Managing conflict in Dutch organizations: A test of the relevance of DeutschŪs cooperation theory

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Managing relationship conflict and the effectiveness of organizational teams

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Summary   Past research has revealed that team effectiveness and satisfaction suffer when teams experience relationship conflict – conflict related to interpersonal issues, political norms and values, and personal taste. This study examined how teams should respond to these conflicts. Three types of conflict responses were studied: collaborating responses, contending responses, and avoiding responses. A field study involving a heterogeneous sample of teams performing complex, non-routine task showed that collaborating and contending responses to relationship conflict negatively relate to team functioning (i.e., voice, compliance, helping behavior) and overall team effectiveness, while avoiding responses were associated with high team functioning and effectiveness. It is suggested that collaborating and contending responses to relationship conflict distract team members from their tasks, while avoiding responses appear more functional in that they allow team members to pursue task performance. Copyright © 2001 John Wiley & Sons, Ltd.

Introduction

Team work in organizations is increasingly the norm, yet the challenges of working effectively in teams are considerable (Guzzo and Shea, 1992). In particular, when teams perform complex tasks, team effectiveness is not only a function of individuals' task performance and goal achievement; team effectiveness also depends on the extent to which team members need to avoid process losses by helping each other, coordinating activities, complying with demands and requirements, and voicing opinions and ideas (*cf*., Hackman, 1983; Podsakoff *et al*., 1997; Steiner, 1972; West *et al*., 1998). One challenge to team effectiveness is conflict – the tension between team members due to real or perceived differences (Thomas, 1992; Wall and Callister, 1995; see also Cohen and Bailey, 1997). Conflict affects team work at various levels, both positive and negative (De Dreu *et al*., 1999). Conflict has been associated with greater innovation and more effective interpersonal relations (Tjosvold, 1997), but also with lower effectiveness, reduced well-being and turnover (Spector and Jex, 1998).

These negative consequences of conflict for well-being and effectiveness appear especially when conflicts relate to the interpersonal relationship aspects of team work (Amason, 1996; De Dreu and Van de Vliert, 1997; Jehn, 1995). As a result, most research efforts focus on preventing relationship

conflict in teams. Alternatively, however, one may ask which responses to relationship conflict are most adequate. Assuming that one can never completely prevent relationship conflict, we need to know how teams (should) respond to relationship conflicts, and how these responses relate to team functioning and team effectiveness. Assuming teams experience some level of relationship conflict, the current research examined which responses to relationship conflict are related to satisfaction with the team, and team effectiveness. We advance a set of hypotheses and we report a field study involving management and cross-functional project teams to test these hypotheses.

Relationship conflict and team functioning

When people work together in teams their social interaction is concerned with task-related issues as well as with relationship issues (e.g., Forsyth, 1983). As to the latter, team members may like or dislike one another for personal reasons, and share or dispute one another's political views, values and beliefs. One reason why teams can work together effectively is because they establish a positive, trusting group climate, based on interpersonal liking and shared norms and values (Zander, 1993). Likewise, one reason why teams fail to be productive is because they fail to develop a positive team climate and instead develop relationship conflicts – conflicts related to interpersonal issues, political norms and values, and personal taste (Amason, 1996; De Dreu and Van de Vliert, 1997; Jehn, 1995, 1997a).

Relationship conflicts concern insights and information that are unrelated to the task, involve negative emotions and threaten one's personal identity and feelings of self-worth (Pelled, 1995). Several studies considered the role of relationship conflicts in teams. Rather than reviewing this literature in a qualitative way we decided to use meta-analysis (Hedges and Olkin, 1985; Johnson, 1989) and to provide a quantitative analysis of past research findings. Appendix A gives a description of the method and procedure and Table 1 summarizes the findings from studies considering relationship conflict as the independent variable and team effectiveness and satisfaction with the team as dependent variables. Most studies measured relationship conflict with a four-item scale developed by Jehn (1995). Studies varied, however, in the way team effectiveness was assessed. Some studies used supervisor ratings of team effectiveness (e.g., Amason, 1996; Jehn, 1994) while others included objective performance measures such as number of average production per day (e.g., Nijdam, 1997 unpublished Master's Thesis; University of Amsterdam). As can be seen in Table 1, some studies reported multiple measures of team effectiveness. When we take the highest values in each case, the average correlation across ten studies between relationship conflict and team effectiveness measures, corrected for sample size, is $r = -0.27$, $p < 0.001$. When we take a more conservative approach and focus on the smallest value in each case, the average correlation across ten studies between relationship conflict and team effectiveness measures, corrected for sample size, is $r = -0.08$, $p < 0.05$. The average correlation across nine studies between relationship conflict and satisfaction measures, corrected for sample size, is $r = -0.48$, $p < 0.001$. These results show that, on the whole, relationship conflict is negatively related to both team effectiveness and member satisfaction.

The conclusion that relationship conflict is negatively associated with team effectiveness and with satisfaction leaves those interested in helping and managing teams with two possibilities. The first is to design systems and techniques that prevent relationship conflict in teams. For example, research by Simons and Peterson (2000) indicated that building and maintaining intra-group trust is an important preventive measure – it reduces the likelihood that task-related disagreements turn into relationship conflicts. Research by Pelled *et al.*, (1999) revealed that (demographic) diversity positively associates with relationship conflict (see also, Jehn *et al.*, 2000). A study by Jehn and Mannix (1999 – unpublished manuscript, The Wharton School, University of Pennsylvania) likewise showed that teams that have initially high levels of consensus about work values develop trust and have low levels of relationship conflict.

