Moving Beyond Relationship and Task Conflict: Toward a Process–State Perspective

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Teams are formed to benefit from an expanded pool of expertise and experience, yet 2 aspects of the conflict stemming from those core differences will ultimately play a large role in determining team viability and productivity: conflict states and conflict processes. The current study theoretically reorganizes the literature on team conflict—distinguishing conflict states from conflict processes—and details the effects of each on team effectiveness. Findings from a meta-analytic cumulation of 45 independent studies (total number of teams = 3,218) suggest states and processes are distinct and important predictors of team performance and affective outcomes. Controlling for conflict states (i.e., task and relationship conflict), conflict processes explain an additional 13% of the variance in both team performance and team affective outcomes. Furthermore, findings reveal particular conflict processes that are beneficial and others detrimental to teams. The truth about team conflict: Conflict processes, that is, *how* teams interact regarding their differences, are at least as important as conflict states, that is, the *source and intensity* of their perceived incompatibilities.

Keywords: team, group, conflict, management, meta-analysis

Organizations are increasingly structuring work around teams in an effort to capitalize on an expanded pool of information, experience, and expertise. Although teams have the potential to transform this expanded input set into lifesaving decisions and innovative new products, teams also possess the almost certainty of conflict. Substantial research and practical attention have been paid to understanding this important aspect of team life. Importantly, comparatively more attention has focused on understanding the types and intensity of conflict issues within teams, with relatively less attention being paid to how teams interact in relation to those differences. As a result, prescriptive advice for teams has largely been provided through conjecture, anecdotal evidence, and common sense rather than empirical evidence. The first aim of the current study was to provide an evidentiary basis for future prescriptions about team conflict by answering the question: Which team conflict processes are functional and dysfunctional in teams?

A second purpose of this study was to better integrate prior work on team conflict (e.g., De Dreu & Weingart, 2003a, 2003b), with the broader literature on team processes (e.g., Marks, Mathieu, & Zaccaro, 2001). We do this by invoking a meaningful distinction in the literature on teams—that of emergent states and behavioral processes (Kozlowski & Chao, 2012; Kozlowski & Ilgen, 2006; Marks et al., 2001)—and leverage this distinction to conceptually reorganize past work on team conflict. Doing so enables us to answer another question of both theoretical and practical importance: What is the relative impact of team conflict-emergent states (i.e., members' perceptions of differences) versus team conflict processes (i.e., the behavioral interactions through which members preemptively and reactively manage differences; Marks et al., 2001) on team outcomes?

Team Conflict: Emergent States and Behavioral Processes

Conflict has been defined as "a process that begins when an individual or group perceives differences and opposition between itself and another individual or team about interests and resources, beliefs, values, or practices that matter to them" (De Dreu & Gelfand, 2008, p. 6). This definition characterizes conflict as a perceptual state. A second important aspect of conflict in teams is how it is managed, which was also noted by De Dreu and Gelfand, "The process view leaves open how parties manage their conflicts" (p. 6). As the preceding definition illustrates, past research on conflict uses the term *process* to encompass multiple aspects of conflict, including perceived differences, strategies aimed at managing those differences, and the consequences of those differences.

The distinction between *emergent states* (defined as relatively enduring properties of the team rooted in individuals' thoughts and feelings) and *processes* (defined as "members' interdependent acts that convert inputs to outcomes through cognitive, verbal, and behavioral activities directed toward organizing task-work to achieve collective goals"; Marks et al., 2001, p. 357) is rooted in systems theory (Allport, 1954; Katz & Kahn, 1966; Lawrence & Lorsch, 1967) and has proved useful in understanding the nuanced aspects of team interaction that mediate the effects of inputs on outcomes (Ilgen, Hollenceck, Johnson, & Jundt, 2005). Both team conflict states and team conflict processes arise because of actual or perceived differences in members' values, working styles, and/or ideas—yet their distinction is an important one. As Marks and her colleagues (2001) stress:

> Indices of emergent states are often intermingled with interactional process indicators, which results in serious construct contamination. Emergent states do not represent team interaction or team actions that lead toward outcomes. Rather, they are products of team experiences (including team processes) and become new inputs to subsequent processes and outcomes. The point is that emergent states are not processes in and of themselves, because they do not describe the nature of member interaction. (p. 358)

Using the state-process distinction, we define (a) *team conflict states* as shared perceptions among members of the team about the intensity of disagreement over either tasks (i.e., goals, ideas, and performance strategies) or relationships (i.e., personality clashes, interpersonal styles) and (b) *team conflict processes* (commonly labeled "conflict management" in the conflict literature) as members' interactions aimed at working through task and interpersonal disagreements (Marks et al., 2001). Prior work on conflict in teams has both (a) blended team conflict "emergent states" with team "conflict processes" and (b) disproportionately focused on understanding team conflict "emergent states" over team "conflict processes."

As evidence of the second point, the literature on conflict as an emergent state has been twice meta-analyzed (De Dreu & Weingart, 2003b; De Wit, Greer, & Jehn, 2012). The first meta-analysis found that both task and relationship conflict were negatively related to team performance and affective outcomes; the second confirmed the negative effects of relationship conflict, but found that task conflict was less harmful, and, in some cases, even beneficial. The core logic of both meta-analyses was to understand the direct effects of conflict states (i.e., perceptions) on team outcomes and to identify moderators of this relationship. Neither study examined team conflict processes.

Understanding team processes is critical because they characterize the interactions among team members that ultimately give rise to emergent states. Over the course of team development, processes regularize into team-emergent states, and states in turn shape and constrain subsequent behavioral processes. This duality of structure and process was elaborated by early systems theorists, as described by Kozlowski and Chao (2012) as "reciprocal forces such that interaction processes stabilize over time and emerge to form structures that then shape subsequent processes" (p. 336). Team members' interactions about conflict (i.e., conflict process) determine their perceptions of differences (i.e., conflict states); likewise, members' conflict states shape their behavioral repertoires in response to perceived differences (i.e., conflict processes).

Processes are particularly valuable explanatory mechanisms in teams because they are more malleable and proximal to team outcomes (like team performance and affect) than are emergent states. From a cognitive dissonance perspective, the key to changing a team-emergent state is to bring about a change in the pattern of team interactions so that members' interactions with one another are no longer congruent with their perceptions, requiring team members to revise their perceptions (i.e., reducing their perceptions of conflict; Festinger, 1957). Brett and her colleagues provide support for this idea, demonstrating that mixing unreciprocated contentious communication with noncontentious communication effectively disrupts dyadic conflict spirals (Brett, Shapiro, & Lytle, 1998).

As processes and states are distinct team explanatory mechanisms, each of which is important to understanding the implications of team conflict, we posit that:

> *Hypothesis 1 (H1):* Team conflict processes and emergent states are each uniquely related to team performance (H1a) and team affective outcomes (H1b).

Impact of Team Conflict Processes on Outcomes

To date, there have been a number of studies to investigate constructs that meet the definition of team conflict processes. These include research on team collaboration, team competition, team avoiding, and team openness. The first three stem from the literature on interpersonal conflict (Blake & Mouton, 1964; Deutsch, 2002; Lewin, 1948; Pruitt & Rubin, 1986; Thomas, 1976; van de Vliert & Euwema, 1994) and have been conceptually adapted to characterize interaction patterns within the team as they work to resolve and/or integrate their differences. The application of these three processes to understanding how individuals interact in teams has been described as "moving toward" (i.e., collaborating), "moving against" (i.e., competing), and "moving away" (i.e., avoiding; De Dreu & Van Vianen, 2001). The fourth conflict process (stemming from Tjosvold's, 1985, idea of constructive controversy), *openness*, refers broadly to open/change-oriented discussions meant to reach mutually beneficial solutions and is similar to the collaborating process. This "moving toward" versus "moving away" distinction can also be thought of as an extension of the Blake and Mouton (1964) dimension of "concern for the self" and "concern for the other party."

Thus, an important aspect of team conflict process is the extent to which members' behavioral patterns show "concern for individuals" versus "concern for the team as a whole." This differentiation parallels research on individual collectivistic tendencies when working in teams (e.g., Jackson, Colquitt, Wesson, & Zapata-Phelan, 2006), which has found that the individualism–collectivism distinction originally discussed in the context of macrolevel cultural values (e.g., Hofstede, 1980) can be used to understand individuals' behavior in teams. Indeed, teams have been found to develop behavioral norms that vary on the basis of their concern for group members, preference to work within the group, reliance on group members, acceptance of group norms, and prioritization of group goals. Teams who score high on such indicators of collectivism are therefore unlikely to adopt conflict processes characterized by competition or avoidance.

We term this distinguishing feature of team conflict process as *collectivism*. Teams with a collectivistic conflict process support a

greater focus on concern for and reliance on others, preference for working as a team, cooperation among members, and teamwide goal accomplishment. In contrast, teams with an individualistic conflict process support a greater tendency toward individual or dyadic (subteam) reliance, concern, and goal accomplishment (Goncalo & Staw, 2006). Openness and collaboration are therefore collectivistic processes (as they incorporate differences in members' viewpoints while still preserving the entitativity of the team), whereas avoiding and competing are individualistic processes (as they preserve individuality and subjugate the entitativity of the team to safeguard the disparate views of its members). Figure 1 depicts this categorization of team conflict process.

The open question regarding team conflict process is: Which processes are functional and which are dysfunctional? We cumulate past research linking these four processes to team effectiveness and test the extent to which they are collectivistic versus individualistic as a moderator of these relationships. Research suggests that the process through which teams interact in relation to conflict affects their functioning (e.g., Behfar, Peterson, Mannix, & Trochim, 2008; Thomas, 1992). For example, collectivistic processes have been associated with enhanced performance and increased concern for team members (as evidenced by a greater incidence of team-directed citizenship behaviors), as well as a reduction in withdrawal behaviors (Jackson et al., 2006). Similarly, collaborative approaches to conflict resolve conflict in a way that is mutually beneficial to the parties involved (Thomas, 1992; Tjosvold, 1991), therefore restoring fairness perceptions, improving process effectiveness, repairing working relationships, and/or enhancing the affective outcomes of team members. If teams make use of conflict processes that do not enable the effective integration of ideas, experiences, and beliefs (which is more likely to occur with the individualistic processes of avoidance and competition), team performance will likely suffer (Behfar et al., 2008). Thus, we posit that collectivistic conflict processes will be positively related to team performance and affective outcomes, whereas individualistic processes will be negatively related to these outcomes.

Hypothesis 2 (H2): Collectivistic conflict processes are positively related to team performance (H2a), whereas individu-

alistic processes are negatively related to team performance (H2b).

Hypothesis 3 (H3): Collectivistic conflict processes are positively related to team affective outcomes (H3a), whereas individualistic processes are negatively related to team affective outcomes (H3b).

Method

Database and Inclusion Criteria

Forty-five independent studies reported in 44 articles (total number of teams = 3,218) examining team conflict were included in this meta-analysis. We built the meta-analytic database using a comprehensive search of the following: (a) PsycINFO and ABI Inform databases using appropriate keyword combinations (e.g., *group* or *team* and *conflict management*, *conflict handling*, *conflict resolution*, *conflict style*, or *conflict tactic*), (b) key journals likely to publish team conflict process research (e.g., *Academy of Management Journal*; *Administrative Science Quarterly*; *Group Dynamics: Theory, Research, and Practice; Group and Organizational Studies*; *International Journal of Conflict Management*; *Journal of Applied Psychology*; *Journal of Management*; *Journal of Organizational Behavior*; *Journal of Personality and Social Psychology*; *Organizational Behavior and Human Decision Processes*; *Personnel Psychology*; and *Small Group Research*), (c) references of studies included in the meta-analytic database, and (d) articles citing seminal studies on team conflict (e.g., De Dreu & Weingart, 2003b; Jehn, 1995). In order to be included in the meta-analytic database, primary studies needed to report sufficient information to compute a bivariate relationship between team conflict process and team effectiveness at the team level of analysis, and needed to define conflict process in terms of one of the four focal processes.

