meta-analysis by De Dreu and Weingart (2003b) on the effects of intragroup conflict on group outcomes, more than 80 new empirical studies of conflict have been conducted, often investigating more complex, moderated relationships between conflict and group outcomes, as well as new types of intragroup conflict, such as process conflict. To explore the trends in this new body of literature, we conducted a meta-analysis of 116 empirical studies of intragroup conflict ($n = 8,880$ groups) and its relationship with group outcomes. To address the heterogeneity across the studies included in the meta-analysis, we also investigated a number of moderating variables. Stable negative relationships were found between relationship and process conflict and group outcomes. In contrast to the results of De Dreu and Weingart, we did not find a strong and negative association between task conflict and group performance. Analyses of main effects as well as moderator analyses revealed a more complex picture. Task conflict and group performance were more positively related among studies where the association between task and relationship conflict was relatively weak, in studies conducted among top management teams rather than non-top management teams, and in studies where performance was measured in terms of financial performance or decision quality rather than overall performance.

Keywords: task conflict, relationship conflict, process conflict, group performance, group viability

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In response to the broader deployment of groups in organizations, a large stream of research has emerged on the consequences of intragroup conflicts for group outcomes. Intragroup conflict can broadly be defined as the process emerging from perceived incompatibilities or differences among group members (De Dreu & Gelfand, 2008). Past work first distinguished two forms of intragroup conflict: relationship conflict and task conflict (e.g., Amason, 1996; Guetzkow & Gyr, 1954; Jehn, 1994), and later evidence has been found for a third type of conflict: process conflict (e.g., Jehn, Northcraft, & Neale, 1999). Relationship conflicts involve disagreements among group members about interpersonal issues, such as personality differences or differences in norms and values.

Task conflicts entail disagreements among group members about the content and outcomes of the task being performed, whereas process conflicts are disagreements among group members about the logistics of task accomplishment, such as the delegation of tasks and responsibilities (Jehn & Bendersky, 2003).

Organizational scholars traditionally thought of intragroup conflicts as a hindrance to effective group functioning (Argyris, 1962; Blake & Mouton, 1984; Pondy, 1967). However, initial research began to suggest that conflicts between group members may not always have to be detrimental for group outcomes (e.g., Amason, 1996; Eisenhardt & Schoonhoven, 1990; Jehn, 1995, 1997; Van de Vliert & De Dreu, 1994). Task-related conflicts, for example, may facilitate innovativeness and superior group decision making because they prevent premature consensus and stimulate more critical thinking (e.g., Amason, 1996; Jehn, 1995; Pelled, Eisenhardt, & Xin, 1999; Tjosvold, 2008; Van de Vliert & De Dreu, 1994). A meta-analysis by De Dreu and Weingart (2003b) of 30 empirical studies of intragroup conflict revealed, however, that both task conflict and relationship conflict generally have a negative effect on group outcomes. To reconcile this past meta-analytic finding with past assumptions of the value of intragroup conflict, a range of studies have been conducted in recent years to better understand the circumstances under which intragroup conflicts, and task conflicts in particular, may either benefit or inhibit group outcomes (e.g., Bayazit & Mannix, 2003; De Dreu, 2006; Gamero, González-Romá, & Peiró, 2008; Goncalo, Polman, & Maslach, 2010; Langfred, 2007; Mannes, 2009; Mohammed & Angell,

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Frank R. C. de Wit, Institute for Psychological Research, Leiden University, Leiden, the Netherlands; Lindred L. Greer, Work and Organizational Psychology, University of Amsterdam, Amsterdam, the Netherlands; Karen A. Jehn, Melbourne Business School, University of Melbourne, Melbourne, Victoria, Australia.

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Correspondence concerning this article should be addressed to Frank R. C. de Wit, Leiden University, Institute for Psychological Research, P.O. Box 9555, 2300 RB Leiden, the Netherlands. E-mail: FWit@fsw.leidenuniv.nl

2004; Olson, Parayitam, & Bao, 2007; Parayitam & Dooley, 2007; Rispons, Greer, & Jehn, 2007; Tekleab, Quigley, & Tesluk, 2009; Wilkens & London, 2006).

In the current study, we utilize this new wave of studies focusing on more complex, moderated relationships between conflict and group outcomes to provide an updated, expanded and yet more fine-grained meta-analysis of the intragroup conflict literature than the De Dreu and Weingart (2003b) meta-analysis. The purpose of the current meta-analysis is to examine the impact of relationship, task, and process conflict on proximal group outcomes (i.e., emergent states, such as trust, and group viability, such as group member satisfaction and group member commitment) and distal group outcomes (i.e., group performance) as moderated by differences between studies in terms of context (e.g., task type or cultural context) and methodology (e.g., the way in which performance was measured; see also Figure 1).

The current meta-analysis extends earlier assessments of the intragroup conflict literature in six ways. First, since the July 2001 cutoff for articles included in the meta-analysis by De Dreu and Weingart (2003b), the number of studies available on intragroup conflict has tripled. The current study includes 116 studies (484 effect sizes) compared to the 30 studies (78 effect sizes) included in the De Dreu and Weingart (2003b) meta-analysis. Second, we expand on earlier reviews and meta-analyses by examining a broader array of possible moderators. This is line with both meta-analytic theory (Hunter & Schmidt, 2004) and conflict theory (e.g., De Dreu, 2008; De Dreu & Weingart, 2003a; Jehn & Bendersky, 2003), which both suggest that the heterogeneity in research findings demands a contingency approach to better understand the effects of intragroup conflict on group outcomes. Third, in addition to examining categorical moderators individually (see also De Dreu & Weingart, 2003b), we also perform weighted least squares multiple regression analyses (cf. Lipsey & Wilson, 2001) to gain better insight into the contribution of specific moderators to effect-size variability and to test the influence of continuous moderators

(Steel & Kammeyer-Mueller, 2002). Fourth, in addition to task and relationship conflicts, we also provide a first meta-analysis of the effects of process conflict on group outcomes. Process conflict was not included in the initial meta-analysis of De Dreu and Weingart (2003b) but has generated a substantial body of research in recent years. Fifth, we use meta-analytic structural equation modeling (MASEM) to test the incremental relationships between task, relationship, and process conflict with group outcomes. Finally, to enable a more general comparison of the effects of conflict on proximal group outcomes and distal group outcomes (i.e., group performance), we expand on the work of De Dreu and Weingart (2003b) by examining the relationships between intragroup conflict and a wider array of proximal outcomes (i.e., emergent states, such as trust and cohesion, and group viability, such as commitment and affect; Hackman & Wageman, 2005; Marks, Mathieu, & Zaccaro, 2001).

The Effects of Intragroup Conflict on Group Outcomes

Past research has examined the effects of the three conflict types (task, relationship, and process) on a variety of group outcomes, ranging from team cohesion to task performance. The effects of the three types of intragroup conflict may differ across different outcome categories. Therefore, when examining the effects of intragroup conflicts on group outcomes, we distinguish between two types of outcomes: distal group outcomes and more proximal group outcomes. In terms of distal group outcomes, we focus on group performance, which includes outcomes such as innovation, productivity, and effectiveness (Ancona & Caldwell, 1992; Van der Vegt & Bunderson, 2005). In terms of more proximal group outcomes, we focus on group emergent states and group viability. Group emergent states include the cognitive, motivational, and affective states of groups, such as intragroup trust or cohesion (Marks et al., 2001). Group viability is a broad, group-level con-

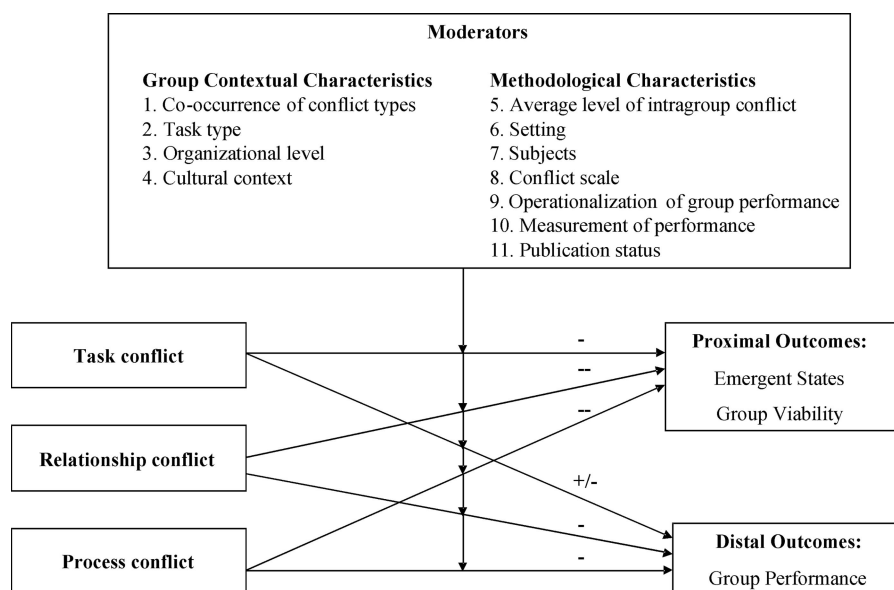


Figure 1. A conflict-outcome moderated model.

struct that reflects group member affect and behavioral intentions and is represented by group members' intention to remain working in the group as well as group member satisfaction and commitment (Balkundi & Harrison, 2006; Barrick, Stewart, Neubert, & Mount, 1998; Hackman & Wageman, 2005). We suggest that the relationship between conflict and both types of proximal outcomes (emergent states and group viability) is equivalent and generally more negative than that between conflict and distal group outcomes (group performance). For instance, a task conflict may have a positive effect on a more distal group outcome, such as group performance, through a more critical evaluation of viewpoints and more educated decision making, yet at the same time, the task conflict may hurt more proximal group outcomes, such as trust within the group and group member satisfaction. This latter effect is especially likely when group members interpret their group members' diverging viewpoints as a negative assessment of their own abilities and competencies (e.g., Swann, Polzer, Seyle, & Ko, 2004). We elaborate in more detail below on the effects of each of the three types of intragroup conflict on both proximal and distal group outcomes.

Task Conflict

Past theory and research often suggested that task conflict has the potential to benefit a broad variety of group outcomes (e.g., Amason, 1996; Jehn, 1995). However, much research has found task conflict to impair both proximal and distal group outcomes (De Dreu & Weingart, 2003b; Hinds & Mortensen, 2005; Lau & Murnighan, 2005; Raver & Gelfand, 2005). The negative effects of task conflict on proximal outcomes, such as satisfaction, can be explained by self-verification theory (Swann et al., 2004), which suggests that group members become dissatisfied when they interpret challenges of their viewpoints by other group members as a negative assessment of their own abilities and competencies. This, for instance, can cause people to ruminate and experience stress as a result of task conflict (cf. Dijkstra, Van Dierendonck, & Evers, 2005; Yang & Mossholder, 2004). The findings of the negative effects of task conflict on more distal group outcomes, such as group performance, support the information-processing perspective (e.g., Carnevale & Probst, 1998), which suggests that task conflicts are a distraction and require resources that cannot be directly invested into task performance. As task conflict increases cognitive load, it also interferes with effective cognitive processes (e.g., Carnevale & Probst, 1998) and may result in narrow, black-and-white thinking and, thereby, obstruct distal group outcomes, such as group effectiveness, creativity, and decision making (De Dreu, 2008).

On the positive side, task conflicts often have been suggested to potentially benefit group outcomes and distal group outcomes, such as group performance, in particular (e.g., Amason, 1996; Jehn, 1995; Olson et al., 2007). A main benefit of task conflict for groups and their members is thought to be an increased understanding of the task at hand and a more critical evaluation of each other's ideas (Amason, Thompson, Hochwater, & Harrison, 1995; Nemeth, 1995). In this way, task conflict may benefit distal group outcomes, such as by overcoming confirmatory biases in group decision making (e.g., Schulz-Hardt, Brodbeck, Mojzisch, Kerschreiter, & Frey, 2006; Schweiger, Sandberg, & Rechner, 1989; Schwenk, 1990) and enhancing innovation (e.g., De Dreu, 2006; De Dreu & West, 2001). Additionally, task conflict may benefit

proximal group outcomes. As a task conflict facilitates group members to voice their own perspective of the task at hand (e.g., Simons & Peterson, 2000), task conflict may be positive for task commitment and member satisfaction (Behfar, Mannix, Peterson, & Trochim, 2011).

Relationship Conflict

Relationship conflicts have generally been found to have large negative effects on both proximal and distal group outcomes (cf. Amason, 1996; Jehn, 1995). Disagreements about personal issues heighten member anxiety (Dijkstra et al., 2005) and often represent ego threats because the issues central to these conflicts are strongly intertwined with the self-concept. This ego threat (Baumeister, 1998) often increases hostility among group members, which, in turn, makes these conflicts more difficult to manage (De Dreu & Van Knippenberg, 2005) and more likely to negatively affect proximal group outcomes, such as identification or trust (e.g., Jehn, Greer, Levine, & Szulanski, 2008; Polzer, Milton, & Swann, 2002; Rispens, Greer, & Jehn, 2007) and member commitment or turnover intentions (e.g., Bayazit & Mannix, 2003; Conlon & Jehn, 2007; Elron, 1997; Raver & Gelfand, 2005). Relationship conflicts also tend to impair more distal group outcomes. Specifically, relationship conflicts can harm group performance because they reduce collaborative problem solving (De Dreu, 2006) and because the time group members spend responding to non-task-related issues could be spent more efficiently on task accomplishment (Evan, 1965). In support of this, relationship conflicts have often been found to harm distal group outcomes, such as group creativity (e.g., Farh, Lee, & Farh, 2010) and group performance (e.g., Brief & Weiss, 2002; Carnevale & Probst, 1998; De Dreu & Weingart, 2003b; Jehn, 1997; Staw, Sandelands, & Dutton, 1981).

