6-2020

Across the great divides: Gender dynamics influence how intercultural conflict helps or hurts creative collaboration

Roy Y. J. CHUA
Singapore Management University, royyjchua@smu.edu.sg

Mengzi JIN
Singapore Management University, mengzi.jin.2014@pbs.smu.edu.sg

Across the great divides: Gender dynamics influence how intercultural conflict helps or hurts creative collaboration

Roy CHUA, Singapore Management University

Mengzi JIN, Peking University

Published in Academy of Management Journal, 2020, 63 (3), 903-934.
https://doi.org/10.5465/amj.2016.1319

Abstract

Collaborating across cultures can potentially increase creativity due to access to diverse ideas and perspectives, but this benefit is not always realized. One reason is that the conflict that arises in intercultural creative collaboration is a double-edged sword and how it is managed matters. In this research, we examine how the gender of collaborating dyads influences the link between intercultural conflict (task and relationship) and creative collaboration effectiveness. Through two studies (a laboratory study and a field survey), we found that intercultural task conflict has a negative effect on creative collaboration in men dyads but a positive effect on creative collaboration in women dyads. Conversely, intercultural relationship conflict has a negative impact on creative collaboration in general, but this effect is stronger for women than men dyads. These effects can be traced to how men versus women dyads handled intercultural conflict. There is also evidence that information elaboration (exchange, discussion, and integration of task-relevant information and ideas) mediates the effects of dyad gender and intercultural conflict on creative collaboration. These findings extend current understanding of when and how intercultural collaborations can result in creativity benefits from a gender and conflict management perspective.

A growing body of research (Chua, 2018; Godart, Maddux, Shipilov, &Galinsky,2015; Stahl, Maznevski, Voigt, & Jonsen, 2010) proposes that intercultural interaction enhances "creativity"—the production of novel and useful ideas (Amabile, 1983). The central argument is that, unlike within culture interaction, intercultural interaction potentiates creativity because of increased access to diverse ideas and perspectives from foreign cultures (Jackson, Joshi, & Erhardt,2003; van Knippenberg, De Dreu, & Homan, 2004). Given that creativity typically involves combining otherwise unconnected ideas (Guilford, 1950; Rietzschel, Nijstad, & Stroebe,2007), access to ideas from different cultures increases the likelihood that disparate ideas are combined in novel ways (Chua, Morris, & Mor, 2012;West,2002;Williams&O'Reilly,1998). However, research has also begun to demonstrate that this creativity benefit of intercultural interaction is not always realized (Dahlin, Weingart, & Hinds, 2005; Gibson & Gibbs, 2006; Pieterse, van Knippenberg, & van Dierendonck,2013), pointing to the need to better understand when intercultural interaction is helpful for creativity. We propose that the conflict that arises in intercultural interaction is a double-edged sword, and so how it is managed matters. On the one hand, constructive disagreement arising from cultural differences can engender creative abrasion—productive debates, information exchange, and integration of diverse perspectives (Skilton & Dooley, 2010). On the other hand, when task disagreements or personal incompatibilities are not deftly handled (e.g., Pelled, 1996; Pelled, Eisenhardt, & Xin, 1999), valuable ideas and perspectives are not exchanged and the creativity potential of working across cultures is not realized or may even be hurt.

Research on workplace conflict found that gender plays a salient role in how interpersonal conflict is handled (Brahnam, Margavio, Hignite, Barrier, & Chin,2005; Davis, Capobianco, & Kraus,2010; Eagly, 1987: 90; Holt & DeVore, 2005; Keener & Strough, 2017; Olekalns, 2013; Rahim, 1983, 2010; Thomas, Thomas, & Schaubhut, 2008), in part because both men and women are socialized by society to adhere to their respective gender role expectations during interpersonal interactions (e.g., Eagly, 1987). Additionally, person perception research has found that, in intercultural interactions, gender is a more salient social cue than culture (Kurzban, Tooby, & Cosmides, 2001; Stangor, Lynch, Duan, & Glass, 1992; Zarate & Smith, 1990). This is because the partner's cultural background is less informative compared to the partner's gender, given that gender categorization is a more familiar social paradigm that is chronically available (Fiske, 1998, 2017; Glick et al., 2000). Thus, when people collaborate across cultures, gender serves as an important reference for conflict management behaviors.[1]

In this paper, we advance current understanding of when intercultural collaboration would result in creativity by developing a contingency model of how gender influences the links between conflict and "intercultural creative collaboration"—the joint development of novel and useful ideas, solutions, and products by two persons from different cultural backgrounds that would not have been derived individually(Chuaetal.,2012). To better understand how conflict arising from intercultural interactions can help or perhaps even hurt creativity, we further differentiate between task and relationship conflict. "Task conflict" refers to disagreements about ideas and how work should be accomplished, whereas "relationship conflict" is associated with interpersonal tensions and incompatibilities (Jehn,1995,1997). Additionally, we take an information processing perspective and propose that the task and relationship conflicts arising from intercultural collaboration can either foster or hinder the exchange, discussion, and integration of diverse task-relevant information — "information elaboration" (van Knippenberg et al., 2004)—and consequently creative collaboration effectiveness. The information elaboration process is especially important in intercultural creative collaborations because the success of such collaborations depends greatly on diverse ideas from different cultures being shared and discussed (Chua et al., 2012; Hajro, Gibson, & Pudelko, 2017; Makela, Kalla, & Piekkari, 2007).

We theorize that, in intercultural collaborations, because gender is a salient social cue, both women and men adhere to their gender role expectations and engage in corresponding conflict management behaviors when working with *same-gender* partners. We focus on same-gender partners because the gender-in-context perspective of social role theory suggests that same-gender interaction heightens enactment of gendered expectations (Deaux & Lafrance, 1998). Specifically, same-gender interaction among women promotes communal and cooperative forms of conflict management approaches whereas same-gender interaction among men promotes agentic and competitive forms of conflict management approaches (Bowles & Flynn, 2010; Eagly, 1987: 27; Keener & Strough, 2017; Maccoby, 1990; Moskowitz, Suh, & Desaulniers, 1994; Suh, Moskowitz, Fournier, & Zuroff, 2004). Consequently, in woman–woman intercultural collaborations (hereafter, "women dyads"), both parties are able to harness task conflict arising from cultural differences for creative benefits through enhanced information elaboration. In man–man intercultural collaborations (i.e., "men dyads"), however, both parties' competitive approaches toward conflict management render them less likely than women dyads to harness such task conflict for creativity benefits. To the extent that women are more socialized to attend to relationships (and thus relationship conflict) than men in same-gender interactions (Curhan, Neale, Ross, & Rosencranz-Engelmann, 2008; Lee, Kesebir, & Pillutla, 2016; Maccoby, 1990; Rose & Rudolph, 2006), we further argue that, when faced with relationship conflict,

[1] 1 In intracultural collaborations, because both parties are from the same cultural background, shared cultural norms would strongly influence how conflict is handled (Morris et al., 1998; Brett & Okumura, 1998). For example, in negotiation contexts, Brett and Okumura (1998) found that, in intracultural negotiations, shared cultural norms and schemas associated with negotiation guided negotiators' behaviors. Thus, gender dynamics in collaborating intracultural dyads are less likely to be as consequential compared to in intercultural dyads.

both parties in women dyads might be more distracted from the task at hand, resulting in a stronger negative association between relationship conflict and creative collaboration effectiveness compared to men dyads.

We focus on dyadic collaboration in part to answer the call for more attention to dyadic creative collaborations (Rouse, 2020); the lack of theoretical understanding and empirical evidence of co-creation around dyads inhibits better understanding of dyadic creative collaborations, which are increasingly common in organizations. From a research standpoint, dyads offer the opportunity to uncover the collaborative dynamics that might not be as easily studied in groups (Rouse, 2020). Specifically, dyadic collaboration provides a good starting point to study the intricacies of conflict and its effects because dyadic conflict is the most basic form of conflict on which more complex intragroup conflict is built (Humphrey, Aime, Cushenbery, Hill, & Fairchild, 2017; Kenny, Kashy, & Cook, 2006; Loyd, Wang, Phillips, & Lount, 2013; Weingart, Behfar, Bendersky, Todorova, & Jehn, 2015). Unlike team-based collaborations,[2] where multiple relationships are simultaneously involved and may influence one another, dyadic collaboration provides a "clean" setting to study the impact of conflict on creativity.

This research makes three key theoretical contributions. First, we shed light on why intercultural interactions do not always result in creativity via the lens of gender and conflict management. We propose and test a contingency model of intercultural conflict and creative collaboration, incorporating the gender of dyads and information elaboration as moderator and mediator respectively. Second, our work expands research on conflict and creativity. Our finding that the gender of dyads has differential effects on the intercultural conflict–creativity link is noteworthy, as research on how conflict affects creativity has generally neglected the separate but important stream of work on gender and conflict management. Third, we contribute to emerging research on gender and creativity. Studies on gender and creativity have examined how gender affects creative performance and creativity perceptions at the individual level (Proudfoot, Kay, & Koval, 2015), as well as how gender as a form of diversity in groups influences group creativity (Dezso & Ross, 2012; Goncalo, Chatman, Duguid, & Kennedy, 2015; van Knippenberg, Haslam, & Platow, 2007). Our work offers a dyadic-level perspective, highlighting the different opportunities and pitfalls that men versus women face when collaborating with a person from a different cultural background to do creative work. This investigation is timely and useful in light of the gender gap in innovation achievement (Elmore & Luna-Lucero, 2016).

THEORETICAL BACKGROUND

Multicultural interactions can be beneficial for creativity because of access to non-redundant ideas and diverse viewpoints (Jackson et al., 2003; van Knippenberg, 2017; West, 2002; Williams & O'Reilly, 1998). For example, Chua (2018) found that a culturally diverse social network increases the likelihood of receiving culture-related novel ideas and hence creativity. Similarly, Maddux and Galinsky (2009) found a positive relationship between living abroad and individual creativity performance. In a meta-analysis, Stahl et al. (2010) found a significantly positive relationship between team cultural diversity and team creativity.

However, research has also revealed that the creativity benefit of multicultural interactions is not always realized and at times can be impaired (e.g., Chua et al., 2012; Gibson & Gibbs, 2006; van

[2] We acknowledge that there is a body of research on groups or teams and creativity. Moreover, there is a debate concerning whether dyads can be considered "groups." We share the view that, although there are features of groups that are not present in dyads (e.g., coalitions), many group-level phenomena are still relevant and applicable to dyads (Williams, 2010). Throughout this paper, when we draw on groups and teams research to develop our arguments, we ensure the findings are relevant to dyads in that they do not implicate group dynamics such as third-party relationships and subgroups.

Knippenberg et al., 2004). For instance, Leung and Chiu (2008) found that multicultural exposure increases individual creative thinking for people with a high level of openness to experience but decreases creative thinking for people with a low level of openness to experience. Godart et al. (2015) argued that the degree of cultural difference matters, and found that, when cultural distance between one's own culture and a foreign culture is too large, the creativity benefits of (in their research) fashion creative directors having foreign experiences diminishes. In the team context, a meta-analysis by Bell, Villado, Lukasik, Belau, and Briggs (2011) found that cultural diversity has a negative (though not significant) relationship with team creativity and innovation. Focusing on dyadic collaborations, Chua and colleagues (2012) found that whether a dyadic intercultural collaboration is creative depends on the level of cultural intelligence in the dyad. Taken together, these findings suggest that the purported positive link between multicultural interactions and creativity is complex one.