Studies reporting on conflict processes in dyads were not included in our database, nor were studies that reported data captured from dyads that were members of larger groups, even when the data were aggregated and analyzed at the team level (e.g., Tjos-
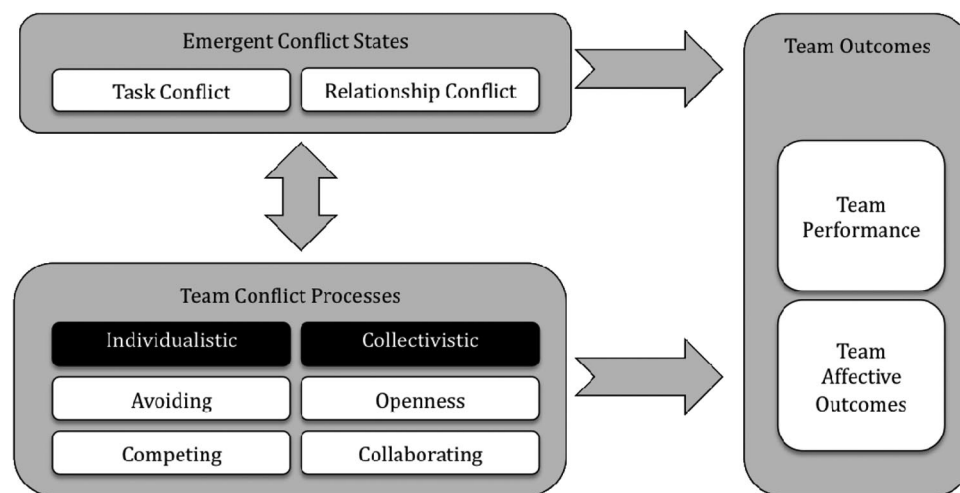

Figure 1. Descriptive taxonomy of team conflict states and processes.

vold, Hui, & Hu, 2003, presented data obtained from 100 teams, each composed of three or more members; team conflict process was operationalized using the views of only two team members). These exclusions were made for two reasons. First, conceptually, there is a distinction between interpersonal conflict process, involving the actions of two people in direct response to one another, and intragroup conflict, which involves the simultaneous dynamics of at least two dyadic interactions and relationships. Second, missing data in teams studies may significantly increase the incidence of Type II errors (Timmerman, 2005). Appendix E summarizes the studies excluded from the database, including the seven that were removed due to this issue.

Coding Procedure

Each study was independently coded by two of the study's authors for (a) sample size, (b) number of teams, (c) correlations between conflict process and outcomes, (d) intercorrelations of conflict processes, if more than one was reported, and (e) reliability estimates for conflict processes and outcomes. Initial intercoder agreement was very high (Cohen's $\kappa = .966$), likely due to the objective nature of the data coded. Coding disagreements were resolved through discussion.

Coding of conflict-emergent states. The primary studies examined one or both of two forms of frequently studied team conflict-emergent states: task conflict (disagreements about ideas related to the task) and relationship conflict (interpersonal incompatibilities; Jehn, 1995). These conflict states were typically assessed using three items each from Jehn's (1992) Conflict scale or a variation thereof (e.g., Jehn, 1994, 1995).

Coding of conflict processes. Conflict processes were coded into one of the four focal constructs examined here: collaborating, competing, avoiding, and openness. The first three stem from the literature on interpersonal conflict (Blake & Mouton, 1964; Deutsch, 2002; Lewin, 1948; Pruitt & Rubin, 1986; Thomas, 1976; van de Vliert & Euwema, 1994) and typically used items drawn or adapted from Rahim's (1983) scale. Collaborating ("moving toward") was assessed with items like: "My team tries to investigate an issue to find a solution acceptable to us." Competing ("moving against"; also conceptualized as distributive behaviors; [e.g., Beersma & De Dreu, 2002, 2005]; dominating; [e.g., Desivilya & Eizen, 2005]; contending; [e.g., Lovelace, Shapiro, & Weingart, 2001]; and forcing [e.g., Richter, Scully, & West, 2005]), was assessed with items like: "My team members are generally firm in pursuing their sides of the issue." Avoiding ("moving away") was assessed with items like: "My team usually engages in open discussion of our differences." Studies based on Tjosvold's (1985) idea of constructive controversy (open-minded discussions in which expressing opposing viewpoints is encouraged) and Jehn's (1995) openness norms construct (group norms that encourage open discussion and confrontation of opinions and concerns) were coded as openness; these teams have behavioral repertoires similar to collaboration and encourage open/change-oriented discussions of conflict. Scale items in these primary studies were similar to the following: "Team members express their own views directly to each other" (Tjosvold, Chen, & Yu, 2003, p. 259), "How much open discussion of issues was there in your group?" (Jehn & Mannix, 2001, p. 244), and "Criticizing or providing information which challenges the feasibility of what is being done is encour-

aged" (Lovelace et al., 2001, p. 785). Although both collaborating and openness conflict processes involve the open discussion of varying viewpoints, collaborating behaviors also explicitly encourage the derivation of mutually beneficial solutions. Research in the collaborating and openness traditions has occurred in silos; to date, there have been no empirical studies examining the overlap between these constructs. As such, we report them separately here.

Coding of team outcomes. The effects of team conflict processes on two aspects of team effectiveness were examined: team performance and affective outcomes. Team performance was typically operationalized as decision quality, project grades, or supervisor ratings of performance. Team affective outcomes were typically assessed using aggregates of self-report measures reflecting the emotional health of the team (e.g., satisfaction and viability).

Analyses

Hunter and Schmidt's (2004) artifact distribution meta-analytic procedures were used to analyze these data. Observed correlations were corrected for sampling error and unreliability in measures. We computed both the credibility and confidence intervals around ρ (the sample size-weighted mean-observed correlation corrected for measure reliability), as each provides unique information about the nature of ρ (Hunter & Schmidt, 2004; Whitener, 1990). Specifically, the credibility interval (CV) provides an estimate of the variability of corrected correlations across studies. Wide CVs or those that include zero suggest the presence of a moderator. An 80% CV that excludes zero indicates that more than 90% of the corrected correlations are different from zero (10% lie beyond the upper bound of the interval). The confidence interval (CI) provides an estimate of the accuracy of our estimation of ρ (Whitener, 1990); in other words, the CI estimates the variability around ρ due to sampling error. A 90% CI that excludes zero indicates that if our estimation procedures were repeated many times, 95% of the estimates of ρ would be larger than zero (5% would fall beyond the upper limit of the interval). As such, relationships are interpreted to generalize across situations when the 80% CV did not include zero, and rhos are interpreted to be meaningfully different from one another when one estimate is not included in the CI band of the other estimate.

Using the theory-testing methods outlined by Viswesvaran and Ones (1995), we conducted a series of meta-analytic regression analyses to explore the extent to which conflict processes and conflict states explain unique variance in team performance and affective outcomes. We conducted regression analyses on meta-analytically derived correlations between the relevant variables (i.e., meta-analytic regression; Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Zimmerman, 2008). To conduct these analyses, we first constructed a meta-analytic correlation matrix among conflict states, conflict processes, and team performance and affective outcomes. This intercorrelation matrix (see Table 1) includes (a) reliability-corrected correlations computed from our database (i.e., between conflict state and conflict process, among the conflict processes, and between conflict process and performance/affective outcomes) as well as (b) reliability-corrected correlations reported by De Wit et al. (2012) between conflict states (task and relationship conflict) and team performance/affective outcomes. We then used the harmonic means of the total sample sizes on which each meta-analytic correlation from the input matrix was estimated in

Table 1

Meta-Analytic Correlation Values for the Relationships Among Conflict States, Conflict Process, and Team Effectiveness

Variable	Task conflict ρ, [95% CI]	Rel. conflict ρ, [95% CI]	Openness ρ, [95% CI]	Collaborating ρ, [95% CI]	Avoiding ρ, [95% CI]	Competing ρ, [95% CI]
Performance	−.01,[a] [−.06, .04]	−.16,[a] [−.21, −.12]	.34, [.25, .43]	.33, [.24, .42]	−.21, [−.33, −.09]	−.25, [−.33, −.17]
k, N	95, 7201	80, 5369	16, 962	19, 1586	7, 650	18, 1521
Affective outcomes	−.24,[a] [−.40, −.09]	−.54,[a] [−.62, −.47]	.44, [.29, .59]	.49, [.36, .62]	−.14, [−.17, −.11]	−.14, [−.23, −.05]
k, N	26, 1979	26, 1901	10, 628	10, 661	6, 393	9, 596
Task conflict		.54[a], .58[a]	.06 [−.13, .25]	−.13 [−.23, −.03]	.01 [−.05, .07]	.24, [.09, .39]
k, N		73, 4845/21, 1491[b]	7, 439	12, 1195	7, 638	10, 943
Rel. conflict			−.44, [−.58, −.30]	−.34, [−.46, −.22]	.25, [.16, .34]	.35, [.21, .49]
k, N			6, 387	12, 1150	8, 694	11, 1047
Openness				—	—	—
k, N						
Collaborating					−.15 [−.23, −.07]	−.32 [−.41, −.23]
k, N					12, 953	23, 1732
Avoiding						.38 [.27, .49]
k, N						10, 831

Note. Dashes indicate that no correlation was available for a relationship. Rel. conflict = Relationship conflict; k = number of correlations meta-analyzed; N = total number of groups; ρ = sample size-weighted mean-observed correlation corrected for unreliability in both measures; 90% CI = 90% confidence interval around ρ.
[a] Relationships obtained from De Wit, Greer, and Jehn (2012); 95% CI = 95% confidence interval around ρ and are only reported for relationships obtained from De Wit et al. [b] De Wit et al. (2012) did not report the 95% CI for this relationship. Two correlations between task and relationship conflict were provided: one in the case of performance outcomes and the other in the case of affective outcomes. These are provided with their corresponding k and N, respectively.

order to compute the standard errors associated with the regression coefficients. Appendices A, B, C, and D report all of the correlations, sample sizes, and reliability coefficients used in the analyses.

Results

Table 1 reports the reliability-corrected correlations among conflict states, conflict processes, and team outcomes. True-score correlations (ρ) between task and relationship conflict, team performance, and team affective outcomes and their associated CIss, number of correlations (k), and number of teams (N) were drawn from De Wit et al. (2012). The remaining true-score correlations involving conflict process were calculated in the current effort (detailed meta-analytic results associated with these true-score correlations are presented in Tables 4 and 5). Tables 2 and 3 present regression analyses using the meta-analytically derived intercorrelations presented in Table 1.

H1 posited that team conflict-emergent states and conflict processes are uniquely related to team performance (H1a) and team affective outcomes (H1b). H1 was tested by first regressing team performance (Model 1) and team affective outcomes (Model 2) on the conflict states (task and relationship conflict). Next, the conflict processes—collaborating, competing, and avoiding—were entered into the equations (Models 3 and 4, respectively). We also tested H1 by adding openness at this second step (Models 5 and 6, respectively). Because intercorrelations could not be computed between the three processes stemming from Deutsch's (2002) work (i.e., collaborating, competing, and avoiding) and the openness process, separate regressions were run, both of which evaluate H1.

Examining the regression models reported in Table 2 provides support for H1. Model 1 shows that task (β = .11, p < .01) and relationship (β = −.22, p < .01) conflict are significantly related to team performance (R^2 = .03, p < .01). Similarly, Model 2

shows that relationship (β = −.60, p < .01) and task conflict (β = .11, p < .01) are significantly related to team affective outcomes. Models 3 and 4 show that collaborating, avoiding, and competing conflict processes account for an incremental 13% (p < .01) of the variance in both team performance and team affective outcomes beyond that which is accounted for by conflict states. Examining the coefficients associated with each process shows that all processes are significantly related to team performance

Table 2

Meta-Analytic Regression Results Examining Unique Contribution of Conflict Processes to Team Outcomes While Controlling Conflict States

Model and variable(s) entered	DV = Team performance	DV = Team affective outcomes
Models 1 & 2	(N = 5,644)	(N = 1,763)
Task conflict	.108*	.110*
Relationship conflict	−.218*	−.604*
R^2	.034*	.300*
Models 3 & 4	(N = 1,622)	(N = 1,247)
Collaborating	.297*	.400*
Avoiding	−.100*	.004
Competing	−.128*	.139*
R^2	.161*	.434*
ΔR^2	.127*	.134*
Models 5 & 6	(N = 932)	(N = 735)
Openness	.349*	.255*
R^2	.117*	.342*
ΔR^2	.083*	.043*

Note. Data are standardized regression coefficients (βs). N = the harmonic mean of the number of data points across all cells included in each analysis. DV = dependent variable.
* p < .01.