However, research has suggested that the negative effects of these conflicts on both proximal and distal group outcomes can be reduced under certain conditions (e.g., Rispens, Greer, Jehn, & Thatcher, in press). For example, recent research has begun to identify the conditions under which relationship conflict may be less likely to negatively affect both proximal and distal group outcomes, such as when members employ effective conflict management strategies (e.g., De Dreu & Van Vianen, 2001; Jehn, 1997; Murnighan & Conlon, 1991; Tekleab et al., 2009) or have low emotionality surrounding relationship conflicts (e.g., Jehn et al., 2008).

Process Conflict

A growing line of research has demonstrated a predominantly negative association between process conflict and both proximal and distal group outcomes (e.g., Behfar, Mannix, Peterson, & Trochim, 2002; Greer & Jehn, 2007; Jehn et al., 2008; Matsuo, 2006; Passos & Caetano, 2005; Vodosek, 2007). The negative effects of process conflict on group outcomes are thought to occur 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). Process conflicts, for instance, may harm the quality of emergent states and group viability (e.g., Jehn et al., 1999; Thatcher, Jehn, & Zanutto, 2003; Vodosek, 2007) and distract members from task accomplishment (Jehn, 1995), thereby negatively impacting both proximal and distal group outcomes.

However, there is reason to believe that under certain circumstances, process conflicts might be less likely to hinder group performance (e.g., Behfar et al., 2011). For example, disagreements about who is responsible for what and how things should proceed might facilitate crucial reevaluations of processes, standards, and task and resource assignments, which may even improve group outcomes (e.g., Jehn & Mannix, 2001) and distal group outcomes, such as group performance, in particular. Recent research has begun to examine potential moderating effects of process conflict and has found that the negative effects of process conflict on more proximal group outcomes, such as trust or negative affect, may be reduced when members can effectively resolve their process conflicts (Jehn et al., 2008) or when members perceive the process conflict as being about actual process improvements and not other members trying to obstruct them (Greer & Jehn, 2007). Additionally, process conflict may be more advantageous at the start of group project, when the group is still in the preparation stage and can still benefit from the examination of different alternatives to complete the task (Goncalo et al., 2010).

Differences Among Conflict Types and Group Outcomes

Taken together, past theory and research suggest that all forms of conflict may have a negative effect on group outcomes (De Dreu & Weingart, 2003b) and proximal outcomes in particular but that this negative effect can be reduced and even reversed under certain conditions. Additionally, differences may exist between the different conflict types in the magnitude of these effects. Specifically, past research suggests that the effect of task conflict on both proximal and distal group outcomes may be less negative than that of relationship or process conflict. Task conflicts are less closely associated with negative emotions than the other conflict types (Jehn et al., 2008) and tend to carry fewer personal connotations (cf. Greer & Jehn, 2007). Compared to relationship and process conflicts, task conflicts have been found to be less negatively related to more proximal group outcomes, such as groups' affective climate (i.e., as moods shared by team members; Gamero et al., 2008) and group members' satisfaction and intentions to remain working in a group (Bayazit & Mannix, 2003; De Dreu & Weingart, 2003b). For example, Thatcher, Jehn, and Chadwick (2007) found that with respect to group member morale (i.e., the degree to which individuals felt satisfied and committed about the group interactions), task conflict did not appear to have the expected negative relationship, whereas both process and relationship conflict did. This suggests that the bivariate relationship between task conflict and proximal group outcomes may not be as negative as that between relationship or process conflicts and proximal group outcomes.

Similarly, task conflicts, compared to process and relationship conflicts, are the least likely to negatively affect more distal group outcomes. This is because task conflicts, as compared to process and relationship conflicts, are the conflicts most directly related to

the task at hand. Task conflicts are therefore the most likely to facilitate a crucial reevaluation of initial viewpoints, which can result in improved distal group outcomes, such as group performance (e.g., Amason, 1996). This implies that the potential for conflicts to be less negative and even positive for distal group outcomes is stronger for task conflicts than for process and relationship conflicts (see also Figure 1).

A Contingency Approach in Understanding the Effects of Intragroup Conflict

To address potential differences between different types of conflict and group outcomes, we apply a contingency framework in this meta-analysis in which the effects of conflict are proposed to depend on the type of conflict, the type of outcomes, and the presence of critical moderating variables (cf. Jehn & Bendersky, 2003; see also Figure 1). On the basis of past theory and research, we have identified two categories of critical moderating variables: contextual characteristics and methodological characteristics. We discuss in the following section the theoretical rationale underlying the role of study contextual characteristics in determining the effects of conflict on both proximal and distal group outcomes and discuss in our Method section the methodological characteristics that may have also influenced the effects of conflict on proximal and distal group outcomes in past research.

Co-Occurrence of Conflict Types

The first critical contextual moderating variable we focus on is the co-occurrence of conflict types across different studies. Task conflict, for example, is suggested to be more positively related to group outcomes when it does not co-occur with relationship conflicts (e.g., Eisenhardt, Kahwajy, & Bourgeois, 1997; Gamero et al., 2008; Mooney, Holahan, & Amason, 2007). In contrast, when task conflicts are paired with relationship conflicts, the hostilities that characterize relationship conflicts (cf. Jehn, 1995; Jehn & Bendersky, 2003) may prevent any positive effects of task conflict from emerging (e.g., Amason & Sapienza, 1997; Mooney et al., 2007; Pelled, 1996; Simons & Peterson, 2000; Yang & Mossholder, 2004). Eisenhardt et al. (1997), for example, found that firms with top management teams that had high task conflict without interpersonal hostilities outperformed firms that either lacked conflict completely or were characterized by high levels of relationship conflict. Similarly, De Dreu and Weingart (2003b) found that task conflict and group performance were less negatively associated among studies where task and relationship conflict were weakly rather than strongly correlated.

We also expect task conflict to be more negatively related to group outcomes when it co-occurs with process conflicts. The additional time that is lost in resolving process-related issues may facilitate more negative effects of task conflicts on both proximal and distal group outcomes. In addition, due to reduced conflict resolution efficacy, the negative effects of process conflicts are likely to become augmented when group members simultaneously experience task conflicts and/or, especially, relationship conflicts (e.g., Jehn et al., 2008). Behfar et al. (2011), for example, found that people-related process conflicts tended to significantly reduce group viability through lower group member satisfaction.

Task Type

The second moderating variable we investigate is task type. We propose that structural aspects of the group context, such as the specific task at hand, may determine the extent to which intragroup conflict and task conflict in particular will be disruptive for group outcomes (e.g., Jehn et al., 1999; McGrath, 1984). In line with De Dreu and Weingart (2003b), we build on McGrath's (1984) task circumplex to distinguish four types of tasks: (a) creativity tasks, which require idea generation, innovation, research, and/or development of new ideas, services, or products; (b) decision-making tasks, which involve tasks where group members need to reach consensus about a certain solution but where there is no demonstrable right answer; (c) production tasks, which involve routine tasks that require overt physical and/or intellectual task execution and where individuals strive to meet certain standards; and (d) project tasks, which involve tasks that are concerned with problem solving and generating plans.

Theories of requisite variety (Ashby, 1956) and information processing (Galbraith, 1973; Tushman & Nadler, 1978) suggest that the amount of disagreement should match the type of the task. When the group task is to generate new ideas or to find solutions to a problem without a demonstrable best solution, groups need to derive multifaceted solutions that may be best found through disagreement and opinion variety (e.g., Jehn, 1995). In contrast, routine tasks and other simple tasks (together labeled as production tasks; McGrath, 1984) demand simple solutions found without disagreement. Hence, when a task is well understood and relatively straightforward, debates about the task or specific process will be counterproductive and interfere with group functioning (e.g., Gladstein, 1984; Jehn et al., 1999) and, thereby, distal group outcomes. Thus, production tasks such as assembly line work may not benefit as much from the exchange of information or ideas, as the task is clearly known and understood and task conflicts may be an unnecessary waste of time (Jehn, 1995). Hence, compared to creative, decision-making, and project tasks, we suggest that groups are less likely to benefit from task conflicts when they are working on production tasks.

The moderating effect of task type may not be limited to group performance but translate to proximal outcomes as well. Jehn (1995), for example, found that on more routine tasks, task conflict had a more negative effect on group member satisfaction and intentions to remain working in the group than among less routine tasks. Therefore, we also expect that compared to production tasks, task conflict is less negatively related to proximal outcomes during creative, decision-making, and project tasks. Finally, we propose that the moderating effect of task type on group outcomes is restricted to task conflict. Whereas for creative, decision-making, and project tasks, task conflict may facilitate an exchange of information and ideas that is crucial for superior group outcomes, debates about relationship and process issues remain counterproductive. Hence, irrespective of the task at hand, we expect relationship and process conflict to interfere with group functioning and to be negatively related to both proximal and distal group outcomes (e.g., Jehn, 1995).

Organizational Level

The third critical moderating variable we investigate is the organizational level of the groups studied. Organizational level

refers to the position of a group in the context of the broader organizational hierarchy (Greer, Caruso, & Jehn, in press; Greer & van Kleef, 2010). Research has suggested that groups that differ in organizational level (such as service teams in branch offices vs. management teams in the head office) may differ in their conflict dynamics (Greer et al., in press; Greer & van Kleef, 2010). This is because members of teams higher up in the organization, such as management teams, are likely to be more politically savvy and better able to handle complex interpersonal situations, such as conflicts (Lazear & Rosen, 1981). Therefore, studies where groups were located generally higher up in the organizational hierarchy should show less negative effects of all forms of conflict on proximal group outcomes and potentially even positive effects of task conflict on distal group outcomes.

Cultural Context

The fourth group contextual moderating variable we investigate is cultural context. In line with theories of psychological stress and emotion (e.g., Frijda, 1993; Lazarus & Folkman, 1984), culturally shaped beliefs and expectations regarding conflict situations have been proposed and found to modify reactions and behaviors toward conflict (Fu et al., 2007; Gelfand et al., 2001; Markus & Kitayama, 1991; Tjosvold, Law, & Sun, 2006). Cultural context has been found to play an important role during negotiations (e.g., Brett et al., 1998). Japanese and American negotiators, for instance, differ in the extent to which they focus on winning or compromising during a negotiation (Gelfand et al., 2001), as well as whether they exchange information in a direct or indirect manner (Adair, Okumura, & Brett, 2001). Similar differences have been found with respect to negotiators' tendencies to stress relationships and social roles instead of logic and reasoning (Drake, 1995). Likewise, a culture's values and norms for power have been found to determine whether power strategies may help or hinder joint gains (Adair et al., 2004).

Although culture may play an important role in shaping the conflict–outcome relationship, research has mainly focused on (intergroup) negotiations, and relatively little attention has been directed at the impact of cultural context on intragroup conflict. We propose that the relationship between task conflict, relationship conflict, process conflict, and both proximal and distal group outcomes will depend on the cultural context. More specifically, differences in the way group members respond to conflicts and therefore in the way in which intragroup conflicts impact group outcomes might reflect differences in cultural dimensions such as power distance, uncertainty avoidance, individualism versus collectivism, long-term versus short-term orientation, and masculinity versus femininity (e.g., Hofstede, 2001; see also Cai & Fink, 2002; Fu et al., 2007; Gabrielidis, Stephan, Ybarra, Pearson, & Villareal, 1997; Sanchez-Burks et al., 2008). For instance, the extent to which process conflicts about roles and responsibilities hurt group outcomes might differ across cultures high and low on power distance as a greater acceptance of the unequal distribution of power might prevent process conflicts from escalating. Similarly, intragroup conflicts may be less negatively related to distal group outcomes among uncertainty-accepting (compared to uncertainty-avoiding) cultures as they generally are more tolerant of opinions different from their own (e.g., Hofstede, 2001). Similar effects may be found with respect to the collectivistic versus individual-

istic nature of the cultural context. European Americans, for example, have a greater preference for addressing conflict with a competing style (Fu et al., 2007) and hold more positive beliefs about relationship conflicts compared to Korean and Chinese participants, who generally score significantly higher on collectivism (Sanchez-Burks et al., 2008). Likewise, among cultures characterized by a long-term orientation, group members may have a greater preference for preserving good relationships for obtaining future rewards and therefore may be more willing to compromise and find a mutually beneficial solution than to win the conflict. Finally, when the dominant values in a certain cultural context are relatively masculine, individuals may be more assertive, more rigid, and less caring for others during conflicts than among more feminine cultural contexts, in which individuals generally will be more cooperative in addressing conflicts (e.g., Leung, Bond, Carment, Krishnan, & Liebrand, 1990), and this may facilitate more negative effects of conflict in masculine, rather than feminine, cultures. Therefore, cultural context may have an important influence on the effects of the three conflict types on both proximal and distal group outcomes.

