THE INFLUENCE OF PROPORTIONAL AND PERCEPTUAL CONFLICT COMPOSITION ON TEAM PERFORMANCE

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Past conflict research and theory has provided insight into the types of conflict and styles of conflict resolution in organizations and groups. A second generation of conflict research is now needed that recognizes that the type of conflict present in a group relative to the other types present (proportional conflict composition) and the amount of conflict perceived relative to the amount perceived by other members (perceptual conflict composition) may be critical to group functioning. Therefore, we propose two types of conflict composition in teams and investigate the links between proportional and perceptual conflict composition conflict, and team effectiveness (i.e., individual and team performance, commitment, cohesiveness, and member satisfaction) in two organizational samples. We find group conflict compositions consisting of high levels of task-related conflict compared to relationship and process conflict (proportional task conflict) are high performing, satisfied teams. In addition, when team members disagree about amounts of conflict present (high perceptual conflict), we find evidence of negative group outcomes. Implications for managers and group members are discussed.

For individuals, groups, organizations, and nations to function effectively they must manage conflict effectively. A recent review of academic research on conflict reveals, however, that the most common conceptualization of conflict may be incomplete and hinder the usefulness of the research (Jehn, in press). Boulding's (1963) definition of conflict is that it is an awareness by employees involved in the conflict that discrepancies,

or incompatible wishes or desires, exist among them. Recent research has focused on the absolute level or total amount of conflict present in groups or organizations and how such conflict influences group performance and satisfaction (e.g., Jehn, 1994, 1995; Amason, 1996).We propose that understanding the absolute level of conflict fails to fully depict the nature and effects of conflict within groups.

Conceptualizations of Team Conflict

Three distinct types of conflict have been identified, and researchers have typically assessed absolute levels of each conflict type to predict various group outcomes (Amason, 1996; Jehn, 1995; 1997; Jehn, Northcraft, & Neale, 1999; Pelled, 1996a). Relationship conflict involves disagreements based on personal and social issues that are not related to work. Task conflict describes disagreement about the work that is being done in the group. Process conflict centers on task strategy and delegation of duties and resources. This framework has usefully distinguished among different types of conflict and identified their differential effects on team outcomes. But, researchers rarely consider the combined effects of these types of conflict, particularly the type of conflict relative to the other types and the overall profile of conflict types in a group. While some work has suggested that conflict types cannot be examined in isolation (Amason, 1994; Amason & Sapienza, 1997; Eisenhardt, Kahwajy, & Bourgeois, 1997), this idea has not been fully developed or used in empirical research.

Further, group members may have unique perceptions about the amount or type of conflict that exists in their group. Past research has identified the types of conflict that are likely to arise in group settings, but has not examined how the conflict types interact with total amounts of conflict and members' unique experiences.

In this paper we define *proportional conflict composition and perceptual conflict composition* and develop hypotheses linking them to team effectiveness. Team effectiveness can be defined in terms of three aspects: (1) the extent to which the productive output of the group meets performance standards (e.g., individual and group-level performance), (2) the extent to which the team develops processes that enhance the capability of members to work together again (e.g., commitment, cohesiveness), and (3) the extent to which group members' experience in the team is satisfying (e.g., member satisfaction) (e.g., Hackman, 1987). We examine the effects of proportional and perceptual conflict composition on team effectiveness across two different work team contexts (management teams and production units).

Proportional Conflict Composition

Comparing the levels of the three different types of conflict within a group is a crucial aspect of a team's conflict composition. Proportional conflict composition describes the relationship among the three types of conflict (task, relationship, and process), as the level of each type of conflict proportional to the other two and to the overall level of conflict within the group, rather than as an absolute level or amount of any one type. A simple example demonstrates how members may experience the work group differently depending on the amount of each type of conflict that exists in proportion to other types. A group of members who experience a moderate amount of

constructive task conflict and no other conflict (no relationship or process conflict), for example, will have a different experience than will members of another group with the same amount of task conflict but also a high proportional level of relationship conflict. In the former group, members should experience less stress, less distraction, and less animosity, all things associated with relationship conflict (Amason, 1996; Jehn, 1994, 1995), than should members of the latter group containing moderate levels of both task and relationship conflict.

To continue with the above example, when both task and relationship conflict exist, members will be less able to focus on task debates, more distracted by interpersonal conflict, and less certain about whether to interpret criticism as either constructive or disparaging (Argyris, 1962; Kelley, 1979). Similarly, members of a group experiencing moderate levels of relationship conflict but no task or process conflict will engage in bickering about non-task issues and attacks about one another's personalities or individual habits (Jehn, 1997). We, therefore, propose that it is important to consider the overall composition of the three types of conflict in terms of the level of each compared to the other two and to the overall level of conflict within the group.

This view of interrelated dimensions of a construct (task, relationship, and process conflict), or a conflict composition, is similar to other multidimensional constructs in the organizational behavior literature. For example, demography researchers have argued that examining the mere presence of demographic characteristics among members of a group and predicting team outcomes based on these is inadequate (e.g., Pfeffer, 1983). Instead, relational demography assesses the distributional differences of members' demographic profiles within various groups. This is important because knowing the comparative similarity or dissimilarity in given demographic attributes of members of a group may provide insight into the members' attitudes and behaviors and the process through which demography affects group and job outcomes (Tsui & O'Reilly, 1989, p. 403). Further, failing to examine profiles of demographic differences would lead to various errors of omission. For example, if researchers examined members' race but ignored their sex, they would erroneously assume that, for example, Asian women and Asian men would behave similarly in group contexts. For this reason, theorists and researchers have examined the diversity composition of members and teams rather than one demographic characteristic alone (Chatman, Polzer, Barsade, & Neale, 1998; Jehn, Northcraft, & Neale, 1999; Lau & Murnighan, 1998; Pelled, 1996b; Thatcher & Jehn, 1998).