Table 1. Overview of correlations between relationship conflict, and effectiveness and satisfaction measures in past research

Study	Effectiveness measures	Satisfaction with team	N	Type of participant
Amason (1996)	− 0.38; − 0.18; − 0.34	NA	48	Management teams
Franssen (1996)	NA	− 0.55	116	Personnel managers
Friedman *et al.* (1998)	NA	− 0.48[§]	82	Medical professionals
Janssen *et al.* (1997)	− 0.27; − 0.35	NA	102	General managers
Jehn (1994)	− 0.40	− 0.60	88	Student teams
Jehn (1995)	− 0.04; − 0.13; − 0.02	− 0.54	93	Production teams Management teams
Jehn & Mannix (1997)	− 0.10; − 0.14	− 0.23	151	MBA students
Jehn *et al.* (1997a)	− 0.12; − 0.29; − 0.02	− 0.50	518	Blue collar; professionals
Jehn *et al.* (1997b)	− 0.15; − 0.38	− 0.50	88	Student teams
Nijdam (1997)	− 0.03;0.29	− 0.41	20	Production teams
Pelled (1996)	− 0.28; − 0.04	NA	233	Blue-collar workers
Pelled *et al.* (1999)	− 0.07	NA	45	Cross-functional teams
Tidd & Friedman (1999)	NA	− 0.55[‖]	82	Medical professionals
Average correlation[¶]	− 0.27;[†] − 0.08[‡]	− 0.48[†]		
Average effect size (*d*)	− 0.56; − 0.14	− 1.10		
Homogeneity statistic (Q_w)	24.73[†]; 46.50[*]	40.16[*]		

Note. For effectiveness measures, multiple indicators were sometimes reported.
NA = Not available.
[§] = Reverse coded measure of job-related stress.
[‖] = Measure of commitment to the team.
[¶] = Corrected for sample size. For team effectiveness, average correlation given the highest value per study, and the average correlation given the lowest value per study is reported.
[*] $p < 0.001$.

Focusing on the antecedents of relationship conflict is useful, but it would be simplistic to assume that we can always prevent relationship conflict occuring. To some extent (demographic) diversity in team composition cannot be controlled and trust is a dynamic and fragile rather than a stable and robust characteristic of teams. In fact, we need to acknowledge that teams sooner or later experience relationship conflicts and have to manage them. Thus, to complement the analysis provided by past research, we need to expand our knowledge about how teams should manage their relationship conflicts once they occur. The current study was designed to do this. As such, it is expected to increase our theoretical understanding of the processes responsible for the negative effects of relationship conflict on team effectiveness, and to assist those interested in helping teams to work effectively.

Responses to relationship conflict in teams

A conflict response is what parties to a conflict intend to do as well as what they actually do (Van de Vliert and Euwema, 1994). In his Theory of Cooperation and Competition, Deutsch (1973) distinguished between cooperative and competitive responses. Cooperation is aimed at working together with the other conflict parties and seeking solutions that satisfy all participants involved.[1] Competition,

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[1] At a more micro-level of analysis it has been proven useful to distinguish three different forms of cooperation: problem solving in which parties seek a mutually beneficial solution; yielding, in which one party makes unilateral concessions and gives in to the other; and compromising, in which parties seek to solve the conflict by splitting the difference (De Dreu *et al.*, 2000; Pluitt and Rubin, 1986; Van de Vliert and Euwema, 1994). In this research, we focus on broader responses to conflict and decided to measure collaborating as an overall, cooperative strategy.

in contrast, is aimed at working against the other conflict parties and seeking solutions that satisfy one's own goals without taking other's goals into consideration. A problem with the distinction between cooperation and competition is that it potentially ignores the possibility that conflict parties decide to avoid interaction and downplay the conflict issue. In fact, qualitative as well as quantitative analyses of organizational conflict suggest that avoiding is a frequently employed response to conflict situations (Kolb and Bartunek, 1992). Thus, the distinction between cooperation and competition can be usefully expanded by including avoiding as a third response to conflict. This fits Horney's (1945) taxonomy 'moving toward,' 'moving against,' and 'moving away.' Putnam and Wilson (1982) redefined these responses in terms of 'collaborating,' 'contending' and 'avoiding,' respectively. Accordingly, we examined: (1) *collaborating* with others and trying to work out a mutually acceptable solution; (2) *contending* and trying to impose one's will, wishes and perspectives upon others; and (3) *avoiding* (interaction concerned with) the conflict issues and ignoring the problem. In a sample of police sergeants, Van de Vliert and Euwema (1994) found that collaborating as well as contending responses were perceived as less passive than avoiding responses, while avoiding and collaborating were seen as more agreeable than contending responses. Their results suggest that compared to avoiding, collaborating and contending are more likely to actively solve or escalate the conflict, respectively. Avoiding, in contrast, is more likely to leave the conflict for what it is, without solving or escalating it. If anything is to happen with the conflict, it is because of external factors that are not purposefully managed by conflict parties.

Two studies considered conflict management in relationship conflict. In a study involving managers from two different companies, De Dreu (1997) found a negative correlation between relationship conflict and collaborating responses, and a positive correlation between relationship conflict and contending responses, and between relationship conflict and avoiding responses. Likewise, Janssen *et al.* (1999) found a negative correlation between relationship conflict and collaborating responses, and a positive correlation between relationship conflict and contending responses (they had no separate measure of avoiding). These studies suggest a tendency for teams to respond to relationship conflict through contending and avoiding responses. They do not, however, answer the question whether contending and avoiding are effective responses, in that they help team members in working together on their joint tasks, and stimulate the team's goal achievement and innovation.

Responses to conflict and team effectiveness

Whether and how particular ways of handling conflict in teams influences team effectiveness has been studied extensively in both the laboratory and in field research. Much of this research has been inspired by Deutsch's Theory of Cooperation and Competition (1973), and reviews of this literature suggest that when teams manage conflicts through collaborating, team effectiveness is enhanced. In contrast, when teams manage conflicts through contending, team effectiveness suffers (Tjosvold, 1997, 1998). Laboratory experiments on negotiation emphasized the importance of pro-social motives and concomitant collaborating behavior as a way to solve conflicts about opposing interests (e.g., De Dreu *et al.*, 1998; Weingart *et al.*, 1993; for reviews, see De Dreu *et al.*, 2000; Deutsch, 1973; Pruitt and Carnevale, 1993). Field research stresses the importance of cooperative goals and concomitant 'constructive controversy'—the open-minded discussion about opposing ideas, feelings and opinions (e.g., Tjosvold and Deemer, 1980; for a review, see Tjosvold, 1997). On the whole, these studies converge on the conclusion that collaborating in conflict situations increases individual and team effectiveness, as exemplified by greater satisfaction and feelings of self-efficacy among conflict parties, more mutually beneficial solutions, reduced likelihood of future conflict, and better goal achievement (Pruitt and Rubin, 1986, Tjosvold, 1997).