Table 3
Meta-Analytic Regression Results Examining Unique Contribution of Conflict States to Team Outcomes While Controlling Conflict Processes

Variable	Team performance ($N = 1,622$)	Team affective outcomes ($N = 1,247$)	Variable	Team performance ($N = 932$)	Team affective outcomes ($N = 735$)
Models 1 & 2			Models 5 & 6		
Collaborating	.275*	.493*	Openness	.340*	.440*
Avoiding	−.125*	−.085*			
Competing	−.115*	.050			
R^2	.146*	.247*	R^2	.116*	.194*
Models 3 & 4			Models 7 & 8		
Task conflict	.152*	.171*	Task conflict	−.039	−.011
Relationship conflict	−.071*	−.553*	Relationship conflict	.014	−.421*
R^2	.161*	.434*	R^2	.117*	.342*
ΔR^2	.015*	.187*	ΔR^2	.001	.149*

Note. Data are standardized regression coefficients (βs). N = the harmonic mean of the number of data points across all cells included in each analysis.
* $p < .01$.

(collaborating [β = .30, $p < .01$], avoiding [β = −.10, $p < .01$], and competing [β = −.13, $p < .01$]). In predicting affective outcomes, however, avoiding was not statistically significant (β = .00, *ns*), whereas the betas associated with collaborating (β = .40, $p < .01$) and competing (β = .14, $p < .01$) were significant. Models 5 and 6 in Table 2 evaluate H1 with openness. After accounting for the variance in team performance and affective outcomes accounted for by conflict states in Models 1 and 2, openness explains an additional 8% ($p < .01$) of the variance in team performance and an additional 4% ($p < .01$) of the variance in team affective outcomes.

We also tested H1 by examining the incremental variance in team outcomes predicted by conflict states while controlling for conflict processes (see Table 3). Models 1 and 2 show that conflict processes are significantly related to team performance ($R^2 = .15$, $p < .01$) and team affective outcomes ($R^2 = .25$, $p < .01$). Models 3 and 4 show that relationship and task conflict account for an incremental 2% ($p < .01$) of the variance in team performance and 19% ($p < .01$) of the variance in team affective outcomes beyond that which is accounted for by conflict processes. Models 5–8 enable the same comparisons with openness. After accounting for the variance in team performance and affective outcomes accounted for by conflict process (i.e., openness) in Models 1 and 2,

relationship and task conflict explain an additional 0.1% (*ns*) of the variance in team performance and an additional 15% ($p < .01$) of the variance in team affective outcomes.

H2 proposed that collectivistic team conflict processes relate positively to team performance, whereas individualistic processes relate negatively. The meta-analytic effect sizes and associated intervals used to evaluate H2 are presented in Table 4. As predicted, both collectivistic processes were positively related to team performance (ρ $_{Openness}$ = .33; ρ $_{Collaborating}$ = .31; the 80% CVs of both effects do not include zero), and both individualistic processes were negatively related to team performance (ρ $_{Avoiding}$ = −.17; ρ $_{Competing}$ = −.23; the 80% CV for competing did not include zero). Although the avoiding–performance relationship is in the predicted direction, the 80% CV included zero, suggesting that in some cases, avoiding is not related or is weakly positively associated with team performance. This may occur, for example, in cases in which collectively avoiding dealing with a relationship conflict allows time to focus on the task at hand rather than getting bogged down with an irrelevant issue. Importantly, the CIs for the individualistic processes were completely nonoverlapping with the CIs for the collectivistic processes, suggesting that collectivistic processes are uniformly more advantageous for team performance than are individualistic processes.

Table 4
Team Conflict Process–Team Performance Relationship

Meta-analysis	k	N	r	SD_r	ρ	SD_ρ	80% CV	90% CI	% SEV	% ARTV	FDk
					Collectivistic processes						
Openness	17	1,007	.28	.18	.33	.16	.13/.53	.25/.41	44.05	45.20	95
Collaborating	22	1,794	.27	.21	.31	.21	.04/.58	.23/.39	24.04	24.46	114
					Individualistic processes						
Avoiding	8	707	−.14	.17	−.17	.16	−.38/.04	−.29/−.05	36.25	36.41	19
Competing	21	1,723	−.20	.18	−.23	.16	−.44/−.02	−.30/−.16	36.63	36.97	76

Note. k = number of correlations meta-analyzed; N = total number of groups; r = sample size-weighted mean-observed correlation; SD_r = sample size-weighted standard deviation of the observed correlations; ρ = sample size-weighted mean-observed correlation corrected for unreliability in both measures; SD_ρ = standard deviation of ρ; 80% CV = 80% credibility interval around ρ; 90% CI = 90% confidence interval around ρ; % SEV = percent variance due to sampling error; % ARTV = percent variance due to all corrected artifacts; FDk = file drawer k representing the number of "lost" studies reporting null findings necessary to reduce ρ to .05.

H3 proposed that collectivistic conflict processes relate positively to team affective outcomes, whereas individualistic processes related negatively. The meta-analytic effect sizes and associated intervals used to evaluate H3 are presented in Table 5. H3 was partially supported. As predicted, both collectivistic processes were positively related to team affective outcomes (ρ_{Openness} = .45; $\rho_{\text{Collaborating}}$ = .51; the 80% CVs of both effects do not include zero), and both individualistic processes were negatively related to team affective outcomes (ρ_{Avoiding} = −.12; $\rho_{\text{Competing}}$ = −.20; the 80% CV for avoiding did not include zero). Although the competing–affective outcomes relationship is in the predicted direction, the 80% CV included zero, suggesting that in some instances, competition is not related to team affect. Future research may be needed to identify when this would occur. Importantly, as with the results for performance, the CIs for the individualistic processes in relation to affective outcomes were completely non-overlapping with the CIs for the collectivistic processes, suggesting that collectivistic processes are uniformly more advantageous for team affective outcomes than are individualistic processes.

Discussion

A clear reality in modern organizations is that teams of interdependent specialized members are charged with accomplishing increasingly complex tasks. Such teams are formed to capitalize on the enhanced intellectual capacity afforded by their diverse array of background experiences, expertise, and ideas. However, one of the most ubiquitous and little understood frustrations of teamwork involves how best to deal with conflict. Despite abundant prescriptive advice originating from both the applied and academic communities regarding how teams "should" manage differences, the development of practical evidence-based prescriptions has been impeded by an overemphasis on *what* teams are disagreeing about (i.e., conflict states) and an underemphasis on the manner in which they interact to incorporate those differences (i.e., conflict processes). During the 18 years following the publication of Jehn's (1995) seminal article on team conflict types, abundant attention has been paid to the discourse of what types of issues teams should and should not disagree on. The prevailing idea of the past two decades has been that cognitively rooted task conflict should be promoted and affectively laden relational conflict should be avoided. Such prescriptions rely on empirical evidence about con-

flict states to underpin recommendations about needed conflict processes. The current article intended to redirect the discourse on team conflict by bringing the structure–process distinction to the forefront and pave the way forward for more nuanced and actionable research on team conflict.

Team conflict is composed of both emergent states and behavioral processes, both of which contribute to team performance and affective outcomes. Although processes and states are both significant predictors of important team outcomes, the processes teams use to manage their differences explain more variance in outcomes than do their emerged perceptions of the nature and amount of those differences. And, finally, collectivistic conflict process is positively related to both performance and affective outcomes, whereas individualistic processes are negatively related to these outcomes. These findings have important implications for theory and practice.

Theoretical Contribution 1: Team Conflict State–Process Model

This work advances and tests an integrated model of team conflict that distinguishes *what* teams disagree about from *how* they go about interacting to resolve their differences. Controlling for the amount and nature of what teams disagree about, we find that the manner in which they interact to resolve differences plays an important role in determining both their performance and affective outcomes.

The model in Figure 1 is offered as a step forward in understanding the state–process conceptualization of conflict in teams supported in the current study. The vast majority of past research has explored either conflict states or processes, but rarely have the two been investigated in tandem. The current findings illustrate that although conflict states and processes are correlated, each explains unique variance in team effectiveness. Interestingly, whereas far more studies investigate conflict states than processes, their relative effects suggest this research trend may be misguided. The amount of variance in team performance explained by relationship and task conflict (i.e., conflict states) is 3%, whereas after controlling for these effects, the conflict processes explain as much as an additional 13% (when collaborating, competing, and avoiding are included; 8% when only openness is included). That is, more than 4 times as much performance variance can be explained

Table 5
Team Conflict Process–Team Affective Outcomes Relationship

Meta-analysis	k	N	r	SD_r	ρ	SD_ρ	80% CV	90% CI	% SEV	% ARTV	FDk
					Collectivistic processes						
Openness	10	646	.39	.23	.45	.24	.15/.76	.31/.59	21.19	22.59	80
Collaborating	12	778	.43	.22	.51	.05	.22/.80	.39/.63	21.42	22.03	110
					Individualistic processes						
Avoiding	7	450	−.10	.06	−.12	.00	−.12/−.12	−.16/−.08	100	100	10
Competing	11	707	−.17	.20	−.20	.19	−.45/.04	−.32/−.08	36.81	37.07	33

Note. k = number of correlations meta-analyzed; N = total number of groups; r = sample size-weighted mean-observed correlation; SD_r = sample size-weighted standard deviation of the observed correlations; ρ = sample size-weighted mean-observed correlation corrected for unreliability in both measures; SD_ρ = standard deviation of ρ; 80% CV = 80% credibility interval around ρ; 90% CI = 90% confidence interval around ρ; % SEV = percent variance due to sampling error; % ARTV = percent variance due to all corrected artifacts; FDk = file drawer k representing the number of "lost" studies reporting null findings necessary to reduce ρ to .05; this relates to Rosenthal's (1979) proposition regarding the potential for a file-drawer effect, wherein significant results are more likely to be published.

by the nature of team conflict interactions (i.e., processes) relative to the nature of their emerged perceptions of conflict (i.e., states).

When predicting the affective health of the team, conflict states and processes are more balanced in their relation to affective outcomes. Conflict processes explain 4% (openness) and 13% (collaborating, avoiding, and competing), respectively, of unique variance in affective outcomes while controlling for conflict states. Similarly, conflict states explain 15% (controlling for collaborating, avoiding, and competing) and 19% (controlling for openness), respectively, of unique variance in affective outcomes while controlling for conflict processes. Taken together, these findings underscore the importance of understanding the unique roles of conflict states and processes (i.e., by suggesting discriminant validity).

Going back to the founding work on team effectiveness, McGrath (1964) and others (e.g., Hackman & Morris, 1975) highlight the importance of understanding two team outcomes: Can they perform, and are they viable to continue working together. The current results suggest that how teams interact about differences shapes their performance—whereas members' emerged perceptions of differences shapes their capacity to continue working together. From this, we know that collectivistic interactions enable members to openly discuss their differing ideas, bringing them to the benefit of creative solutions to team problems. We also know that members' emerged perceptions of differences are important to team affective outcomes. What we need to know next is how teams can interact collectivistically to leverage their differences (benefiting team performance), while suppressing the emerged perceptions of task and relationship conflict that undermine affective functioning. For this, research is needed to better understand the microdynamics governing the coevolution of conflict processes and emerged states over time.

Team conflict research would be well served to consider both the type and amount of conflict involved (i.e., conflict states) as well as the nature of interaction processes around resolving and integrating differences (i.e., conflict processes). De Dreu and Weingart's (2003b) meta-analytic finding that both task and relationship conflict are negatively related to team outcomes spawned a frenzy of research aimed at understanding when and how this is not the case. In fact, a second meta-analysis followed, tripling the data set and expanding the moderators to conclude, in contrast to De Dreu and Weingart's findings, that although both types of conflict are disruptive for group outcomes, "we have found that task conflict has a less negative (and under certain conditions, a positive) relationship with group outcomes" (De Wit et al., 2012, p. 372). Researchers hold tightly to the idea that intellective, task-based conflict improves team performance. In light of these current findings, we raise the possibility that more will be understood about conflict in teams by broadening our conceptualization of conflict to include both the state and process aspects.

Theoretical Contribution 2: Collectivistic Conflict Process

Collectivistic conflict processes are associated with enhanced team performance and affective outcomes. Conversely, the more teams characterize their conflict process as individualistic, the worse their performance and affective outcomes. Interestingly, Goncalo and Staw (2006) reported that individualistic idea-sharing norms may provoke positive task-related conflict that ultimately enhances team creativity. Our results suggest this finding may be true to the extent that the resulting conflict is handled using collectivistic processes.