Idiographic approaches to assessing personality and organizational culture are based on similar assumptions. Indeed, personality research has been widely criticized for failing to address how people may differ from one another in terms of the way that their traits, values, abilities and motives are related to each other (e.g., Chatman, 1989)—or the relative profile of the traits. One solution has been to use methods that simultaneously allow for an internal comparison among traits, while still enabling a standardized comparison across people, or a semi-idiographic approach (e.g., Chatman, Caldwell, & O'Reilly, 1999). Similarly, researchers have argued that organizational culture is multidimensional and that depicting culture accurately requires assessing the uniqueness of patterns of values across people and organizations, or value composition, rather than individual values that are not explicitly related to one another (Chatman, 1991; Chatman

& Jehn, 1994; O'Reilly, Chatman, & Caldwell, 1991). We believe that conflict, as well, must be examined by taking into account the profile of conflict types present (the team conflict composition), rather than examining one type of conflict without considering the effects of the other types present. Thus, in contrast to previous models of conflict (Amason, 1996; Jehn, 1995, 1997), our model does not assume that the three types of conflict are independent of one another. In fact, we propose that they are interrelated in such a way that the presence of one type of conflict changes the effect that a different type of conflict will have on group processes and outcomes. For instance, if we take into account only task conflict without examining the relationship conflict present as well, we may assume that a group with high levels of task and relationship conflict will perform as well as a group with high levels of task conflict and low levels of relationship conflict.

Proportional Conflict Composition and Group Effectiveness

Past research finds that disagreement about a task is the most beneficial type of conflict (e.g., Amason, 1996; Jehn, 1995, 1997; Jehn & Mannix, in press). Task conflict often includes constructive debate that leads to better decision-making and work outcomes. Disagreements about the task that focus solely on content-related issues, can improve performance. For example, avoiding candid discussions about conflict surrounding a task can lead to conditions of "groupthink" in which a lack of critical questioning hinders a group's ability to come up with interesting, creative, and effective solutions to problems (e.g., Pratkanis & Turner, 1999). Norms that support constructive and open debates regarding task issues increase the likelihood that group members will offer and evaluate various solutions, thus reaching optimal decisions and outcomes (e.g., Gruenfeld, Mannix, Williams, & Neale, 1996). However, if relationship conflict is present, it will detract from the positive effects of task conflict. Similarly, the distractions caused by fights about resources, fairness, and delegation of duties (process conflict) will also lessen the effects of the positive attributes of task conflict. Therefore, we propose that groups with higher levels of task conflict proportional to relationship or process conflict will be more effective than groups with no task conflict, or more relationship or process conflict than task conflict.

Past research suggests that moderate levels of task conflict alone, with no relationship or process conflict present, will lead to the highest performance (e.g., Jehn & Mannix, in press). Therefore we hypothesize that the proportion of task conflict to the other types (proportional conflict composition) will predict group effectiveness. Specifically, higher task conflict will be more effective when it is combined with lower levels of relationship and process conflict. Thus, groups with task conflict and proportionally high amounts of relationship or process conflict may not experience the same benefit from the task conflict as groups experiencing high task conflict and low levels of relationship and process conflict (a high proportional task conflict composition). Therefore, we propose:

> *Hypothesis 1*: The existence within a group of a proportional conflict composition dominated by task conflict will lead to increased group effectiveness; that is, a higher relative proportion of task conflict compared to relationship and process conflict will be positively

related to group effectiveness (member commitment, cohesiveness, satisfaction, individual performance, and group performance).

In contrast to task conflict, relationship and process conflict constrain creative problem solving and members' motivation to complete the task (e.g., Jehn, 1995, 1997). Thus, we predict that when these types of conflict exist in a high proportion to task conflict, group effectiveness will be impaired. Relationship conflict, typified by disagreements and struggles among group members about personal issues that are not task-related, increases the amount of time members spend avoiding or resolving interpersonal problems (Evan, 1965; Baron, 1991; Pelled, 1996b). Such process losses expend energy and effort that could, alternatively, be directed toward task completion. Negative emotional reactions to relationship conflict also effect members' satisfaction (Walton & Dutton, 1969; Jehn, 1995), which decreases their willingness to engage in the group and constructive task conflict. Therefore we hypothesize that:

> *Hypothesis 2*: A proportional conflict composition with a high relative proportion of relationship conflict compared to task and process conflict will be negatively related to group effectiveness (member commitment, cohesiveness, satisfaction, individual performance, and group performance).

We propose competing hypotheses regarding the amounts of process conflict proportional to task and relationship conflict. To begin with, process conflict includes disagreements about task allocation that may encourage member discussion about skills. The debate about task delegation may result in the best fit of skills and duties within the team (Jehn, 1997) that can enhance performance (Hackman & Oldham, 1975). In addition, team planning has been shown to increase goal accomplishment, to decrease uncertainty, and to increase overall group performance (Weingart, 1992). We first propose that the disagreements about the task completion process will involve planning discussions, member skill–duty fit, and uncertainty reduction that will positively enhance team performance and morale.