It is important to note, however, that this research did not specifically consider *relationship* conflict. Some studies considered general team conflict, but most focused on *task* conflict – conflict about the distribution of resources, about procedures and policies, and about judgments and the interpretation of facts. Task conflict is less threatening to one's personal identity, involves less intense, negative emotions, and tends to motivate team members to search for optimal judgements and decisions (for reviews, see Amason and Schweiger, 1997; De Dreu *et al.*, 1999; Jehn, 1997a). In fact, in the case of relationship conflict teams collaborating responses may be less effective than one would expect. Relationship conflict is difficult to settle to mutual satisfaction. Tension and frustration rooted in discrepant personal norms and values, political preferences and sense of humour is difficult to reduce, simply because it requires changing issues fundamental to one's personal identity and acquired in the course of an entire life. Druckman and Zechmeister (1973, p. 450) indicated that 'the mode of resolution for [relationship] conflicts is not joint compromise or concessions . . .[instead] altered understanding of the situation by one or both parties is necessary.' In a more recent publication, Druckman (1994, p. 549) concluded from his meta-analytical review that negotiators have greater difficulty compromising 'when the differences . . . on important issues are derived from long-held social attitudes, and/or are linked to contrasting ideologies'. Thus, seeking middle-ground and mutually acceptable solutions through give and take is unlikely to solve the relationship conflict, and may instead make it loom bigger and intractable (see also, Harinck *et al.*, 2000).

At first blush the research by Druckman and colleagues might suggest that relationship conflict requires a certain degree of explicit confrontation and contending, because this clarifies issues and fosters altered understanding of the situation by one or both parties (see also Putnam, 1997). This notion ignores, however, that contending easily locks parties into a conflict spiral. Conflict research showed that contending behaviors are quickly reciprocated by even stronger responses by others, undermine trust and benevolent views of the opposing conflict parties and result in poor outcomes for all (for reviews, see Deutsch, 1973; Pruitt and Carnevale, 1993). Thus, although contending responses may help team members to clarify issues and alter their understanding of the situation, they also entail the danger of escalating the conflict and thus hinder team functioning and effectiveness. Contending responses are, overall, not expected to contribute positively to team functioning and team effectiveness.

A qualitative study by Murnighan and Conlon (1991) corroborates that neither collaborating nor contending responses are adequate in the case of relationship conflict. These authors interviewed members of British String Quartets and concluded that less successful teams often resolved their irritation through compromises, while more successful quartets often abandoned their annoyances and focused on their task. More successful teams appeared to realize which conflicts would be disruptive and approached these by avoiding or forestalling them. Avoiding responses allow the conflict to become less prominent. Irritations and annoyances related to interpersonal issues may even go away when time passes by, when team members go through new experiences and get to know one another in new and different ways. As such, avoiding responses in the case of relationship conflict may be quite functional in that they do not escalate the conflict and instead teach parties the benefits of patience. Jehn (1997b) obtained similar impressions. She observed that 'qualitative data revealed that open norms about affective [relationship] conflict increased the number and intensity of affective conflicts but the openness regarding conflict did not provide an atmosphere of acceptance and forgiveness. In fact, the conflict escalated as the number and intensity of episodes increased' (p. 95). These qualitative observations by Murnighan and Conlon, and by Jehn fit well with the advice given by Ury (1991) when he introduces 'going to the balcony' as a metaphor for a mental attitude of detachment in conflict situations. Often, Ury argues, going to the balcony means distracting from one's emotions and natural impulses. This in turn could reduce the tension and frustration up to a point where it no longer hurts working together on a joint task.

The present study

The various literatures we reviewed appear to converge on the conclusion that contending in relationship conflict is unlikely to relate positively to team functioning and team effectiveness. Regarding collaborating, negotiation research (Pruitt and Carnevale, 1993) and research concerned with 'constructive controversy' (Tjosvold, 1997) may suggest collaborating increases team functioning and team effectiveness. However, this literature did not examine *relationship* conflict, and research by Druckman and colleagues suggests that collaborating in relationship conflict is unlikely to produce more effective teams. Finally, the qualitative analysis of team functioning (Murnigham and Conlon, 1991; Jehn, 1997b) suggests avoiding responses to relationship conflict increase team functioning and team effectiveness. Thus, we predicted that contending and collaborating responses to relationship conflict will be negatively related to measures of team functioning (Hypothesis 1a) and team effectiveness (Hypothesis 1b), while avoiding responses to relationship conflict will be positively related to measures of team functioning (Hypothesis 2a) and team effectiveness (Hypothesis 2b).

In a sample of 27 teams in various organizations (see also the Method section), we assessed (responses to) relationship conflict and team effectiveness. As mentioned at the outset, team work involves issues of team functioning and issues related to the team's job (Hackman, 1983). Team members perform behaviors that are not part of their formal role requirements, but nevertheless promote the team's effectiveness. For teams to be effective, team members need to avoid process losses by helping each other, coordinating activities, complying with demands and requirements, and voicing opinions and ideas (*cf.*, Podsakoff *et al.*, 1997; Steiner, 1972; West *et al.*, 1998). Thus, in the current research we examined relationships between (responses to) relationship conflict and team functioning. In addition, we measured overall team effectiveness.

In addition to team functioning and team effectiveness we assessed the team members' satisfaction with their team. We included this measure to facilitate comparisons with past research (see Table 1), and to explore the effects of collaborating, contending and avoiding responses to relationship conflict. It cannot be excluded beforehand that particular conflict responses have quite different effects on team functioning and effectiveness on the one hand, and satisfaction with the team on the other.

Method

Participants and procedure

Teams were approached that fit the definition of teams as ongoing, partly-autonomous groups whose members have a joint responsibility for accomplishing a set of tasks (Guzzo and Shea, 1992). Teams were selected for participation in the following way. With the consent of a private company involved in recruitment and personnel selection, we selected 27 past or current clients of this company who were (part of) organizational groups that fit the above definition of teams as ongoing. In the fall of 1997 these clients were approached by a research assistant and asked to introduce the researchers to the team supervisor. All clients we approached agreed (100 per cent) and supervisors were asked to participate in a study on team processes. All of teams that we approached participated in the study (100 per cent).