Dyadic Intercultural Creative Collaborations

Creativity is social in nature and rarely achieved alone (Amabile, 1983, 1988; Zhou & Hoever, 2014). In recent years, research that examines creativity in the contexts of teams (e.g., Hülsheger, Anderson, & Salgado, 2009; Taggar, 2002), dyads (Chua et al., 2012; Rouse, 2020; Sosa, 2011), and social networks (e.g., Burt, 2004; Perry-Smith, 2006) wherein collaboration is required has flourished. The dyadic type of creative collaboration is specifically defined as "co-creation," referring to the process in which two people engage in creative processes with the goal of developing novel and useful ideas and products (Rouse, 2020). In the current business environment, it is increasingly common for individuals to pair up with another person to engage in creative work.[3] Dyadic collaboration, compared to teamwork, brings many benefits of collaborative work without the downsides of having to manage multiple relationships simultaneously (Moreland, 2010). Furthermore, with globalization, people from diverse cultures are increasingly working alongside one another, and any problems arising from these relationships are therefore often cross-cultural in nature. Dyadic collaborations between two people from different cultural backgrounds (e.g., nationality or ethnicity) are consequently increasingly prevalent and necessary.

Diversity scholars have theorized that diversity confers two key properties on workgroups—variety and separation (Giambatista & Bhappu, 2010; Hoffman, 1959; Milliken & Martins, 1996). "Variety" refers to the non-redundancy of ideas and perspectives that a diversity source brings. As discussed, cultural diversity has the potential to increase creativity (van Knippenberg et al., 2004). "Separation" here refers to the tendency for a diversity source such as culture to generate social categorization among group members (Tajfel & Turner, 1986). Such dynamics are associated with increased interpersonal conflict and reduced performance (Gibson & Gibbs, 2006; Harrison & Klein, 2007; Pelled, 1996; Pelled et al., 1999). This theoretical perspective on the dual effects of diversity implies that dyadic intercultural collaboration is likely a double-edged sword, with potentials for both positive and negative outcomes.

Gender and Conflict

Research on interpersonal conflict (in particular, negotiation) suggests that gender is a significant factor that influences how people handle conflict (Brahnam et al., 2005; Davis et al., 2010; Eagly, 1987: 90; Guadagno & Cialdini, 2007; Holt & DeVore, 2005; Keener & Strough, 2017; Olekalns, 2013; Rahim, 1983, 2010; Thomas et al., 2008). According to the social role theory, gender-specific social role expectations arise to affect individuals' social behaviors in the following ways. Partly due to division of labor as human societies evolved, gender-specific expectations developed regarding

[3] Start-up companies with two founders are fairly common (e.g., Microsoft, Google, Instagram, and Skype). Many creative cultural products are frequently accomplished by pairs of artists, such as music collaborations by duos and movie productions by co-directors (e.g., Slumdog Millionaire was co-directed by Loveleen, Tandan and Danny Boyle). Organizations are also increasingly using collaborative dyads to jumpstart innovation (Gardner, 2017; Shenk, 2014).

how men versus women should behave based on the roles they play (e.g., men as breadwinner and women as homemakers). In many societies, both women and men are socialized from an early age by parents and schools to behave according to their gender role expectations (Eagly, 1987). One of the most established social expectations on gender roles is communal versus agentic behaviors (Eagly, 1987; Eagly, Wood, & Diekman, 2000). Thus, stereotypical women's roles are built upon the *communal* or *cooperative* domain, which involves collaborating, attending to interpersonal relationships, and devoting oneself to others. Conversely, stereotypical men's roles are built upon the *agentic* or *dominant* domain, which involves dominating over others and gaining and maintaining hierarchy (Eagly, 1987).

According to the gender-in-context perspective, gender effects in social behavior are more reliably predicted by situational factors than by individual differences (Deaux & Lafrance, 1998). One such situational context is same-gender peer interaction. Research has shown that, from early childhood, gender differences emerge during same-gender play and interactions (Maccoby, 1990). Developmental psychology studies have found that girls tend to be affiliation focused and collaborative when they play with other girls, whereas boys tend to be more competitive and controlling with other boys (e.g., Strough & Berg, 2000). By adulthood, the behaviors of men and women vary by and large along gender-typical continua, through further affiliation with and socialization within their own gender group (Eagly & Wood, 2013; Ellemers, 2018; Fiske, 2017). For instance, Moskowitz et al. (1994) found that women in general are especially communal in interaction with other women coworkers. Suh et al. (2004) found that, in same-sex friendships, men were more dominant whereas women were more agreeable. More central to the current research, Keener and Strough (2017) found that, when conflict involved a same-gender friend, women in general adopted more communal strategies than did men. In mixed-gender dyads, women reduced their adoption of communal strategies while men enhanced theirs.

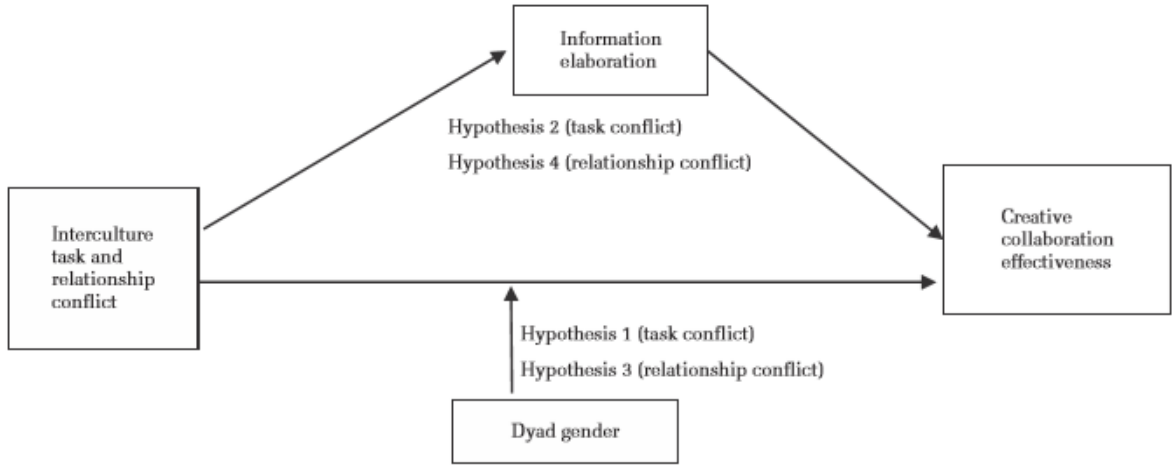
Further theorizing involving gender and conflict extends to intergroup situations (Baer, Vadera, Leenders, & Oldham, 2014; Baumeister & Sommer, 1997; Eagly, Diekman, Johannesen-Schmidt, & Koenig, 2004). Eagly et al. (2004) proposed that adherence to gender roles produces systematic gender differences in women's and men's different attitudes toward out-groups, such that women endorsed more equality-based attitudes whereas men endorsed more dominance-based attitudes in intergroup situations. Consistent with this view, research has found empirical evidences that gender differences in conflict management extend to intercultural situations (Boyer et al., 2009; Florea et al., 2003; Yuki & Yokota, 2009)—the context of interest in our current research.

THEORY DEVELOPMENT AND HYPOTHESES

We next develop a contingency model of how dyad gender moderates the impact of intercultural task and relationship conflicts on information elaboration and creative collaboration, in order to shed light on why intercultural collaboration does not always result in enhanced creativity (see Figure 1). Hypotheses 1 and 3 (detailed below) examine the impact of dyad gender on how intercultural task and relationship conflicts respectively affect creative collaboration effectiveness.[4] Hypotheses 2 and 4 focus on the role of information elaboration as the mediating mechanism. Throughout our theorizing, "culture" is defined broadly as sets of values, worldviews, and belief systems that are shared among a group of people. Such cultural differences can arise from differences in both nationality and ethnicity (Chua et al., 2012; Stahl et al., 2010).

[4] Mixed-gender dyads are not the focus of the present theorizing, but we will examine their effects empirically.

FIGURE 1 Theoretical Model and Hypotheses: Dyad Gender Moderates the Effects of Intercultural Task and Relationship Conflict on Creative Collaboration Effectiveness



We theorize that, in intercultural collaborations, gender remains a salient social cue to both the focal person and the partner because, when multiple group memberships are present (e.g., culture and gender), people selectively attune to certain features based on the expected utility. Features that are informative to the extent that they allow for making inferences will become relatively salient. Gender, as a chronically salient social category, is a more informative social cue than ethnicity or culture as it provides more useful information about others regarding what kinds of behaviors to expect (Fiske, 2017; Kurzban et al., 2001; Stangor et al., 1992; Zarate & Smith, 1990). Hence, people are more likely to categorize others based on their gender than their ethnicity or culture (Stangor et al., 1992). Congruently, Kurzban et al., (2001) found that the encoding of a target's race could be easily overridden when the target was assigned to an additional group membership. However, the encoding of a target's gender information remained as strong even when additional group membership was assigned. Drawing on these findings, we posit that, when facing intercultural conflict, gender is a highly salient social cue guiding men and women dyads to approach intercultural conflict using learned conflict management approaches that are consistent with gender role expectations. Below, we develop specific hypotheses based on this line of argument.

Intercultural Task Conflict

Let us first consider how dyad gender (men vs. women dyads) influences the impact of task conflict on creative collaboration effectiveness. Task conflict, in terms of criticisms and dissenting opinions, can potentially help collaborating dyads more fully engage with the problem at hand by forcing them to look at issues from different angles and perspectives (De Dreu & West, 2001; Nemeth, Personnaz, Personnaz, & Goncalo, 2004). Task conflict therefore has the potential to increase creativity. However, conflict stemming from cultural diversity is insufficient for reaping the rewards of cultural diversity (Lovelace, Shapiro, & Wiengart, 2001; van Knippenberg et al., 2004). Task conflict merely introduces divergent ideas and perspectives, but it is how the parties manage these differences that matters.

We propose that, following the emergence of task conflict,[5] the gender of a collaborating dyad influences the extent to which the divergent perspectives and ideas stemming from different cultures will be shared, discussed, and integrated. Specifically, the gender of *both* parties is a critical yet often neglected factor that influences this information elaboration process. Because gender is a salient cue in intercultural collaboration (Kurzban et al., 2001; Stangor et al., 1992), when facing task-related

[5] We acknowledge that gender can also affect the formation of conflict. Please refer to the Discussion section for a fuller exploration of this issue.

disagreements with a same gender partner, each party enacts his or her own learned approach toward conflict management that is consistent with gender role expectations. Thus, women dyads are more likely to handle intercultural task conflict collaboratively, compared to men dyads. When both women in a dyad adopt this cooperative approach, they are likely to engage in enhanced idea sharing, listening, and intercultural learning, despite their cultural differences (Hajro et al., 2017).[6] For men dyads, however, we expect the opposite effect. As discussed, men are socialized to take a more competitive approach toward conflict management (Keener & Strough, 2017; Maccoby, 1990; Moskowitz et al., 1994), especially when working with other out-group men (Yuki & Yokota, 2009). Hence, we theorize that, in the case of men dyadic collaborations, competitive approaches from both parties who see each other as out-group members due to cultural differences would inhibit idea sharing and intercultural learning during creative work.