> *Hypothesis 3a*: A proportional conflict composition with a high relative proportion of process conflict compared to task and relationship conflict will be positively related to group effectiveness (member commitment, cohesiveness, satisfaction, individual performance, and group performance).

However, current research has shown that process conflict negatively affects performance and morale (Jehn & Mannix, in press; Jehn, Northcraft, & Neale, 1999; Kabanoff, 1991). For example, arguments among members about resource allocation or duties and responsibilities may detract from effort that would be more usefully spent engaging in debates about the task itself (Kramer, 1991). In addition, disagreements about who is capable of doing what and how resources should be allocated often cause extended delays and heated discussions about members' contributions and worth that negatively influence morale (Jehn, 1997). Therefore, we predict in contrast to Hypothesis 3a that:

Hypothesis 3b: A proportional conflict composition with a high relative pro-
portion of process conflict compared to task and relationship
conflict will be negatively related to group effectiveness (member
commitment, cohesiveness, satisfaction, individual performance,
and group performance).

We also propose that a team conflict composition with low levels of all types of
conflict has an important influence on group effectiveness. Because moderate levels of
task conflict are required for groups to be effective, low levels of all types of conflict is
presumed to lead to low or moderate performance, but not high levels of performance
(Amason, 1996; Cosier & Rose, 1977; Jehn, 1995). Research on strategic decision-
making reinforces this claim—a paucity of constructive debate about the decision or task
leads to .suboptimal strategic planning, low financial performance, and decreased
organizational growth (Bourgeois, 1985; Schweiger, Sandberg, & Rechner, 1989;
Eisenhardt & Schoonhoven, 1990). While low levels of relationship conflict and process
conflict will be advantageous (Jehn, 1997), the lack of constructive debate will constrain
decision-making quality and team performance.

Low levels of all types of conflict, however, make for a group atmosphere that
individuals often prefer, thus increasing satisfaction and morale (Jehn & Mannix, in
press). Despite the beneficial aspects of task conflict for performance, members still are
less satisfied in groups characterized by moderate or high levels of any type of conflict
(Jehn, 1995). Baron (1990) has shown that critical evaluations often cause negative affect
regardless of the actual performance outcome. Therefore we propose that while low
levels of all types of conflict may hinder performance, members in these groups will be
more satisfied, cohesive, and committed to the group than if conflict of any type were
present.

Hypothesis 4: The existence within a group of low proportional conflict
composition (that is, low levels of all types of conflict) will lead to
decreased individual and group performance and *increased*
commitment, cohesiveness, and member satisfaction.

Perceptual Conflict Composition

Past research on group conflict assumes that members within a work group
perceive conflict identically (Amason, 1996; Jehn, 1994, 1995). But members may have
vastly different perceptions of team interaction (e.g., Barrick, Stewart, Neubert, & Mount,
1998). One potentially useful way of conceptualizing the amount of conflict that one
member perceives and how that differs from the amount other members perceive is
perceptual conflict composition. Again, this is comparable to the construct of relational
demography in diversity research. Relational demography is the degree to which each
individual in a group is different from other members of the group on demographic
characteristics (Tsui, Egan, & O'Reilly, 1992). Perceptual conflict composition
examines the degree to which each individual in a group perceives levels of conflict
differently compared to other member perceptions in the group. Perceptual conflict
composition compares each member's perceptions of conflict to all other members'
perceptions in the group. This construct represents the variance in perceptions of conflict

noted in recent conflict research (Simons & Peterson, 2000). It can also be viewed as meta-conflict construct (conflict about conflict) in that low levels of agreement among members about perceptual conflict composition will be associated with conflict over how much conflict exists.

An illustration may clarify what we mean by perceptual conflict composition. Imagine that two team members in an eight-person team perceive arguments in the group pertaining to the task while the other six members do not detect such conflict. According to our conceptualization, the first two members experience more task conflict in relation to the other members. These members would receive a larger "perceptual conflict composition score" than those members who agreed that there was no task conflict. Based on conceptualizations and empirical research of individual-to-group level aggregation (Barrick, Stewart, Neubert, & Mount, 1998; Kenny & LaVoie, 1985), within-group agreement (Kozlowski & Hattrup, 1992), and conceptual disagreement (Cheung, 1999), we propose that perceptual conflict composition will provide a more fine-grained accounting of individual member s' satisfaction and performance than will an assessment of conflict aggregated to the group level (which, again, assumes all members view conflict similarly).

Research in social cognition suggests that members may view conflict as more vivid depending on the extent to which they are personally involved in the particular issue stimulating the conflict (e.g., Bazerman, 1998; Tversky & Kahneman, 1981). This salience argument is comparable to the logic of tokenism in relational demography terms. Token members in a group are more identifiable and perceive that the characteristics on which they differ from the group are more salient (Chatman et al., 1998; Thomas & Ely, 1996). Similarly, when one or two members are identified as directly involved in an interpersonal conflict, they will experience the conflict more vividly than other members. Therefore, members may experience the same conflict situation differently based on their position/role in the conflict and their felt experience.