Teams were approached by two female research assistants and asked to participate in a study on team processes. Teams were promised and given feedback based on the survey. Individual anonymity was ensured and it was emphasized that data would be aggregated before feedback would be provided. Team members were given the survey during their weekly meeting, asked to fill it out in their own

time, independently and without consulting their peers, and to return the questionnaire within two weeks. Supervisors received their questionnaire one to three weeks later and were also given two weeks to complete the materials.

Twenty-seven teams were surveyed about (their responses to) relationship conflicts and their satisfaction with the team; information about team size, team functioning; and team performance was obtained from supervisors. Participants worked in management and cross-functional project teams in different organizations, including public television, consulting, financial planning and accounting, and research and development. All teams were semi-autonomous and performed non-routine, complex tasks that required differential expertise and skills. All teams contained male and female members, and team size ranged from 4 to 13. Teams interacted face-to-face at least once a week in collective planning meetings, and more informally on a day-to-day basis. As mentioned, all teams we approached participated in the study. A total of 201 participants responded, for an average response per team of 82 per cent (range is between 63 and 100 per cent). Fifty-seven per cent of the respondents were male. Respondents averaged 35 years of age. All in all, we accessed a sample of teams that were generally involved in non-routine, complex tasks but otherwise differed in their goals and organizational setting.

Team measures

Relationship conflict measure

Past research on relationship conflict usually employed a four-item scale derived from Rahim (1983) and Jehn (1994). For two reasons, however, we decided to design an alternative measure. First, informal pilot testing indicated that the items used in past research were somewhat too general. Team members had difficulty answering some of the questions, and little consensus among team members emerged. Hence, items were designed that referred to conflicts about specific team activities (see the next paragraph), rather than asking for a more global assessment. Second, the relationship conflict items used in past research focus on the *intensity* of the conflicts in particular and neglect the *frequency* of the conflicts (i.e., use items like 'how much friction is present in your work team,' and 'how much emotional conflict is there in your work team;' see e.g., Jehn, 1994, p. 229). Strictly speaking, it is unclear from past research whether results should be attributed to the nature of the conflict (relationship), to differences in the intensity of the conflict, or to a combination (i.e., intense relationship conflicts reduce team performance) (see also, Jehn, 1997a).

To address these issues, relationship conflict was measured by asking team members to rate how *often* (members in) their team perceived tension and frustration about (a) interpersonal style, (b) attitudes and political preferences, (c) someone's norms and values, (d) someone's personality, and (e) someone's sense of humour. All items could be answered on a five-point Likert scale, ranging from almost never (1) to very often (5). In addition, we asked team members for each of the conflict items whether they would characterize the tension and frustration as (1) very mild, to (5) very intense. Frequency and intensity ratings were highly inter-correlated ($rs > 0.80$) and factor analysis consistently yielded one dominant factor. We decided to compute one index of relationship conflict by averaging frequency and intensity ratings. The high correlations between intensity and frequency suggest that the distinction is not as important as one may think, and that future research could use either our, or Jehn's original measure.

Conflict responses

Using and adapting items from scales developed by Rahim (1983), Janssen *et al.* (1999), and Putnam and Wilson (1982) conflict responses to relationship conflict were assessed by asking team members to respond to the statement 'In my team, we usually deal with these relationship conflicts

by... (1) discussing the issues to work out mutually acceptable decisions, (2) cooperate to better understand others' views and positions, (3) settle the issues through give and take, (4) putting pressure on other's to accept one's ideas, (5) sticking to one's positions, (6) raising one's voice and using threats, (7) avoiding the issues, (8) acting as if nothing has happened, (9) hushing up the quarrel, (10) asking the supervisor to help, and (11) turning to other's outside the team for assistance.[2] For each item, team members were asked to indicate the general tendency in their team (1 = not at all, to 5 = to a great extent). Factor analysis revealed a four factor solution, with the first factor representing the *collaborating* response (items 1, 2, and 3; Eigen value = 3.57, 32.5 per cent of the variance), the second factor representing the *contending* response (items 4, 5 and 6; Eigen value = 2.22, 20.2 per cent of the variance), the third factor representing the *avoiding* response (items 7, 8 and 9; Eigen value = 1.63, 14.9 per cent of the variance), and the fourth factor representing a '*third party*' response (items 10 and 11; Eigen value = 1.14, 10.4 per cent of the variance).

Satisfaction with the team.
Satisfaction with the team was measured using three items. A sample item is 'Which statement best describes your feelings about the team you're working in (1 = very dissatisfied, to 5 = very satisfied).

Supervisor survey

Team size
We assessed *team size* by asking supervisors to report how many members their team had. This measure served as a control variable. The number provided always matched or slightly exceeded the number of respondents per team.

Team functioning
To assess team functioning, we built upon inter-related research on organizational citizenship behavior, contextual performance and extra-role behavior (for discussions, see, e.g., Borman and Motowidlow, 1993; Organ, 1988; Van Dyne *et al*., 1995). Team functioning was assessed, first of all, with regard to *compliance* with rules and regulations set by the team, including agreed-upon deadlines and procedures. In addition, we measured *helping behavior* and also we assessed *voice*: the extent to which members express views and opinions and search for new and alternative methods and strategies to perform the task. The supervisor questionnaire assessed these aspects of team functioning using items derived from Motowidlow and Van Scotter (1994), and Smith *et al*., (1983) (for validation issues, see, e.g., Van Dyne and LePine, 1998). *Compliance* was assessed using four items: (a) Team members rarely miss a meeting, even if they have good reasons for doing so; (b) During meetings, supervisor suggestions are carefully considered; (c) Team members are always on time and meet their deadlines; and (d) Members work carefully and with concentration. *Helping behavior* was assessed using three items: (a) Team members adapt their schedules to meet one another's demands; (b) Team members help each other with their tasks; and (c) Team members respect one another and show understanding. *Voice* was measured using three items: (a) Team members give their opinion when it concerns important issues; (b) Team members express their opinions and ideas; and (c) Team members try new, alternative methods and strategies. All questions could be answered using five-point scales ranging from 1 (not at all) to 5 (to a great extent).