Because exchanging, sharing, and discussing any divergent perspectives or disagreements may not come naturally in intercultural collaborations due to cultural barriers (Chua et al., 2012; Makela et al., 2007; Tröster & van Knippenberg, 2012), the information elaboration process is especially critical for creativity during intercultural collaboration (Knight & Baer, 2014; van Knippenberg et al., 2004). Indeed, according to the categorization-elaboration model, diversity can engender disagreements over tasks at hand; however, collaborative creativity does not arise from dissent and conflict per se. Rather, collaborative creativity requires deep-level processing of the divergent information and viewpoints (van Knippenberg, 2017). Hence, we posit that the interactive effects of gender dyad and intercultural task conflict on creative collaboration effectiveness flow through the critical process of information elaboration.

Hypothesis 1. Dyad gender moderates the relationship between intercultural task conflict and creative collaboration effectiveness such that, in men dyads, intercultural task conflict decreases creative collaboration effectiveness, whereas, in women dyads, intercultural task conflict increases creative collaboration effectiveness.

Hypothesis 2. Information elaboration mediates the interactive effects between dyad gender and intercultural task conflict on creative collaboration effectiveness.

Intercultural Relationship Conflict

Previous research suggests that relationship conflict has an overall negative impact on information elaboration (Samba, van Knippenberg, & Miller, 2018). In a recent meta-analysis, Samba et al. (2018) found that low interpersonal relationship quality disrupts information elaboration. This is because, when interpersonal relationship quality is low, people are less likely to feel psychologically safe to exchange, discuss, and integrate their ideas with each other. Thus, we expect that, when relationship conflict arises in intercultural collaboration, the information elaboration process will be disrupted in general, undermining creative collaboration.

However, the degree to which relationship conflict hurts creative collaboration depends on how much attention is devoted toward managing such conflict. De Dreu and van Vianen, (2001) found that teams are less effective when members actively manage relationship conflict (trying to work on the personal differences until mutual acceptance is reached), compared to teams with members who avoided

[6] Groups research found that "collective intelligence"—the general ability of a group to perform a wide variety of tasks—is enhanced by the equal distribution of information sharing among group members, as opposed to conversational domination by particular group member(s) (Woolley, Chabris, Pentland, Hashmi, & Malone, 2010). Importantly, collective intelligence is positively correlated with the proportion of women in the group, and this effect is mediated by social sensitivity. Thus, it appears that groups with more women are more "collectively intelligent" because the members are more socially sensitive and able to share and elaborate information more. Although this research was conducted at the group level, the underlying dynamic of women's higher social sensitivity and greater willingness to share information and hear one another out is consistent with our theorizing that there is more information elaboration in women dyads than men dyads.

dealing with relationship conflict head on. Correspondingly, Behfar, Peterson, Mannix, and Trochim (2008) found that, in high-performing teams, members used avoiding or ignoring strategies to deal with relationship conflict to prevent it from interfering with the tasks. In lower-performing teams, however, team members spent relatively more time on discussing relationship conflict. More specific to cross-cultural contexts, Von Glinow, Shapiro, and Brett (2004) proposed that openly discussing feelings with the goal of repairing hurt relationships can harm effectiveness in multicultural teams because "forcing" talk may escalate interpersonal tensions. Although all these studies were conducted in team contexts, the same dynamic is still relevant to dyads (Williams, 2010). Loyd et al. (2013) found that, when facing disagreements from an out-group member, a relationship-focused approach decreases task-relevant information elaboration processes, whereas reduced relationship concern helps to direct more attention to the task at hand. Hence, devoting increased attention and resources toward handling relationship conflict can be detrimental to information elaboration and consequently creative collaboration effectiveness.

In intercultural same-gender collaborations, given the salient gender social cue, we expect dyad gender to influence the extent to which attention is focused on resolving relationship conflict. As discussed, women are socialized by gender role expectations to be more sensitive and attentive toward relational issues in same-gender social contexts, compared to men (Curhan et al., 2008; Maccoby, 1990; Rose & Rudolph, 2006). For example, Halpern and Parks (1996) found that interpersonal concerns were brought up earlier in woman–woman than man–man negotiations. Hence, we argue that, in women dyads, both parties involved are likely to devote a greater amount of time and effort to managing relationship conflict when it arises, compared to men dyads. Although this active management of conflict helped women harness the benefits of task conflict, focusing on relationship conflict draws valuable attention away from the task at hand, reducing the task-relevant information elaboration that is critical for creative collaboration. Research on negotiation corroborates our arguments; for example, Curhan et al. (2008) found that negotiations between women resulted in lower joint economic outcomes due to their emphasis on relational goals.

It is also plausible that relationship conflict is perceived differently in women versus men dyads. For example, Brescoll and Uhlmann (2008) found that both men and women evaluators conferred lower status on angry female professionals than on angry male professionals. Heilman and Chen (2005) showed that there are higher expectations of cooperative helping behavior from women than from men, such that a man's refusal to help is taken more lightly than a woman's. Thus, when relationship conflict occurs in women dyads resulting in anger expression and refusal to cooperate, the parties involved may perceive the other's behaviors more negatively (i.e., the other party is accorded lower status and the refusal to cooperate is deemed less acceptable) than in men dyads encountering the same behaviors. These negative perceptions could further undermine information elaboration, reducing creative collaboration effectiveness.

Hypothesis 3. The negative effect of intercultural relationship conflict on creative collaboration effectiveness is moderated by dyad gender such that the effect is stronger for women dyads than men dyads.

Hypothesis 4. Information elaboration mediates the interactive effect between dyad gender and intercultural relationship conflict on creative collaboration effectiveness.

OVERVIEW OF THE STUDIES

We designed two studies—a laboratory study and a field survey—to test the above hypotheses. Study 1 (the laboratory study) involved pairs of strangers working on a common creativity task for a short time. This setting did not allow relationship conflict to meaningfully arise, thus we focused on testing the hypotheses related to *task* conflict (Hypotheses 1 and 2). However, the laboratory setting allowed us the opportunity to video-record the entire collaboration process, providing us with a valuable source of observational data. Study 2 was a field survey designed to test all our hypotheses. Rather

than focusing on a specific creativity task as in Study 1, Study 2 examined longstanding collaborative relationships between pairs of intercultural colleagues at the workplace. This approach allowed us to more reliably assess relationship conflict and its impact on creative collaboration.

Notably, our two studies were designed to examine different lengths of collaboration tenure. In Study 1, we examined first-time collaborations between two strangers who had just met. In contrast, in Study 2, we examined real-world collaborations that had been going on for considerable periods. This approach allowed us to test the generalizability of our theory and findings to different stages of collaboration. Furthermore, we used different approaches to measure creative collaboration effectiveness, tapping both *outcome* and *process*. In Study 1, we examined the creative output of a collaborating pair. The more the output was judged by external experts to be creative, the more effective the creative collaboration was. In Study 2, we focused on the process aspect of creative collaboration: participants' assessments of their partners as effective collaborators during creative work. By using both outcome and process measures of creative collaboration effectiveness, we strengthened the validity of our findings.

STUDY 1: LABORATORY STUDY

Participants and Design

We recruited 450 business students at a large Asian university. In exchange for their participation, the students received course credits with a chance to win cash awards.[7] Participants completed a two-part study: an online survey and a collaborative project in the laboratory. In our sample, the average age was 21.4 years old, 53% of participants were female, and 25% self-identified as "foreigners" (i.e., non-local exchange students). In the online survey conducted prior to the collaborative project, participants independently reported their demographic information and completed measures for the control variables. To maximize the number of intercultural dyads (the focus of our research), we always tried to pair a foreigner with a local where possible. The assignment of a local to a foreigner was randomly made during each session (local–foreigner pairs, $n = 111$). When all foreigners had been paired with locals, the remaining locals in a given session were randomly paired with other locals to create intracultural dyads (local–local pairs, $n = 114$). "Local" pairs always consisted of participants from the same ethnicity. Intracultural dyads were not relevant to our hypotheses, but they provided a valuable comparison for us to see whether the hypothesized effects also occur within culture. We checked with participants to ensure that individuals in a dyad had not known each other prior to the study.

In the laboratory, paired participants were asked to make a poster together. The poster theme was "A joint celebration for both [a local event] and the University's achievement." Each dyad worked in a separate room with identical sets of materials. We told participants that each poster would be judged based on its creativity (novelty and usefulness); the pair that made the most creative poster would win cash awards (about 40 U.S. dollars per person). We did not set any specific time limit for the task but participants understood that each session was supposed to last about 1 hour. All the dyadic collaborations in this study were video-recorded with the permission of the participants. Upon completion, participants independently completed a post-task survey on their experiences during the task and were debriefed.

[7] Those who did not wish to participate in our study had the option to complete a written assignment to receive the same credit.

Measures

Creativity.

We hired three experienced experts from a local art school to rate the creativity of the posters. We measured the creativity through three items—"To what extent do you think the poster is appealing to the audience?," "How original do you think the poster is?," and "Overall, how creative do you think the poster is?"—rated on a scale from 1 ("*not at all*") to 10 ("*very much so*"). The question on the appealing aspect of the poster was a measure of its effectiveness in invoking audiences' positive responses. The Cronbach's alphas (involving the three items) for the judges were .95, .95, and .79 (ICC(1) = .48, ICC(2) = .73, mean r_{WG} = .72, median r_{WG} = .72), which suggests an acceptable threshold for aggregation. We thus averaged scores from the three judges into one variable: *expert-rated creativity*.

Task conflict.

We operationalized *task conflict* with data coded from the video recordings, using a coding schema based on the definition of task conflict (Jehn, 1995). Although a total of 225 dyads were filmed, a technical problem with the video equipment caused 28 video recordings to be incomplete, leaving us with 197 recordings (100 intracultural dyads and 97 intercultural dyads) that could be fully analyzed.[8] We (the authors) first viewed 10 videos and derived a preliminary coding scheme for task conflict. To complete the coding for all recordings, we hired eight research assistants (RAs)[9] who were blind to the hypotheses. We trained all eight RAs to identify instances of disagreements on task-related matters occurring in the videos. We first discussed with them their understanding of the behaviors of interest (task conflict). We gave the RAs examples of such behaviors drawn from the 10 videos we had viewed earlier, asked all eight assistants to code the same videos, and then compared the discrepancies. We repeated this procedure three times and the assistants coded another 15 videos together with us (the authors) until all reached absolute agreement over the coding scheme. This scheme was then used to code all videos. The RAs took note of the specific timestamp of a given task conflict within the video recording. This coding approach allowed us to identify the specific episodes of task conflict within each collaboration, enabling us to resolve any inconsistencies in coding. We then counted the total number of episodes of task conflict for each collaboration. The greater number of conflict episodes, the higher the level of task conflict. The 197 complete videos were randomly assigned to four pairs of RAs, with each pair coding about 45 recordings. Within the pairs, each RA first coded every video independently; disagreements were resolved via discussion. We calculated inter-rater reliability and agreement for all pairs of coders together (ICC(1) = .55, ICC(2) = .71, mean r_{WG} = .75, median r_{WG} = .75).