Future Directions

A key opportunity for future investigations of team conflict is to examine the interactive effects of conflict states and processes. A few studies have investigated such interactions (Atuahene-Gima & Murray, 2004; DeChurch & Marks, 2001; De Dreu & Van Vianen, 2001), but more are needed. These initial studies find conflict states are more or less important to team outcomes depending on the nature of conflict processes; for example, De Dreu and Van Vianen (2001) found relationship conflict to be less harmful when differences are avoided. A similar moderating question raised by the current findings is: Under what conditions are collectivistic conflict processes more and less strongly related to effectiveness? Are there tasks for which individualistic processes are needed, for example, to avoid groupthink or to foster creativity? Two contingency models of conflict have yet to be adequately tested (De Dreu & Weingart, 2003b; Jehn & Bendersky, 2003); these models provide a theoretically rich starting point for future work.

A second area ripe for future work is the longitudinal analysis of team process like conflict (Cronin, in press; Leenders, Contractor, & DeChurch, 2012). Earlier, we pointed out the reality that most research on conflict states actually looks at "emerged" conflict. An important question in need of future research concerns how task and relationship conflict dynamically emerge in teams. Research is needed to identify the manner in which conflict states and processes dynamically shape outcomes over the course of team performance episodes. Ideally, this research needs to (a) explain how conflict states and processes shape and are shaped by cognitive and motivational emergent states, and transition and action processes (Cronin, Weingart, & Todorova, 2011), and (b) directly assess behavioral interactions rather than relying on perception-based proxies (Kozlowski & Chao, 2012).

Practical Implications

There are two gravitational pulls on teams (Guzzo & Shea, 1992). The first is performance driven; teams form to perform tasks too complex for lone individuals. The second is affectively driven; team interactions need to preserve the interpersonal fabric of the team so that it remains a socially viable collective entity. The current findings have clear implications for both of these aims.

The use of collaborative and open-minded conflict processes is associated with task and socioemotional team functioning. Regardless of the underlying reason for the conflict, collectivistic conflict processes relate positively to team outcomes. Research suggests constructive controversy (Tjosvold, 1985, 1998), openness (Jehn, 1995), and similar behavioral patterns characterized by actively expressing ideas, openly discussing issues, and challenging the feasibility of ideas enhance team functioning. Similarly, collaborative process aimed at surfacing and integrating team members' underlying concerns contribute to team effectiveness. Conversely, the pattern of evidence suggests that avoiding and competing, processes that uphold individuals' ideas at the expense of group solidarity, impair effectiveness.

Limitations

Three limitations of this meta-analysis should be noted. First, the relationships reported here reflect largely correlational effects between conflict process and team outcomes; the nature of the primary studies does not afford strong causal inferences to be drawn regarding conflict process and outcomes. Second, there is little standardization in how studies operationalize team conflict process, and this may partially explain the wide variance in the observed relationships. Third, several of the meta-analyzed relationships included a relatively small number of correlations (i.e., relationships between conflict states and process, particularly those involving avoidance). As a result, several relationships maintain considerable variability after correcting for artifacts. Although small sample sizes in meta-analyses seems to be common across team-level studies (with several other meta-analyses reporting comparable numbers; e.g., Bowers, Pharmer, & Salas, 2000; De Dreu & Weingart, 2003b; Evans & Dion, 1991; Gully, Devine, & Whitney, 1995; Horwitz & Horwitz, 2007; Mullen & Copper, 1994; Oliver, Harman, Hoover, Hayes, & Pandhi, 1999), we recognize that second-order sampling error (Hunter & Schmidt, 2004) poses a threat to the validity of our findings.

Conclusion

In sum, the truth about team conflict seems to be that conflict processes, that is, how teams *interact regarding* their differences, are at least as important as conflict states, that is, the *source* and *intensity* of those perceived differences.

References

References marked with an asterisk indicate studies included in the meta-analysis.

References marked with a dagger indicate studies excluded from the database, including the seven that were removed due to this issue.

Allport, F. H. (1954). The structuring of events: Outline of a general theory with applications to psychology. *Psychological Review, 61,* 281–303. doi:10.1037/h0062678

*Alper, S., Tjosvold, D., & Law, K. S. (1998). Interdependence and controversy in group decision making: Antecedents to effective self-managing teams. *Organizational Behavior and Human Decision Processes, 74,* 33–52. doi:10.1006/obhd.1998.2748

*Alper, S., & Tjosvold, D., & Law, K. S. (2000). Conflict management, efficacy, and performance in organization teams. *Personnel Psychology, 53,* 625–642. doi:10.1111/j.1744-6570.2000.tb00216.x

†Amason, A. C., & Mooney, A. C. (1999). The effects of past performance on top management team conflict in strategic decision making. *International Journal of Conflict Management, 10,* 340–359.

*Amason, A. C., & Sapienza, H. J. (1997). The effects of top management team size and interaction norms on cognitive and affective conflict. *Journal of Management, 23,* 495–516.

†Andrews, I. R., & Tjosvold, D. (1983). Conflict management under different levels of conflict intensity. *Journal of Occupational Behaviour, 4,* 223–228.

†Atuahene-Gima, K., & Murray, J. Y. (2004). Antecedents and outcomes of marketing strategy comprehensiveness. *Journal of Marketing, 68,* 33–46. doi:10.1509/jmkg.68.4.33.42732

†Ayoko, O. B. (2007). Communication openness, conflict events and reactions to conflict in culturally diverse workgroups. *Cross Cultural Management: An International Journal, 14,* 105–124.

Ayoko, O. B., Callan, V. J., & Härtel, C. E. J. (2008). The influence of team emotional intelligence climate on conflict and team members' reactions to conflict. *Small Group Research, 39,* 121–149.

*Barrick, M. R., Stewart, G. L., Neubert, M. J., & Mount, M. K. (1998). Relating member ability and personality to work-team processes and team effectiveness. *Journal of Applied Psychology, 83,* 377–391. doi:10.1037/0021-9010.83.3.377

**Barsade, S. G. (2002). The ripple effects: Emotional contagion and its influence on group behavior. *Administrative Science Quarterly, 47,* 644–675.

**Bayazit, M., & Mannix, E. A. (2003). Should I stay or should I go? Predicting team members' intent to remain in the team. *Small Group Research, 34,* 290–321.

*Beersma, B., & De Dreu, C. K. W. (1999). Negotiation processes and outcomes in prosocially and egoistically motivated groups. *International Journal of Conflict Management, 10,* 385–402. doi:10.1108/eb022831

*Beersma, B., & De Dreu, C. K. W. (2002). Integrative and distributive negotiation in small groups: Effects of task structure, decision rule, and social motive. *Organizational Behavior and Human Decision Processes, 87,* 227–252. doi:10.1006/obhd.2001.2964

*†Beersma, B., & De Dreu, C. K. W. (2005). Conflict's consequences: Effects of social motives on postnegotiation creative and convergent group functioning and performance. *Journal of Personality and Social Psychology, 89,* 358–374. doi:10.1037/0022-3514.89.3.358

†Behfar, K. J., Peterson, R. S., Mannix, E. A., & Trochim, W. M. K. (2008). The critical role of conflict resolution in teams: A close look at the links between conflict type, conflict management strategies, and team outcomes. *Journal of Applied Psychology, 93,* 170–188. doi:10.1037/0021-9010.93.1.170

†Bell, C., & Song, F. (2005). Emotions in the conflict process : An application of the cognitive appraisal model of emotions to conflict management. *International Journal of Conflict Management, 16,* 30–54.

†Bishop, J. W., & Dow Scott, K. (2000). An examination of organizational and team commitment in a self-directed team environment. *Journal of Applied Psychology, 85,* 439–450.

Blake, R. R., & Mouton, J. S. (1964). *The managerial grid.* Houston, TX: Gulf Publishing.

†Boies, K., & Howell, J. M. (2006). Leader–member exchange in teams: An examination of the interaction between relationship differentiation and mean LMX in explaining team-level outcomes. *Leadership Quarterly, 17,* 246–257.

*Boone, C., & Hendriks, W. (2009). Top management team diversity and firm performance: Moderators of functional-background and locus-of-control diversity. *Management Science, 55,* 165–180. doi:10.1287/mnsc.1080.0899

*Boros, S., Meslec, N., Curseu, P. L., & Emons, W. (2010). Struggles for cooperation: Conflict resolution strategies in multicultural groups. *Journal of Managerial Psychology, 25,* 539–554. doi:10.1108/02683941011048418

Bowers, C. A., Pharmer, J. A., & Salas, E. (2000). When member homogeneity is needed in work teams: A meta-analysis. *Small Group Research, 31,* 305–327. doi:10.1177/104649640003100303

Brett, J. M., Shapiro, D. L., & Lytle, A. L. (1998). Breaking the bonds of reciprocity in negotiations. *Academy of Management Journal, 41,* 410–424. doi:10.2307/257081

†Buchholtz, A. K., Amason, A. C., & Rutherford, M. A. (2005). The impact of board monitoring and involvement on top management team affective conflict. *Journal of Managerial Issues, 17,* 405–422.

†Cannon, M. D., & Edmonson, A. C. (2001). Confronting failure : Antecedents and consequences of shared beliefs about failure in organizational work groups. *Journal of Organizational Behavior, 22,* 161–177.

*Chen, G., Liu, C., & Tjosvold, D. (2005). Conflict management for effective top management teams and innovation in China. *Journal of*

Management Studies, 42, 277–300. doi:10.1111/j.1467-6486.2005 .00497.x

*Chen, G., & Tjosvold, D. (2002). Conflict management and team effectiveness in China: The mediating role of justice. *Asian Pacific Journal of Management, 19,* 557–572. doi:10.1023/A:1020573710461

†Chen, M.-H. (2006). Understanding the benefits and detriments of conflict on team creativity process. *Creativity and Innovation Management, 15,* 105–116.

†Chen, M.-H., & Chang, Y.-C. (2005). The dynamics of conflict and creativity during a project's life cycle: A comparative study between service-driven and technology-driven teams in Taiwan. *International Journal of Organizational Analysis, 13,* 127–150.

†Chen, Y., Tjosvold, D., & Fang, S. S. (2005). Working with foreign managers: Conflict management for effective leader relationships in China. *International Journal of Conflict Management, 16,* 265–286.

†Chou, H.-W., & Yeh, Y-J. (2007). Conflict, conflict management, and performance in ERP teams. *Social Behavior and Personality: An International Journal, 35,* 1035–1048.

Colquitt, J. A., Conlon, D. E., Wesson, M. J., Porter, C. O. L., & Ng, K. Y. (2001). Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology, 86,* 425–445. doi:10.1037/0021-9010.86.3.425

†Cooper, M. J., Gwin, C. F., & Wakefield, K. L. (2008). Cross-functional interface and disruption in CRM projects: Is marketing from Venus and information systems from Mars? *Journal of Business Research, 61,* 292–299.

†Correia, A. P. (2008). Team conflict in ICT-rich environment: Roles of technologies in conflict management. *British Journal of Educational Technology, 39,* 18–35.

Cronin, M. A. (in press). Dynamic relationships in groups and teams. *Organizational Psychology Review.*

Cronin, M. A., Weingart, L. R., & Todorova, G. (2011). Dynamics in groups: Are we there yet? In J. P. Walsh, & A. P. Brief (Eds.), *The Academy of Management Annals* (Vol. 5, pp. 571–612). Philadelphia, PA: Taylor & Francis.

†Darr, W., & Johns, G. (2004). Political decision-making climates: Theoretical processes and multi-level antecedents. *Human Relations, 57,* 169–200.

†Dayan, M., Di Benedetto, C. A., & Colak, M. (2009). Managerial trust in new product development projects: Its antecedents and consequences. *R & D Management, 39,* 21–37.

†DeChurch, L. A., Hamilton, K. L., & Haas, C. (2007). Effects of conflict management strategies on perceptions of intragroup conflict. *Group Dynamics: Theory, Research, and Practice, 11,* 66–78.

*DeChurch, L. A., & Marks, M. A. (2001). Maximizing the benefits of task conflict: The role of conflict management. *International Journal of Conflict Management, 12,* 4–22. doi:10.1108/eb022847

†De Dreu, C. K. W. (2002). Team innovation and team effectiveness: The importance of minority dissent and reflexivity. *European Journal of Work and Organizational Psychology, 11,* 285–298.

†De Dreu, C. K. W. (2006). When too little or too much hurts: Evidence for a curvilinear relationship between task conflict and innovation in teams. *Journal of Management, 32,* 83–107.

De Dreu, C. K. W., & Gelfand, M. J. (2008). *The psychology of conflict and conflict management in organizations.* New York, NY: Lawrence Erlbaum Associates.