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[2] The last two items were entered to explore the role of seeking outside assistance in the case of conflict.

Team effectiveness
Team effectiveness was measured with a scale adapted from Hackman (1983). Supervisors were asked to rate on five-point scales (1 = totally disagree, to 5 = totally agree) their team on five statements tapping into aspects of team effectiveness. Sample items are 'This team is good in coming up with ways to complete their tasks;' 'This team effectively deals with uncertainty and unexpected events;' and 'At times, this team fails to approach its task adequately' (reverse coded).

Results

Treatment of the data

Missing values at the individual level were substituted by the team's average, provided the number of missing values per individual did not exceed 10 per cent of their answers (which was the case for two individuals from two different teams; these individuals were dropped from the analyses). Many of the variables assessed in the team survey were correlated. Due to these expected correlations, a confirmatory factor analysis with oblique rotation was used. Results confirmed that respondents differentiated between relationship conflict, collaborating, contending, avoiding, and third party responses, and satisfaction with the team. We decided not to factor-analyse team functioning and team effectiveness measures because the number of supervisors ($N = 27$ supervisors) was too low in relation to the number of items in these measures ($k = 15$ items) (cf., Nunnally, 1978).

Responses by individual team members were aggregated to the team level for further analysis. This aggregation is designed to reduce the impact of individual differences in perception within each team (and thus company) to form a more objective estimate of the team attributes and conduct (Simons, and Peterson, 2000). Further, aggregation is necessary because individual team members' reports are interdependent and therefore should not be analysed as separate data points (Kenny and LaVoie, 1985). To justify aggregation, we computed the *Eta*-squared statistic, which indicates whether individuals within the same team are more similar than individuals who are in different teams. *Eta*-squared statistics for relationship conflict, collaborating, contending, avoiding and third party responses, and satisfaction with the team were 0.52, 0.59, 0.54., 0.71, 0.56 and 0.46, and all exceed Georgopolous' (1986) minimum criterion of 0.20. To further assess within-team agreement we computed R_{wg} (James *et al.*, 1984). R_{wg} averaged 0.78, 0.89, 0.82, 0.87, 0.85, and 0.87 respectively. These two sets of statistics tend to justify aggregation of the data to the team level (i.e., individual responses per item within one team were summed and divided by the total number of respondents per team).

Descriptive statistics

Table 2 gives the means, standard deviations and inter-correlations for all variables, as well as scale-reliabilities. Team size correlated negatively with supervisor ratings of compliance and voice, which is consistent with LePine and Van Dyne (1998). As in past research, relationship conflict was negatively correlated with satisfaction with the team. Relationship conflict did not correlate with team effectiveness, which is not inconsistent with (a conservative look at) past research (cf., Table 1). A similar pattern can be observed for the correlations between relationship conflict and the various components of team functioning (compliance, helping behavior, voice). Third party and collaborating responses to relationship conflict were not correlated with contending and avoiding responses, while the latter two tended to be positively correlated. This tends to correspond to the findings of De Dreu (1997) and Janssen *et al.* (1999).

Table 2. Descriptive statistics and inter-correlations for all study variables

	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Team size (S)	7.45	1.25	NA	0.09	− 0.09	− 0.08	− 0.06	− 0.23	− 0.02	0.26	− 0.46†	− 0.01	− 0.38†
2. Relationship conflict (T)	2.24	0.93		(0.91)	− 0.08	0.15	0.55†	− 0.29	− 0.30	0.06	− 0.03	− 0.22	− 0.01
3. Collaborating responses (T)	3.13	0.56			(0.79)	0.23	0.07	0.17	0.17	− 0.45†	− 0.34*	− 0.47†	− 0.47†
4. Contending responses (T)	1.49	0.34				(0.69)	0.55†	0.41†	0.08	− 0.18	− 0.01	− 0.03	− 0.10
5. Avoiding responses (T)	2.08	0.62					(0.76)	0.19	− 0.15	0.31	0.38†	0.11	0.22
6. Third party responses (T)	1.18	0.32						(0.73)	− 0.28	0.06	0.23	0.08	0.02
7. Satisfaction with team (T)	3.25	0.47							(0.78)	− 0.34*	− 0.14	− 0.17	− 0.10
8. Team effectiveness (S)	3.58	0.43								(0.82)	0.40†	0.61†	0.58†
9. Compliance (S)	4.04	0.56									(0.79)	0.66†	0.71†
10. Helping behavior (S)	4.01	0.59										(0.83)	0.70†
11. Voice (S)	3.76	0.72											(0.73)

Note. All constructs are coded such that higher scores indicate more of it. Numbers on the diagonal are Cronbach's alphas (NA = not applicable). T = Measured and aggregated at the team level; S = ratings obtained from the teams' supervisors.
*$p < 0.05$; †$p < 0.025$ (two-tailed; $N = 27$ teams).

The various measures of team functioning obtained from the teams' supervisors were moderately correlated (ranging from $r = 0.66$ to $r = 0.71$) suggesting constructs overlap but measures were not identical. Overall team effectiveness is correlated with the three components of team functioning (ranging from $r = 0.40$ to $r = 0.61$), corroborating the idea that extra-role behaviors are needed for teams to perform effectively. Finally, inspection of the means indicated that collaborating and avoiding responses to relationship conflict were more common than contending and third party responses.

Team functioning and team effectiveness

To test our hypotheses we conducted four hierarchical regressions. Dependent variables were (a) team functioning (i.e. compliance, helping behavior, and voice), and (b) team effectiveness. In each regression, we first entered team size as a control variable. In the second step we entered the level of relationship conflict. In the third step, we entered the three conflict responses to relationship conflict. Support for one or more of our hypotheses requires that the third step explains a significant amount of additional variance in the dependent variables. Results are summarized in Table 3.