[8] We also measured participants' perceptions of task conflict using an adapted version of the four-item scale developed by Jehn (1995). A sample item included "How often did you and your partner disagree about opinions regarding the poster?" (rated on a scale of 1 = "*not at all*" to 5 = "*a lot*"). Cronbach's alpha for the scale was .71. We found that perception of task conflict was indeed shared between both participants of a dyad, with a median r_{WG} of .80 and a mean r_{WG} of .81, greater than the suggested minimum value of .70; ICC(1) = .29, ICC(2) = .45 (Klein & Kozlowski, 2000). The correlation between perceived task conflict and that coded from the videos was r = .36 (p < .001), indicating convergence between the two operationalizations. Perceived task conflict in the dyads with incomplete recordings, compared to those with complete recordings, was not significantly different (mean difference = 0.01, n.s.), and nor was there a significant difference in creativity (mean difference = 0.03, n.s.). For all our analyses, we used video-coded task conflict measures, but, for a robustness check, we also replicated the analyses with perceived task conflict measures, and found the same results.

[9] We used eight assistants to increase efficiency as well as reduce workload for each person, as each assistant needed to watch the entire video, lasting about 1 hour, and identify exact moments when the task disagreement happened.

Information elaboration.

Using the same procedure described above, we hired three RAs[10] to watch all video recordings and code for behaviors related to *information elaboration*. Following previous research (Hoever, Zhou, & van Knippenberg, 2018), RAs rated the extent to which the collaborators in a given dyad exchanged information about preferences, engaged in discussion, and shared insights and different views (1 = "*not at all*", 7 = "*to a great extent*"). Similar to the procedures of coding task conflict, we trained the RAs to ensure they had absolute agreement over the behavior indicators for information elaboration. Following the training, they coded the remaining video recordings independently (ICC(1) = .62, ICC(2) = .83, mean r_{WG} = .72, median r_{WG} = .76). Disagreements were resolved via discussion. Ratings for the information elaboration were aggregated among the three coders.

Control variables.

We controlled for *cultural metacognition*, using a six-item scale based on Ang et al., (2007), because previous research indicated that this variable affects intercultural creative collaboration (Chua et al., 2012). Cronbach's alpha for this scale was .90. We computed and controlled for the higher cultural metacognition in a given dyad (Chua et al., 2012). Given that we did not set a time limit, we also controlled for the time spent (minutes) on the collaboration.

Although Study 1 was not designed to test hypotheses for relationship conflict, we nevertheless measured and controlled for it. We coded relationship conflict using third-party ratings of the videos. Three RAs watched all the video recordings and reported their general perceptions of how prevalent relationship conflict was during each collaboration, using Jehn's (1995) four-item scale. Sample items included "Emotional conflict was evident between the two collaborators" and "There was tension between the two during the collaboration" (rated on a scale from 1 = "*not at all*" to 5 = "*a lot*"). Cronbach's alpha was .86 among the four items. In addition, we found strong inter-rater agreement and consistency (ICC(1) = .50, ICC(2) = .72, mean r_{WG} = .74, median r_{WG} = .76). We thus aggregated the three ratings.[11]

STUDY 1: RESULTS

Inter- versus Intracultural Task Conflict

Table 1 presents the descriptive statistics and correlations of all variables.

We coded the gender composition of the dyads using two dummy indicators, WM and XM. Specifically, we coded men dyads using WM = 0 and XM = 0, women dyads using WM = 1 and XM = 0, and mixed-gender dyads using WM = 0 and XM = 1 (Hayes & Preacher, 2014). Thus, WM compares women dyads to men dyads (our key variable of interest), whereas XM compares mixed-

[10] Because this task is less complex than identifying task conflict episodes, due to human resources considerations, we reduced the number of RAs to three for this coding task.

[11] Besides video coding, we also used Jehn's (1995) four-item scale to measure relationship conflict during the post-task survey; sample items included "Emotional conflict was evident between me and the partner" and "There was tension between me and the partner during the collaboration" (rated on a scale of 1 = "*not at all*" to 5 = "*a lot*"). Cronbach's alpha for this scale was .88. We found that perception of relationship conflict was shared between both participants in the dyad, while the median r_{WG} was .81 and the mean r_{WG} was .80; ICC(1) = .27, ICC(2) = .45. Thus, we aggregated the relationship conflict measures of both participants within the same dyad. We found that video-coded relationship conflict highly correlated with participant-reported relationship conflict (r = .71, p < .01). The same pattern of results was obtained when we replaced video-coded relationship conflict with participant-reported relationship conflict in our analyses.

gender dyads to men dyads. Although we do not have hypothesis about mixed-gender dyads, we included them in our sample for completeness of analyses.

Because our theorizing focuses on intercultural creative collaborations, we first established that the interactive effect of task conflict and dyad gender on creativity occurred primarily in intercultural dyads and less so in intracultural dyads. In Table 2a, Model 1, we present the main effects of cultural and gender compositions of dyads and task conflict on expert-rated creativity. Here, we see that the intercultural condition has an overall positive but not statistically significant effect on creativity (b = .17, n.s.). Task conflict itself did not have any direct association with creativity (b = −.01, n.s.). Model 2 adds the two-way interactions among the three key predictors whereas Model 3 adds the three-way interactions. Model 3 shows that the three-way interaction involving task conflict, intercultural condition, and WM (women vs. men) is significant (b = .36, SE = 0.12, t = 2.90, p < .01) and the corresponding three-way interaction involving XM (mixed-gender vs. men) is also significant (b = .29, SE = 0.12, t = 2.39, p = .02). In Model 4, we added the control variables for cultural metacognition, relationship conflict, and time spent to show incremental validity. The effects remained unchanged.

TABLE 1 Descriptive Statistics and Correlations (Study 1)

	Variables	Min.	Max.	Mean	*SD*	1	2	3	4	5	6	7	8
1	WM[a]	0.00	1.00	0.34	0.47								
2	XM[a]	0.00	1.00	0.34	0.47	−.51**							
3	Intercultural condition[b]	0.00	1.00	0.52	0.50	−.04	.04						
4	Expert-rated creativity	1.89	7.00	4.83	1.22	.11	.04	.07					
5	Information elaboration (coded)	1.00	6.00	4.20	0.83	.06	.08	.05	.20**				
6	Task conflict (coded)	0.50	20.00	5.27	3.55	−.15*	.06	.15*	.01	.06			
7	Higher cultural metacognition in dyad	3.00	7.00	5.09	0.70	.05	−.10	.06	−.02	−.04	−.05		
8	Time spent (minutes)	20.01	94.03	48.53	14.85	.04	.01	.16*	.29**	.08	.18*	−.03	
9	Relationship conflict (coded)	1.00	4.00	1.96	0.52	−.03	.04	.06	.09	−.05	.14	.09	.14*

[a] "WM" denotes women versus men dyad comparisons; "XM" denotes mixed-gender versus men dyad comparisons. Men dyads = 64; women dyads = 67; mixed-gender dyads = 66.

[b] Intercultural condition is dummy coded "0" for intracultural dyads and "1" for intercultural dyads.

** $p < .01$

* $p < .05$

TABLE 2a Effects of Culture, Gender Composition, and Task Conflict on Expert-Rated Creativity (Study 1)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept	4.52**	4.53**	3.73**	3.17**	2.79**	2.15**
Intercultural condition	0.17	0.57	1.76**	1.62**	1.56*	1.36**
Task conflict (coded)	−0.01	−0.04	0.13	0.14	0.12	0.12
Women vs. men dyads (WM)	0.40	−0.11	1.10	1.45*	1.15	1.26*
Mixed-gender vs. men dyads (XM)	0.29	0.59	1.63**	1.69**	1.52*	1.44*
Task conflict × Intercultural condition		−0.01	−0.24*	−0.24**	−0.21*	−0.21*
WM × Intercultural condition		−0.47	−2.31**	−2.44*	−2.12**	−2.11*
XM × Intercultural condition		−0.47	−2.01**	−1.72*	−1.71*	−1.41
WM × Task conflict		0.15*	−0.09	−0.18	−0.10	−0.15
XM × Task conflict		−0.01	−0.22*	−0.24**	−0.22*	−0.23*
WM × Intercultural condition × Task conflict			0.36**	0.41**	0.30*	0.33*
XM × Intercultural condition × Task conflict			0.29*	0.27*	0.26*	0.24*
Information elaboration					0.27*	0.24*
Control variables						
Higher cultural metacognition in dyad				−0.15		−0.13
Relationship conflict (coded)				0.13		0.15
Time spent (minutes)				0.02**		0.02**
Adjusted R^2	.01	.03	.07	.14	.09	.16

** $p < .01$

* $p < .05$

We next broke down the three-way interaction effects based on intercultural and intracultural dyads. Results for intercultural and intracultural collaborations are presented in Table 2b. Models 1 to 3 focus on intercultural dyads whereas Models 4 to 6 focus on intracultural dyads. Model 1 adds task conflict and gender compositions. Model 2 adds the two-way interactions between task conflict and WM or XM. The results suggest that the interaction between WM and task conflict was significant (b = .27, SE = 0.08, t = 3.45, p < .01). Model 3 adds the control variables for cultural metacognition, relationship conflict, and time spent; the interaction result between WM and task conflict remains unchanged. Simple slope analyses indicated that, in intercultural collaborations, task conflict had a significant positive relationship with creativity in women dyads (b = .16, SE = 0.05, t = 2.90, p = .01). The relationship was negative and significant in men dyads (b = −.11, SE = 0.05, t = −2.38, p = .02). Thus, Hypothesis 1 is supported.

TABLE 2b Effects of Gender Composition and Task Conflict on Expert-Rated Creativity by Cultural Compositions (Study 1)

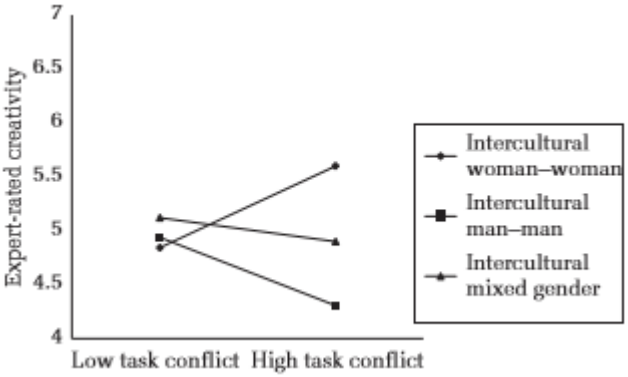
	Intercultural Dyads			Intracultural Dyads		
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
Intercept	4.82**	5.42**	4.30**	4.19**	3.54**	3.47**
Task conflict (coded)	−0.01	−0.10	−0.10*	0.01	0.14*	0.15**
Women vs. men dyads (WM)	0.20	−1.16*	−0.98	0.70*	1.34*	1.42*
Mixed-gender vs. men dyads (XM)	0.09	−0.35	−0.02	0.57*	1.77**	1.79*
WM × Task conflict		0.27**	0.22**		−0.09	−0.15
XM × Task conflict		0.07	0.02		−0.22*	−0.25**
Control variables						
Higher cultural metacognition in dyad			−0.23			−0.11
Relationship conflict (coded)			0.32			−0.01
Time spent (minutes)			0.03**			0.01
Adjusted R^2	.01	.11	.29	.03	.06	.05

** $p < .01$
* $p < .05$

For mixed-gender intercultural dyads, the relationship between task conflict and creativity was not statistically significant (b = −.04, n.s.). We compared the effect of task conflict on creativity between women versus mixed-gender intercultural dyads in a separate analysis, and the effect was found to be significant (b = .20, SE = 0.08, t = 2.53, p = .02); however, when we compared the effect of task conflict on creativity in men dyads with that of mixed-gender intercultural dyads (XM), the result was not significant (Table 2b, Model 2: b = .07, n.s.). These analyses suggest that the effect of task conflict on creativity for mixed-gender intercultural dyads mirrors that of men intercultural dyads. Figure 2 shows the patterns of results pertaining to how intercultural task conflict is associated with creativity for different gender compositions in dyads.