Disagreements in perceptions about conflict level will negatively influence team effectiveness as well as individual member attitudes. Drawing on procedural justice literature, employees who experience different levels of conflict will be less satisfied, that is, when they experience conflict but those around them do not the discomfort and inequity will cause dissatisfaction with the group experience (Lind & Tyler, 1988). Members who believe they are experiencing something that is not validated by other group members will question their own sense of reality, and this may decrease their motivation, effort, satisfaction and performance (Swann, 1996).

These differences in views of conflict may cause member dissatisfaction and misunderstandings, and, ultimately, reduce group effectiveness. When group members do not agree on the magnitude of each type of conflict or what the disagreement is about, we propose that this *meta*-conflict (conflict about conflict) will negatively influence group process and outcomes. We, therefore, suggest that variance in the amount of conflict members experience in the group (perceptual conflict composition) will be negatively associated with team effectiveness, or, more specifically,

> *Hypothesis 5*:   High levels of perceptual conflict composition will be negatively
>   associated with group effectiveness (member commitment, cohe-

siveness, satisfaction, individual performance, and group performance).

Method

We examined how members' perceptions of how much and what type of conflict existed in their workgroup influenced effectiveness in two samples: production units and management teams in a large household goods moving company.

Samples and Research Design

The sample consisted of 545 employees in one of the top three firms in the household goods moving industry. Respondents' age averaged 37.8, and 32% of the sample were male. Respondents worked in the firm's international headquarters which houses all functional areas including the marketing, sales, accounting, information systems, domestic, and international operations divisions (see Jehn, 1995 for more details about this sample).

The firm formally designated work units as production units or management teams. We, therefore, examined management teams and production units separately based on past research showing that the effectiveness of conflict is often influenced by the type of task the team performs (Gladstein, 1984; Jehn, 1995). The production units mapped directly onto the supervisors' and employees' view of who their fellow group members were, as did the management teams. Work units completed all functions within the organization, from sorting and delivering mail to developing corporate strategy, including, for example, sales units that engaged client corporations by handling the physical moving of their employees to other domestic and international locations; data entry and coding units who processed this information; and, groups who oversaw the governmental regulations regarding state and international cross-border transit.

Measures

As a starting point in constructing proportional conflict composition and perceptual conflict composition, we developed baseline levels of relationship and task conflict following past research using the "Intragroup Conflict Scale" developed by Jehn (1995). These survey items asked participants to report the amount and type of relationship and task conflict they believed existed in their work unit or team. The 12 items focusing on the presence of conflict were rated on a 5-point Likert scale anchored by $1 =$ "None" and $5 =$ "A lot." Four items measured relationship conflict ("How much friction is there among members in your work unit?" "How much are personality conflicts evident in your work unit?" "How much tension is there among members of your work unit?" "How much emotional conflict is there among members in your work unit?"). Examples of the five items measuring task conflict included: "How frequently are there conflicts about ideas in your work unit?" and, "How often do people in your work unit disagree about opinions?" The coefficient αs for relationship and task conflict were .90 and .88, respectively.

Three items measuring process conflict were taken from Shah and Jehn (1993): "How often do members of your work unit disagree about who should do what?" "How

frequently do members of your work unit disagree about the way to complete a group task?" and, "How much conflict about delegation of tasks exists within your work unit?" The coefficient α for process conflict was .78. Given the intercorrelation of the three conflict types, we tested the discriminant validity of the constructed variables. Past research has examined the discriminant validities of the conflict variables using Howell's (1987) approach (Jehn, Northcraft, & Neale, 1999). This test of discriminant validity computes the upper limit for the confidence interval of the observed correlations and tests whether this limit is smaller than the maximum possible correlation between the scales as computed from their reliability coefficients. All of the conflict construct pairs met the discriminant validity test at $p < .002$. In addition, we conducted a factor analysis with oblique rotation and found results similar to Shah and Jehn (1993), Amason (1996) and others (Amason & Sapienza, 1997; Janssen, Van de Vliert, & Veenstra, 1998) who used the Intragroup Conflict Scale and found that relationship, task, and process conflict items load separately (see Simons & Peterson, 2000, for a review of these studies and the intercorrelations between the types of conflict).

  Proportional Conflict Composition. We constructed the measurement of proportional conflict as the ratio of the level of conflict type (task, relationship, or process) to the general level of conflict within the group. If group members reported a high level of task conflict (level = 5), little to no relationship conflict (level = 1), and low levels of process conflict (level = 2), the proportional conflict score would be: task conflict / (task + relationship + process); or proportional task conflict = 5 / (5 + 1 + 2) = .633. Proportional relationship conflict in this group equals 1 / (5 + 1 + 2) or .133 and proportional process conflict in this group equals 2 / (5 + 1 + 2) or .25. A second group has the same level of task conflict (5), but also has high levels of relationship (5) and process conflict (5). In this second group, proportional task conflict (as well as proportional relationship and process conflict) is .33 compared to .633 in the first group, despite the same traditional level of task conflict.

  Perceptual Conflict Composition. We measured perceptual conflict composition using the relational demography scoring method for continuous variables. These scores represent the difference between a subject and all other subjects in his or her group on perceptions of the types of conflict. Following Tsui and O'Reilly (1989), perceptual conflict composition was measured using the following equation: $[1/n \sum (x_i - x_j)^2]^{1/2}$, where: x_i = the focal individual's score on the dimension (e.g., task conflict); x_j = each other member's score on that dimension; and n = the number of subjects in the group. We calculated distinct scores for perceptual task, relationship, and process conflict. Each score reflected the difference on a specific type of conflict between an individual and all other individuals in the same group. All of the perceptual conflict composition scores were created such that the larger the score, the larger the difference between that individual and other members of the group. The perceptual conflict composition task conflict scores in this sample ranged from 0 to 1.50. The perceptual conflict composition relationship scores and process scores ranged from 0 to 1.75 and 0 to 1.61, respectively.