The reader may wonder whether our analyses should include the interactions between relationship conflict on the one hand and collaborating, contending and avoiding responses on the other. It is important to note, however, that interactions provide information about the effectiveness of a particular conflict management strategy under high versus low levels of relationship conflict. Our theory concerned the effectiveness of conflict responses to relationship conflict and although we did not hypothesize about interaction effects (e.g., avoiding becomes more effective the greater the level of relationship conflict) we explored these possibilities by including the interaction terms in a fourth step. No significant interaction effects were found which may be due to: (1) the low sample size; (2) true absence of interaction effects; and (3) both (1) and (2). Because the lack of significant interaction effects is not critical to our theory, and because the failure to detect significant effects is difficult to explain unequivocally, we decided not to report these.

Team functioning
Hypotheses 1a and 2a were both concerned with team functioning. Team functioning was operationalized as team member compliance, helping behavior, and voice. To test the hypotheses three hierarchical regressions were run with a particular component of team functioning as the dependent variable, and team size (control variable; step 1), relationship conflict (step 2), and responses to conflict (step 3) as independent variables. To avoid capitalization on chance (Hays, 1973) we adjusted, through Bonferroni correction, the conventional level of significance from $p < 0.05$ to $p < 0.025$.

Regarding *compliance*, regression analysis showed significant relations between team size and team member compliance, indicating that larger teams are characterized by less compliance. After controlling for team size, relationship conflict did not explain additional variance. Conflict responses, however, contributed significantly to the model. As expected in Hypothesis 1a, collaborating responses to relationship conflict were negatively associated with compliance, as were contending responses. Consistent with Hypothesis 2a, avoiding responses to relationship conflict were positively related to team compliance. Third party responses were not related to compliance.

A similar pattern of results emerged with regard to *helping behavior*. Team size was not related to helping behavior, and the level of relationship conflict did not explain additional variance. Final *Beta*-weights showed, however, that relationship conflict was negatively associated with helping behavior. Collaborating responses to relationship conflict were negatively related to helping, while contending and third party responses were not related to helping. As predicted, avoiding responses to relationship conflict were associated with more helping behavior.

Table 3. Results of hierarchical regression analysis predicting satisfaction, team functioning and team effectiveness

Step		Satisfaction			Compliance			Helping behavior			Voice			Effectiveness		
		R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2	β
1.	Team size	0.03	–	−0.08	0.21†	–	−0.42	0.02	–	−0.01	0.15†	–	−0.41	0.07	–	0.29‡
2.	Relat. conflict	0.09	0.06	−0.56	0.21†	0.00	−0.36†	0.03	0.00	−0.54†	0.15	0.00	−0.31	0.07	0.00	−0.29
3.	Collaborating	0.39‡	0.30‡	0.14	0.65*	0.44*	−0.39†	0.41‡	0.36*	−0.51†	0.53*	0.38†	−0.49†	0.57*	0.50†	−0.41†
	Contending			0.34			−0.36†			−0.08			−0.22			−0.49†
	Avoiding			0.08			0.75†			0.50‡			0.55†			0.75†
	Third party			−0.64†			0.09			−0.06			−0.13			0.16
Total model		0.39‡			0.65*			0.41*			0.53*			0.57*		

Note. * †$p < 0.01$; $p < 0.025$; ‡$p < 0.10$ (two-tailed, with $df = 1$, 20 for step 1 and 2, $df = 4$, 20 for step 3, and $df = 6$, 20 for the total model).

Results finally showed a marginally significant tendency towards less *voice* in larger teams ($p < 0.10$). More relationship conflict tended to be associated with less voice, but this result was not significant. As with the other aspects of team functioning, collaborating responses to relationship conflict were negatively associated, and contending responses were not associated with voice. As hypothesized, avoiding responses were positively associated with voice. Third party responses were not related to voice.

Team effectiveness
Hierarchical regression analyses revealed a negative association between collaborating responses (and also contending responses) to relationship conflict on the one hand, and team effectiveness on the other. This supports Hypothesis 1b. Consistent with Hypothesis 2b, results further suggest that avoiding responses contribute to greater team effectiveness. Third party responses were not related to team effectiveness.

Satisfaction with the team

A hierarchical regression was conducted to examine the relationship between responses to relationship conflict and satisfaction with the team. We first entered team size as a control variable. In the second step we entered the level of relationship conflict. In the third step, we entered the four conflict responses to relationship conflict (see Table 3). Results showed that team size was not related to satisfaction with the team. Consistent with past research (see Table 1), relationship conflict was negatively associated with satisfaction with the team. Adding conflict responses explained additional variance, but as results were not significant ($p < 0.10$) we refrain from interpreting these results.

Comparative tests

The regression analyses reported above inform us that avoiding is positively associated with effectiveness, while collaborating and contending is not. However, it may be that avoiding is no more effective than collaborating and/or contending. That is, avoiding may be positively associated with a measure of team functioning or effectiveness while collaborating or avoiding is not, but the difference between the avoiding on the one hand, and collaborating or contending on the other may not be significant. To answer this question, comparative tests are needed to see whether the relationship between avoiding and measures of team functioning and effectiveness on the one hand, and the relationship between collaborating and/or contending and measures of team functioning and effectiveness on the other, differ significantly.

Using Fisher-Z transformations, zero-order correlations (see Table 2) were compared using the formula for dependent correlations (Hays, 1973).[3] Collaborating responses were less positively correlated than contending responses with voice, $Z = -0.51$ versus $Z = 0.10$; $t(24) = -2.05$, $p < 0.05$, with helping behavior, $Z = -0.51$ versus $Z = -0.03$, $t(24) = -0.2.70$, $p < 0.01$, and with compliance, $Z = -0.35$ versus $Z = -0.01$, $t(24) = -1.72$, $p < 0.10$. Also, collaborating responses were less positively correlated than avoiding responses with voice, $Z = -0.51$ versus $Z = -0.23$; $t(24) = -3.07$, $p < 0.01$, with helping behavior, $Z = -0.51$ versus $Z = -0.11$, $t(24) = -2.00$, $p < 0.10$, and with compliance, $Z = -0.35$ versus $Z = -0.40$, $t(24) = -3.77$, $p < 0.01$. Finally, contending responses were less positively correlated than avoiding responses with voice, $Z = -0.10$ versus $Z = 0.23$; $t(24) = -1.65$, $p < 0.10$, with compliance, $Z = -0.01$ versus $Z = -0.40$, $t(24) = -.2.05$, $p < 0.05$,

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[3] Controlling for team size did not change the results.

but not with helping behavior, $Z = -0.03$ versus $Z = -0.11$, $t(24) < 1$, n.s. These results suggest that team functioning benefits less from collaborating responses in the case of relationship conflict than from contending responses, which in turn are less beneficial than avoiding responses.