*De Dreu, C. K. W., & Van Vianen, A. E. M. (2001). Managing relationship conflict and the effectiveness of organizational teams. *Journal of Organizational Behavior, 22,* 309–328. doi:10.1002/job.71

De Dreu, C. K. W., & Weingart, L. R. (2003a). A contingency theory of task conflict and performance in groups and organizational teams. In M. A. West, D. Tjosvold, & K. G. Smith, (Eds.) *International handbook of organizational teamwork and cooperative working* (pp. 151–166). Hoboken, NJ: Wiley.

De Dreu, C. K. W., & Weingart, L. R. (2003b). Task versus relationship conflict, team performance, and team member satisfaction: A meta-analysis. *Journal of Applied Psychology, 88,* 741–749. doi:10.1037/0021-9010.88.4.741

†De Dreu, C. K. W., & West, M. A. (2001). Minority dissent and team innovation: The importance of participation in decision making. *Journal of Applied Psychology, 86,* 1191–1201.

*Desivilya, H. S., & Eizen, D. (2005). Conflict management in work teams: The role of social self-efficacy and group identification. *The International Journal of Conflict Management, 16,* 183–208. doi:10.1108/eb022928

*Desivilya, H. S., & Yagil, D. (2005). The role of emotions in conflict management: The case of work teams. *The International Journal of Conflict Management, 16,* 55–69. doi:10.1108/eb022923

Deutsch, M. (2002). Social psychology's contributions to the study of conflict resolution. *Negotiation Journal, 18,* 307–320. doi:10.1111/j.1571-9979.2002.tb00263.x

†Devine, D. J., Clayton, L. D., Philips, J. L., Dunford, B. B., & Melner, S. B. (1999). Teams in organizations: Prevalence, characteristics, and effectiveness. *Small Group Research, 30,* 678–711.

De Wit, F. R. C., Greer, L. L., & Jehn, K. A. (2012). The paradox of intragroup conflict: A meta-analysis. *Journal of Applied Psychology, 97,* 360–390. doi:10.1037/a0024844

*Dionne, S. D. (1998). *Team training and development in organizations: A multiple levels of analysis field experiment.* (Doctoral dissertation). (UMI Microform 9830610).

†Duffy, M. K., Shaw, J. D., & Stark, E. M. (2000). Performance and affective outcomes in conflicted interdependent groups: When and how does self-esteem make a difference? *Academy of Management Journal, 43,* 772–782.

†Ehrhart, M. G., Bliese, P. D., & Thomas, J. L. (2006). Unit-level OCB and unit effectiveness: Examining the incremental effect of helping behavior. *Human Performance, 19,* 159–173.

†Ensley, M. D., & Pearce, C. L. (2001). Shared cogniition in top management teams: Implications for new venture performance. *Journal of Organizational Behavior, 22,* 145–160.

†Ensley, M. D., Pearson, A. W., & Sardeshmukh, S. R. (2007). The negative consequences of pay dispersion in family and non-family top management teams: An exploratory analysis of new venture, high-growth firms. *Journal of Business Research, 60,* 1039–1047.

†Erez, A., LePine, J. A., & Elms, H. (2002). Effects of rotated leadership and peer evaluation on the functioning and effectiveness of self-managed teams: A quasi-experiment. *Personnel Psychology, 55,* 929–948.

Evans, C. R., & Dion, K. L. (1991). Group cohesion and performance: A meta-analysis. *Small Group Research, 22,* 175–186. doi:10.1177/1046496491222002

Festinger, L. (1957). *A theory of cognitive dissonance.* Stanford, CA: Stanford University Press.

†Giebels, E., & Janssen, O. (2005). Conflict stress and reduced well-being at work: The buffering effect of third-party help. *European Journal of Work and Organizational Psychology, 14,* 137–155.

*Gibson, C. B., Cooper, C. D., & Conger, J. A. (2009). Do you see what we see? The complex effects of perceptual distance between leaders and teams. *Journal of Applied Psychology, 94,* 62–76. doi:10.1037/a0013073

Goncalo, J. A., & Staw, B. M. (2006). Individualism-collectivism and group creativity. *Organizational Behavior and Team Decision Processes, 100,* 96–109. doi:10.1016/j.obhdp.2005.11.003

†Greer, L. L., Jehn, K. A., & Mannix, E. A. (2008). Conflict transformation: A longitudinal investigation of the relationships between different types of intragroup conflict and the moderating role of conflict resolution. *Small Group Research, 39,* 278–302.

†Guerra, J. M., Martinez, I., Munduate, L., & Medina, F. J. (2005). A contingency perspective on the study of the consequences of conflict types: The role of organizational culture. *European Journal of Work and Organizational Psychology, 14,* 157–176.

Gully, S. M., Devine, D. J., & Whitney, D. J. (1995). A meta-analysis of cohesion and performance: Effects of level of analysis and task interdependence. *Small Group Research, 26,* 497–520. doi:10.1177/1046496495264003

Guzzo, R. A., & Shea, G. P. (1992). Group performance and intergroup relations in organizations. In M. D. Dunnette & L. M. Hough (Eds.). *Handbook of industrial and organizational psychology* (pp. 269–313). Palo Alto, CA: Consulting Psychologists Press.

Hackman, J. R., & Morris, C. C. (1975). *Group tasks, group interaction process, and group performance effectiveness: A review and proposed integration*. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (pp. 45–99). New York, NY: Academic Press. doi:10.1016/S0065-2601(08)60248-8

*Hempel, P. S., Zhang, Z., & Tjosvold, D. (2009). Conflict management between and within teams for trusting relationship and performance in China. *Journal of Organizational Behavior, 30,* 41–65. doi:10.1002/job.540

†Hinds, P. J., & Mortensen, M. (2005). Understanding conflict in geographically distributed teams: The moderating effects of shared identity, shared context, and spontaneous communication. *Organization Science, 16,* 290–307.

†Hobman, E. V., & Bordia, P. (2006). The role of team identification in the dissimilarity-conflict relationship. *Group Processes & Intergroup Relations, 9,* 483–507.

†Hobman, E. V., Bordia, P., & Gallois, C. (2003). Consequences of feeling dissimilar from others in a work team. *Journal of Business and Psychology, 17,* 301–325.

†Hobman, E. V., Bordia, P., Irmer, B., & Chang, A. (2002). The expression of conflict in computer-mediated and face-to-face groups. *Small Group Research, 33,* 439–465.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage.

†Homan, A. C., Van Knippenberg, D., Van Kleef, G. A., & De Dreu, C. K. W. (2007). Interacting dimensions of diversity: Cross-categorization and the functioning of diverse work groups. *Group Dynamics: Theory, Research, and Practice, 11,* 79–94.

Horwitz, S. K., & Horwitz, I. B. (2007). The effects of team diversity on team outcomes: A meta-analytic review of team demography. *Journal of Management, 33,* 987–1015. doi:10.1177/0149206307308587

*Huang, J. (2010). Unbundling task conflict and relationship conflict: The moderating role of team goal orientation and conflict management. *International Journal of Conflict Management, 21,* 334–355. doi:10.1108/10444061011063207

Hunter, J. E., & Schmidt, F. L. (2004). *Methods of meta-analysis: Correcting error and bias in research findings* (2nd ed.). New York, NY: Sage.

†Hsu, J. L., & Chou, H. W. (2008). The effects of communicative genres on intra-group conflict in virtual student teams. *International Journal of Distance Education Technologies, 7,* 1–22.

Ilgen, D. R., Hollenbeck, J. R., Johnson, M., & Jundt, D. (2005). Teams in organizations: From input-process-output models to IMOI models. *Annual Review of Psychology, 56,* 517–543. doi:10.1146/annurev.psych.56.091103.070250

Jackson, C. L., Colquitt, J. A., Wesson, M. J., & Zapata-Phelan, C. P. (2006). Psychological collectivism: A measurement validation and linkage to group member performance. *Journal of Applied Psychology, 91,* 884–899. doi:10.1037/0021-9010.91.4.884

†Janssen, O., Van de Vliert, E., & Veenstra, C. (1999). How task and person conflict shape the role of positive interdependence in management teams. *Journal of Management, 25,* 117–142.

Jehn, K. A. (1992). *The impact of intragroup conflict on effectiveness: A multimethod examination of the benefits and detriments of conflict* (Doctoral dissertation). Northwestern University, Evanston, Illinois.

Jehn, K. A. (1994). Enhancing effectiveness: An investigation of advantages and disadvantages of value-based intragroup conflict. *International Journal of Conflict Management, 5,* 223–238. doi:10.1108/eb022744

*Jehn, K. A. (1995). A multimethod examination of the benefits and determinants of intragroup conflict. *Administrative Science Quarterly, 40,* 256–282. doi:10.2307/2393638

Jehn, K. A., & Bendersky, C. (2003). Intragroup conflict in organizations: A contingency perspective on the conflict-outcome relationship. *Research in Organizational Behavior, 25,* 187–242. doi:10.1016/S0191-3085(03)25005-X

†Jehn, K. A., & Bezrukova, K. (2004). A field study of group diversity, workgroup context, and performance. *Journal of Organiztaional Behavior, 25,* 703–729.

†Jehn, K. A., & Chatman, J. A. (2000). The influence of proportional and perceptual conflict composition on team performance. *The International Journal of Conflict Management, 11,* 56–73.

*Jehn, K. A., & Mannix, E. A. (2001). The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance. *Academy of Management Journal, 44,* 238–251. doi:10.2307/3069453

†Jehn, K. A., Northcraft, G. B., & Neale, M. A. (1999). Why differences make a difference: A field study of diversity, conflict, and performance in workgroups. *Administrative Science Quarterly, 44,* 741–763.

*Jehn, K. A., & Shah, P. P. (1997). Interpersonal relationships and task performance: An examination of mediating processes in friendship and acquaintance groups. *Journal of Personality and Social Psychology, 72,* 775–790. doi:10.1037/0022-3514.72.4.775

†Jex, S. M., & Thomas, J. L. (2003). Relations between stressors and group perceptions: Main and mediating effects. *Work & Stress, 17,* 158–169.

†Jong, R. D., Schalk, R., & Curseu, P. L. (2008). Virtual communicating, conflicts and performance in teams. *Team Performance Management, 14,* 364–380.

*Jones, R. E., & White, C. S. (1985). Relationships among personality, conflict resolution styles, and task effectiveness. *Group & Organization Management, 10,* 152–167. doi:10.1177/105960118501000204

†Jordan, P. J., Lawrence, S. A., & Troth, A. C. (2006). The impact of negative mood on team performance. *Journal of Management & Organization, 12,* 131–145.

*Jordan, P. J., & Troth, A. C. (2004). Managing emotions during team problem solving: Emotional intelligence and conflict resolution. *Human Performance, 17,* 195–218. doi:10.1207/s15327043hup1702_4

†Karn, J. S., & Cowling, A. J. (2008). Measuring the effect of conflict on software engineering teams. *Behavior Research Methods, 40,* 582–589.

Katz, D., & Kahn, R. L. (1966). *The social psychology of organizations*. New York, NY: Wiley.

*Kellermanns, F. W., Floyd, S. W., Pearson, A. W., & Spencer, B. (2008). The contingent effect of constructive confrontation on the relationship between shared mental models and decision quality. *Journal of Organizational Behavior, 29,* 119–137. doi:10.1002/job.497

†Kotlyar, I., & Karakowsky, L. (2006). Leading conflict? Linkages between leader behaviors and group conflict. *Small Group Research, 37,* 377–403.

Kozlowski, S. W. J., & Chao, G. T. (2012). The dynamics of emergence: Cognition and cohesion in work teams. *Managerial and Decision Economics, 33,* 335–354. doi:10.1002/mde.2552

Kozlowski, S. W. J., & Ilgen, D. R. (2006). Enhancing the effectiveness of work groups and teams. *Psychological Science in the Public Interest, 7,* 77–124.

†Kurtzberg, T. R., & Mueller, J. S. (2005). The influence of daily conflict on perceptions of creativity: A longitudinal study. *International Journal of Conflict Management, 16,* 335–353.

†Langfred, C. W. (2007). The downside of self-management: A longitudinal study of the effects of conflict on trust, autonomy, and task interdependence in self-managing teams. *Academy of Management Journal, 50,* 885–900.

†Lankau, M. J., Ward, A., Amason, A., Ng, T., & Sonnenfeld, J. A. (2007). Examining the impact of organizational value dissimilarity in top management teams. *Journal of Managerial Issues, 19,* 11–34.

Lawrence, P. R., & Lorsch, J. W. (1967). Differentiation and integration in complex organizations. *Administrative Science Quarterly, 12,* 1–47. doi:10.2307/2391211

†Lau, D. C., & Murnighan, J. K. (2005). Interactions within groups and subgroups: The effects of demographic faultlines. *Academy of Management Journal, 48,* 645–659.