For intracultural collaborations (Table 2b, Models 4–6), there was no significant interaction effect between WM (women–men comparison) and task conflict (b = −.09, n.s.). But, there was a significant interaction between XM and task conflict (b = −.22, SE = 0.10, t = −2.30, p = .02). Simple slope analyses showed that, for women and men dyads, the links between task conflict and creativity were both not significant (women: b = .06, n.s.; men: b = .13, n.s.), but, for mixed-gender dyads, task conflict had a marginally significant negative relationship with creativity (b = −.10, SE = 0.05, t = −1.78, p = .08).

FIGURE 2 Effects of Task Conflict on Expert-Rated Creativity Based on Culture and Gender Compositions (Study 1)



Mediation Analyses

To test Hypothesis 2 (i.e., the mediation effect of intercultural task conflict through information elaboration), we added information elaboration to Model 5 in Table 2a. The results showed it significantly predicted creativity (b = .27, SE = 0.11, t = 2.37, p = .02). Results remained unchanged with the inclusion of control variables in Model 6.

Next, we tested whether the three-way interaction among task conflict, gender, and cultural compositions predicted information elaboration. Our results are presented in Table 3. In Model 1, we added the task conflict, dyad gender, and intercultural condition variables. In Model 2, we added the two-way interactions among the predictors; in Model 3, we added the three-way interactions. Model 3 shows that the three-way interaction among WM, intercultural condition, and task conflict was a significant predictor of information elaboration (b = .16, SE = 0.07, t = 2.19, p = .03). When we added the control variables in Model 4, the effect remained unchanged. Then, we unpacked this three-way interaction effect based on inter- versus intracultural conditions. For intercultural dyads (Models 5–7 in Table 3), we found that the interaction between WM and task conflict significantly predicted information elaboration (b = .22, SE = 0.05, t = 4.11, p < .01) and the interaction between XM and task conflict was also significant for information elaboration (b = .11, SE = 0.05, t = 2.35, p = .02). We next tested the simple slopes for each gender composition. The results indicate that, for intercultural men dyads, task conflict significantly decreases information elaboration (b = −.09, SE = 0.04, t = −2.26, p = .03), whereas, for intercultural women dyads, task conflict significantly increases information elaboration (b = .13, SE = 0.04, t = 3.32, p < .01).

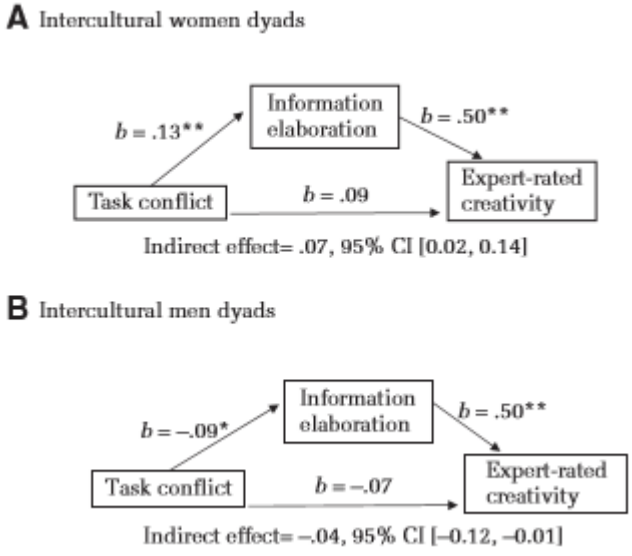
We next tested the moderated mediation model with information elaboration as the mediator for intercultural dyads. We compared the indirect effect of task conflict on creativity between intercultural women and men dyads. Bootstrapping results based on 5,000 iterations showed that information elaboration mediated the interaction effect of gender and task conflict on creativity conditionally for intercultural dyads (for intercultural men dyads: indirect effect = −.04, *SE* = 0.03, 95% CI [—0.12, —0.01]—excludes 0; for intercultural women dyads: indirect effect = .07, *SE* = 0.03, 95% CI [—0.02, —0.14]—excludes 0). The difference between the two conditional indirect effects was significant (information elaboration: b_{diff} = .10, 95% CI [—0.03, —0.24]). These effects are illustrated in Figure 3. Based on these results, Hypothesis 2 is supported.

TABLE 3 Effects of Culture, Gender Composition, and Task Conflict on Information Elaboration (Study 1)

	All Dyads				Intercultural Dyads			Intracultural Dyads		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Intercept	4.02**	4.22**	2.43**	4.23**	4.16**	4.79**	5.72**	4.00**	4.84**	3.47**
Intercultural condition	0.10	0.29	0.70	0.71						
Task conflict (coded)	0.01	−0.05	−0.02	−0.02	0.01	−0.09*	−0.08*	−0.01	−0.02	−0.03
Women vs. men dyads (WM)	0.15	−0.65*	−0.25	−0.24	0.22	−0.97**	−0.92*	0.08	−0.25	−0.30
Mixed-gender vs. men dyads (XM)	0.13	0.11	0.34	0.36	−0.09	−0.78*	−0.67	0.38*	0.34	0.27
Task conflict × Intercultural condition		0.00	−0.07	−0.07						
WM × Intercultural condition		0.13	−0.72	−0.72						
XM × Intercultural condition		−0.55	−1.12**	−1.11**						
WM × Task conflict		0.14**	0.06	0.06		0.22**	0.21**		0.06	0.07
XM × Task conflict		0.06	0.01	0.01		0.11*	0.09		0.01	0.02
WM × Intercultural condition × Task conflict			0.16*	0.16*						
XM × Intercultural condition × Task conflict			0.10	0.10						
Control variables										
Higher cultural metacognition in dyad				−0.02			−0.15			0.11
Relationship conflict (coded)				−0.06			−0.16			0.10
Time spent (minutes)				−0.00			0.01			−0.01
Adjusted R^2	.01	.07	.09	.09	.01	.12	.12	.02	.02	.02

** $p < .01$
* $p < .05$

FIGURE 3 Mediation Analyses for Effects of Information Elaboration (Study 1)



For completeness, we tested the interactive effect of task conflict and gender composition on information elaboration for intracultural dyads (Models 8–10 in Table 3) and did not find any significant effects. Taken together, these analyses showed that our hypothesized effects of gender and task conflict occurred mainly for intercultural but not intracultural dyads.

Supplementary Analyses

A core argument underlying Hypotheses 1 and 2 is that men and women dyads use different approaches to handle the task conflict that arises in intercultural collaboration. Additional data and analyses featured in Appendix A provide evidence for this assertion. Therein, as expected, we found that women dyads indeed adopted a more integrative and less dominant conflict management approach than men dyads did during intercultural collaborations.

STUDY 1: DISCUSSION

Our analyses thus far revealed that intercultural women dyads were more effective at harnessing task conflict for creativity because of greater information elaboration, compared with intercultural men dyads where the effect was opposite. These effects can be traced to how women versus men dyads handled task conflict (Appendix A). The results for mixed-gender intercultural dyads appeared to mirror those of men intercultural dyads.

Study 1 has two main strengths. First, it used a laboratory setting in which collaborators were required to complete the same task, ensuring high comparability of outcomes. Second, it compared intercultural with intracultural dyads, demonstrating that our hypothesized effects were specific to intercultural collaborations. The fact that we did not find significant effects for intracultural dyads suggests that there might not be sufficient informational diversity and divergent viewpoints in same-culture collaborations for task conflict to arise. It is also possible that, in intracultural collaboration, both women and men dyads engaged in similar conflict management approaches because of shared cultural norms (e.g., Morris et al., 1998).

A key limitation of Study 1 is that, because the collaborators were strangers interacting on a short task, there was little opportunity for relationship conflict to meaningfully arise. Accordingly, the next study was designed to address this limitation and hence test Hypotheses 3 and 4. We collected data in the field from collaborators who have had longstanding relationships with one another, ensuring that relationship conflict could be meaningfully measured.

STUDY 2: FIELD SURVEY

In Study 2, we examine real-world dyadic collaborations that have been going on for considerable periods. Besides addressing the limitation stated above, the field setting complements the laboratory setting in Study 1 by increasing external validity. Furthermore, Study 2 adopts a different approach toward measuring creative collaboration effectiveness, focusing on the collaboration process (as opposed to outcome, which was the focus of Study 1).

Context, Sample, and Procedure

Intercultural creative collaborations are not restricted to cross-country collaborations but are also prevalent within countries that have different ethnic cultural groups (e.g., Chua et al., 2012). Indeed, Stahl et al. (2010) categorized cultural diversity into two types: cross-national and intra-national. As

these authors and others (Tung, 2008) have argued, in intra-national contexts, variations in perspectives and values between members of different ethnic cultures can be as significant as those between members of different national cultures. The United States is a culturally diverse country where creativity is prized. It therefore provides a natural setting for studying intercultural creative collaborations in which cultural differences (and conflict) stem from diversity of ethnic cultural backgrounds rather than nationality differences.

We recruited employee–colleague dyads through a third-party research agent (ClearVoice) in the United States. This sampling method has been used and validated in previous studies (e.g., Derfler-Rozin, Baker, & Gino, 2018). A criterion for partaking in the study was that participants must have worked with colleagues of ethnic cultural groups different from their own. A consent form was given along with the surveys seeking agreement from the focal employees to participate in our study and to invite their colleagues from different cultural backgrounds to also participate. We assured participants that no one except the researchers would see their responses to the surveys. The focal participant completed the survey before the invited colleague. Both surveys were completed independently and respondents were told that their colleague would not see their responses.

We asked all participants to report their colleagues' and their own cultural ethnicity to check if the information reported from both parties was consistent. We excluded those dyads in respect of which the ethnicity backgrounds reported were inconsistent (e.g., one person reported the partner to be "Caucasian," while the partner self-reported as "Latino"). This type of inconsistency was the only reason any responses were excluded from our analyses.

To ensure that recruited dyads had indeed engaged in creative collaboration tasks, we asked all participants to describe a collaboration experience in which they generated novel and useful ideas or solutions with the other partner at work. These descriptions spanned a variety of collaborations at the workplace; for example, one participant described, "We created a new logo for the company to include a more clear and concise mission statement and description." Another shared that, "For a presentation of our company's newest product, we created unique interactive displays for our prospective buyers." In a given dyad, the collaborators might or might not have described the same creative project. Our goal was not to examine the conflict–creativity link for a specific project but rather for the given collaborative relationship.