  We took various steps to ensure the reliability and utility of our perceptual conflict composition measures by addressing the typical concerns raised about using difference scores. In particular, we reduced potential unreliability and spurious associations by

examining differences between component scores derived from two different sources, focal individuals and remaining group members, rather than scores derived from the same subject (Johns, 1981; Cheung, 1999). We also found that the correlations among the component scores were slightly positive but not significant (average $r = .10$) suggesting that ours is a conservative test since positive correlations among components lead to underestimates of the reliability of a difference score. Finally, we calculated reliability scores for each component independently (self and group), and found them to be high (average αs = .72 and .79, respectively; Johns, 1981). Further, following others (e.g., Wagner, Pfeffer, & O'Reilly, 1984; Burt, 1982; Blau & Alba, 1982), our purpose was not to claim the superiority of this method to identifying variance explained by each component, rather we were interested in examining the distribution of perceptions of conflict to augment existing findings that examine each type of conflict independently. In this sense, our analytical approach was dictated by our theoretical perspective, which required that we use a combination of the two components (self and group perception) rather than two single component measures.

Group Effectiveness

In the production units of the moving firm, performance was measured by departmental records provided and standardized by the firm's quality development analysts. Performance among management teams was measured with supervisors' (most often a vice president) ratings of performance, consisting of a 7-point Likert scale from 1 = "Not at all effective" to 7 = "Very effective."

Commitment, cohesiveness, and satisfaction were measured using 7-point, Likert-type scales ranging from 1 = "Strongly disagree" to 7 = "Strongly agree." Commitment was measured with two items: "I am committed to this work group," and "I plan to continue working in this group." The average overall Cronbach α was .78. Cohesiveness was measured with four items such as "I generally like the other members of my work unit," and "There is group spirit in our work unit." The average Cronbach α across samples was .80. Satisfaction with group membership was measured with a 5-point scale and the Kunin (1955) faces scale which asked group members to circle the face which indicates how happy the member was working in their group. The Cronbach α was, on average, .91 in the two samples.

Results

Table 1 shows the correlations among the proportional conflict composition variables and the perceptual conflict composition variables in each sample. There were consistent, negative relationships among proportional relationship conflict, proportional process conflict, and proportional task conflict across samples. There were no consistent patterns among the correlations of perceptual conflict and proportional conflict. There were consistent, positive relationships among perceptual relationship conflict, perceptual process conflict, and perceptual task conflict across samples.

Table 1
Correlations Among Conflict Types

Conflict Type	Relationship Conflict	Proportional Conflict Task Conflict	Process Conflict	Relationship Conflict	Perceptual Conflict Task Conflict	Process Conflict
A. Production Units (n = 326)						
Proportional						
Relationship conflict	—					
Task conflict	-.68**	—				
Process conflict	-.38**	-.42**	—			
Perceptual						
Relationship conflict	.09*	.04	-.16**	—		
Task conflict	-.09	.19**	-.13**	.56**	—	
Process conflict	.01	-.07	.08	.61**	.44**	—
Mean	1.03	.99	1.14	1.23	1.36	1.12
SD	.87	.33	.90	.47	.36	.60
B. Management Teams (n = 230)						
Proportional						
Relationship conflict	—					
Task conflict	-.66**	—				
Process conflict	-.27**	-.55**	—			
Perceptual conflict						
Relationship conflict	.18**	-.12*	-.04	—		
Task conflict	-.02	.08	-.08	.39**	—	
Process conflict	.05	-.13*	.11*	.65**	.58**	—
Mean	1.21	1.24	.98	.94	1.14	.93
SD	.76	.78	.56	.47	.38	.44

*p < .05. **p < .01. (two–tailed)

Proportional Conflict Composition and Group Effectiveness

Table 2 provides the correlations for proportional conflict and team outcomes. We found support for Hypothesis 1, that the existence within a group of proportional conflict composition dominated by task conflict led to increased cohesiveness, group performance, and satisfaction among production units. In management teams, we found similar results supporting Hypothesis 1; the existence within a group of high proportional task conflict increased commitment, cohesiveness, individual performance, group performance, and satisfaction.

Table 2
Correlations Between Proportional Conflict Composition and Group Effectiveness

	Relationship Conflict	Proportional Task Conflict	Process Conflict
A. Production Units ($n = 326$)			
Commitment	−.14**	−.09*	−.18***
Cohesiveness	−.14**	.17**	−.20***
Individual performance	−.07	.01	−.02
Group performance	−.09*	.12*	−.13**
Satisfaction	−.12**	.15**	−.16***
B. Management Teams ($n = 230$)			
Commitment	−.31***	.30***	−.04
Cohesiveness	−.16**	.14*	.00
Individual performance	−.07	.14*	−.17*
Group performance	−.13	.22**	−.14
Satisfaction	−.29**	.20*	.06

$*p < .05.$ $**p < .01.$ $***p < .001.$ (two–tailed)

In addition, Hypotheses 2 and 3b were also supported in both samples (with the exception of proportional process conflict in management teams): high proportions of relationship conflict and process conflict were negatively related to team member commitment, cohesiveness, group performance, and member satisfaction. Hypothesis 3a, that proportional process conflict would be positively related to group effectiveness, was not supported.