Method

Literature Search

The first step in developing the database for the present meta-analysis was a keyword search in several electronic databases and search engines for journal articles dated between 1990 and September 2010 (e.g., ABI/Inform, Google Scholar, PsycINFO, Web of Science, and proceedings of the Academy of Management conferences). To find published and unpublished articles on intragroup conflict, we used the keyword *team* or *group* in combination with *conflict* or *disagreement* and other keywords such as *task*, *relationship*, *process*, *cognitive*, *affective*, and *emotional*. We also searched using combinations of these words with indicators of proximal group outcomes, such as viability (e.g., satisfaction and commitment) and emergent states (e.g., trust and cohesion), and indicators of more distal group outcomes, such as performance. The second step was to closely examine the reference lists of past (meta-analytic) reviews of the conflict literature (e.g., De Dreu & Weingart, 2003b; Jehn & Bendersky, 2003) to make sure we included all articles they included. Third, using the cited reference search offered by Web of Science, we searched among publications that had cited important articles in the field (e.g., De Dreu & Weingart, 2003b; Jehn, 1995; Jehn et al., 1999; Pelled et al., 1999). Fourth, we examined the table of contents of the last 5 years of the relevant journals in social psychology and organizational behavior (e.g., *Academy of Management Journal*, *Administrative Science Quarterly*, *International Journal of Conflict Management*, *Journal of Applied Psychology*, *Journal of Management*, *Journal of Organizational Behavior*, *Journal of Occupational and Organizational Psychology*, *Journal of Personality and Social Psychology*, *Journal of Vocational Behavior*, and *Strategic Management Journal*). Fifth, to address publication bias (e.g., Rothstein, Sutton, & Borenstein, 2005), we sent queries via Listservs and newsletters to members of, for example, the Academy of Management, the European Association of Experimental Social Psychology, the European Association of Work and Organizational Psychology, and the International Academy of Conflict Management for working pa-

pers or publications in this area. Finally, we contacted authors who in the past had published on conflict to ask if they would send us any (yet) unpublished work that could be included in our data set.

Inclusion Criteria

We used inclusion criteria that were equivalent to those of De Dreu and Weingart (2003b). Hence, studies were included if they (a) measured relationship conflict, task conflict, and/or process conflict; (b) included a measure of proximal and/or distal group outcomes; and (c) gave sufficient statistical information to compute effect sizes. Given that our research question is concerned with intragroup conflict, studies had to include groups; we therefore excluded studies on buyer–seller relationships, studies on dyads, and studies using only individual- or organizational-level measurements. As they did not report data at the group level of analysis, we decided not to include five studies that De Dreu and Weingart did include (i.e., Bradford, 1999; Duffy, Shaw, & Stark, 2000; Gardner, 1998; Pelled, 1996; Winters, 1997). Additionally, we were not able to locate two other studies included by De Dreu and Weingart (Nauta & Molleman, 2001; Nijdam, 1998). An explicit comparison of our sample and findings with those of the meta-analysis by De Dreu and Weingart (including, as well as excluding, these seven studies) is available upon request from Frank R. C. de Wit. Furthermore, to avoid using the results of one data set twice, in case two articles used an identical data set, we included only the most elaborate article or the one including the most variables of interest. Similarly, studies that collapsed task, relationship, and process conflict together into one variable were also excluded as our goal was to distinguish the effects of each type of conflict separately. Finally, besides intragroup conflict, the study had to include one or more group outcomes. We included decision quality, effectiveness, financial performance, innovativeness, and overall performance as indicators of group performance. As proximal group outcomes, we included two emergent states (intragroup trust and group cohesion) and six indicators of group viability (group member satisfaction, commitment, identification with the group, organizational citizenship behavior, counterproductive workplace behavior, and positive affect; Balkundi & Harrison, 2006).

Data Set and Coding of Studies

Our literature search resulted in an initial collection of around 300 articles. Using the above inclusion criteria, the number of studies finally included in the present meta-analysis was 116 studies. The references considered but excluded from the meta-analyses are available online as supplemental materials. All articles (including those excluded) were examined twice, once by a trained research assistant and once by either Frank R. C. de Wit or Lindred L. Greer. Interrater agreement was high; similar codings were obtained for 96.7% of the coded effect sizes and moderator variables. Discrepancies were resolved by reaching consensus via discussion. Together, the 116 studies represent 484 effect sizes. The coders collected information on sample size and statistical artifact information, such as the reliability of the scales used to measure conflict and group outcomes. The coders also collected information on the four theoretical moderators: (a) the association between task, relationship, and process conflict (correlation of task, relationship, and process conflicts), to test whether the effect

sizes depend on the extent to which the three types of conflict accompany each other (e.g., Gamero et al., 2008; Mooney et al., 2007); (b) group task, to test whether the effect sizes depend on the type of the task being performed (we used McGrath's, 1984, group task circumplex to distinguish five different tasks: creativity tasks, decision-making tasks, production-planning tasks, project tasks, and mixed tasks; in the mixed-tasks category, we included studies in which groups worked on a variety of tasks); (c) organizational level (top management teams vs. non-top management teams), to test for differences between groups at the top of the organizational hierarchy versus groups at lower levels of the organizational hierarchy (e.g., Greer et al., in press); and (d) cultural context, to test whether the effect sizes differ across cultures (e.g., Tjosvold et al., 2006): We first determined the geographical location where a study was conducted and then assigned to the study the associated values of Hofstede's (2001) five cultural dimensions: power distance, individualism-collectivism, masculinity-femininity, uncertainty avoidance, and long-term versus short-term orientation. To avoid potential problems with multicollinearity, all scores were mean-centered.

In addition to the theoretical moderators included in this study, we also collected information about methodological aspects that may have had an influence on whether conflict was positively or negatively related to group outcomes. We examined the following methodological moderators: (a) average level of intragroup conflict, to test whether studies among groups with relatively high levels of conflict differ from studies among groups with relatively low levels of conflict (we adjusted and controlled for the number of answer categories that were used to measure conflict); (b) setting (field and nonfield), to assess whether results differ for studies conducted within organizations or within laboratories or classrooms; (c) subjects (professionals, undergraduates, and postgraduates), to test whether the effect sizes vary when group members were professionals instead of students; (d) conflict scale (Jehn and non-Jehn), to test whether the effect sizes vary across different scales used to measure conflict (e.g., Korsgaard, Jeong, Mahony, & Pitariu, 2008); (e) operationalization of group performance,¹ to test whether results differ across five different operationalizations of group performance (e.g., De Dreu, 2008): decision quality, effectiveness, financial performance, innovativeness, and overall performance (in which multiple performance dimensions were combined into one measure, such as in overall course grades or measures that combined efficiency, output quality, and adherence to budget into one measure); (f) measurement of performance (objective and subjective), to test whether there is a difference in effect sizes when performance is measured via more objective, for instance, financial, measures or via more subjective ratings of performance (Arvey & Murphy, 1998); and (g) publication status (unpublished and published), to test whether the effect sizes are affected by publication selection bias. Descriptive statistics of the continuous moderators (e.g., cultural context and co-occurrence of conflict types) can be found in Table 1. Moreover, all the effect sizes, as well as reliability and moderator information, can be found in Appendixes A, B, and C.

Meta-Analytic Procedures

All the effect sizes were first corrected for sampling error. Next, we corrected for the measurement error in the independent and dependent variables. This was done according to the approach

developed by Hunter and Schmidt (1990, 2004); we divided individual effect sizes by the square root of the reliability estimates of the two correlated variables. We used internal consistency coefficients reported in the respective study as the reliability estimates. In case the authors did not report internal consistency coefficients, the internal consistency coefficient for each variable across all studies included in the meta-analysis was used. We assigned a reliability coefficient of 1.00 to objective performance indicators for which no reliability coefficient was reported (for similar procedures, see, e.g., Riketta, 2008). In case a study provided multiple estimates of a correlation between a predictor (X) and a criterion (Y), we used the formula for composites (Hunter & Schmidt, 2004) to derive a linear composite of the effect sizes to ensure the independence of effects sizes in the final data set. The analyses were conducted using the Schmidt-Le program (Version 1.1; Schmidt & Le, 2004). The precision of the effect sizes was examined by calculating the 95% confidence interval (CI) around the effect size. Finally, we used the procedures described by Viechtbauer and Cheung (2010) to derive outlier and influence diagnostics, using the Metafor meta-analysis package for R (Version 1.4-0; Viechtbauer, 2010a, 2010b).

Moderator Analyses

Heterogeneity among the effect sizes of the relationship between intragroup conflict and group outcomes was examined by calculating 90% credibility intervals (Hunter & Schmidt, 2004). Subsequently, we assessed the significance of the categorical moderator variables by comparing the 95% CIs of the associated moderator categories. We interpreted nonoverlapping CIs as signifying reliable differences among categories (Hunter & Schmidt, 2004). We also performed meta-analytic weighted least squares (WLS) regression analyses to examine (a) the impact of continuous moderator variables and (b) the influence of multiple moderator effects simultaneously (Steel & Kammeyer-Mueller, 2002; Viechtbauer, 2007; Viswesvaran & Sanchez, 1998). In the WLS regression analyses, studies were given inverse variance weights based on their sample size (see Hedges & Olkin, 1985). These are weights that are inversely proportional to the variance of the study so that studies with a larger sample size, which are assumed to offer more precise estimations of an effect size than studies with a smaller sample size, are given larger weight in the analyses (see Heugens & Lander, 2009; Lipsey & Wilson, 2001). We used Wilson's (2005) SPSS macros for meta-analytic WLS regression analyses to derive fixed- and mixed-effects models. In fixed-effects models, the studies being analyzed are assumed to be homogeneous at the level of study population effect sizes, and differences between studies are attributed to sampling error and other study artifacts (Hunter & Schmidt, 2000). In mixed-effects models, this assumption is not made, and variance in effect sizes is attributed to sampling error, other study artifacts, and a remaining unmeasured random component (Lipsey & Wilson, 2001). Mixed-effects models, therefore, are more conservative, allowing for the

¹ It is important to note that there was little overlap between task type and what aspect of performance was measured. For example, whereas top management teams can be classified as decision-making teams, often their performance was not measured directly by assessing the quality of their decisions but more indirectly via financial indicators such as profitability of the organization.

Table 1
Descriptive Statistics for the Continuous Moderators

Moderator	<i>M</i>	<i>SD</i>	Minimum	Maximum
Uncorrected correlations				
Task conflict–relationship conflict	0.52	0.32	−0.69	0.93
Task conflict–process conflict	0.66	0.28	−0.50	0.93
Relationship conflict–process conflict	0.67	0.15	0.24	0.90
Cultural dimension				
Power distance	43.32	11.15	13.00	80.00
Masculinity (vs. femininity)	53.27	17.57	14.00	70.00
Individualism (vs. collectivism)	79.25	22.17	17.00	91.00
Uncertainty avoidance	49.81	12.69	8.00	104.00
Long-/short-term orientation	37.67	22.59	19.00	118.00
Average level of task conflict	3.54	0.85	1.63	6.30
Average level of relationship conflict	2.72	0.70	1.36	5.35
Average level of process conflict	2.54	0.46	1.86	3.66

possibility that the population parameter values can vary between studies (Hunter & Schmidt, 2000).

Results

Intragroup Conflict and Proximal Group Outcomes

Table 2 presents the overall mean corrected correlations between intragroup conflict and proximal group outcomes. In the

case of task conflict and its relationship with trust and commitment, the study by Parayitam and Dooley (2007) was identified as a positive outlier and was not included in the analyses. The results show that task, relationship, and process conflicts are reliably negatively related to trust ($\hat{\rho} = -.45$, $\hat{\rho} = -.53$, $\hat{\rho} = -.59$, respectively) and group member commitment ($\hat{\rho} = -.31$, $\hat{\rho} = -.47$, and $\hat{\rho} = -.54$, respectively). With respect to trust, for all three types of conflict, the credibility intervals do not contain zero,

Table 2
Meta-Analysis Results for Intragroup Conflict and Proximal Group Outcomes