Leenders, R., Contractor, N. S., & DeChurch, L. A. (2012, October). *Once upon a time: Understanding team dynamics as relational event networks.* Paper presented at the European Association of Work and Organizational Psychology Small Group Meeting, Varenna, Italy.

Lewin, K. (1948). Resolving social conflicts: Selected papers on group dynamics. New York, NY: Harper.

†Li, J., & Hambrick, D. C. (2005). Factional groups: A new vantage on demographic faultlines, conflict, and disintegration in work teams. *Academy of Management Journal, 48,* 794–813.

†Liang, T. P., Liu, C. C., Lin, T. M., & Lin, B. (2007). Effect of team diversity on software project performance. *Industrial Management & Data Systems, 107,* 636–653.

†Lira, E. M., Ripoll, P., Peiro, J. M., & Gonzalez, P. (2007). The roles of group potency and information and communication technologies in the relationship between task conflict and team effectiveness: A longitudinal study. *Computers in Human Behavior, 23,* 2888–2903.

†Lira, E. M., Ripoll, P., Peiro, J. M., & Orengo, V. (2008). How do different types of intragroup conflict affect group potency in virtual compared with face-to-face teams? A longitudinal study. *Behaviour & Informational Technology, 27,* 107–114.

*Liu, J., Fu, P., & Liu, S. (2009). Conflicts in top management teams and team/firm outcomes: The moderating effects of conflict-handling approaches. *International Journal of Conflict Management, 20,* 228–250. doi:10.1108/10444060910974867

*Liu, X., Magjuka, R. J., & Lee, S.-H. (2008). An examination of the relationship among structure, trust, and conflict management styles in virtual teams. *Performance Improvement Quarterly, 21,* 77–93. doi:10.1002/piq.20016

*Lovelace, K., Shapiro, D. L., & Weingart, L. R. (2001). Maximizing cross-functional new product teams' innovativeness and constraint adherence: A conflict communications perspective. *Academy of Management Journal, 44,* 779–793. doi:10.2307/3069415

Marks, M. A., Mathieu, J. E., & Zaccaro, S. J. (2001). A temporally based framework and taxonomy of team processes. *Academy of Management Review, 26,* 356–376.

†Maruping, L. M., & Agarwal, R. (2004). Managing team interpersonal processes through technology: A task-technology fit perspective. *Journal of Applied Psychology, 89,* 975–990.

†Matsuo, M. (2006). Customer orientation, conflict, and innovativeness in Japanese sales departments. *Journal of Business Research, 59,* 242–250.

McGrath, J. E. (1964). *Social psychology: A brief introduction*. New York, NY: Holt.

†Medina, F. J., Munduate, L., Dorado, M. A., Martinez, I., & Guerra, J. M. (2005). Types of intragroup conflict and affective reactions. *Journal of Managerial Psychology, 20,* 219–230.

†Menon, A., Bharadwaj, S. G., & Howell, R. (1996). The quality and effectiveness of marketing strategy: Effects of functional and dysfunctional conflict in intraorganizational relationships. *Journal of the Academy of Marketing Science, 24,* 299–313.

†Mohammed, S., & Angell, L. C. (2004). Surface- and deep-level diversity in workgroups: Examining the moderating effects of team orientation and team process on relationship conflict. *Journal of Organizational Behavior, 25,* 1015–1039.

†Mortensen, M., & Hinds, P. (2001). Conflict and shared identity in geographically distributed teams. *International Journal of Conflict Management, 12,* 212–238.

†Moye, N. A., & Langfred, C. W. (2004). Information sharing and group conflict: Going beyond decision making to understand the effects of information sharing on group performance. *International Journal of Conflict Management, 15,* 381–410.

Mullen, B., & Copper, C. (1994). The relation between group cohesiveness and performance: An integration. *Psychological Bulletin, 115,* 210–227. doi:10.1037/0033-2909.115.2.210

†Ng, K. Y., & Van Dyne, L. (2005). Antecedents and performance consequences of helping behavior in work groups: A multilevel analysis. *Group & Organization Management, 30,* 514–540.

*Nguyen, R. V. (2007). *Conflict in functionally diverse teams* (Doctoral dissertation). Retrieved from ProQuest Information and Learning Company. (3224957)

†Nibler, R., & Harris, K. L. (2003). The effects of culture and cohesiveness on intragroup conflict and effectiveness. *Journal of Social Psychology, 143,* 613–631.

†Ohbuchi, K., & Suzuki, M. (2003). Three dimensions of conflit issues and their effects on resolution strategies in organiational settings. *International Journal of Conflict Management, 14,* 61–73.

Oliver, L. W., Harman, J., Hoover, E., Hayes, S. M., & Pandhi, S. A. (1999). A quantitative integration of the military cohesion literature. *Military Psychology, 11,* 57–83. doi:10.1207/s15327876mp1101_4

†Olson, B. J., Parayitam, S., & Bao, Y. (2007). Strategic decision making: The effects of cognitive diversity, conflict, and trust on decision outcomes. *Journal of Management, 33,* 196–222.

†Otmar, V. E., Burke, M. J., & Landis, R. S. (2008). A model of emergence and dysfunctional effects of emotional conflict in groups. *Group Dynamics, 12,* 112–126.

†Parayitam, S., & Dooley, R. S. (2007). The relationship between conflict and decision outcomes: Moderating effects of cognitive- and affect-based trust in strategic decision-making teams. *International Journal of Conflict Management, 18,* 42–73.

†Park, H. S., & Park, M. (2008). Multilevel effects of conflict management preferences on satisfaction with group processes. *International Journal of Conflict Management, 19,* 57–71.

†Passos, A. M., & Caetano, A. (2005). Exploring the effects of intragroup conflict and past performance feedback on team effectiveness. *Journal of Managerial Psychology, 20,* 231–244.

*Patrick, R. R. (1997). *Teams and conflict management style: The moderating effect of conflict management style on the relationship between the type of conflict and team effectiveness in continuous work teams* (Doctoral dissertation). Retrieved from UMI Microform. (9725132)

†Pearsall, M. J., Ellis, A. P. J., & Evans, J. M. (2008). Unlocking the effects of gender faultlines on team creativity: Is activation the key? *Journal of Applied Psychology, 93,* 225–234.

†Pearson, A. W., Ensley, M. D., & Amason, A. C. (2002). An assessment and refinement of Jehn's Intragroup Conflict Scale. *International Journal of Conflict Management, 13,* 110–126.

†Pelled, L. H., Eisenhardt, K. M., & Xin, K. R. (1999). Exploring the black box: An analysis of work group diversity, conflict, and performance. *Administrative Science Quarterly, 44,* 1–28.

†Pelled, L. H., Xin, K. R., & Weiss, A. M. (2001). No es como mi: Relational demography and conflict in a Mexican production facility. *Journal of Occupational and Organizational Psychology, 74,* 63–84.

†Peterson, R. S., & Behfar, K. J. (2003). The dynamic relationship between performance feedback, trust, and conflict in groups: A longitudinal study. *Organizational Behavior and Human Decision Processes, 92,* 102–112.

*Pinto, M. B., Pinto, J. K., & Prescott, J. E. (1993). Antecedents and consequences of project team cross-functional cooperation. *Management Science, 39,* 1281–1297. doi:10.1287/mnsc.39.10.1281

†Poitras, J., & Le Tareau, A. (2008). Dispute resolution patterns and organizational dispute states. *International Journal of Conflict Management, 19,* 72–87.

†Polzer, J. T., Crisp, C. B., Jarvenpaa, S. L., & Kim, J. W. (2006). Extending the faultline model to geographically dispersed teams: How colocated subgroups can impair group functioning. *Academy of Management Journal, 49,* 679–692.

†Polzer, J. T., Milton, L. P., & Swann, W. B. (2002) Capitalizing on diversity: Interpersonal congruence in small work groups. *Administrative Science Quarterly, 47,* 296–324.

Pruitt, D. G., & Rubin, J. Z. (1986). *Social conflict: Escalation, stalemate, and settlement.* New York, NY: Random House.

†Quigley, N. R., Teklab, A. G., & Tesluk, P. E. (2007). Comparing consensus- and aggregaton-based methods of measuring team-level variables. *Organiztaional Research Methods, 10,* 589–608.

Rahim, M. A. (1983). A measure of styles of handling interpersonal conflict. *Academy of Management Journal, 26,* 368–376. doi:10.2307/255985

†Ramarajan, L., Berzukova, K., Jehn, K. A., & Euwema, M. (2004). Relationship between peacekeepers and NGO workers: The role of training and conflict management styles in international peacekeeping. *International Journal of Conflict Management, 15,* 167–191.

†Randel, A. E. (2002). Identity salience: A moderator of the relationship between group gender composition and work group conflicct. *Journal of Organizational Behavior, 23,* 749–766.

†Randel, A. E., & Jaussi, K. S. (2008). Gender social and personal identity, sex dissimilarity, relationship conflict and asymmetrical effects. *Small Group Research, 39,* 468–491.

†Rau, D. (2005). The influence of relationship conflict and trust on the transactive memory: Performance relation in top management teams. *Small Group Research, 36,* 746–771.

†Rau, D. (2006). Top management team transactive memory, information gathering, and perceptual accuracy. *Journal of Business Research, 59,* 416–424.

†Raver, J. L., & Gelfand, M. J. (2005). Beyond the individual victim: Linking sexual harassment, team processes, and team performance. *Academy of Management Journal, 48,* 387–400.

*Richter, A. W., Scully, J., & West, M. A. (2005). Intergroup conflict and intergroup effectiveness in organizations: Theory and scale development. *European Journal of Work and Organizational Psychology, 14,* 177–203. doi:10.1080/13594320444000263

†Richter, A. W., West, M. A., Van Dick, R., & Dawson, J. F. (2006). Boundary spanners' indentification, intergroup conflict, and effective intergroup relations. *Academy of Management Journal, 49,* 1252–1269.

†Rispens, S., Greer, L. L., & Jehn, K. A. (2007). It could be worse: A study on the alleviating roles of trust and connectedness in intragroup conflicts. *International Journal of Conflict Management, 18,* 325–344.

†Rutkowski, A., Saunders, C., Vogel, D., & Van Genuchten, M. (2007). Is it already 4 a.m. in your time zone? Focus immersion and temporal dissociation in virtual teams. *Small Group Research, 38,* 98–129.

†Saavedra, R., Earley, P. C., & Van Dyne, L. (1993). Complex interdependence in task-performing groups. *Journal of Applied Psychology, 78,* 61–72.

†Sawyer, S. (2001). Effects of intra-group conflict on packaged software development team performance. *Information Systems Journal, 11,* 155–178.

†Seltzer, J., & Kilmann, R. H. (1977). Effect of group composition on group process: Homogeneity vs heterogeneity on task and people dimensions. *Psychological Reports, 41,* 1195–1200.

*Shah, P. P., Dirks, K. T., & Chervany, N. (2006). The multiple pathways of high performing groups: The interaction of social networks and group

processes. *Journal of Organizational Behavior, 27,* 299–317. doi:10.1002/job.368

*Simons, T., Pelled, L. H., & Smith, K. A. (1999). Making use of difference: Diversity, debate, and decision comprehensiveness in top management teams. *Academy of Management Journal, 42,* 662–673. doi:10.2307/256987

*Simons, T. L., & Peterson, R. S. (2000). Task conflict and relationship conflict in top management teams: The pivotal role of intragroup trust. *Journal of Applied Psychology, 85,* 102–111. doi:10.1037/0021-9010.85.1.102

*Somech, A. (2008). Managing conflict in school teams: The impact of task and goal interdependence on conflict management and team effectiveness. *Educational Administration Quarterly, 44,* 359–390. doi:10.1177/0013161X08318957

*Somech, A., Desivilya, H. S., & Lidogoster, H. (2009). Team conflict management and team effectiveness: The effects of task interdependence and team identification. *Journal of Organizational Behavior, 30,* 359–378. doi:10.1002/job.537

†Song, M., Dyer, B., & Thieme, R. J. (2006). Conflict management and innovation performance: An integrated contingency perspective. *Academy of Marketing Science Journal, 34,* 341–356.

†Staples, D. S., & Zhao, L. (2006). The effects of cultural diversity in virtual teams versus face-to-face teams. *Group Decision and Negotiation, 15,* 389–406.