Table 3 provides the correlations between perceptual conflict and team outcomes to examine Hypothesis 4. We found that individuals in production units who had a different view of the level of relationship and process conflict were less likely to be committed and satisfied. They were also less likely to feel that their team was cohesive, less likely to feel that they performed well individually, and were less likely to be in groups that performed well. Thus Hypothesis 4, that groups with high perceptual conflict compositions are less

effective, is partially supported. In addition, perceptual task conflict was significantly, positively correlated with performance in management teams.

Table 3
Correlations Between Perceptual Conflict Composition
and Group Effectiveness

	Perceptual Relationship Conflict	Perceptual Task Conflict	Perceptual Process Conflict
A. Production Units ($n = 326$)			
Commitment	−.18**	.06	−.20***
Cohesiveness	−.12*	−.02	−.18***
Individual performance	−.10*	−.03	−.09
Group performance	−.10*	−.02	−.15**
Satisfaction	−.13**	−.03	−.19***
B. Management Teams ($n = 230$)			
Commitment	−.02	.01	−.01
Cohesiveness	−.10	.04	−.12*
Individual performance	−.10	.03	−.03
Group performance	−.05	.18*	−.06
Satisfaction	−.07	.05	−.08

$*p < .05.$ $**p < 01.$ $***p < .001.$ (two–tailed)

Discussion

Past conflict research and theory has focused on types of conflict and styles of conflict resolution, neglecting a more complete conceptualization of the interplay and influence of various types and amounts of conflict on group effectiveness. In this research, we present two new conflict constructs based on the proportion of conflict types present compared to the overall amount and other types of conflict (proportional conflict composition) and the extent to which workgroup members perceive similar or different amounts of conflict (perceptual conflict composition). Past research based on traditional baseline conflict constructs are misleading because it has assumed that conflict types are independent from one another. Our conceptualization and empirical results suggest that conflict types are interrelated, leading researchers who examine one type of conflict independent of other types to predict group outcomes to draw incorrect inferences. For instance, we found that task conflict was more beneficial when low levels of relationship and process conflict also existed, compared to when all three types of conflict were high.

In management teams, proportional relationship conflict (higher levels of relationship conflict compared to overall levels of conflict) and proportional process conflict were negatively related to commitment, cohesiveness, satisfaction, and individual performance. Proportional task conflict (higher levels of task conflict compared to overall conflict) was positively related to performance and member attitudes, as predicted. In

production units, the results were similar, proportional relationship conflict was *negatively* related to group performance and member attitudes while proportional task conflict was *positively* related to member attitudes and group performance. This is inconsistent with Jehn's (1995) findings and explanation that all types of conflict are viewed negatively in routine and nonroutine task settings. We found that members appreciated task conflict, if *not* associated with relationship or process conflict. Our current findings may also be more valid since our assessment of conflict constructs and group effectiveness preclude the existence of common source bias (as in Jehn, 1995 and other conflict research; Amason, 1996; Jehn, Northcraft, & Neale, 1999) and utilize a more useful conceptualization of a system of conflict types and their interaction. We note that proportional task conflict increased individual performance in management teams but not production units. We suggest that this could be due to the different metrics used to measure individual performance in the different samples.

We also found that team conflict composition characterized by low levels of all three types of conflict within a production unit or management team increases member commitment, cohesiveness and satisfaction, but that these profiles are not positively correlated with performance. This implies that a *complete absence* of all types of conflict is not beneficial to group and individual performance. It also provides support for theories of innovation and change, groupthink, and escalation of commitment suggesting that disagreement and challenging of assumptions is critical to move thought forward (Flynn & Chatman, in press; Janis, 1985; Schweiger, Sandberg, & Rechner, 1989).

Perceptual conflict composition conflict, or the variation among team members in their perceptions of the type and level of conflict, also proved to be important in predicting team effectiveness in production units. We found that the more members disagreed about the levels of relationship and process conflict that existed, the lower their performance and more negative their attitudes. However, this was not true in the management teams. It may be that different conflict resolution techniques or norms about disagreement existed among managers such that differences in perceptions about levels of relationship and process conflict were not as salient or distracting in management teams. We can speculate that this is due to the higher tenure of the management teams compared to the production units. This explanation is particularly likely since there was no less disagreement in general in management teams than production units (see Table 1 means and standard deviations). This suggests that managing conflict is closely related to the more general process of managing team norms (e.g., Flynn & Chatman, in press). Future research should examine differences between types of teams more systematically (e.g., varying team task and type) to specifically identify the reasons for this difference.

As a result of our findings, our recommendations for conflict management vary from those provided in past research. For instance, our framework views conflict as a system, or profile, of conflict types. As such, one cannot simply attempt to resolve negative types of conflict without influencing the overall conflict composition. This may require addressing the relative levels of conflict rather than the absolute level of only one type of conflict. Thus, rather than attempting to reduce the amount of process conflict, for example, managers may, instead, increase task conflict.