Predictor	<i>k</i>	<i>N</i>	Mean \bar{r}	Mean $\hat{\rho}$	<i>SD</i> $\hat{\rho}$	90% credibility interval	<i>SE</i> $\hat{\rho}$	95% confidence interval
Trust								
Task conflict	16	1,205	−.37	−.45	.20	−0.78, −0.12	.06	−0.56, −0.33
Relationship conflict	16	1,302	−.45	−.53	.29	−1.00, −0.05	.08	−0.68, −0.38
Process conflict	7	492	−.51	−.59	.16	−0.85, −0.32	.07	−0.73, −0.45
Cohesion								
Task conflict	16	1,326	.01	.00	.50	−0.83, 0.83	.13	−0.26, 0.25
Relationship conflict	14	1,175	−.37	−.44	.19	−0.75, −0.13	.06	−0.55, −0.33
Process conflict	3	205	−.45	−.48	.20	−0.81, −0.16	.13	−0.74, −0.23
Satisfaction								
Task conflict	26	1,979	−.22	−.24	.38	−0.87, 0.38	.08	−0.40, −0.09
Relationship conflict	26	1,901	−.47	−.54	.17	−0.82, −0.27	.04	−0.62, −0.47
Process conflict	10	643	−.52	−.61	.05	−0.70, −0.52	.04	−0.68, −0.53
Commitment								
Task conflict	13	1,044	−.25	−.31	.19	−0.62, 0.01	.06	−0.43, −0.18
Relationship conflict	12	772	−.41	−.47	.28	−0.93, −0.02	.09	−0.64, −0.30
Process conflict	8	538	−.45	−.54	.17	−0.82, −0.26	.07	−0.68, −0.40
Identification								
Task conflict	5	229	−.26	−.30	.01	−0.32, −0.28	.07	−0.44, −0.15
Relationship conflict	5	229	−.43	−.49	.12	−0.69, −0.29	.08	−0.65, −0.33
Process conflict	1	38	−.05	−.05				
Organizational citizenship behavior								
Task conflict	7	427	−.19	−.23	.22	−0.59, 0.12	.10	−0.43, −0.04
Relationship conflict	7	436	−.32	−.38	.20	−0.72, −0.04	.09	−0.56, −0.20
Process conflict	1	121	−.24	−.27				
Counterproductive workplace behavior								
Task conflict	4	296	.42	.53	.00	0.53, 0.53	.04	0.46, 0.60
Relationship conflict	4	296	.43	.54	.39	−0.10, 1.17	.20	0.14, 0.94
Positive affect								
Task conflict	5	623	.05	.05	.57	−0.89, 0.99	.26	−0.46, 0.56
Relationship conflict	4	387	−.40	−.48	.38	−1.11, 0.15	.17	−0.87, −0.09

Note. *k* = number of effect sizes; *N* = total sample size; \bar{r} = mean estimate of uncorrected correlations; *SE* $\hat{\rho}$ = mean estimate of corrected population correlation; *SD* $\hat{\rho}$ = estimated standard deviation of mean $\hat{\rho}$; *SE* $\hat{\rho}$ = estimated standard error of mean $\hat{\rho}$.

indicating that the negative relationships with trust are generalizable across different settings. Table 2 further shows that both task and relationship conflicts are negatively related to group member identification ($\hat{\rho} = -.30$ and $\hat{\rho} = -.49$, respectively), organizational citizenship behaviors (OCB; $\hat{\rho} = -.23$ and $\hat{\rho} = -.38$, respectively) and positively related to counterproductive work behaviors (CWB; $\hat{\rho} = .53$ and $\hat{\rho} = .54$, respectively).

With respect to group member satisfaction, group cohesion, and positive affect, the results indicate a significant difference between the conflict types. First, the associated CIs indicate that process and relationship conflicts are more negatively related to group member satisfaction ($\hat{\rho} = -.54$ and $\hat{\rho} = -.61$, respectively) than task conflict ($\hat{\rho} = -.24$). These results replicate the findings of De Dreu and Weingart (2003b), who also found a less negative relationship between task conflict and group member satisfaction ($\hat{\rho} = -.27$) than between relationship conflict and group member satisfaction ($\hat{\rho} = -.48$). Second, whereas there is a strong negative association between relationship conflict and cohesion ($\hat{\rho} = -.44$), there is not between task conflict and cohesion ($\hat{\rho} = .00$). Third, whereas relationship conflict is reliably negatively associated with positive affect ($\hat{\rho} = -.48$), task conflict is not ($\hat{\rho} = .05$). Moreover, the credibility intervals indicate that for the relationships between task conflict and cohesion, group member satisfaction, and positive affect, the presence of subpopulations (moderators) is likely.

Intragroup Conflict and Distal Group Outcomes

Table 3 summarizes the overall mean corrected correlations between the three types of intragroup conflict and the primary distal group outcome we investigated: group performance. The results show that relationship conflict ($\hat{\rho} = -.16$) and process conflict ($\hat{\rho} = -.15$) are negatively related to group performance but that, overall, neither a positive nor a negative relationship exists between task conflict and group performance ($\hat{\rho} = -.01$). As the associated CIs for both process and relationship conflict do not include zero, the results suggest that the negative relationship between both process and relationship conflict and group performance is reliable (Whitener, 1990). Moreover, as the CIs of process conflict and relationship conflict do not overlap with the CI of task conflict, the results indicate that process and relationship conflicts are significantly more negatively related to group performance than task conflict.

The results for relationship conflict replicate those of De Dreu and Weingart (2003b), who found a similar negative association between relationship conflict and group performance ($\hat{\rho} = -.22$). The results for task conflict are notably different. De Dreu and Weingart found a more negative relationship between task conflict

and group performance ($\hat{\rho} = -.23$) than we did ($\hat{\rho} = -.01$). Similar to the findings of De Dreu and Weingart, for all three conflict types, the 90% credibility intervals reported in Table 3 were relatively wide and included zero. This indicates that there are restrictions to the generalizability of the estimated correlations and that there is a sufficient amount of heterogeneity in the observed results to justify an investigation of potential moderators of these effects.

Moderator Analyses

We performed subgroup analyses to test categorical moderators (e.g., Hunter & Schmidt, 2004) and WLS regression analyses to test continuous moderators (e.g., Lipsey & Wilson, 2001) and to test multiple moderators simultaneously (e.g., Steel & Kammeyer-Mueller, 2002). We tested multiple moderators simultaneously only when the total sample size for a specific effect size was larger than 50 studies as testing multiple moderators simultaneously may lead to misestimating moderator effects when the data set is too small (see Steel & Kammeyer-Mueller, 2002). More than 50 studies were available for group performance and its association with task conflict and relationship conflict but not for group performance and process conflict or for any of the proximal group outcomes. Hence, for the association between process conflict and group performance, as well as the proximal group outcomes, we tested the moderators only individually.

Moderators of the association between intragroup conflict and proximal group outcomes. The overall effect sizes reported in Table 2 indicate that, for process conflict, the negative relationships with proximal group outcomes are generalizable across different settings. With respect to relationship conflict, heterogeneity existed in the relationships with CWB and positive affect, and with respect to task conflict, heterogeneity existed in the relationships with cohesion, satisfaction, OCB, and positive affect. In the case of OCB ($k = 7$), CWB ($k = 4$), and positive affect ($k = 5$), the sample size was too small to conduct meaningful moderator analyses. Therefore, we examined the effects of group contextual and methodological moderators only for the relationships between task conflict and group cohesion and between task conflict and group member satisfaction. With respect to group member satisfaction, one study (Oliver, Poling, & Woehr, 2008) was identified as an outlier and excluded from the analyses. We found one moderator (the co-occurrence of task and relationship conflict) to moderate the association between task conflict and group member satisfaction. The results presented in Table 4 show that the stronger the association between task and relationship conflict, the more negative the association between task conflict and group member satisfaction ($p < .001$). Table 4 further shows

Table 3
Meta-Analysis Results for Group Performance

Predictor	<i>k</i>	<i>N</i>	Mean \bar{r}	Mean $\hat{\rho}$	<i>SD</i> $\hat{\rho}$	90% credibility interval	<i>SE</i> $\hat{\rho}$	95% confidence interval
Task conflict	95	7,201	-.01	-.01	.23	-0.38, 0.36	.03	-0.06, 0.04
Relationship conflict	80	5,369	-.15	-.16	.16	-0.43, 0.10	.02	-0.21, -0.12
Process conflict	24	1,752	-.13	-.15	.20	-0.47, 0.17	.05	-0.25, -0.06

Note. *k* = number of effect sizes; *N* = total sample size; \bar{r} = mean estimate of uncorrected correlations; $\hat{\rho}$ = mean estimate of corrected population correlation; *SD* $\hat{\rho}$ = estimated standard deviation of mean $\hat{\rho}$; *SE* $\hat{\rho}$ = estimated standard error of mean $\hat{\rho}$.

Table 4
WLS Regression Analyses With the Association Between Conflict Types as Predictor Variables

Predictor	B	SE B	β	Z	p	90% confidence interval	R ²	k
Task conflict and group member satisfaction								
Constant	.16	.17	.00	0.97	.33	−0.17, 0.50	.36	21
Association between task and relationship conflict	−.84	.25	−.60	−3.32	.00	−1.34, −0.35		
Task conflict and group member satisfaction								
Constant	−.19	.30	.00	−0.63	.53	−0.76, 0.39	.09	10
Association between task and process conflict	−.31	.35	−.29	−0.87	.38	−1.00, 0.38		
Task conflict and group performance								
Constant	−.14	.34	.00	−0.41	.68	−0.81, 0.53	.00	21
Association between task and process conflict	.03	.40	.02	0.09	.93	−0.76, 0.83		
Relationship conflict and group performance								
Constant	.38	.25	.00	1.52	.13	−0.11, 0.88	.22	21
Association between relationship and process conflict	−.66	.30	−.47	−2.17	.03	−1.26, −0.07		
Process conflict and group performance								
Constant	−.01	.43	.00	−0.02	.98	−0.84, 0.82	.04	19
Association between task and process conflict	.05	.56	.03	0.09	.93	−1.05, 1.15		
Association between relationship and process conflict	−.32	.50	−.21	−0.65	.52	−1.31, 0.66		

that the relationship between task conflict and group member satisfaction is not moderated by the association between task conflict and process conflict. Finally, similar to group member satisfaction, we found that the stronger the association between task and relationship conflict, the more negative the association between task conflict and group member cohesion ($p < .001$).

Moderators of the association between intragroup conflict and distal group outcomes.

Task conflict and group performance. Two moderators were tested individually (the co-occurrence of task and process conflict and organizational level) as they could not be included in the regression analyses due to the limited number of studies that provided information on these two variables. More specifically, only a limited number of studies on task conflict also measured process conflict ($N = 22$). Similarly, in case of organizational level, only 60 studies were conducted in a field setting, whereas 35 were conducted in the lab or in the classroom. Of the 60 field studies, only 41 reported sufficient data on the organizational level. We tested the moderating effect of the co-occurrence of task and process conflict using WLS regression analyses. The study by Wan and Ong (2005) was identified as an outlier and therefore excluded from these analyses. As shown Table 4, we found no effect of the co-occurrence of task and process conflict (also if we

controlled for the co-occurrence of task and relationship conflict). The moderating effect of organizational level was analyzed using subgroup analyses, and as shown in Table 5, we found a reliable difference between studies conducted among top management teams and studies conducted among teams lower in the organizational hierarchy. Compared to non-top management teams ($\hat{\rho} = -.21$, CI [−0.34, −0.09]), the relationship between task conflict and performance was distinctly more positive for top management teams ($\hat{\rho} = .09$, CI [−0.01, 0.18]).

The remaining moderators were tested simultaneously using WLS regression analyses. The residual component Q_{residual} of the fixed-effects model was significant, and as this violates the assumptions of fixed-effects analysis (see Lipsey & Wilson, 2001), in Table 6, we report only the more conservative mixed-effects model. The mixed-effects model fitted the data well and showed support for several of the hypothesized moderating effects. First, the results confirm that the relationship between task conflict and group performance becomes more negative when the association between task and relationship conflict among the groups within a study is higher ($p < .01$). This result is also depicted in Figure 2, showing the association between task conflict and group performance varies as a function of the association between task conflict and relationship conflict. This

Table 5
Results for Categorical Moderator Analyses of Organizational Level

Predictor	k	N	\bar{r}	$\hat{\rho}$	SD $\hat{\rho}$	90% credibility interval	SE $\hat{\rho}$	95% confidence interval
Task conflict–group performance								
Non-top management	22	1,007	−.17	−.21	.23	−0.60, 0.17	.06	−0.34, −0.09
Top management	19	2,464	.07	.09	.18	−0.21, 0.39	.05	−0.01, 0.18
Relationship conflict–group performance								
Non-top management	18	871	−.21	−.25	.09	−0.40, −0.11	.04	−0.34, −0.16
Top management	12	1,344	−.17	−.18	.16	−0.45, 0.08	.06	−0.29, −0.07
Process conflict–group performance								
Non-top management	7	366	−.28	−.32	.00	−0.32, −0.32	.06	−0.44, −0.21
Top management	2	259	−.07	−.08	.11	−0.26, 0.11	.11	−0.29, 0.13

Note. k = number of effect sizes; N = total sample size; \bar{r} = mean estimate of uncorrected correlations; $\hat{\rho}$ = mean estimate of corrected population correlation; $SD \hat{\rho}$ = estimated standard deviation of mean $\hat{\rho}$; $SE \hat{\rho}$ = estimated standard error of mean $\hat{\rho}$.