Results for team effectiveness yielded a similar pattern: collaborating responses were less positively correlated than avoiding responses with team effectiveness, $Z = -0.49$ versus $Z = 0.32$; $t(24) = -4.03$, $p < 0.01$. Also, contending responses were less positively correlated than avoiding responses with team effectiveness, $Z = -0.18$ versus $Z = 0.32$; $t(24) = -2.52$, $p < 0.025$. Collaborating and contending responses did not differ from each other ($t < 1$, n.s.). Thus, these results suggest collaborating and contending responses to relationship conflict are less beneficial to team effectiveness than avoiding responses.

Conclusions and Discussion

Relationship conflict is often conceived of as detrimental to team effectiveness but research ignored the question *what to do* when relationship conflict in teams emerges. The current study was conducted to fill this void and to examine what types of responses to relationship conflict would be most adequate. Building on past research (e.g., Putnam and Wilson, 1982) we distinguished between collaborating, contending, and avoiding responses to conflict. Results showed that collaborating and contending responses to relationship conflict were negatively related to team functioning and effectiveness, while avoiding responses to relationship conflict were positively related to team functioning and effectiveness.

At least two explanations for the pattern of results may be considered. The first is that relationship conflict is difficult to settle to mutual satisfaction. Tension and frustration rooted in discrepant personal norms and values, political preferences and sense of humour is difficult to reduce, simply because it requires changing issues fundamental to one's personal identity and acquired in the course of an entire life (Druckman, 1994; Druckman and Zechmeister, 1973). Thus, being cooperative and understanding in the case of relationship conflict is unlikely to solve the problem, and make it instead loom bigger and intractable (Harinck *et al.*, 2000). The second explanation is that collaborating and contending responses direct team members away from their tasks and instead focus them (even more) on their interpersonal relations. As a result, team members do not invest their time and energy in team work, and team functioning and effectiveness suffers (*cf.* Murnighan and Conlon, 1991). This explanation enables us to account for the full pattern of findings, including the negative relations between collaborating and contending responses and team functioning, and the positive relation between avoiding and team functioning and effectiveness. It should be noted, however, that both explanations may account for (part of) the results and that future research is needed to provide additional evidence for or against any of these explanations.

It is possible that supervisors prefer their team to avoid relationship conflicts and judge those teams that indeed tend to avoid relationship conflict as better. The current results do not speak to this possibility, although it is not counter to our conclusions. Most often, the functioning and performance of teams is a matter of subjective assessment by supervisors, as products and services can be judged in the long run only. In addition, supervisors may very well understand that team performance requires team members to put personal quarrels aside to focus effectively on their collaborative tasks. Nevertheless, an interesting question for future research is to assess the extent to which personal preferences upheld by supervisors shape team processes and performance. Second, future research is needed to examine whether current conclusions hold for objective performance measures as well. Although this would be expected on the basis of Murnighan and Conlon's (1991) qualitative analysis in conjunction with the current results, additional evidence would be welcome.

The finding that collaborating in conflict is associated with *lower* team performance is inconsistent with a vast literature suggesting cooperation is key to effective organizations (for reviews, see, e.g., De Dreu *et al*., 1999; Tjosvold, 1997). This apparent inconsistency is less problematic, however, when we realize that different types of conflict are involved. The current findings pertain to *relationship* conflict, while most other research concerned *task-related* conflicts and disagreements. As such, current results indirectly corroborate the critical distinction between relationship and task-related conflict. These two types of conflict differentially predict team functioning and performance (Amason, 1996; Jehn, 1994, 1995). Also, these two types of conflict require different responses to render them productive, or less destructive. We speculate that task conflict requires collaborating responses, and should be confronted rather than avoided. Relationship conflict, in contrast, should not be met with collaborating (or contending) responses but instead require avoiding responses. Contending responses do not seem to be productive in any type of conflict.

In light of this analysis, it is interesting to note that research showed a tendency for teams to respond to relationship conflict through avoiding responses, while task conflicts were correlated with collaborating responses (De Dreu, 1997; Janssen *et al*., 1999). From a learning and developmental perspective one may argue that individuals in teams tend towards those behaviors that are functional and help them perform their tasks. Team members may realise, and actually have learned in the course of their (professional) life, that relationship conflicts are hard to solve and merely distract from the work that needs to be done. Developing this insight provides teams with a solid basis to be adaptive to (potentially dysfunctional) relationship conflicts, and hence to become quite effective. Obviously, this analysis is rather speculative and research is needed to corroborate the analysis.

Thomas (1992) and De Dreu *et al*. (1999) argued that time is an important factor in conflict that has received too little attention. To assess the effectiveness of (responses to) conflict one needs to consider both short-term and long-term consequences. In fact it may well be that certain types of conflict, or certain responses, yield positive effects in the short term but rather detrimental consequences in the long term. Of course, it is arbitrary what constitutes short-term and long-term. For instance, in the current study we asked team members and their supervisors about their current situation and probably assessed impressions about the last several months. Some may argue we assessed associations between responses to relationship conflict and team functioning and effectiveness within a relative short time frame; others might argue, however, that our findings pertain to the long-term effects of (responses to) relationship conflict. Although we have no solution to settle the debate about what time frame constitutes short-term and long-term, we suggest future research takes a longitudinal perspective and examines the consequences of (responses to) conflict at various moments in the life-cycle of organizational teams. It could very well be that avoiding responses to relationship conflict foster team effectiveness in the next couple of months, but leads to intensely escalated relationship conflicts several months later. Alternatively, avoiding responses to relationship conflict foster team effectiveness in the next couple of months, and dilute the conflict issue at the same time, thus providing an even better position for the team to perform effectively.