In addition, we address the differences individuals experience when involved in a conflict situation (perceptual conflict composition) and suggest that conflict management

needs to address relationships between member expectations about conflict and individual and team effectiveness. Ironically, the implication from this study is that certain levels and types of conflict might be effective in a team as long as members agree about how much conflict actually exists, and as long as the conflict is somewhat balanced, or equivalently spread among all members of the team. It also suggests that this approach to conflict research should include a consideration of the demographic composition of the work team to identify the causes of higher levels of perceptual conflict composition conflict. It may be the case that people who are more demographically different from other members are more likely to perceive more conflict in teams (Chatman et al., 1998). People who are more demographically different from their teammates may also, in fact, be more involved in such conflict because of the historical differences in how people from different demographic categories are treated and the resulting differences in perceptions, ideas, and expectations (Jehn, Northcraft, & Neale, 1999; Pfeffer, 1983).

Future research should continue to examine these two conflict composition constructs using additional analytic approaches. Observational techniques might be useful for gaining greater insight into cases in which conflict is unbalanced, that is, when it is experienced only by a few members of the group. Experimental techniques might be useful for varying the specific proportions of certain types of conflict compared to others. Such research will contribute greater insight into the role of conflict in work teams.

References

Amason, A. (1994). Distinguishing effects of functional and dysfunctional conflict on strategic decision making, and organizational performance. *International Journal of Conflict Management, 5,* 239–253.

Amason, A. (1996). Distinguishing the effects of functional and dysfunctional conflict on strategic decision making: Resolving a paradox for top management teams. *Academy of Management Journal, 39,* 123–148.

Amason, A., & Sapienza, H. (1997). The effects of top management team size and interaction norms on cognitive and affective conflict. *Journal of Management, 23* (4), 496–516.

Argyris, C. (1962). *Interpersonal competence and organizational effectiveness.* Homewood, IL: Dorsey Press.

Baron, R. (1990). Countering the effects of destructive criticism: The relative efficacy of four interventions. *Journal of Applied Psychology, 75,* 235–245.

Baron, R. (1991). Positive effects of conflict: A cognitive perspective. *Employees Responsibilities and Rights Journal, 4,* 25–36.

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.

Bazerman, M. H. (1998). *Judgment in managerial decision making.* New York: Wiley.

Blau, J. R., & Alba, R. D. (1982). Empowering nets of participation. *Administrative Science Quarterly, 27,* 363–379.

Boulding, K. (1963). *Conflict and defense.* New York: Harper and Row.

Bourgeois, L. J. (1985). Strategic goals, environmental uncertainty, and economic performance in volatile environments. *Academy of Management Journal, 28,* 548–373.

Burt, D. N. (1982). Simulated negotiations: An experiment. *International Journal of Purchasing and Materials Management, 18* (1), 6–8.

Chatman, J. (1989). Improving interactional organizational research. A model of person–organization fit. *Academy of Management Review, 14,* 333–349.

Chatman, J. (1991). Matching people and organizations: Selection and socialization in public accounting firms. *Administrative Science Quarterly, 36,* 459–484.

Chatman, J., Caldwell, D., & O'Reilly, C. (1999). Managerial personality and early career success: A semi-idiographic approach. *Journal of Research in Personality, 33,* 514–545.

Chatman, J., & Flynn, F. (in press). The Influence of demographic composition on the emergence and consequences of cooperative norms in groups. *Academy of Management Journal.*

Chatman, J., & Jehn, K. (1994). Assessing the relationship between industry characteristics and organizational culture: How different can you be? *Academy of Management Journal, 36,* 522–553.

Chatman, J., Polzer, J. T., Barsade, S. G., & Neale, M. A. (1998). Being different yet feeling similar: The influence of demographic composition and organizational culture on work processes and outcomes. *Administrative Science Quarterly, 143* (4), 749–780.

Cheung, G. W. (1999). Multifaceted conceptions of self–other ratings disagreement. *Personnel Psychology, 52,* 1–36.

Cosier, R. A., & Rose, G. L. (1977). Cognitive conflict and goal conflict effects on task performance. *Organizational Behavior and Human Decision Processes, 19,* 378–391.

Edwards, J. R. (1994). The study of congruence in organizational behavior research: Critique and a proposed alternative. *Organizational Behavior & Human Decision Processes, 58,* 51–100.

Eisenhardt, K., Kahwajy, J. L., & Bourgeois, L. J. (1997, July–August). How management teams can have a good fight. *Harvard Business Review,* pp. 77–82.

Eisenhardt, K., & Schoonhoven, C. (1990). Organizational growth: Linking founding team, strategy, environment, and growth among U.S. semiconductor ventures, 1978–1988, *Administrative Science Quarterly, 35,* 504–529.

Evan, W. (1965). Conflict and performance in R & D organizations. *Industrial Management Review, 7* (4), 37–46.

Flynn, F., & Chatman, J. (in press). Strong cultures and innovation: Oxymoron or opportunity? To appear in J. Chatman, T. Cummings, P. C. Earley, N. Holden, P. Sparrow, & W. Starbuck (Eds.), *International handbook of organizational culture and climate.* Sussex: Wiley.

Gladstein, D. (1984). A model of task group effectiveness. *Administrative Science Quarterly, 29,* 499–517.

Gruenfeld, D. H., Mannix, E. A., Williams, K. Y., & Neale, M. A. (1996). Group composition and decision-making: How member familiarity and information distribution affect process and performance. *Organizational Behavior and Human Decision Processes, 67,* 1–15.

Hackman, J. R. (1987). The design of work teams. In J. Lorsch (Ed.), *Handbook of organizational behavior* (pp. 315–342). Englewood Cliffs, NJ: Prentice-Hall.