Table 6
WLS Regression Analysis Results for Group Performance

Variable	Task conflict–performance	Relationship conflict–performance
Group contextual moderators		
(1) Association task and relationship conflict	−0.34 (0.11)**	−0.05 (0.10)
(2) Group task: project	0.06 (0.12)	0.10 (0.11)
(2) Group task: creativity	−0.13 (0.19)	−0.17 (0.18)
(2) Group task: decision making	−0.10 (0.13)	−0.02 (0.12)
(2) Group task: production planning	−0.15 (0.16)	−0.20 (0.15)
(3) Cultural dimension: power distance	−0.86 (1.35)	−1.35 (1.26)
(3) Cultural dimension: masculinity (vs. femininity)	0.32 (0.30)	0.35 (0.28)
(3) Cultural dimension: individualism (vs. collectivism)	−0.23 (0.64)	−0.69 (0.59)
(3) Cultural dimension: uncertainty avoidance	0.37 (0.38)	−0.15 (0.35)
(3) Cultural dimension: long-/short-term orientation	0.49 (0.40)	0.19 (0.37)
Methodological moderators		
(5a) Average level of relationship conflict	0.03 (0.07)	−0.09 (0.06)
(5b) Average level of task conflict	−0.12 (0.07)†	−0.04 (0.07)
(6) Field setting	−0.21 (0.12)†	−0.08 (0.11)
(7) Non-Jehn conflict scale	−0.09 (0.15)	0.01 (0.14)
(8) Performance indicator: decision quality	0.44 (0.14)**	0.14 (0.13)
(8) Performance indicator: innovativeness	0.37 (0.35)	0.01 (0.32)
(8) Performance indicator: effectiveness	0.18 (0.16)	0.14 (0.15)
(8) Performance indicator: financial performance	0.47 (0.17)**	0.20 (0.16)
(9) Objective	−0.08 (0.12)	0.04 (0.12)
(10) Published	−0.09 (0.10)	−0.13 (0.09)
Constant	0.55 (0.27)*	0.28 (0.25)
R^2	0.60	0.47
K	55	55
$Q_{\text{model}} (p)$	45.88 (.001)	27.29 (.127)
$Q_{\text{Residual}} (p)$	30.18 (.656)	31.40 (.596)
V	0.04	0.03

Note. Unstandardized regression coefficients are presented with standard errors in parentheses. k is the total number of effect sizes; Q is the homogeneity statistic with its probability in parentheses; v is the random-effects variance component.

† $p < .10$. * $p < .05$. ** $p < .01$.

replicates the findings by De Dreu and Weingart (2003b), who found a more negative relationship between task conflict and group performance ($\hat{\rho} = -.35$ vs. $\hat{\rho} = -.10$) in studies that reported a relatively high (vs. low) correlation between task and relationship conflict. The results further indicate that compared to when performance was measured in terms of overall performance (i.e., the reference category), the relationship between task conflict and group performance was more positive when it

was measured in terms of decision-making quality ($p < .01$) or financial performance ($p < .01$). In addition, two moderators had a marginally significant effect on the relationship between task conflict and group performance. The relationship between task conflict and group performance was more negative when the average level of task conflict among teams within a study was relatively high ($p = .096$). Additionally, compared to when the study was conducted in a classroom or laboratory setting,

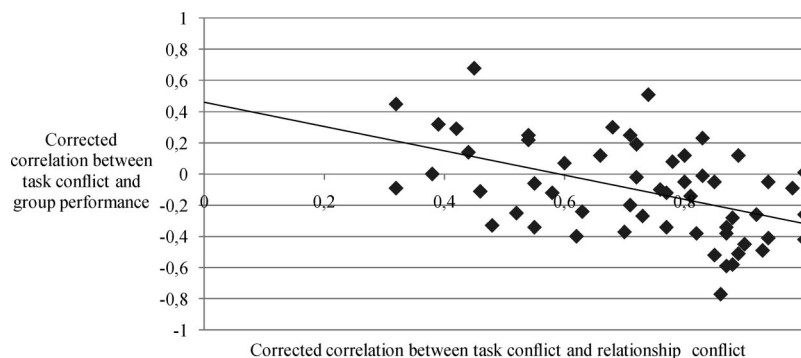


Figure 2. The association between task conflict and group performance ($n = 61$) as a function of the association between task conflict and relationship conflict. Only positive correlations are included in this figure.

task conflict were more negatively related to performance in studies conducted in the field ($p = .073$).

The results presented in Table 6 show no support for the hypothesized effect of task type. Hence, the relationship between task conflict and group performance does not appear to differ across studies investigating mixed, project, creativity, decision-making, or production-planning tasks when controlling for other moderating effects. This is in contrast to the meta-analysis of De Dreu and Weingart (2003b), who found that studies that investigated production teams ($\hat{\rho} = .04$) reported weaker negative correlations than studies that investigated decision-making teams ($\hat{\rho} = -.20$), project teams ($\hat{\rho} = -.26$), or mixed teams ($\hat{\rho} = -.43$). Similarly, no support was found for a moderating effect of cultural context, the average level of relationship conflict, the scales used to measure intragroup conflict, whether performance was measured objectively versus subjectively, or whether the study was published or not.

Relationship conflict and group performance. Two moderators were again tested individually: the co-occurrence of relationship and process conflict and the organizational level. The results reported in Table 4 indicate that the association between relationship conflict and group performance becomes more negative when the association between process and relationship conflict within a study is stronger ($p < .05$). This effect was not found for the association between relationship conflict and task conflict, as can also be seen in Table 4. As shown in Table 5, we did not find a difference between studies conducted among top management teams and studies conducted among teams lower in the organizational hierarchy. The remaining moderators were investigated using WLS regression analyses. The residual component of the fixed-effects model was significant. Therefore, in Table 6, we again report only the more conservative mixed-effects model. The results indicate that when controlling for the presence of other moderators, none of the moderators affected the association between relationship conflict and group performance.

Process conflict and group performance. As the number of studies available on process conflict was too small to test moderators simultaneously, we tested the moderators individually for the relationship between process conflict and group performance. Interestingly, none of our group contextual and methodological moderators affected the association between process conflict and group performance. For example, as shown in Table 4, neither the moderating effect of the co-occurrence of relationship and process conflict nor the co-occurrence of task conflict and process conflict was significant (the study by Brauckmann, 2007, was identified as an outlier and therefore excluded from these analyses). Likewise, as shown in Table 5, only for studies conducted among teams lower in the organizational hierarchy was the negative association between process conflict and group performance reliable and generalizable, yet the difference between studies conducted among top management teams and studies conducted among teams lower in the organizational hierarchy was not significant.

Supplementary Analysis

The results reported above are consistent with our hypotheses that relationship conflict and process conflict are more negatively related to both proximal and distal group outcomes than task

conflict. In addition, the findings show that the relationships between task and relationship conflict and group outcomes are moderated by several characteristics, such as the type of performance measure and the co-occurrence of conflict types. Yet, so far, we have not looked at the unique contribution of the three types of intragroup conflict on group outcomes. To develop a clearer picture of the incremental relationships between process conflict, relationship conflict, task conflict, and proximal and distal group outcomes, we therefore conducted supplemental path analyses using MASEM (e.g., Viswesvaran & Ones, 1995). Given the heterogeneity in our data set, we used two-stage structural equation modeling (TSSEM) in which correlation matrices are first tested for homogeneity and then pooled and used in a MASEM (Cheung & Chan, 2005). We used Cheung's metaSEM package for R to conduct these analyses (Version 0.5-1; Cheung, 2010).

With respect to conflict and proximal group outcomes, we restrict ourselves to the results for satisfaction. Similar results were obtained for the other proximal outcome (i.e., group cohesion) and are available on request from Frank R. C. de Wit. The first stage of the MASEM indicated heterogeneity among the correlation matrices, $\chi^2(91, N = 2,257) = 528.61$, root-mean-square error of approximation (RMSEA) = .25, comparative fit index (CFI) = .76. This is in line with the results reported above that suggested that the relationship between task conflict and group satisfaction is moderated by the association between relationship conflict and task conflict. To address the heterogeneity in the correlation matrices, we therefore used a random-effects model to average the correlation matrices (see Becker, 1992) as suggested by Cheung and Chan (2005). Yet, as the associated weighted covariance matrix was nonpositive definite, we could not proceed to the second stage of the structural equation modeling (i.e., Cheung & Chan, 2005). This problem resulted from missing values in the many studies that did not measure process conflict in combination with pairwise deletion when synthesizing the correlation matrices. We therefore performed structural equation modeling without process conflict. The resulting pooled correlation matrix of task conflict, relationship conflict, and group member satisfaction is found in Table 7. On the basis of the pooled correlation matrix, we proceeded to the second step of the TSSEM and performed structural equation modeling to calculate the incremental relationships between the task and relationship conflicts and group satisfaction. Given that the model was fully saturated, the fit indices could not be used to test the fit of the model, and therefore, we restrict ourselves to describing the path coefficients. The results of the structural equation modeling showed that both the standardized path coefficient of task conflict ($\beta = -.13$, $SE = 0.06$, $CI [-0.24, -0.02]$, $p < .05$) and that of relationship conflict were significant and negative ($\beta = -.39$, $SE = 0.05$, $CI [-0.48, -0.30]$, $p < .001$).

For group performance, the results of the first stage of the MASEM again indicated heterogeneity among the correlation matrices, $\chi^2(295, N = 7,905) = 1,553.25$, $RMSEA = .24$, $CFI = .70$.² We therefore used a random-effects model to average the correlation matrices (see Becker, 1992). The pooled correlation matrix is reported in Table 7. The results of the second step of the

² The studies by Wan and Ong (2005) and Brauckmann (2007) were again identified as outliers and excluded from the analyses.

Table 7
Corrected Meta-Analytic Intercorrelations Among Study Variables

Variable	1. Process conflict	2. Relationship conflict	3. Task conflict	4. Satisfaction
1. Process conflict	—			
2. Relationship conflict	.73 ($k = 18, N = 1,157$)	—	.58 ($k = 21, N = 1,491$)	-.47 ($k = 25, N = 1,765$)
3. Task conflict	.72 ($k = 19, N = 1,353$)	.54 ($k = 73, N = 4,845$)	—	-.36 ($k = 25, N = 1,843$)
4. Performance	-.18 ($k = 21, N = 1,428$)	-.18 ($k = 77, N = 5,045$)	-.07 ($k = 92, N = 6,877$)	—

Note. Values above the diagonal are the pooled correlation coefficients based on the correlation matrices including group member satisfaction. Values below the diagonal are the pooled correlation coefficients based on the correlation matrices including group performance. k = number of effect sizes; N = total sample size.

TSSEM showed that the standardized path coefficients characterizing the effect of task conflict were significant and positive ($\beta = .15, SE = 0.07, CI [0.00, 0.29], p < .05$), while those of relationship conflict ($\beta = -.10, SE = 0.05, CI [-0.20, 0.00], p = .059$) and process conflict ($\beta = -.21, SE = 0.11, CI [-0.43, 0.00], p = .055$) were negative but only marginally significant. The results suggest that, controlling for the other two types of conflict, task conflict is positively related to group performance, while process conflict and relationship conflict are negatively related to group performance. Again, these results should be taken with caution because considerable heterogeneity existed among the correlation matrices.

Discussion

In this meta-analysis of 116 studies on intragroup conflict, we examined the relationship of three types of intragroup conflict (i.e., task, relationship, and process conflict) with proximal group outcomes (i.e., group viability and emergent states) and distal group outcomes (i.e., group performance). Overall, we found that the three types of conflict are more negatively related to proximal group outcomes than to distal group outcomes (i.e. group performance). For several proximal outcomes, such as group member satisfaction and cohesion, we found that the relationships are less negative for task conflict as compared to process and relationship conflict. Similarly, we found that for task conflict, the overall association with group performance is neither negative nor positive, whereas the overall association of relationship and process conflict with group performance is more uniformly negative.

Among the studies included in the meta analysis, considerable heterogeneity existed for each of the three types of intragroup conflict and their relationship with group performance. Further exploration of this heterogeneity revealed that the relationship between task conflict and group performance depends heavily on the presence of different moderating factors. We also found this to be true for the relationship between task conflict and proximal group outcomes such as group member satisfaction. Below, we address these moderating factors in more detail as well as the theoretical and methodological implications of this meta-analysis.

Theoretical Implications

Our meta-analysis suggests that the effects of conflict are better understood by a contingency approach. This offers an important extension to the meta-analysis of De Dreu and Weingart (2003b) as we have shown across 116 studies (86 studies more than the 30

studies included in their meta-analysis) that the effects of conflict are dependent on the type of conflict, the context studied, and the methods used. Factors such as the type of conflict, type of outcome, correlation between task and relationship conflict, organizational level, and how variables are operationalized and measured may explain when conflict is more negatively or positively related to group outcomes.

Extension of De Dreu and Weingart (2003b)

Whereas some of the findings of the current meta-analysis are consistent with the findings of the De Dreu and Weingart (2003b) meta-analysis, such as the negative association between relationship conflict and group outcomes and the moderating effect of the association between task conflict and relationship conflict, other findings extend or refine the insights gained from their meta-analysis. First, we have expanded their review by examining a broader array of possible moderators and group outcomes and have provided a first meta-analysis of the effects of process conflict on group outcomes. Second, in contrast to their finding that task and relationship conflict are equally disruptive for group outcomes, we have found that task conflict has a less negative (and under certain conditions, a positive) relationship with group outcomes than process and relationship conflict. Indeed, when entering all three conflict types into a path analysis together, task conflict actually became positive for group performance, whereas relationship and process conflict affected performance negatively. Third, De Dreu and Weingart found that task conflict had the least negative correlation with task performance in studies on production teams and more negative relations with performance in studies on decision-making and project teams. They concluded that “conflict interferes with information processing capacity and therefore impedes task performance, especially when tasks are complex and demand high levels of cognitive activity” (De Dreu & Weingart, 2003b, p. 747). We did not find support for this conclusion, however, as we did not find a difference between task types when testing all moderators simultaneously. Importantly, when testing the moderating effect of group task type in isolation (using subgroup analyses), we found a small and positive correlation among studies on decision-making tasks.³ Similarly, we also found that in studies in which performance was measured specifically in terms of decision-making quality or financial performance (instead of more global overall performance), task conflict and performance were more positively related. To test whether

³ The results of the subgroup analyses are available upon request from Frank R. C. de Wit.

the differences between the results of De Dreu and Weingart and the current meta-analysis were due to coding decisions, we ran a separate analysis in which we restricted the analyses to the studies that existed when they performed their meta-analysis. The results of these analyses exhibited the same general pattern as De Dreu and Weingart, and thus, the difference between the two meta-analyses is not due to divergent coding decisions. Instead, the primary explanation for the difference in the two findings is the greater breadth of studies that we have included in the current meta-analysis. For example, at the time of De Dreu and Weingart's meta-analysis, only five of the available studies were qualified as decision-making teams. In contrast, in the current study, 23 studies of decision-making teams were included.