Although conclusions about responses to relationship conflict constitute the central contribution of the current research, several other findings are noteworthy. First, zero-order correlations correspond to recent findings that team size negatively relates to voice in teams (LePine and VanDyne, 1998), and additionally suggest that team size reduces compliance. An explanation for these effects is that increased team size makes one's (lack of) contributions less identifiable. Second, this study is the first to link relationship conflict to aspects of team functioning, and hierarchical regressions suggest relationship conflict especially influenced helping behavior. Compliance, voice and general team effectiveness were not significantly related to relationship conflict. These findings suggest that the main reason why relationship conflict negatively influences team productivity and performance is because it results in less helping behavior. Less viable seems the explanation that relationship conflict

negatively influences team productivity and performance because it undermines cognitive processes and insights, something task-related conflict is supposed to foster (e.g., Amason, 1996; De Dreu, 1997; Jehn, 1995, 1997a). Future research could further pursue this reasoning, and test the hypothesis that relationship conflict tends to undermine performance because it hinders prosocial behavior including helping, while task conflict boosts performance because it stimulates voice and cognitive change.

As most studies, the current research has several shortcomings. First, measures of team functioning and team effectiveness were correlated and derived from the same source, and common-method variance may account for part of the correlations between team functioning (compliance, helping, voice) and team effectiveness. Second, the current study assessed team effectiveness using supervisor ratings, and we had no objective performance measures. This would have been extremely difficult to realize as teams were from a variety of organizations and performed a variety of tasks. Nevertheless, research is needed to validate current conclusions with objective performance measures. Third, we had a diverse set of teams from different organizations performing a variety of non-routine, complex tasks. On the one hand, this implies results tend to generalize across setting. On the other hand, however, we cannot exclude the possibility that current results hold up only, or especially, when teams perform complex tasks that are challenging, require attention and stimulate a task orientation. Perhaps that other responses to relationship conflict than avoiding prove effective when teams are involved in simple, routine tasks. Finally, the current research design is not suited to deal with issues of causality. Our findings suggest some interesting avenues for future (experimental or longitudinal) research and do not yet allow for solid advice as to how to manage conflict in organizations. Moreover, it should be obvious that our findings and conclusions pertain to conflict about relationships, and should not be generalized to conflict about task-related issues. As ample research has shown, conflict about relationships and conflict about task-related issues are different phenomena with rather different dynamics (De Dreu *et al.*, 1999; Jehn, 1997; Simons and Peterson, 2000).

As mentioned at the outset (see also Appendix A), substantial variation exists in the effect sizes obtained in past research. Accordingly, future research is needed to expand our theory about (relationship) conflict in teams and to test specific moderators of the effects of (responses to) relationship conflict on team functioning and team effectiveness. One such moderator variable is task complexity mentioned above. Other moderators that may be tested include team size, team tenure (how long the team has been together), and task interdependence (to what extent do individual team members need one another to perform their tasks).

Past research suggested ways to prevent relationship conflict (e.g., by investing in the development and maintenance of intra-group trust). The current study suggests that once relationship conflict emerges avoiding rather than collaborating or contending responses may help the team to function and to be effective. This finding has practical relevance in that it suggests how leaders could manage their teams when (relationship) conflicts emerge. The finding has theoretical relevance because it expands, first of all, our knowledge about relationship conflict in small teams working on a joint task. In addition, the current study strongly suggests, contrary to conventional wisdom, that avoiding responses to conflict may sometimes be extremely beneficial to maintain and increase the functioning of organizational teams.

Acknowledgements

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Appendix A

Background information about the meta-analysis:

Literature search

A literature search was conducted using PsycINFO and Silverplatter for the Apple Macintosh version 3.23. Recent issues of conflict management, psychology, and organization behavior journals were searched for articles that might not yet have been included in these databases (i.e. *International Journal of Conflict Management*, *Journal of Conflict Resolution*, *Journal of Applied Psychology*, *Journal of Personality and Social Psychology*, *Personality and Social Psychology Bulletin*; *Organizational Behavior and Human Decision Processes*, *Academy of Management Journal; Journal of Management*). Also, we examined conference proceedings of the last five conferences (1999 and backwards) of the Society for Industrial and Organizational Psychology, the International Association for Conflict Management, and the Academy of Management Meetings. A backward search of the reference section of each article provided additional studies. In 1999 we contacted authors who had conducted research on task or relationship conflict in the past to collect current and unpublished research, and we searched *dissertation abstracts* to identify unpublished dissertations that fit our criteria for inclusion.

Criteria for inclusion

Studies were included if they: (a) involved teams in organizations; (b) measured relationship conflict and included measures of team effectiveness and satisfaction; and (c) provided the necessary statistical information to compute effect sizes. A description of the studies is presented in Table 1. Several studies reported multiple measures of team effectiveness and/or satisfaction. To maintain statistical independence, only one of the set of possible correlated effects was analyzed. Specifically, we assessed the overall effect size taking the most extreme values per study, and once taking the most moderate values per study. Doing so gives an indication of the range within which true effect sizes are likely to be.

Computation and analysis of effect sizes

The Hedges and Olkin (1985) approach was used to analyse the data. Following this approach, study outcomes were converted into g values, so that effect sizes with positive signs indicate that relationship conflict positively related to team effectiveness and/or satisfaction. The gs were converted to ds by correcting them for bias. All mean ds were computed with each effect size weighted by the reciprocal of its variance. DSTAT (Version 1.11; Johnson, 1989) was used to generate effect-size estimates (see Table 1).

To determine whether the effect sizes were consistent across the studies reviewed, we tested the *homogeneity* of the effect sizes. The homogeneity statistic, Q, has an approximate *chi*-square distribution with k -1 degrees of freedom, where k is equal to the number of effect sizes. For the team effectiveness measures, as well as the satisfaction measures, correlations differed across studies (see the homogeneity statistics in Table 1). This suggests that important moderators exist. Partly due to the relatively small sample size, we were unable to find variables discriminating between these studies that resulted in significant contrasts *and* homogeneity of effect sizes.