We received responses from 184 full-time employees in the United States (out of 500 invitations). Our final sample consisted of 139 matched intercultural employee–colleague dyads, wherein both participants completed the survey and passed checks on information consistency between the two surveys' responses. In terms of gender composition, there were 50 women dyads, 40 men dyads, and 49 mixed-gender dyads. The average age of our sample was 39 years old (SD = 9.75). All participants self-reported as U.S. citizens, and the breakdown for ethnic or cultural background was as follows: 41% Caucasian, 21% African American, 20% Hispanic, 8% Asian American, and 10% self-identified as Other (e.g., Middle Eastern and Native American). On average, the participants in the dyads had known each other for 6.19 years (SD = 5.17) and 85% indicated that they interacted daily at work (10% interacted weekly, and the remaining 5% interacted several times per month). Participants worked in a range of industries, including accounting, banking and finance, higher education, health care, media, fashion industries, and information technology.

Measures

Creative collaboration effectiveness.

We measured creative collaboration effectiveness in a given intercultural dyad using two process indicators. Following Sosa (2011), we used an item that assessed "the ease of generating creative

ideas" within each relationship. Sosa (2011) argued that, at the dyadic level, the actor and his or her partner are best able to accurately estimate their creative idea generation in their interactions. Thus, we asked both the participant and his or her colleague to report the extent to which they agreed with the following statement "When I interact with [name of colleague], it is easy for me to generate NOVEL solutions and/or ideas. These NOVEL solutions or ideas can be either related to our products or the way we do things" (rated on a scale of 1 = "*strongly disagree*" to 7 = "*strongly agree*"). The solution aspect of this statement captures the usefulness dimension of creativity. Following Chua et al. (2012), we asked participants to respond to a scenario question, "If you were asked to work on a project that requires coming up with novel and useful solutions or ideas, how likely are you to pick [name of colleague] as your collaborator?" (rated on a scale from 1 = "*extremely unlikely*" to 7 = "*extremely likely*"). This item captures the degree to which the collaborative relationship was deemed effective in terms of creativity and that the participant would like to work with the other person again in the future. Cronbach's alpha for this two-item scale was .79. Because we measured collaborative creativity from both employees, we calculated the intraclass correlation coefficient and r_{WG} statistics, with the results indicating that it was appropriate to aggregate them to the dyadic level (ICC(1) = .67, ICC(2) = .80, mean r_{WG} = .91, median r_{WG} = .97).

Task and relationship conflict.

We measured task conflict and relationship conflict using the eight-item scale developed by Jehn (1995), but we changed the reference to collaborative relationships at work in general. Cronbach's alphas for the task conflict and relationship conflict scales were .89 and .93 respectively. Both the participant and his or her colleague completed the same scale. We then tested the aggregation statistics (task conflict: ICC(1) = .61, ICC(2) = .76; mean r_{WG} = .90, median r_{WG} = .98; relationship conflict: ICC(1) = .85, ICC(2) = .92, mean r_{WG} = .95, median r_{WG} = .98). The results suggested that perceptions of conflict could be aggregated to the dyadic level. We therefore used the average of the two task and relationship conflict perceptions within each dyad as our conflict variables.

Information elaboration.

Drawing on the definition of information elaboration (van Knippenberg et al., 2004), we measured information elaboration with three items adopted from Chua et al., (2012). Items were "[colleague's name] is open in sharing work-related information with you," "[colleague's name] is forthcoming in sharing information regarding work-related matters," and "You and [colleague's name] discuss NOVEL work-related ideas with each other" (rated on a scale of 1 = "*not at all*" to 5 = "*to a great extent*"). Cronbach's alpha was .84. We tested whether the employee–colleague dyads had agreement over information elaboration (ICC(1) = .62, ICC(2) = .76; mean r_{WG} = .91, median r_{WG} = .98), and the results indicated that it was appropriate to aggregate the information elaboration measures to the dyadic level.

Control variables.

As in Study 1, we measured *cultural metacognition* with the same six-item scale (Ang et al., 2007). Reliability for the scale was .84. We computed the higher value of cultural metacognition in dyads and used that as a control variable. We also controlled for *functional diversity*—whether the colleague collaborator was from the same department or job function as the participant—because task conflict could be a result of functional differences instead of cultural differences (coded "1" for a different job function or "0" for the same job function) (Jehn, Northcraft, & Neale, 1999). Previous research has shown that *age difference* is associated with conflict dynamics (Jehn et al., 1999), and so we also controlled for age difference in the dyads (operationalized as absolute difference in age, in number of years). Lastly, we controlled for *frequency of creative collaboration*. In a real-world setting, interactions are ongoing and repeated. Thus, our findings could be influenced by the frequency of creative collaboration. We asked each participant in a dyad to respond to the item "At work, how often do you collaborate with [colleague's name] on tasks involving novel and useful ideas or

solutions generation?" (rated on a scale from 1 = "*never*" to 6 = "*all the time*"). We calculated inter-rater agreement (ICC(1) = .68, ICC(2) = .81, mean r_{WG} = .84, median r_{WG} = .98) before aggregating the frequency of creative collaboration to the dyadic level.

STUDY 2: RESULTS

Preliminary Analyses

We first conducted a multilevel confirmatory factor analysis using individual-level data for task conflict, relationship conflict, creative collaboration effectiveness, and information elaboration. The results showed that the four-factor model (CFI = .94, TLI = .92, RMSEA = .08, χ^2 (59) = 179.87, p < .01) achieved satisfactory model fit, and was a significantly better fit than the following alternative models: one-factor model (CFI = .59, TLI = .50, RMSEA = .20, $\Delta\chi^2$ = 694.48, Δdf = 6, p < .01); two-factor model, with task conflict and relationship conflict as one factor and information elaboration and collaborative creativity as another factor (CFI = .76, TLI = .7, RMSEA = .15, $\Delta\chi^2$ = 356.79, Δdf = 5, p < .01); three-factor model, with task and relationship conflict as one factor, information elaboration as one factor, and collaborative creativity as another factor (CFI = .81, TLI = .76, RMSEA = .14, $\Delta\chi^2$ = 261.89, Δdf = 3, p < .01). Thus, we established that the four main variables were indeed distinctive constructs.

Task Conflict and Relationship Conflict

Table 4 presents the descriptive statistics and correlations at the dyadic level. As in Study 1, we coded the three dyadic gender compositions with two indicators, WM and XM (Hayes & Preacher, 2014). Specifically, we coded men dyads using WM = 0 and XM = 0, women dyads using WM = 1, XM = 0, and mixed-gender dyads using WM = 0, XM = 1. Of key interest is the WM variable, which captures the comparison of men versus women dyads.

TABLE 4 Descriptive Statistics and Correlations: Dyadic Level (Study 2)

	Variables	Min.	Max.	Mean	*SD*	1	2	3	4	5	6	7	8	9	10
1	WM[a]	0.00	1.00	0.36	0.48										
2	XM[a]	0.00	1.00	0.35	0.48	−.55**									
3	Higher cultural metacognition in dyad	2.00	7.00	5.34	0.88	.21*	−.10								
4	Age difference	0.00	31.00	7.81	7.31	.05	.14	−.06							
5	Creative collaboration frequency	2.00	6.00	4.96	0.73	.16	−.05	.20*	−.15						
6	Functional diversity[b]	0.00	1.00	0.51	0.50	−.11	.10	−.02	.01	−.13					
7	Task conflict	1.00	4.38	2.30	0.72	−.37**	.28**	−.17	.12	−.15	.00				
8	Relationship conflict	1.00	4.63	1.51	0.85	−.15	.11	−.18*	.06	−.15	−.02	.74**			
9	Creative collaboration effectiveness	2.50	5.67	5.02	0.69	.32**	−.17	.34**	−.03	.46**	.09	−.56**	−.55**		
10	Information elaboration	1.50	5.00	4.61	0.60	.31	−.14	.23**	.02	.38**	.06	−.51**	−.50**	.70**	
11	Cultural distance	0.15	4.27	0.62	0.62	.06	.00	.19*	−.01	−.01	.08	.12	.01	−.12	−.17*

[a] "WM" denotes women versus men dyad comparisons; "XM" denotes mixed-gender versus men dyad comparisons. Men dyads = 40; women dyads = 50; mixed-gender dyads = 49.
[b] Functional diversity is dummy coded "1" = different job function and "0" = same job function.
**p < .01
*p < .05

We ran hierarchical regressions to test Hypotheses 1 and 2 and present the results in Table 5. In Model 1, we added both indicators of dyadic gender compositions (WM, XM), task conflict, and relationship conflict. We found that both task conflict (b = −.24, SE = 0.11, t = −2.14, p = .04) and relationship conflict (b = −.28, SE = 0.09, t = −3.25, p < .01) were negatively associated with creative collaboration effectiveness. Women intercultural dyads had higher creative collaboration effectiveness than men intercultural dyads (b = .26, SE = 0.13, t = 2.05, p = .04).

TABLE 5 Effects of Task Conflict, Relationship Conflict on Creative Collaboration Effectiveness and Information Elaboration (Study 2)

	DV: Creative collaboration effectiveness					DV: Information elaboration		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Constant	4.90**	4.92**	4.87**	4.99**	4.97**	4.46**	4.49**	4.45**
Task conflict	−0.24*	−0.73**	−0.67**	−0.20	−0.26	−0.24**	−0.55**	−0.50**
Relationship conflict	−0.28**	0.10	0.09	0.21	0.20	−0.19**	−0.12	−0.14
Women vs. men dyads (WM)	0.26*	0.44**	0.30*	0.14	−0.35	0.22*	0.31**	0.23*
Mixed-gender vs. men dyads (XM)	0.10	0.10	0.01	0.03	0.15	0.10	0.07	0.01
WM × Task conflict		1.14**	1.11**	0.50*	0.59**		0.67**	0.64**
XM × Task conflict		0.43	0.34	0.13	0.14		0.31	0.24
WM × Relationship conflict		−0.69**	−0.70**	−0.57**	−0.61**		−0.12	−0.11
XM × Relationship conflict		−0.43*	−0.32	−0.35*	−0.32*		−0.09	0.00
Information elaboration				0.96**	0.82**			
Control variables								
Higher cultural metacognition in dyad			0.11*		0.08*			0.05
Age difference			0.02*		0.01			0.01
Creative collaboration frequency			0.35**		0.14**			0.26**
Functional diversity			0.20*		0.09			0.14*
Adjusted R^2	.36	.43	.57		.76	.37	.41	.54

** $p < .01$
* $p < .05$

Let us first consider the effects for task conflict. In Model 2, we added the two-way interactions among the predictors. The interaction between WM and task conflict was significant (b = 1.14, SE = 0.32, t = 3.58, $p < .01$). In Model 3, we added the control variables to show incremental validity. The effects remained materially unchanged. Consistent with prior research (Chua et al., 2012), we found that the higher value of cultural metacognition in an intercultural dyad has a positive relationship with creative collaboration (b = .11, SE = 0.05, t = 2.38, p = .02). Further, collaboration frequency positively predicted creative collaboration (b = .35, SE = 0.06, t = 6.09, $p < .01$); both functional diversity (b = .20, SE = 0.08, t = 2.51, p = .01) and age difference (b = .02, SE = 0.01, t = 2.42, p = .02) were also positively related to creative collaboration.