Theoretical moderators of the conflict-outcomes relationship.

Co-occurrence of conflict types. One important moderator of the relationship between task conflict and both proximal and distal group outcomes (i.e., group performance and group member satisfaction) was the association between task conflict and relationship conflict. The moderator analyses revealed that task conflict was more negatively related to group performance and group member satisfaction among studies where task conflict and relationship conflict were highly associated. These findings are in line with theory and research suggesting that if task conflicts can occur without relationship conflicts also occurring, task conflicts are less likely to be emotional (Yang & Mossholder, 2004), escalate (Greer et al., 2008), and impair group performance (Peterson & Behfar, 2003; Shaw et al., 2011; Simons & Peterson, 2000). Interestingly, the association between relationship conflict and group performance was not altered when controlling for the association between task conflict and relationship conflict within a study. We did find that the association between relationship conflict and group performance was moderated by the co-occurrence of process conflict and relationship conflict; the stronger the association between process and relationship conflict reported by a study, the more negative the association between relationship conflict and group performance in that study. These findings suggest that if relationship conflicts can occur without process conflicts, they will have a less negative effect on group performance. Interestingly, the association between process conflict and group performance was not affected when controlling for the association between process conflict and relationship conflict or task conflict. Process conflicts seem to be negatively related to group performance irrespective of the extent to which they co-occur with relationship conflict or task conflict. The results of our two-stage meta-analytic path analyses provided additional support for these findings. When investigating the incremental effects of task, relationship, and process conflict, task conflict was positively related to performance, while relationship conflict and process conflict were negatively related to group performance. Moreover, instead of relationship conflict, process conflict appeared to be the most negative form of conflict for group performance. Given the heterogeneity among the correlations and the correlation matrices and the influence of the other moderating processes, this conclusion should, however, be taken cautiously.

Organizational level. We also found that the association between task conflict and performance was distinctly more positive among studies on top management teams than among studies on teams operating at lower levels of the organizational hierarchy. The same result was not found for relationship or process conflict

or for other group outcomes. Interestingly, a closer inspection of the data revealed that the average correlation of task conflict with relationship conflict among studies on top management teams was significantly lower than among the studies on non-top management teams. Since a weaker correlation between task and relationship conflicts is related to a more positive relationship between task conflict and group performance, an alternative explanation for why task conflicts in top management teams are more positively related to group performance is that members of top management teams are better able to prevent task conflict from turning into relationship conflict. It will be interesting for future research to investigate why, in top management teams, task and relationship are more weakly correlated than in non-top management teams. It might be that members of top management teams are under greater time constraints and therefore have a greater need to remain task focused or, alternatively, that members of top management teams are more politically savvy (Lazear & Rosen, 1981) and therefore better able to prevent task conflicts from escalating into relationship conflicts.

Task type. In contrast to the findings of De Dreu and Weingart (2003b), task type was not found to moderate the association between task conflict and group outcomes (even though we made the same coding decisions). Similarly, we did not find support for task type moderating the stable negative effect of process conflict on group outcomes. Although the WLS regression analyses showed that when controlling for other moderators, task type did not moderate the association between relationship conflict and group outcomes, a replication of the subgroup analyses by De Dreu and Weingart showed that, compared to studies in which groups worked on mixed tasks, relationship conflict was less negatively related to group performance among studies in which groups worked on project tasks. One possible explanation might be that during project tasks, group members are together for a short and limited period of time and work relatively independently throughout the project. This might prevent relationship conflicts from escalating or persisting over longer time periods and, therefore, could make relationship conflict less detrimental for group performance (Jehn, 1995). Future research should therefore investigate which specific factors cause outcomes of project tasks to be less affected by relationship conflicts and how this interacts with other potential moderating effects.

Cultural context. Finally, controlling for the effects of the other moderators, we did not find that cultural context affects the associations between intragroup conflict and group outcomes. In contrast to our expectations, the relationships between intragroup conflict and group outcomes, therefore, seem to be stable and generalizable across different cultural contexts.

Methodological Implications

We also found that differences in the methods employed in past studies of intragroup conflict may play a role in determining whether or not the effects of conflict were positively or negatively related to group outcomes. We found that the association between conflict and performance depended on the way in which performance was operationalized. Compared to overall performance, the relationship between task conflict and performance was more positive in studies where performance was operationalized in terms of financial performance. Additionally, the moderator anal-

yses showed that, compared to overall performance, the relationship between task conflict and performance was more positive in studies where performance was operationalized in terms of decision quality. Since overall performance measures often include more subjective evaluations of performance than, for instance, objective financial performance indicators, these findings suggest that subjective evaluations of performance might be more susceptible to the negative affect that is triggered by conflict and that may cause more unfavorable and pessimistic overall performance evaluations (e.g., Ferris, Judge, Rowland, & Fitzgibbons, 1994; Mayer, Gaschke, Braverman, & Evans, 1992). Research has shown that those who experience negative affect have a more pessimistic outlook and easily link their negative affect to a certain target (Isen, Shalke, Clark, & Karp, 1978; Schwarz & Bohner, 1996). Since financial performance and decision quality are generally more objective indicators of performance, they are less affected by these negative biases and result in more positive performance evaluations, thereby showing a more positive association between conflict and performance. When controlling for the effects of the other moderators, we also found that the relationship between task conflict and group performance was more negative among studies conducted in the field than among studies conducted in the laboratory or the classroom. Although this effect was only marginally significant, it suggests that as groups in laboratory settings normally have a clear common group goal (e.g., finish a student project) and as group members are only together for a relatively short period of time, task conflicts may be less likely to escalate and easier to resolve as members realize their collaboration is temporary and focus on the accomplishment of the immediate common goal.

With respect to relationship conflict and process conflict, the above effects were not found, reflecting their stable negative relationships with all types of group outcomes. For example, with respect to relationship conflict, we did not find that the different measures used to measure relationship conflict or performance affected the association between relationship conflict and group performance. Similar and exemplary of the stable negative relationship of process conflict with group outcomes is the finding that none of the studies on process conflict that were included in the current meta-analysis reported a positive association of process conflict with emergent states and group viability, despite the different methods used to measure process conflict and group outcomes. Moreover, 19 of the 24 studies reported a negative relationship of process conflict with group performance. Not surprisingly, therefore, none of the moderators that we included in this study affected the direction or the strength of the association between process conflict and group performance, emergent states, and group viability. In sum, process conflicts seem to be uniformly negative for group outcomes.

Limitations and Future Research

Our meta-analysis yields important insights into the effects of conflict on group outcomes, as well as potential boundary conditions of these effects. However, there are several limitations to our findings. First and perhaps most important, our meta-analysis was conducted at the study, and not group, level of analysis. As such, interpretation of our findings to the group level of interaction and analysis should be made cautiously to

prevent committing the ecological fallacy of making inferences at a level of analysis different from the level at which the meta-analytic results exist (Robinson, 1950). For instance, we can only conclude that in studies where task conflict and relationship conflict are highly correlated, task conflict is more negatively related to team performance. We are unfortunately unable to conclude whether, in groups in which relationship conflict and task conflict are both high, team performance will suffer. Therefore, future research should test this finding on the group level directly, to allow between-group, rather than between-study, conclusions to be drawn. Relatedly, because we could only investigate between-study differences, we were limited in the moderators we could examine in this article, as, for many theoretically relevant moderators, such as trust, conflict management style, and group demography, only a limited number of studies exist that have examined these moderators. Therefore, future research would also benefit from further investigation of theoretically relevant moderators of the conflict-outcomes relationship.

Another limitation of our study is that the effect sizes for the relationships with group performance are relatively small. However, they are comparable to other meta-analyses of the intragroup conflict literature (e.g., De Dreu & Weingart, 2003b). Furthermore, common method variance may potentially underlie the relatively strong relationship between intragroup conflict and proximal outcomes, such as intragroup trust. Future research, therefore, would benefit from (quasi-)experimental investigations that examine the relationship between intragroup conflict and proximal group outcomes more directly. Additionally, we did not find cultural context to moderate the association between intragroup conflict and group outcomes. Given that we could examine the moderating effect of cultural context only indirectly, conflict research would benefit from a more direct and systematic examination of the effect of cultural context to investigate whether the findings are truly generalizable across different cultural contexts. Finally, since the results from moderator analyses do not provide any evidence of a causal relationship between moderators and outcomes (Cooper, 1998; Viechtbauer, 2007), future research should aim to better understand exactly how the causal relationships between intragroup conflict and group outcomes are affected by the moderators identified in this study (Cooper, 1998).

Future research on conflict would benefit from taking a more multilevel, process-oriented view of intragroup conflict, including focusing on, for example, within-group, rather than between-group, studies of the development and dynamics of intragroup conflicts over time. Understanding more precisely what happens within a team when intragroup conflicts occur (who perceives what issues, who in the group engages in what conflict behaviors, etc.) and how these dynamics evolve within the team over time may help provide further insights into how intragroup conflicts occur and how exactly they may eventually come to positively or negatively affect group outcomes.

Several promising research directions exist in this area. One research direction is that of asymmetric conflict perceptions (Jehn, Rispens, & Thatcher, 2010). By recognizing and better investigating how members within the same team may come to view the same conflict in different manners, researchers may be able to better understand the nuances and dynamics of intragroup con-

flicts. Another related and interesting future pathway is that of the dynamics underlying intragroup conflict involvement, or the number of people involved in the intragroup conflict (Greer, Jehn, & Lytle, 2009). By understanding the team-level and individual-level factors that may differentially lead individuals within teams to join intragroup conflicts, researchers and practitioners may be able to better understand and manage team conflicts. Last, another interesting research direction would be to focus on the temporal patterns within groups over time in terms of conflict types and performance (e.g., Gersick, 1988; Jehn & Mannix, 2001). For example, it could be insightful to look at whether periods of time in a group when task and relationship co-occur versus do not occur simultaneously are more or less productive periods. Relatedly, identifying the tipping points in groups in which task and relationship conflicts start to co-occur would also be interesting (the arise of asymmetric perceptions, emotional interpretations of conflict situations, etc.).

Future research should identify factors that determine whether groups are able to separate task from relationship conflicts. More generally, future research may examine moderators of the relationships between the three types of conflict. One possible factor may be the level of behavioral integration within the group: the extent to which group members meet regularly, exchange a significant amount of information, and are collaborative (Hambrick, 1994). Behavioral integration seems to go hand in hand with collaborative communication styles in which group members communicate their disagreement in a helpful, problem-solving, and nonpunitive manner (e.g., De Dreu & West, 2001; Lovelace, Shapiro, & Weingart, 2001). Moreover, behavioral integration appears to increase trust among group members (e.g., Polzer, Crisp, Jarvenpaa, & Kim, 2006) as well as a greater understanding of each other's emotions during conflict (Yang & Mossholder, 2004). As such, behavioral integration may reduce misattributions of task conflict and thus weaken the relation between task and relationship conflict (Gamero et al., 2008; Mooney et al., 2007; Simons & Peterson, 2000).

Conclusion

The findings of the current meta-analysis offer hope for a less negative view of intragroup conflict. Whereas groups should be better off without relationship or process conflicts, we have found that task conflicts are not necessarily disruptive for group outcomes. Instead, conditions exist under which task conflict is positively related to group performance. For example, task conflict is more positively related to team performance when task conflict and relationship conflict are weakly correlated, when the conflict occurs among top management teams rather than teams at lower levels of the organizational hierarchy, and when performance is operationalized in terms of financial performance or decision quality (rather than overall performance). Hereby, the current results reemphasize the need for future research to adopt a contingency approach to understand the relationships between intragroup conflict and group outcomes.