†Swann, W. B., Milton, L. P., & Polzer, J. T. (2000). Should we create a niche or fall in line? Identity negotiation and small group effectiveness. *Journal of Personality and Social Psychology, 79,* 238–250.

*Tekleab, A. G., Quigley, N. R., & Tesluk, P. E. (2009). A longitudinal study of team conflict, conflict management, cohesion, and team effectiveness. *Group & Organization Management, 34,* 170–205. doi:10.1177/1059601108331218

†Temkin-Greener, H., Gross, D., Kunitz, S. J., & Mukamel, D. (2004). Measuring interdisciplinary team performance in a long-term care setting. *Medical Care, 42,* 472–481.

Thomas, K. W. (1976). Conflict and conflict management. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 889–935). Chicago, IL: Rand McNally.

Thomas, K. W. (1992). Conflict and conflict management: Reflection and update. *Journal of Organizational Behavior, 13,* 265–274. doi:10.1002/job.4030130307

Timmerman, T. A. (2005). Missing persons in the study of groups. *Journal of Organizational Behavior, 26,* 21–36.

Tjosvold, D. (1985). Implications of controversy research for management. *Journal of Management, 11,* 21–37. doi:10.1177/014920638501100303

†Tjosvold, D. (1988). Cooperative and competitive interdependence. *Group & Organization Studies, 13,* 274–289.

†Tjosvold, D. (1990). Flight crew collaboration to manage safety risks. *Group & Organizational Studies, 15,* 177–191.

Tjosvold, D. (1991). *The conflict-positive organization: Stimulate diversity and create unity.* Reading, MA: Addison-Wesley.

Tjosvold, D. (1998). Cooperative and competitive goal approach to conflict: Accomplishment and challenges. *Applied Psychology, 47,* 285–313. doi:10.1111/j.1464-0597.1998.tb00025.x

*Tjosvold, D., Chen, Y., & Yu, Z-y. (2003). *Conflict management for individual problem solving and team innovation in China.* Paper presented at the 16th Annual International Association of Conflict Management Conference, Melbourne, Australia.

†Tjosvold, D., Hui, C., Ding, D. Z., & Hu, J. (2003). The influence of team emotional intelligence climate on conflict and team members' reactions to conflict. *Small Group Research, 39,* 121–149.

†Tjosvold, D., Hui, C., Ding, D. Z., & Junchen, H. (2003). The influence of team emotional intelligence climate on conflict and team members' reactions to conflict. *Small Group Research, 39,* 121–149.

†Tjosvold, D., Hui, C., & Sun, H. (2004). Can Chinese discuss conflicts openly? Field and experimental studies of face dynamics in China. *Group Decision and Negotiation, 13,* 341–373.

*Tjosvold, D., Law, K. S., & Sun, H. F. (2006). Effectiveness of Chinese teams: The role of conflict types and conflict management approaches. *Management and Organization Review, 2,* 231–252. doi:10.1111/j.1740-8784.2006.00040.x

†Tjosvold, D., Nibler, R., & Wan, P. (2001). Motivation for conflict among Chinese university students: Effects of others' expertise and one's own confidence on engaging in conflict. *Journal of Social Psychology, 414,* 353–363.

†Tjosvold, D., Poon, M., & Yu, Z. (2005). Team effectiveness in China: Cooperative conflict for relationship building. *Human Relations, 58,* 341–367.

†Tjosvold, D., & Sun, H. F. (2002). Understaing conflict avoidance: Relationship, motivations, actions and consequences. *International Journal of Conflict Management, 13,* 142–164.

†Tjosvold, D., & Sun, H. F. (2003). Openness among Chinese in conflict: Effects of direct discussion and warmth on integrative decision making. *Journal of Applied Social Psychology, 33,* 1878–1897.

†Tjosvold, D., Tang, M. M. L., & West, M. (2004). Reflexivity for team innovation in China. *Group and Organization Management, 29,* 540–559.

†Tjosvold, D., Wedley, W. C., & Field, R. (1986). Constructive controversy, the Vroom-Yetton model, and managerial decision-making. *Journal of Occupational Behaviour, 7,* 125–138.

*Tjosvold, D., Wong, A., Nibler, R., & Pounder, J. S. (2002). Teamwork and controversy in undergraduate management courses in Hong Kong–Can the method reinforce the message? *Swiss Journal of Psychology, 61,* 131–138. doi:10.1024//1421-0185.61.3.131

van de Vliert, E., & Euwema, M. C. (1994). Agreeableness and activeness as components of conflict behaviors. *Journal of Personality and Social Psychology, 66,* 674–687. doi:10.1037/0022-3514.66.4.674

†Vodosek, M. (2007). Intragroup conflict as a mediator between cultural diversity and work group outcomes. *International Journal of Conflict Management, 18,* 345–375.

*Virgil-King, D. M. C. (1999). *Team conflict, integrative conflict-management strategies, and team effectiveness: A field study* (Doctoral dissertation). UMI Microform. (9989330)

Viswesvaran, C., & Ones, D. S. (1995). Theory testing: Combining psychometric meta-analysis and structural equations modeling. *Personnel Psychology, 48,* 865–885. doi:10.1111/j.1744-6570.1995.tb01784.x

†Wang, G., Jing, R., & Klossek, A. (2007). Antecendents and management of conflict: Resolution styles of Chinese top managers in multiple rounds of cognitive and affective conflict. *International Journal of Conflict Management, 18,* 74–97.

†Watson, W., Cooper, D., Torres, M. A., & Boyd, N. G. (2008). Team processes, team conflict, team outcomes, and gender: An examination of US and Mexican learning teams. *International Journal of Intercultural Relations, 32,* 524–537.

†Wilkens, R., & London, M. (2006). Relationships between climate, process, and performance in continuous quality improvement groups. *Journal of Vocational Behavior, 69,* 510–523.

*West, B. J., Patera, J. L., & Carsten, M. K. (2009). Team level positivity: Investigating positive psychological capacities and team level outcomes. *Journal of Organizational Behavior, 30,* 249–267. doi:10.1002/job.593

Whitener, E. M. (1990). Confusion of confidence intervals and credibility intervals in meta-analysis. *Journal of Applied Psychology, 75,* 315–321. doi:10.1037/0021-9010.75.3.315

†Wong, A., Tjosvold, D., & Zhang, P. (2005). Developing relationships in strategic alliances: Commitment to quality and cooperative interdependence. *Industrial Marketing Management, 34,* 722–731.

†Wright, N. S., & Bennett, H. (2008). Harmony and participation in Arab and Western teams. *Education, Business and Society: Contemporary Middle Eastern Issues, 1,* 230–243.

†Wright, N. S., & Drewery, G. P. (2006). Forming cohesion in culturally heterogeneous teams: Differences in Japanese, Pacific Islander and Anglo experiences. *Cross Cultural Management, 13,* 345–360.

†Xin, K. R., & Pelled, L. H. (2003). Supervisor-subordinate conflict and perceptions of leadership behavior: A field study. *Leadership Quarterly, 14,* 25–40.

†Yeh, Y. J., & Chou, H. W. (2005). Team composition and learning behaviors in cross-functional teams. *Social Behavior and Personality, 33,* 391–402.

†Zarankin, T. G. (2008). A new look at conflict styles: Goal orientation and outcome preferences. *International Journal of Conflict Management, 19,* 167–184.

†Zellmer-Bruhn, M. E., Maloney, M. M., Bhappu, A. D., & Salvador, R. (2008). When and how do differences matter? An exploration of perceived similarity in teams. *Organizational Behavior and Human Decision Processes, 107,* 41–59.

*Zhang, Z., Cao, Q., & Tjosvold, D. (2011). Linking transformational leadership and team performance: A conflict management approach. *Journal of Management Studies, 48,* 1586–1611. doi:10.1111/j.1467-6486.2010.00974.x

Zimmerman, R. D. (2008). Understanding the impact of personality traits on individuals' turnover decisions: A meta-analytic path model. *Personnel Psychology, 61,* 309–348. doi:10.1111/j.1744-6570.2008.00115.x

Appendix A

Correlations Between Team Conflict States and Team Conflict Processes

Article	TC-OPN	RC-OPN	TC-COL	RC-COL	TC-AVD	RC-AVD	TC-COM	RC-COM
Alper et al. (1998)								
Alper et al. (2000)								
Amason & Sapienza (1997)	0.1465	−0.3558						
Barrick et al. (1998)								
Beersma & De Dreu (1999)								
Beersma & De Dreu (2002)				−0.69				0.51
Beersma & De Dreu (2005; S1)								
Beersma & De Dreu (2005; S2)								
Boone & Hendriks (2009)								
Boros et al. (2010)				−0.11		0.37		0.48
G. Chen & Tjosvold (2002)								
L. Chen et al. (2005)								
De Dreu & Van Vianen (2001)				−0.08		0.55		0.15
DeChurch & Marks (2001)	0.24		−0.22		−0.15		0.07	
Desivilya & Eizen (2005)								
Desivilya & Yagil (2005)			−0.04	−0.01	−0.09	0.02	0.13	0.14
Dionne (1998)								
Gibson et al. (2009)								
Hempel et al. (2009)								
Huang (2010)			−0.2	−0.41	0.1	0.26	0.39	0.6
Jehn & Mannix (2001)	0.05	0.01					0.24	0.27
Jehn & Shah (1997)								
Jehn (1995)	−0.22	−0.59						
Jones & White (1985)								
Jordan & Troth (2004)			−0.03	−0.02	0.04	0.15	0.61	0.5
Kellermanns et al. (2008)								
Liu et al. (2009)			0.06	−0.04	0.09	0.11	−0.14	−0.13
Liu et al. (2008)								
Lovelace et al. (2001)			0.1				0.49	
Nguyen (2007)	−0.01	−0.43						
Patrick (1997)			−0.15	−0.29	−0.1	0.24		
Pinto et al. (1993)								
Richter et al. (2005)								
Shah et al. (2006)								
Simons & Peterson (2000)							−0.05	0.18
Simons et al. (1999)	0.47							
Somech (2008)								
Somech et al. (2009)			0.18	−0.32			−0.06	−0.07
Tekleab et al. (2009)	−0.32	−0.38						
Tjosvold, Chen, & Yu (2003)								
Tjosvold et al. (2003)								
Tjosvold et al. (2006)			−0.2	−0.33			0.26	0.29
Virgil-King (1999)			−0.65	−0.72	0.03	0.14		
West et al. (2009)		−0.33						
Zhang et al. (2011)								

Note. TC = Task Conflict; OPN = Openness Conflict Process; RC = Relational Conflict; COL = Collaboration; AVD = Avoidance; COM = Competition.

(Appendices continue)

Appendix B

Intercorrelations Among Team Conflict Processes

Article	COL-AVD	COL-COM	AVD-COM
Alper et al. (1998)		−0.55	
Alper et al. (2000)		−0.55	
Amason & Sapienza (1997)			
Barrick et al. (1998)			
Beersma & De Dreu (1999)		−0.7	
Beersma & De Dreu (2002)		−0.4	
Beersma & De Dreu (2005; S1)		−0.61	
Beersma & De Dreu (2005; S2)		−0.66	
Boone & Hendriks (2009)			
Boros et al. (2010)	−0.08	−0.07	0.53
G. Chen & Tjosvold (2002)	−0.25	−0.24	0.35
G. Chen et al. (2005)			
De Dreu & Van Vianen (2001)	0.07	0.23	0.55
DeChurch & Marks (2001)	0.05	−0.11	0.38
Desivilya & Eizen (2005)	−0.26	0.01	−0.14
Desivilya & Yagil (2005)	−0.02	−0.01	0.1
Dionne (1998)			
Gibson et al. (2009)			
Hempel et al. (2009)		−0.38	
Huang (2010)	−0.12	−0.37	0.32
Jehn & Mannix (2001)			
Jehn & Shah (1997)			
Jehn (1995)			
Jones & White (1985)	0.25	−0.23	0.13
Jordan & Troth (2004)			
Kellermanns et al. (2008)			
Liu et al. (2009)	−0.2	0	0.06
Liu et al. (2008)		−0.581	
Lovelace et al. (2001)		−0.09	
Nguyen (2007)			
Patrick (1997)	−0.37		
Pinto et al. (1993)			
Richter et al. (2005)		−0.02	
Shah et al. (2006)			
Simons & Peterson (2000)			
Simons et al. (1999)			
Somech (2008)		−0.24	
Somech et al. (2009)		−0.27	
Tekleab et al. (2009)			
Tjosvold, Chen, & Yu (2003)	−0.13	−0.02	0.35
Tjosvold et al. (2003)			
Tjosvold et al. (2006)			
Tjosvold et al. (2005)		−0.07	
Tjsovold et al. (2004)		−0.12	
Virgil-King (1999)	−0.2		
West et al. (2009)			
Zhang et al. (2011)		−0.59	

Note. COL = Collaboration; AVD = Avoidance; COM = Competition.