Simple slope analyses indicated that, for women dyads, as task conflict increased, creative collaboration effectiveness also increased (b = .41, SE = 0.14, t = 2.90, $p < .01$). For men dyads, task conflict had a significant and negative relationship with creative collaboration effectiveness (b = −.73, SE = 0.27, t = −2.75, p = .01). These results support Hypothesis 1. For completeness of analysis, we also considered mixed-gender dyads. Here, the effect of task conflict on creative collaboration effectiveness was negative and significant (b = −.33, SE = 0.16, t = −2.07, p = .04), mirroring the effect for men dyads (see Figure 4a for graphical depiction of the effects).

We next consider relationship conflict. Hypothesis 3 posited that the negative effect of relationship conflict on creative collaboration would also be contingent on dyad gender. Our results (Table 5, Model 2) show that both WM and XM interacted with relationship conflict to significantly predict creative collaboration effectiveness (WM: b = −.69, SE = 0.22, t = −3.14, $p < .01$; XM: b = −.43, SE = 0.27, t = 1.62, p = .05). In Model 3, after adding the control variables, the interactive effect of WM and relationship conflict remained significant (b = −.70, SE = 0.22, t = −3.14, $p < .01$). Simple slope analyses showed that, for women dyads, relationship conflict significantly decreased creative collaboration effectiveness (b = −.59, SE = 0.11, t = −5.61, $p < .01$), whereas, for men dyads, the effect was not significant (b = .10, n.s.), supporting Hypothesis 3. The effect of mixed-gender relationship conflict on creative collaboration effectiveness was significant and negative (b = −.33, SE = 0.16, t = −2.07, p = .04), mirroring the effect for women dyads. These effects are depicted in Figure 4b.

FIGURE 4a Effects of Task Conflict on Creative Collaboration Effectiveness Based on Gender Compositions (Study 2)

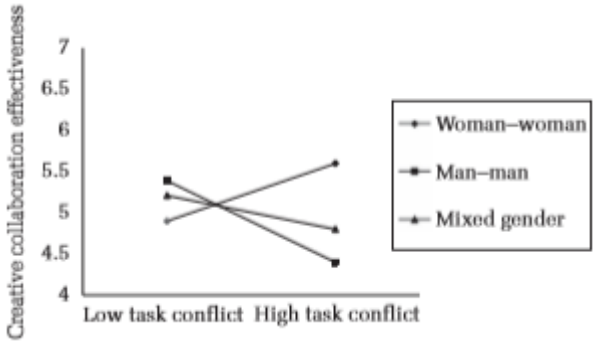
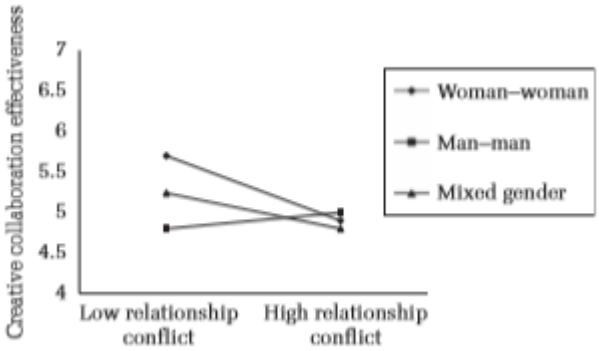


FIGURE 4b Effects of Relationship Conflict on Creative Collaboration Effectiveness Based on Gender Compositions (Study 2)



Mediation Analyses

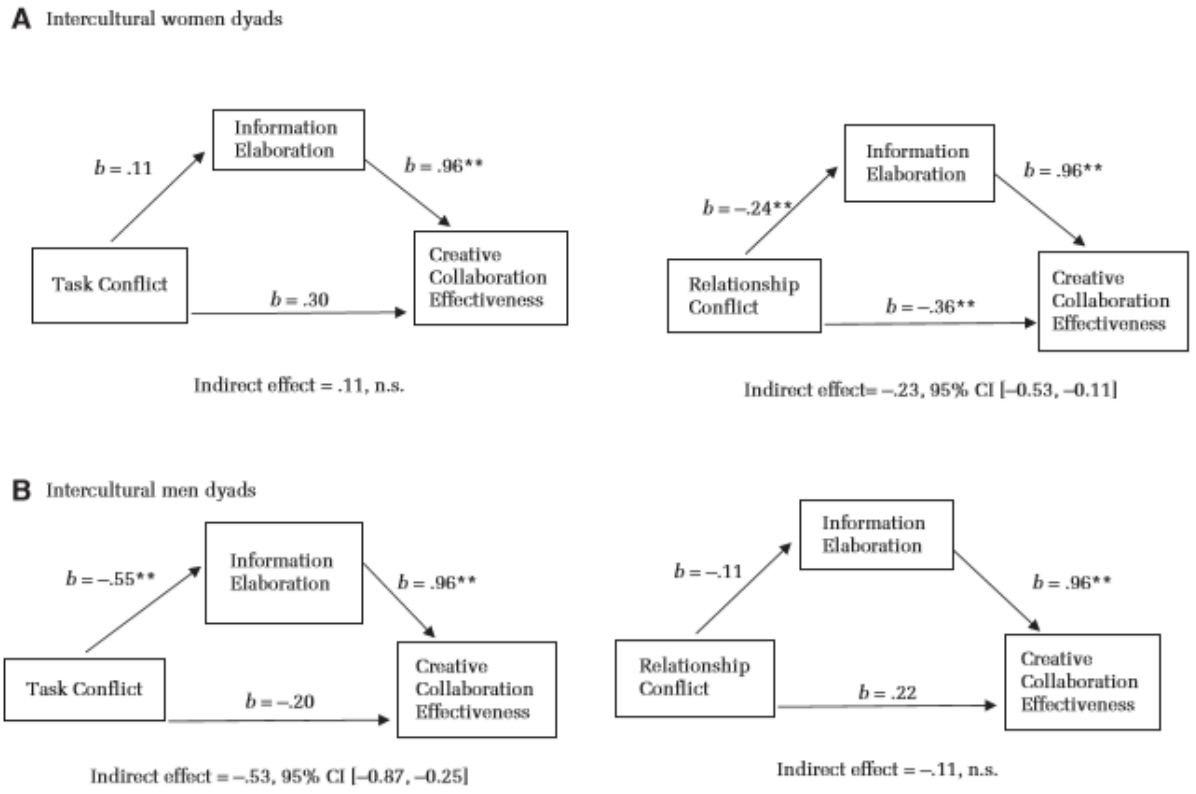
We next tested for the mediation role of information elaboration (Hypotheses 2 and 4). The results presented in Model 4 of Table 5 show that information elaboration was positively associated with creative collaboration (b = .96, SE = 0.08, t = 12.76, p < .01). In Model 5, we added the control variables and the results remained unchanged. We then regressed the key predictors and their interaction terms on information elaboration. The results are presented in Table 5, Models 6 to 8. In Model 6, we first included task and relationship conflict and gender composition dummy variables (WM and XM). We found that task conflict and relationship conflict were both negatively associated with information elaboration (task conflict: b = −.24, SE = 0.09, t = −2.80, p < .01; relationship conflict: b = −.19 SE = 0.07, t = −2.74, p < .01). There was more information elaboration in women dyads than in men dyads (b = .22, SE = 0.10, t = 2.17, p = .03). We next added the two-way interactions to Model 7. We found that task conflict interacted with WM to predict information elaboration (b = .67, SE = 0.25, t = 2.67, p < .01). Finally, we added the control variables in Model 8. The results remained unchanged. Functional diversity and creative collaboration frequency were positively associated with information elaboration (functional diversity: b = .14, SE = 0.07, t = 2.17, p = .03; collaboration frequency: b = .26, SE = 0.05, t = 5.59, p < .01).

Simple slope analyses indicated that, for men dyads, task conflict significantly decreased information elaboration (b = −.55, SE = 0.19, t = −3.00, p < .001), whereas, for women dyads, task conflict increased information elaboration but this effect was not significant (b = .11, n.s.). For mixed-gender dyads, the effect was marginally negative (b = −.23, SE = 0.13, t = −1.75, p = .08). Using bootstrapping procedures with 5,000 iterations, we found that, for men dyads, information elaboration partially mediated the effect from task conflict to creative collaboration effectiveness (indirect effect = −.53, SE = 0.16, 95% CI [—0.87, —0.25]—excludes 0). However, information elaboration did not

mediate the effect for women dyads, although the effect was in the expected direction (indirect effect = .11, n.s.). Hence there is partial support for Hypothesis 2.

Next, we tested whether information elaboration mediated the interactive effect of relationship conflict and dyad gender on creative collaboration effectiveness (H4). First, we assessed whether relationship conflict interacted with gender compositions to predict information elaboration. The results shown in Model 7 of Table 5 indicate that gender composition (WM) did not moderate the effect of relationship conflict on information elaboration ($b = -.12$, n.s.). This finding implies that first stage moderation is not supported. Nevertheless, we tested the conditional indirect effect of relationship conflict for specific dyads. We found that information elaboration mediates the effect of relationship conflict on creative collaboration effectiveness for women dyads (indirect effect = −.23, *SE* = 0.11, 95% CI [—0.53, —0.11]) and mixed-gender dyads (indirect effect = −.20, *SE* = 0.12, 95% CI [—0.48, —0.03]), but not for men dyads (indirect effect = −.11, n.s.). However, these mediation effects were not significantly different from each other. Overall, Hypotheses 2 and 4 are partially supported. Information elaboration mediates the effect of task conflict on creative collaboration effectiveness for men dyads but not for women dyads. Information elaboration mediates the effect of relationship conflict on creative collaboration effectiveness for intercultural women but not for men dyads. These effects are depicted in Figure 5.

FIGURE 5 Mediation Analyses for Effects of Information Elaboration (Study 2)



Supplemental Analyses

To provide additional richness to the above findings, we further examined the role of cultural distance between the collaborating partners in a dyad (see Appendix B). Cultural distance between the collaborators appears to accentuate the *negative* effects of intercultural task and relationship conflict on creative collaboration effectiveness.

DISCUSSION

In this paper, we argue that the gender of intercultural dyads influences how conflict is managed, shedding light on when and how intercultural collaboration translates into creativity benefits. Studies 1 and 2 consistently found that task conflict increases creative collaboration effectiveness for women dyads but decreases creative collaboration effectiveness for men dyads. Study 2 found that relationship conflict has a general negative effect on creative collaboration effectiveness, but this effect is stronger for women dyads than men dyads.

There is evidence from both studies that information elaboration mediates the negative effect of intercultural task conflict on creative collaboration for men dyads. Information elaboration mediated the positive effect of intercultural task conflict on creative collaboration for women dyads only in Study 1, but not in Study 2; the patterns of result are nevertheless consistent in both studies. Information elaboration also mediated the negative effect of intercultural relationship conflict on creative collaboration (Study 2), but only for women dyads. Furthermore, we found in Study 1 that the interactive effect of dyad gender and intercultural task conflict on information elaboration and creative collaboration effectiveness is due to differential conflict management approaches for intercultural women and men dyads (Appendix A). Women dyads adopt more integrative and less dominant conflict management approaches than men dyads, resulting in greater sharing and exchanging of ideas and hence collaborative creativity.