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(Appendices follow)

Appendix A
Effect Sizes Regarding Group Performance, as Well as Reliability and Moderator Information

Study	Sample size	Moderator																		
		Effect size					Reliability					5								
		TC	RC	PC	TC-RC	TC-PC	RC-PC	TC-RC	TC-PC	RC-PC	TC	RC	TC	RC	TC	RC	Scale			
Acuña, Gómez, & Juristo (2009)	35	-.19	-.14	n.a.	n.a.	1.00	.64	n.a.	n.a.	C	Spain	n.a.	n.a.	1-5	1-5	NF	0	E	S	1
Amason (1996)	48	-.09	-.38	.79	.86	.91	.38	.79	.86	DM	USA	2.51	1.93	1-5	1-5	F	0	DQ	S	1
Amason & Mooney (1999)	44	-.21	-.37	.73	.88	1.00	.42	.73	.88	DM	USA	2.97	1.99	1-5	1-5	F	0	FFP	Ob	1
Ayoko, Callen, & Härtel (2008)	97			.86	.87		.67	.86	.87	Mix	Australia	n.a.	n.a.	1-5	1-5	F	0			1
Barrick, Stewart, Neubert, & Mount (1998)	51	-.39		.83		.83		.83		P&S	USA	2.75		1-5		F	1	GP	S	1
Barsade, Ward, Turner, & Sonnenfeld (2000)	62	.01	.07	.73	.93	1.00	.84	.73	.93	DM	USA	3.54	3.42	1-7	1-7	F	0	FFP	Ob	1
Bayazit & Mannix (2003)	28	.15	.04	.77	.79	.85	.56	.77	.79	O	USA	1.87	1.31	1-5	1-5	NF	0	GP	S	1
Beersma et al. (2009)	75		-.29	.86	.86	1.00		.86	.86	Mix	USA	1.23		1-5	1-5	NF	0	DQ	Ob	1
Bendersky & Hays (in press)	44	.10	-.08	.04	.74	.74	.78	.74	.78	n.a.	USA			1-7	1-7	NF	0	GP	S	1
Bierly, Stark, & Kessler (2009)	116			.71	.83			.71	.83	C	USA & UK	2.14		1-5	1-5	F	1			1
Bradford, Stringfellow, & Weitz (2004)	81			.81	.94		.61	.81	.94	DM	USA	4.21	2.32	1-7	1-7	NF	1			1
Bradford, Stringfellow, & Weitz (2007)	196	-.05	-.06	.84	.91	1.00	.62	.84	.91	C	USA	1.88		1-7	1-7	F	1	GP	Ob	0
Brauckmann (2007)	33	.28	-.02	.37	.92	n.a.	.30	.37	.92	C	Netherlands	2.18	1.29	1-5	1-5	F	0	FFP	S	0
Chatman, Polzer, Barsade, & Neale (1998)	14	-.05		1.00		1.00		1.00		C	USA	2.5		1-7	1-7	NF	1	GP	Ob	1
Choi & Sy (2010)	62	-.44	-.40	.85	.94	.89	.58	.85	.94	Mix	USA	2.83	2.97	1-7	1-7	F	0	GP	S	1
Conlon & Jehn (2007)	84	.27	.08	.87	.83	1.00	.36	.87	.83	C	USA	1.63	1.78	1-7	1-7	F	1	FFP	Ob	0
Cunningham & Waltemyer (2007)	45	-.43		.94		.64		.94		O	USA	3.43		1-7	1-7	F	0	GP	S	1
Curşuş & Schrujier (2010)	174	-.01	-.20	.76	.80	1.00	.59	.76	.80	P	Netherlands	2.75	1.67	1-5	1-5	NF	0	GP	S	1
DeChurch & Marks (2001)	96	-.17		.87		1.00		.87		P	USA	1.86		1-5	1-5	NF	0	GP	S	1
De Dreu (2006)	21	.01		.76		1.00		.76		P&S	Netherlands	2.64		1-5	1-5	F	0	I	S	1
Study 1	29	.18	.15	.78	.81	.82	.66	.78	.81	n.a.	Netherlands	2.65	2.17	1-5	1-5	F	0	I	S	1
Study 2	27	.06		.91		.82		.91		n.a.	Netherlands	2.24		1-5	1-5	F	0	E	S	1
De Dreu & Van Vianen (2001)	21	-.20		.79		1.00		.79		P&S	Netherlands	2.86		1-5	1-5	F	0	I	S	1

(Appendices continue)

Appendix A (continued)

Study	Sample size	Moderator																											
		Effect size					Reliability					Moderator																	
		TC	RC	PC	TC	RC	PC	TC-RC	TC-PC	RC-PC	RC-PC	2	3	4	5	Mean TC	Mean RC	Mean Scale TC	Mean Scale RC	Scale									
Desivilya & Yagil (2005)	69				.74	.84	.66										2.91	2.89	1-5	1-5	F	1							
De Vries (1998)	32	-.42	-.35		.85	.76	.77	.68										2.68	2.22	1-5	1-5	F	1	GP	S	1			
Elron (1997)	109	.24			.72		.85											3.70		1-5		F	1	GP	S	1			
Ennsley (2006)	108	.07			.79													2.65		1-5	1-5	F	0	O	S	1			
Ennsley & Hmieleski (2005)	256	.19	-.21		.79	.85	1.00	-.41										1.94	2.26	1-5	1-5	F	0	FFP	Ob	1			
Ennsley, Pearson, & Amason (2002)	70	.27	-.10		.79	.85	1.00	.56										2.78	2.37	1-5	1-5	F	0	FFP	Ob	1			
Ennsley, Pearson, & Sardeshmukh (2007)	200	.19	-.12		.82	.87	1.00	-.58										3.01	2.38	1-5	1-5	F	0	FFP	Ob	1			
Farh, Lee, & Farh (2010)	71	.19	-.08		.76	.82	.85	.43										2.61	2.08	1-5	1-5	F	1	I	S	1			
Gamero, González-Romá, & Peiró (2008)	156				.89	.89	.78											2.22	1.77	1-5	1-5	F	0			1			
Time 1	156				.92	.91	.81											2.22	1.79	1-5	1-5	F	0			1			
Time 2	156				.91	.90	.80											2.22	1.78	1-5	1-5	F	0			1			
Aggregated																													
Goncato, Polman, & Maslach (2010)	42			.15		.80	.75																						
Study 1, Time 1	42			-.34		.70																							
Study 1, Time 2	42			-.10		.85	.82	.81	1.00	.47	.41																		
Study 1 aggregated	72	-.15	-.11	-.02	.85	.82	.81	1.00										1.96	1.39	1-5	1-5	NF	0	GP	S	1			
Study 2, Time 1	72	.07	.23	.30	.82	.86	1.00	.66	.42	.58	.42							1.89	1.31	1-5	1-5	NF	0	GP	S	1			
Study 2, Time 2	72	-.07	-.14	-.07	.83	.81	.84	1.00	.42	.65	.61							1.8	1.39	1-5	1-5	NF	0	GP	S	1			
Study 2, Time 3	72	-.04	-.12	.01	.88	.86	.90	1.00	.69	.73	.65							1.86	1.4	1-5	1-5	NF	0	GP	S	1			
Study 2, Time 4	72	.03	-.23	-.11	.86	.84	.93	1.00	.68	.70	.74							1.94	1.51	1-5	1-5	NF	0	GP	S	1			
Study 2, Time 5	72	-.02	-.07	.02	.85	.83	.88	1.00	.60	.58	.62							1.87	1.40	1-5	1-5	NF	0	GP	S	1			
Study 2 aggregated																													
Greer, Jehn, & Lytle (2009)	36	.22	.01		.78	.85	1.00	.44										4.49	2.87	1-7	1-7	NF	0	GP	S	0			
Greer, Jehn, & Thatcher (2011)	68	.23	.23	-.12	.84	.79	.90	1.00	.58	.74	.63							2.44	1.61	1-7	1-7	F	0	DQ	Ob	0			
Greer, Jehn, Thatcher, & Mannix (2011)																													
Study 1	60				.84	.79	.90	1.00	.58	.75	.62							2.43	1.6	1-7	1-7	F	0	DQ	Ob	0			
Study 2, Time 1	28	-.07	-.17	-.16	.75	.94	.81	1.00	.81	.83	.88							2.71	1.91	1-7	1-7	NF	0	GP	S	0			
Study 2, Time 2	28	-.01	-.24	-.21	.83	.89	.91	1.00	.79	.83	.91							2.68	1.84	1-7	1-7	NF	0	GP	S	0			
Study 2 aggregated	28	-.04	-.21	-.19	.79	.92	.87	1.00	.80	.83	.90							2.70	1.88	1-7	1-7	NF	0	GP	S	0			
Hinds & Mortensen (2005)	35	-.23	-.12		.82	.89	.84	.75										2.51	2.03	1-5	1-5	F	0	GP	S	1			

(Appendices continue)

Appendix A (continued)

Study	Sample size	Effect size						Reliability						Moderator																									
		TC			PC			TC			RC			PC			TC			RC			PC			TC			RC			PC							
		TC	RC	PC	TC	RC	PC	TC	RC	PC	TC	RC	PC	TC	RC	PC	TC	RC	PC	TC	RC	PC	TC	RC	PC	TC	RC	PC	TC	RC	PC	TC	RC	PC	TC	RC	PC		
Polzer, Milton, & Swann (2002)	83	-.01	-.13		.81	.92		1.00	.72		Mix	USA	n.a.	2.78	2.37	1-5	1-5	NF	0	GP	S	1																	
Porter & Lilly (1996)	80	-.35			.82						DM	USA	n.a.	2.80	1-7			NF	1	DQ	S	1																	
Quigley, Tekleab, & Tesluk (2007)	53		-.24		.94		1.00				Mix	USA	n.a.		1.82	1-7	1-7	NF	0	GP	S	1																	
Raver & Gelfand (2005)	27	-.35	-.52		.86	.85		1.00	.74		P&S	USA	Non-TMT	2.63	2.36	1-5	1-5	F	1	FFP	Ob	1																	
Raver & Van Knippenberg (2007)	38	-.23	-.06		n.a.	n.a.			.61		DM	Canada	n.a.	2.61	1.61	1-5	1-5	NF		GP	S	0																	
Rispens, Greer, & Jehn (2007) Study 2	27				.71	.92			.57		Mix	USA	n.a.	3.09	2.39	1-7	1-7	F	0			1																	
Rispens, Greer, Jehn, & Thatcher (2007)	27	-.68	-.59		.90	.76		.87	.71		P&S	Netherlands	Non-TMT	3.33	2.17	1-7	1-7	F	0	GP	S	1																	
Rupert & Jehn (2009a)	67	-.30	-.26	-.15	.91	.88	.86	.88	.69	.78	P&S	Netherlands	Non-TMT	3.35	2.70	1-7	1-7	F	0	GP	S	0																	
Rupert & Jehn (2009b)	49	-.20	-.17	-.22	.77	.78	.78	.91	.49	.66	DM	Netherlands	Non-TMT	3.32	2.85	1-7	1-7	F	0	GP	S	0																	
Rupert & Meurs (2007)	17	-.38	-.29	-.36	.80	.85	.82	1.00	.87	.93	O	Netherlands	Non-TMT	3.85	3.75	1-7	1-7	F	0	GP	Ob	0																	
Senpere, González-Romá, & Peiró (2007)	65	-.39			.91			.95			P&S	Spain	n.a.	2.03		1-6		F	0	GP	S	0																	
Sessa (1993)	30	.00	-.09		.61	.61		.87	.23		DM	USA	n.a.	2.70	2.10	1-5	1-5	F	1	DQ	S	0																	
Simons, Pelled, & Smith (1999)	57	.07			.75			1.00		.57	DM	USA	TMT	2.90	n.a.			F	1	FFP	Ob	1																	
Simons & Peterson (2000)	70				.78	.87					DM	USA	TMT	2.56	1.85	1-5	1-5	F	0			1																	
Stalmeyer, Gijsselaers, Wolfhagen, Harendza, & Scherpbier, (2007)	21	.18	-.30		.75	.84			-.69		P	Netherlands	n.a.	n.a.	n.a.			F	1	GP	S	1																	
Stark & Bierly (2009)	178				.79						C	USA & UK	n.a.	2.09				F	1			0																	
Talaulicar, Grundei, & van Werder (2005)	48	.08			.77			.56			DM	Germany	TMT	4.50		1-5		F	1	O	S	1																	
Thatcher, Jehn, & Chadwick (2007)																																							
Time 1	144				.70	.92	.83	1.00	.61	.58	Mix	USA	n.a.	3.47	2.67	1-7	1-7	NF	0	GP	S	1																	
Time 2	144	.09	.13	.06	n.a.	n.a.	n.a.	1.00	.58	.67	Mix	USA	n.a.	3.00	2.57	1-7	1-7	NF	0	GP	S	1																	
Aggregated	144	.09	.13	.06	.70	.92	.83	1.00	.60	.63	Mix	USA	n.a.	3.24	2.62	1-7	1-7	NF	0	GP	S	1																	
Thatcher, Jehn, & Zanutto (2003)	79	-.29	-.64	-.66	.70	.92	.83	1.00	.56	.66	Mix	USA	n.a.	2.90	2.54	1-7	1-7	NF	0	GP	S	1																	
Tjosvold, Law, & Sun (2006)	186	.09	-.06		.73	.82		.80	.62		P&S	China	Non-TMT	3.46	3.01	1-7	1-7	F	0	E	S	1																	
Van Woerkom & Van Engen (2009)	84	-.25	-.32		.74	.80		.68	.55		Mix	Netherlands	n.a.	2.80	2.29	1-5	1-5	F	0	GP	S	1																	
Vermeul (1996)	16	-.21	-.21		.77	.77					Mix	Netherlands	Non-TMT	2.33	2.07	1-5	1-5	F	1	E	S	1																	
Vodosek (2007)	76	-.41	-.42	-.45	.76	.93	.87	.84	.75	.84	C	USA	Non-TMT	n.a.	n.a.	1-7	1-7	F	0	GP	S	1																	

(Appendices continue)

Appendix A (continued)