(Appendices continue)

Appendix C

Correlations Between Team Conflict Process and Team Outcomes

Article	OPN-PERF	COL-PERF	AVD-PERF	COM-PERF	OPN-AFF	COL-AFF	AVD-AFF	COM-AFF
Alper et al. (1998)	0.61	0.37		−0.48	0.88	0.81		−0.69
Alper et al. (2000)		0.22		−0.27				
Amason & Sapienza (1997)								
Atuahene-Gima & Murray (2004)		0.16	−0.11					
Barrick et al. (1998)	0.26				0.38			
Beersma & De Dreu (1999)		0.85		−0.54				
Beersma & De Dreu (2002)		0.51		−0.43				
Beersma & De Dreu (2005; S1)		0.66		−0.68				
Beersma & De Dreu (2005; S2)		0.29		−0.25				
Boone & Hendriks (2009)	0.21							
Boros et al. (2010)								
G. Chen & Tjosvold (2002)		0.65	−0.31	−0.25				
G. Chen et al. (2005)	0.34	0.36	−0.34	−0.35				
Chou & Yeh (2007)		0.461	0.094	0.15		0.257	−0.123	−0.051
De Dreu & Van Vianen (2001)		−0.45	0.31	−0.18		0.17	−0.15	0.08
DeChurch & Marks (2001)	0.1	−0.03	−0.04	0.02	0.07	0.51	−0.09	−0.07
Desivilya & Eizen (2005)						0.26	0.04	−0.28
Desivilya & Yagil (2005)						0.35	−0.09	−0.06
Dionne (1998)	0.41				0.51			
Gibson et al. (2009)	0.26							
Hempel et al. (2009)		0.17		−0.21		0.34		−0.32
Huang (2010)								
Janssen et al. (1999)		0.62		−0.43		0.55		−0.59
Jehn & Mannix (2001)	0.26			−0.08	0.2			−0.18
Jehn & Shah (1997)	0.07				0.2			
Jehn (1995)	0.21				0.36			
Jones & White (1985)								
Jordan & Troth (2004)		0.11	−0.17	0.02				
Kellermanns et al. (2008)	0.7							
Liu et al. (2009)		0.16	−0.14	0.11		0.13	−0.13	−0.02
Liu et al. (2008)		0.195		0.001		0.664		−0.31
Lovelace et al. (2001)		0.1		−0.35				
Nguyen (2007)	0.32							
Patrick (1997)		0.01	0.21			0.28	0.03	
Pinto et al. (1993)	0.53				0.63			
Richter et al. (2005)		0.06		−0.07		0.39		0.08
Shah et al. (2006)	−0.08							
Simons & Peterson (2000)								
Simons et al. (1999)	0.27							
Somech (2008)		0.21		−0.19				
Somech et al. (2009)		0.3		−0.24		0.51		−0.18
Song et al. (2006)	0.26	0.39	−0.22	−0.23				
Tekleab et al. (2009)	0.15				0.23			
Tjosvold, Chen, & Yu (2003)								
Tjosvold et al. (2002)	0.19							
Tjosvold et al. (2006)		0.45		−0.3				
Virgil-King (1999)		0.17	−0.09			0.83	−0.16	
West et al. (2009)					0.51			
Zhang et al. (2011)		0.21		−0.01				

Note. OPN = Openness Conflict Process Behaviors; COL = Collaboration; AVD = Avoidance; COM = Competition; PERF = Team Performance; AFF = Team Affective Outcomes.
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(*Appendices continue*)

Appendix D

Scale Reliabilities and Sample Sizes

Article	N	TC	RC	OPN	COL	AVD	COM	PERF	AFF
Alper et al. (1998)	60			0.9	0.81		0.72	0.94	0.94
Alper et al. (2000)	61				0.92		0.88	0.94	
Amason & Sapienza (1997)	48	0.79	0.86	0.72					
Barrick et al. (1998)	51			0.87				0.83	0.82
Beersma & De Dreu (1999)	22				0.96		0.86		
Beersma & De Dreu (2002)	91		0.92		0.95		0.85		
Beersma & De Dreu (2005; S1)	30				0.96		0.85		
Beersma & De Dreu (2005; S2)	69				0.79		0.79		
Boone & Hendriks (2009)	33			0.733					
Boros et al. (2010)	125		0.89		0.82	0.87	0.86		
G. Chen & Tjosvold (2002)	126				0.75	0.8	0.69	0.91	
G. Chen, Liu, & Tjosvold (2005)	105			0.94	0.95	0.9	0.93	0.93	
De Dreu & Van Vianen (2001)	27		0.91		0.79	0.76	0.69	0.82	0.78
DeChurch & Marks (2001)	96	0.87			0.84	0.72	0.8		0.94
Desivilya & Eizen (2005)	13				0.81	0.75	0.88		0.88
Desivilya & Yagil (2005)	69	0.74	0.84						0.82
Dionne (1998)	26			0.71					0.87
Gibson et al. (2009)	65			0.87				0.86	
Hempel et al. (2009)	102				0.89		0.85		0.79
Huang (2010)	120	0.86	0.91		0.91	0.8	0.89		
Jehn & Mannix (2001)	51	0.94	0.94	0.92				0.93	0.94
Jehn & Shah (1997)	53			0.86					0.82
Jehn (1995)	93	0.87	0.92	0.74					0.79
Jones & White (1985)	32								
Jordan & Troth (2004)	108	0.82	0.85		0.71	0.7	0.7		
Kellermanns et al. (2008)	56			0.96				0.92	
Liu et al. (2009)	123	0.88	0.81					0.92	0.78
Liu et al. (2008)	38				0.826		0.806		
Lovelace et al. (2001)	43	0.81			0.83		0.85	0.87	
Nguyen (2007)	41	0.8	0.9	0.58					
Patrick (1997)	57								
Pinto et al. (1993)	62			0.95				0.8	0.71
Richter et al. (2005)	51								0.84
Shah et al. (2006)	35			0.81					
Simons & Peterson (2000)	70	0.78	0.87				0.65		
Simons et al. (1999)	57	0.75		0.78					
Somech (2008)	149				0.86		0.84	0.83	
Somech et al. (2009)	77	0.75	0.8		0.82		0.92	0.85	0.92
Tekleab et al. (2009)	53	0.89	0.94	0.79					0.96
Tjosvold, Chen, & Yu (2003)	100				0.7	0.79	0.89		
Tjosvold et al. (2002)	70			0.83					
Tjosvold et al. (2006)	186	0.73	0.82		0.78		0.79	0.82	
Virgil-King (1999)	65	0.92	0.93		0.88	0.83			0.86
West et al. (2009)	101		0.92	0.92					0.72
Zhang et al. (2011)	108				0.9			0.91	

Note. N = number of teams reported in sample; TC = Task Conflict; RC = Relational Conflict; OPN = Openness Conflict Process Behaviors; COL = Collaboration; AVD = Avoidance; COM = Competition; PERF = Team Performance; AFF = Team Affective Outcomes.

(*Appendices continue*)

Appendix E

Summary of Studies Excluded From the Current Database

Article	No-CM	No-Crit	No-Data	ST-Meas	No-Team
Amason & Mooney (1999)		X			
Andrews & Tjosvold (1983)	X				
Atuahene-Gima & Murray (2004)				X	
Ayoko (2007)			X		
Ayoko et al. (2008)		X			
Barsade (2002)		X			
Bayazit & Mannix (2003)	X				
Beersma & De Dreu (2005)	X				
Behfar et al. (2008)	X				
Bell & Song (2005)					X
Bishop & Dow Scott (2000)	X				
Boies & Howell (2006)	X				
Buchholtz et al. (2005)	X				
Cannon & Edmonson (2001)	X				
M. H. Chen (2006)	X				
M. H. Chen & Chang (2005)	X				
Y. Chen et al. (2005)					X
Chou & Yeh (2007)				X	
Cooper et al. (2008)	X				
Correia (2008)			X		
Darr & Johns (2004)	X				
Dayan et al. (2009)	X				
DeChurch et al. (2007)					X
De Dreu (2002)	X				
De Dreu (2006)	X				
De Dreu & West (2001)	X				
Devine et al. (1999)	X				
Duffy et al. (2000)	X				
Ensley et al. (2007)	X				
Ensley & Pearce (2001)	X				
Erez et al. (2002)		X			
Ehrhart et al. (2006)	X				
Giebels & Janssen (2005)					X
Greer et al. (2008)	X				
Guerra et al. (2005)	X				
Hinds & Mortensen (2005)	X				
Hobman & Bordia (2006)	X				
Hobman et al. (2003)	X	X			
Hobman et al. (2002)	X				
Homan et al. (2007)	X				
Hsu & Chou (2008)	X				
Janssen et al. (1999)				X	
Jehn & Bezrukova (2004)		X			
Jehn & Chatman (2000)	X				
Jehn et al. (1999)	X				
Jex & Thomas (2003)	X				
Jong et al. (2008)	X				
Jordan et al. (2006)	X				
Karn & Cowling (2008)	X				
Kotlyar & Karakowsky (2006)	X				
Kurtzberg & Mueller (2005)	X				
Langfred (2007)	X				
Lankau et al. (2007)	X				
Lau & Murnighan (2005)	X				
Li & Hambrick (2005)		X			
Liang et al. (2007)	X				
Lira et al. (2007)	X				
Lira et al. (2008)	X				
Maruping & Agarwal (2004)			X		
Matsuo (2006)	X				
Medina et al. (2005)	X				
Menon et al. (1996)	X				
Mohammed & Angell (2004)	X				

(*Appendices continue*)

Appendix E (*continued*)

Article	No-CM	No-Crit	No-Data	ST-Meas	No-Team
Mortensen & Hinds (2001)	X				
Moye & Langfred (2004)	X				
Ng & Van Dyne (2005)		X			
Nibler & Harris (2003)			X		
Ohbuchi & Suzuki (2003)					X
Olson et al. (2007)	X				
Otmar et al. (2008)		X			
Parayitam & Dooley (2007)	X				
Park & Park (2008)		X			
Passos & Caetano (2005)	X				
Pearsall et al. (2008)	X				
Pearson et al. (2002)	X				
Pelled et al. (1999)	X				
Pelled et al. (2001)	X				
Peterson & Behfar (2003)	X				
Poitras & Le Tareau (2008)	X				
Polzer et al. (2006)	X				
Polzer et al. (2002)	X				
Quigley et al. (2007)		X			
Ramarajan et al. (2004)					X
Randel (2002)	X				
Randel & Jaussi (2008)	X				
Rau (2005)	X				
Rau (2006)	X				
Raver & Gelfand (2005)	X				
Richter et al. (2006)	X				
Rispens et al. (2007)	X				
Rutkowski et al. (2007)	X				
Saavedra et al. (1993)	X				
Sawyer (2001)		X			
Seltzer & Kilmann (1977)	X				
Song et al. (2006)				X	
Staples & Zhao (2006)	X				
Swann et al. (2000)	X				
Temkin-Greener et al. (2004)					X
Tjosvold (1990)					X
Tjosvold (1988)					X
Tjosvold et al. (2003)				X	
Tjosvold et al. (2003)					X
Tjosvold et al. (2004)					X
Tjosvold et al. (2001)					X
Tjosvold et al. (2005)				X	
Tjosvold & Sun (2002)					X
Tjosvold & Sun (2003)					X
Tjosvold et al. (2004)				X	
Tjosvold et al. (1986)	X				
Vodosek (2007)	X				
Wang et al. (2007)	X				
Watson et al. (2008)		X			
Wilkens & London (2006)	X				
Wong et al. (2005)	X				
Wright & Bennett (2008)	X				
Wright & Drewery (2006)	X				
Xin & Pelled (2003)	X				
Yeh & Chou (2005)		X			
Zellmer-Bruhn et al. (2008)	X				
Zarankin (2008)			X		

Note. No-CM = no relevant conflict process behaviors were reported; No-Crit = behaviors included in the study did not match the conceptual definitions of conflict process (additional explanation provided in the comments); No-Data = no relevant effect sizes reported; ST-Meas = study reports effect sizes that are based on conflict process responses of only a small subset of each team; No-Team = effect sizes were not computed at the team level.