Hackman, J. R., & Oldham, G. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology, 60,* 159–170.

Howell, R. D. (1987). Covariance structure modeling and measurement issues: A note on interrelations among a channel entity's power sources. *Journal of Marketing Research, 24,* 119–126.

Janis, I. L. (1985). International crisis management in the nuclear age. *Applied Social Psychology Annual, 6,* 63–86.

Janssen, O., Van De Vliert, E., & Veenstra, C. (1998). How task and person conflict shape the role of positive interdependence in management teams. *Journal of Management, 25,* 117–141.

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.

Jehn, K. (1995). A multimethod examination of the benefits and detriments of intragroup conflict. *Administrative Science Quarterly, 40,* 256–282.

Jehn, K. (1997). A qualitative analysis of conflict types and dimensions in organizational groups. *Administrative Science Quarterly, 42,* 530–557.

Jehn, K. A. (in press). Interpersonal conflict. In B. M. Staw & R. M. Sutton (Eds.), *Research in organizational behavior.* Greenwich, CT: JAI Press.

Jehn, K. A., & Mannix, E. (in press). The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance. *Academy of Management Journal.*

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.

Johns, G. (1981). Difference score measures of organizational behavior variables: A critique. *Organizational Behavior & Human Decision Processes, 27,* 443–463.

Kabanoff, B. (1991). Equity, equality, power, and conflict. *Academy of Management Review, 16,* 416–441.

Kelley, H. H. (1979). *Personal relationships.* Hillsdale, NJ: Erlbaum.

Kenny, D. A., & LaVoie, L. (1985). Separating individual and group effects, *Journal of Personality and Social Psychology, 48,* 339–348.

Kozlowski, S., & Hattrup, K. (1992). A Disagreement about within-group agreement: Disentangling issues of consistency versus consensus. *Journal of Applied Psychology, 77,* 161–167.

Kramer, R. (1991). Intergroup relations and organizational dilemmas: The role of categorization processes. In L. L. Cummings, & B. M. Staw (Eds.), *Research in organizational behavior* (Vol. 13, pp. 191–228). Greenwich, CT: JAI Press.

Kunin, T. (1955). The construction of a new type of attitude measure. *Personnel Psychology, 8,* 65–78.

Lau, D. C., & Murnighan, J. K. (1998). Demographic diversity and faultlines: The compositional dynamics of organizational groups. *Academy of Management Review, 23,* 325–340.

Lind, E. A., & Tyler, T. R. (1988). *The social psychology of procedural justice.* New York: Plenum.

O'Reilly, C., Chatman, J., & Caldwell, D. (1991). People, jobs, and organizational culture. *Academy of Management Journal, 34,* 487–516.

Pelled, L. H. (1996a). Relational demography and perceptions of group conflict and performance: A field investigation. *International Journal of Conflict Management, 7,* 230–246.

Pelled, L. H. (1996b). Demographic diversity, conflict, and work group outcomes: An intervening process theory. *Organization Science, 7,* 615–631.

Pfeffer, J. (1983). Organizational demography. *Research in Organizational Behavior, 5,* 299–357.

Pratkanis, A. R., & Turner, M. E. (1999). Groupthink and preparedness for the Loma Prieta earthquake: A social identity maintenance analysis of causes and preventions. In R. Wageman, E. Mannix, & M. Neale (Eds.), *Research on managing groups and teams: Groups in context* (Vol. 2, pp. 115–136). Stamford, CT: JAI Press.

Schweiger, D., Sandberg, W., & Rechner, P. (1989). Experiential effects of dialectical inquiry, devil's advocacy, and consensus approaches to strategic decision making. *Academy of Management Journal, 32,* 745–772.

Shah, P., & Jehn, K. A. (1993). Do friends perform better than acquaintances?: The interaction of friendship, conflict, and task. *Group Decision and Negotiation, 2,* 149–165.

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

Swann, W. (1996) *Self-traps.* NY: Freeman.

Thatcher, S., & Jehn, K. A. (1998). A model of group diversity profiles and categorization processes in bicultural organizational teams. In M. Neale, E. Mannix, & D. Gruenfeld (Eds.), *Research on managing groups and teams* (pp. 1–20). London: JAI Press.

Thomas, D. A., & Ely, R. J. (1996, September–October). Making differences matter: A new paradigm for managing diversity. *Harvard Business Review*, pp. 79–90.

Tsui, A. S., Egan, T. D., & O'Reilly, C. A. (1992). Being different: Relational demography and organizational attachment. *Administrative Science Quarterly, 37*, 549–579.

Tsui, A. S., & O'Reilly, C. A. (1989). Beyond simple demographic effects: The importance of relational demography in superior-subordinate dyads. *Academy of Management Journal, 32*, 402–423.

Tversky, A., & Kahneman, D. (1981, January). The framing of decisions and the psychology of choice. *Science*, pp. 453–458.

Wagner, W. G., Pfeffer, J., & O'Reilly, C. A. (1984). Organizational demography and turnover in top-management groups. *Administrative Science Quarterly, 29*, 74–92.

Walton, R. E., & Dutton, J. M. (1969). The management of interdepartment conflict: A model and review. *Administrative Science Quarterly, 14*, 73–84.

Weingart, L. R. (1992). Impact of group goals, task component complexity, effort, and planning on group performance. *Journal of Applied Psychology, 77*, 682–693.

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