Study	Sample size	Effect size										Reliability										Moderator																						
		TC			RC			PC			TC-RC			TC-PC			RC-PC			2			3			4			5			Mean			Scale			Scale						
		TC	RC	PC	TC	RC	PC	TC	RC	PC	TC-RC	TC-PC	RC-PC	TC-RC	TC-PC	RC-PC	Mix	USA & Korea	DM	USA	USA	USA	USA	Singapore	USA & Mexico	n.a.	TMT	Non-TMT	TC	RC	TC	TC	RC	TC	TC	RC	TC	RC	RC	RC				
Wakefield, Leidner, & Garrison (2008)	23	-.30	-.22	-.34	.91	.92	.89	.88	.80	.85	.76	.85	.85	.76	Mix	USA & Korea	DM	USA	USA	USA	USA	Singapore	USA & Mexico	n.a.	TMT	Non-TMT	2.84	2.72	1-7	1-7	1-7	1-7	2.84	2.72	1-7	1-7	1-7	1-7	F	0	GP	S	1	S
Wan & Ong (2005)	212	.01	-.06	-.01	.77	.80	.73	1.00	-.58	-.50	.66	-.58	-.50	.66	DM	Singapore	DM	USA	USA	USA	USA	Singapore	USA & Mexico	n.a.	TMT	Non-TMT	3.91	2.19	1-5	1-5	1-5	1-5	3.91	2.19	1-5	1-5	1-5	1-5	F	0	FFP	Ob	1	S
Watson, Cooper, Torres, & Boyd (2008)	142	.83	.81	.83	.81	.81	.81	.81	.64	.64	.64	.64	.64	.64	n.a.	USA & Mexico	n.a.	USA	USA	USA	USA	Singapore	USA & Mexico	n.a.	TMT	Non-TMT	2.35	1.70	1-5	1-5	1-5	1-5	2.35	1.70	1-5	1-5	1-5	1-5	NF	0	NF	0	1	S
Weingart, Todorova, & Cronin (2008)	21	.44	.14	.14	.83	.87	.87	.82	-.25	-.25	.74	-.25	-.25	.74	C	USA	C	USA	USA	USA	USA	Singapore	USA & Mexico	n.a.	TMT	Non-TMT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	NF	0	I	S	0	S
Wilkins & London (2006)	8	.17	.00	.00	.95	.91	.63	.63	.50	.50	.50	.50	.50	.50	Mix	USA	Mix	USA	USA	USA	USA	Singapore	USA & Mexico	n.a.	TMT	Non-TMT	4.22	2.51	1-7	1-7	1-7	1-7	4.22	2.51	1-7	1-7	1-7	1-7	F	0	E	S	1	S
Wolfe & Murthy (2005)	87	.79	.78	.78	.78	.78	.78	.78	.33	.33	.33	.33	.33	.33	O	USA	O	USA	USA	USA	USA	Singapore	USA & Mexico	n.a.	TMT	Non-TMT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	NF	1	NF	1	1	S
Yeh & Chou (2005)	88	-.02	-.20	-.20	.84	.93	.88	.88	.64	.64	.64	.64	.64	.64	P&S	Taiwan	P&S	USA	USA	USA	USA	Singapore	USA & Mexico	n.a.	TMT	Non-TMT	3.14	2.36	1-5	1-5	1-5	1-5	3.14	2.36	1-5	1-5	1-5	1-5	F	0	E	S	1	S
Zhang, Hempel, & Hahn (2008)	101	-.12	-.11	-.17	.84	.90	.84	.82	.70	.66	.74	.66	.66	.74	C	China	C	USA	USA	USA	USA	Singapore	USA & Mexico	n.a.	TMT	Non-TMT	2.42	2.08	1-5	1-5	1-5	1-5	2.42	2.08	1-5	1-5	1-5	1-5	F	0	E	S	0	S
Zhu, Shaw, & Scott (2008)	103	.10	-.06	-.06	.76	.78	.78	1.00	.51	.51	.51	.51	.51	.51	n.a.	USA	n.a.	USA	USA	USA	USA	Singapore	USA & Mexico	n.a.	TMT	Non-TMT	1.55	2.11	1-5	1-5	1-5	1-5	1.55	2.11	1-5	1-5	1-5	1-5	NF	0	GP	S	0	S
Zona & Zattoni (2007)	301	0.00	0.00	0.00	.86	.86	.75	.75	.75	.75	.75	.75	.75	.75	O	Italy	O	USA	USA	USA	USA	Singapore	USA & Mexico	n.a.	TMT	Non-TMT	1.73	1.73	1-5	1-5	1-5	1-5	1.73	1.73	1-5	1-5	1-5	1-5	F	0	GP	S	1	S

Note. Moderators: 1 = association between conflict types; 2 = task type; 3 = country where study was conducted; 4 = organizational level; 5 = mean level of task and relationship conflict; 6 = field setting versus nonfield setting; 7 = conflict scale; 8 = performance indicator; 9 = objective versus subjective performance indicator; 10 = publication status. Abbreviations: C = creativity; DM = decision making; DQ = decision quality; E = effectiveness; F = field setting; FFP = financial (firm) performance; GP = general performance; I = innovativeness; Mix = mixed set of tasks; n.a. = not applicable; NF = nonfield setting; O = other; Ob = objective; P = project; PC = process conflict; Perf = performance; P&S = production and service; RC = relationship conflict; S = subjective; TC = task conflict; TMT = top management team.

^a0 = Jehn scale, 1 = non-Jehn scale. ^b0 = not published, 1 = published.

(Appendices continue)

Appendix B
Effect Sizes Between Intragroup Conflict and Trust, Cohesion, Satisfaction, and Commitment

Study	Trust				Cohesion				Satisfaction				Commitment			
	TC	RC	PC	α	TC	RC	PC	α	TC	RC	PC	α	TC	RC	PC	α
Acuña, Gómez, & Juristo (2009)				n.a.	-.41	-.48			-.53	-.35		n.a.				
Barrick, Stewart, Neubert, & Mount (1998)				.87	-.90								-.16	-.55		.83
Bayazit & Mannix (2003)				.89									-.41	-.54		.84
Bierly, Stark, & Kessler (2009)				.75	-.64	-.47			-.59	-.60			-.38	-.51	-.21	.75
Brafford, Stringfellow, & Weitz (2004)																
Brauckmann (2007)	-.32	-.39			-.27	-.62	-.20		-.47	-.30						
Curşue & Schrujjer (2010)																
DeChurch & Marks (2001)					.56											
De Dreu & Van Vianen (2001)					.37	-.21		.77								
Elron (1997)					-.12	-.24		.84								
Ennsley & Hmieleski (2005)					.46	-.41		.88								
Ennsley, Pearson, & Amason (2002)																
Ennsley, Pearson, & Sardeshmukh (2007)																
Greer, Jehn, Thatcher, & Mannix (2011)																
Study 1	-.45	-.21	-.46	.85	-.37	-.30	-.50	.89	-.37	-.30	-.50	.89	-.30	-.18	-.34	.77
Study 2, Time 1	-.45	-.45	-.60	.94												
Study 2, Time 2	-.45	-.50	-.51	.93												
Study 2 aggregated	-.45	-.48	-.56	.94												
Homan, Van Knippenberg, Van Kleef, & De Dreu (2007)																
Jehn (1994)					-.24	-.19	-.19	.94	-.41	-.50	-.39	.85	-.31	-.41	-.30	.85
Jehn & Bezrukova (2007)																
Jehn, Chadwick, & Thatcher (1997)					-.24	-.46		.96	-.24	-.46		.96				
Jehn, Greer, Levine, & Szulanski (2008)					-.12	-.60		.88	-.12	-.60		.88				
Jehn & Mannix (2001)					-.50	-.53	-.52	.91	-.50	-.53	-.52	.91				
Jehn, Northcraft, & Neale (1999)					-.19	-.50	-.38	.92	-.19	-.50	-.38	.92				
Langfred (2007)	-.22	-.17	-.19	.82	-.22	-.19	-.19	.94	-.28	-.38	-.38	.82				
Time 1	-.52	-.60														
Time 2	-.84	-.88														
Aggregated	-.72	-.78		.89												
Lau & Murnighan (2005)					-.58	-.73	-.62	.92	-.50	-.65		.88				
Leslie (2007)					-.49			.85	-.60			.90				
Lira, Ripoll, Peiró, & González (2007)					-.10	-.20		.78								
Liu, Fu, & Liu (2009)																
Mannes (2009)																
Study 1					-.53	-.71		.76	-.53	-.71		.76				
Study 2					.23	.14		.87	.23	.14		.87				

(Appendices continue)

Appendix B (continued)

Study	Trust				Cohesion				Satisfaction				Commitment			
	TC	RC	PC	α	TC	RC	PC	α	TC	RC	PC	α	TC	RC	PC	α
Minichilli, Zattoni, & Zona (2008)													.00			.76
Oliver, Poling, & Woehr (2008)																
Papenhausen (2006)	-.47	-.60		n.a.					.69	-.57		.96				
Parayitam & Dooley (2007)	.30	.10		.90									.69	.12		.88
Parayitam, Olson, & Bao (2010)	-.12	-.29		.89												
Parry, Song, & Spekman (2008)									.18		n.a.					
Passos & Caetano (2005)									-.18	-.41	-.50	.86				
Peterson & Behfar (2003) Time 1	-.57	-.70		.89												
Polzer, Crisp, Jarvenpaa, & Kim (2006)	-.56	-.54		.82												
Porter & Lilly (1996)	-.46			.84												
Quigley, Tekleab, & Tesluk (2007)					-.38		.94			-.38		.96		-.29		.84
Raver & Gelfand (2005)					-.48	-.56	.77									
Rispeps, Greer, & Jehn (2007) Study 2					-.18	-.48	.73									
Rispeps, Greer, Jehn, & Thatcher (2007)																
Rispeps, Greer, Jehn, & Thatcher (2007)	-.67	-.74		.89					-.50	-.58	-.55	.91	-.57	-.58	-.58	.91
Rupert & Jehn (2009a)	-.67	-.78		.72					-.13	-.50	-.32	n.a.	-.12	-.30	-.13	.88
Rupert & Jehn (2009b)	-.24	-.34		.71					-.69	-.69	-.77	n.a.	-.59	-.58	-.59	.82
Rupert & Meurs (2007)																
Simons & Peterson (2000)	-.36	-.62		.89												
Stalmeijer, Gijsselaers, Wolfhagen, Harendza, & Scherpbier (2007)									.61	-.55		1.00				
Stark & Bierly (2009)																
Talaulicar, Grundei, & van Werder (2005)																
Thatcher, Jehn, & Chadwick (2007)	-.03			.84												
Time 1																
Time 2																
Aggregated																
Vermeil (1996)									-.43	-.67	-.64	n.a.	-.41	-.66	-.61	n.a.
Vodosek (2007)									-.31	-.58	-.63	n.a.	-.32	-.60	-.61	n.a.
Watson, Cooper, Torres, & Boyd (2008)									-.37	-.63	-.63	n.a.	-.37	-.63	-.61	n.a.
Wolfe & Murthy (2005)																
Yeh & Chou (2005)									-.30	.37	.75	.74	-.30	-.11	-.82	.82
Zhu, Shaw, & Scott (2008)									-.31	-.48	.83	.92	-.44	-.60	-.57	.78

Note. n.a. = not applicable; PC = process conflict; RC = relationship conflict; TC = task conflict.

Appendix C

Effect Sizes Between Intragroup Conflict and Identification, Organizational Citizenship Behavior, Counterproductive Workplace Behavior, and Positive Affect

Study	Identification				Organizational citizenship behavior				Counterproductive workplace behavior			Positive affect		
	TC	RC	PC	α	TC	RC	PC	α	TC	RC	α	TC	RC	α
Ayoko, Callen, & Härtel (2008)									.49	.63	.71			
Choi & Sy (2010)					-.01	-.27		.94						
De Dreu & Van Vianen (2001)						-.22		.83						
Desivilya & Yagil (2005)												-.02	.03	.77
Gamero, González-Romá, & Peiró (2008)														
Time 1												-.59	-.63	.92
Time 2												-.59	-.57	.92
Aggregated												-.59	-.60	.92
Hsu, Chou, Hwang, & Chou (2008)					-.69			.84						
Janssen, Van de Vliert, & Veenstra (1999)												-.35	-.74	.91
Jehn & Bezrukova (2007)	-.07	-.19	-.05	.88										
Leslie (2007)					-.25	-.33	-.24	.86						
Mannes (2009) Study 2												.27	.19	.90
Menon, Bharadwaj, Howell (1996)												.61		.84
Mortensen (2004)	-.45	-.62		.80										
Mortensen & Hinds (2001)	-.44	-.47		.93										
Nguyen (2007)	-.15	-.21		.76										
Polzer, Milton, & Swann (2002)	-.24	-.53		.92										
Raver & Gelfand (2005)					.00	-.14		.88						
Rispens, Greer, & Jehn (2007)														
Study 2					-.30	-.29		n.a.	.36	-.43	n.a.			
Sessa (1993)					.42	.31			.29	.00				
Vermeul (1996)								.86						
Watson, Cooper, Torres, & Boyd (2008)					-.31	-.54		.85	.41	.55	.84			

Note. n.a. = not applicable; PC = process conflict; RC = relationship conflict; TC = task conflict.

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