Theoretical Contributions

This research makes several theoretical contributions. First, we shed light on why intercultural creative collaboration does not always lead to creative benefits even though the parties have access to non-redundant ideas and perspectives. We advance a contingency model wherein the creativity success of intercultural collaboration depends on the gender of the collaborating dyad. Previous research on when multicultural interactions help or hurt creativity have focused on the degree of cultural differences (Chua, Roth, & Lemoine, 2015; Godart et al., 2015) or individual differences such as openness to experience (Leung & Chiu, 2008) and cultural intelligence (Chua et al., 2012). Gender, a chronically salient social category and informative social cue, has largely been overlooked in these investigations. The current research addresses this gap by considering the conflict management approaches[12] of women and men dyads and their impact on translating intercultural conflict to creativity. Our findings highlight that, to fully understand how multicultural interactions can be harnessed for creativity, gender dynamics within these interactions cannot be ignored.

[12] Dyad gender is unlikely to be simply a proxy for conflict management approaches. Rather, it is an antecedent to differential conflict management approaches in same-gender intercultural collaborations. As much as conflict management approaches can be individually trained, we found, in Study 1, that the gender of a given dyad is a significant predictor. Specifically, women adopt more integrating approaches and less dominating approaches when working with other foreign women compared to men working with other foreign men. Conflict management approaches themselves (independent of gender) do not produce the effects we found in the present research.

Second, our research expands current understanding of how conflict affects creative performance. Early studies on task and relationship conflicts largely focused on identifying contingencies and situations that moderate the link between conflict and performance as elaborated in the conflict-outcome moderated model (Jehn & Bendersky, 2003). For example, Farh, Lee, and Farh (2010) found an inverted U-shaped relationship between team task conflict and creativity in the early (but not late) stages of team projects.[13] However, the categorization-elaboration model argues that conflict itself is neither necessary nor conducive for creativity (van Knippenberg, 2017); rather, it is the deep-level processing of divergent viewpoints that matters. Our research integrates the information processing perspective of the categorization-elaboration model with the conflict-outcome moderated model by identifying information elaboration as the key mechanism through which intercultural task and relationship conflict fosters or hinders creative performance under different gender compositions of dyadic collaborations. We showed that conflict can help or hurt creativity in specific conditions because of how conflict is managed. Our research answers Farh et al. (2010)'s call to better understand *how* conflict is handled to reap creativity during collaborative work.

It is interesting to note that information elaboration mediates the effect of intercultural conflict on creative collaboration effectiveness in some dyadic gender compositions but not others. For instance, the negative effect of intercultural relationship conflict on creative collaboration is mediated by information elaboration for women dyads but not men dyads. Our interpretation is that information elaboration appears to play a critical role in situations in which intercultural conflict has an especially strong negative influence on collaboration. Specifically, in the case of intercultural men dyads wherein task conflict is not productively managed, information elaboration is reduced, dampening creativity collaboration effectiveness. In intercultural women dyads, relationship conflict distracts the collaborators from the task at hand, reducing information elaboration and creative collaboration effectiveness. Thus, our work provides insights into when information elaboration would function as a mechanism linking cultural diversity and creativity. In collaborations in which intercultural conflict is not deftly handled by the parties involved, the role of information elaboration becomes especially salient.

Third, we contribute to the growing knowledge on gender and creativity. Prior research has investigated whether there are any differences between men and woman in creative performance and found no reliable gender differences (Baer & Kaufman, 2008). More recent work has examined how men and women are perceived as innovators (Proudfoot et al., 2015). While insightful, these studies exclusively focused on the effects of gender on creativity at the individual level. To the extent that creativity is often collaborative in nature, research on gender and creativity needs to consider not only the gender of the innovator but also the gender of the innovator's collaborator. We contribute to this growing body of work on gender and creativity by showing how women and men differentially engage in same-gender intercultural creative collaboration. Although not a focus of our current research, we additionally found interesting results regarding mixed-gender dyads: the effects of intercultural task conflict in mixed-gender dyads mirror those in men dyads whereas the effects of intercultural relationship conflict mirror those in women dyads. These results are consistent with Baer et al. (2014)'s finding that, when facing intergroup competition, mixed-gender groups reacted in the same manner as all-men groups. In our case, the competitive approach that the man in a mixed-gender dyad takes during task conflict resolution could have derailed information elaboration. Conversely, in situations of mixed-gender relationship conflict, the woman's focus on relational issues could have distracted the dyad from the task at hand. Our research therefore highlights that, to fully understand the effects of gender on creativity and innovation, it is important to consider not only how men and women innovate individually but also the gender of their collaborators.

[13] We did not find any inverted U-shaped effect in our dyadic data. The squared term of intercultural task conflict was not significantly associated with creative collaboration effectiveness ($b = -.17$, n.s.) in Study 2 or expert-rated creativity for intercultural dyads ($b = -.11$, n.s.) in Study 1. One interpretation could be that the detrimental effects of "too much" conflict is less severe in dyads consisting of two persons compared to teams of about seven, as were featured in Farh et al.'s (2010) sample.

Limitations and Future Research

As with all research, the current studies have certain limitations. First, although we were able to identify the specific approaches used to manage task conflict in Study 1, there was less concrete evidence regarding how relationship conflict was managed. The short interactions in Study 1 did not allow relationship conflict to meaningfully arise; the interpersonal tensions we observed might have been superficial ones. Future research could attempt to measure how men versus women handle relationship conflict in more realistic organizational settings.

Second, dyad gender, besides moderating the conflict and creative collaboration link, could also have an impact on the degree of conflict that arises. We acknowledge that gender can potentially influence both (a) levels or types of conflict formation and (b) how conflict is handled once it is formed. Our research focused on the latter—that is, how the presence of intercultural conflict might translate into creative collaboration, instead of how the intercultural conflict arises in the first place. Nevertheless, we conducted further analyses on the relationship between gender and levels of relationship conflict and task conflict. We did not find any consistent pattern concerning how dyad gender influences conflict level.[14] Research by Hoogendoorn, Oosterbeek, and van Praag (2013) also reported null correlation between the gender composition of business teams and any conflict experienced. Thus, there is an overall lack of consistent evidence that gender composition of dyads has direct impact on conflict emergence. Future research could examine how conflict management behaviors may feed back into intercultural conflict. For example, in men's intercultural collaborations, because both parties conform to male role expectations, a competitive way of handling disagreements from each other might generate more subsequent disagreements. Whereas, in women's intercultural collaborations, because both parties conform to women role expectations, an integrative way of handling different points of views may encourage more integration and learning, reducing further disagreements. We believe future research exploring these spiral relationships will help gain insights into how and when conflict resolutions spill over to collaboration processes.

Third, a limitation of Study 2 is that all variables were collected at the same time point for each participant, potentially increasing the risk of common method variance. However, our variables from Study 2 were collected from multiple sources: the focal employee and his or her coworker. Focal employees, who were contacted first, responded to the surveys at an earlier time point than their coworkers. Responses from both individuals were aggregated to and then analyzed at the dyad level, alleviating single source and single time point concerns. In addition, common method variance cannot explain the interaction effects on which all our hypotheses are based (Siemsen, Roth, & Oliveira, 2010).

Fourth, our research focused on information elaboration as the primary mechanism linking intercultural conflict and creative collaboration effectiveness. However, one might consider other mechanisms. For example, an alternative mechanism could be trust. Indeed, Chua et al. (2012) found that trust mediates the effect of cultural intelligence on intercultural creative collaboration. Future research could examine how trust develops as a function of the gender of a collaborating intercultural dyad, leading to differential levels of collaborative creativity.

[14] In Study 1, gender composition did not predict levels of task conflict (video coded), $F(2, 194) = 2.23$, $p = .11$, or relationship conflict (video coded), $F(2, 194) = .04$, $p = .96$. In Study 2, we found that gender composition significantly predicted task conflict perception at the dyadic level, $F(2, 136) = 11.11$, $p < .01$; simple contrasts showed that there was a significant difference (mean difference = −0.47, $p < .01$) between the task conflict of women (mean = 1.93, $SD = 0.57$) and men dyads (mean = 2.40, $SD = 0.65$) and a significant difference (mean difference = −0.64, $p < .01$) between the task conflict of women and mixed-gender dyads (mean = 2.57, $SD = 0.77$). However, there was no significant difference (mean difference = 0.17, $p = .26$) between mixed-gender and men dyads. In addition, in Study 2, gender composition did not significantly affect relationship conflict perceptions, $F(2, 136) = 1.60$, $p = .21$. Overall, the effect of gender on conflict emergence was mixed.

Lastly, the current research focuses on intercultural creative collaborations. Would the gender effects hold for same culture collaborations? Study 1 found that the effects regarding task conflict held only for intercultural collaborations but not intracultural collaborations; this is likely because there might not be sufficient informational diversity and opinion differences in same-culture collaborations for task conflict to arise (the correlation between intercultural condition and coded task conflict was .15, $p < .05$—see Table 1). It is also possible that shared cultural norms for conflict management reduced the need for the parties involved to rely on gender as a social cue for handling conflict. Nevertheless, it is plausible that some of the effects we found regarding relationship conflict might still be relevant to same-culture collaborations. Future research could examine whether women's intracultural creative collaborations are more negatively affected by relationship conflict than men's intracultural creative collaborations.

Practical Implications

As the business environment becomes more culturally diverse, intercultural creative collaborations will be inevitable. Our findings suggest that there are opportunities and challenges for both men and women employees when collaborating across cultures to do creative work. Specifically, women dyads appear to be more adept at translating intercultural task conflict into creative benefits than men dyads. However, women dyads are also especially derailed if intercultural relationship conflict is high. Thus, when assembling intercultural dyads for creative projects, managers need to carefully consider these opportunities and challenges. One suggestion is for women dyads to engage in developing good relationships before engaging in intercultural creative collaboration, as that approach might mitigate the downsides of relationship conflict. For men dyads, the good news is that they seem relatively less distracted by relationship conflict. Equally, men could develop more cooperative conflict management approaches so that they too can harness the creativity benefits of intercultural task conflict.

CONCLUSION

Innovation and gender equality have been identified as two of the "grand challenges" in the current business world (George, Howard-Grenville, Joshi, & Tihanyi, 2016). In the present research, we linked these two grand challenges, presenting an early effort toward building a theory of how gender dynamics influence cross-cultural innovation. We hope our work can stimulate future theorizing about gender and innovation in organizations and societies.

Acknowledgments

We would like to thank the editor and three anonymous reviewers for their constructive suggestions and comments. The paper has improved significantly as a result of the review process. Special thanks also go to colleagues and friends who gave useful comments regarding early versions of this paper: Cheng Chiying, Marko Pitesa, Ronald Bledow, Abhijeet Vadera, and Xi Zou.

Both authors contributed equally to this research. This research was conducted with the support of the Singapore Ministry of Education's Social Science Research Thematic Grant (MOE2017-SSRTG-042).

REFERENCES

Amabile, T. M. 1983. The social psychology of creativity: A componential conceptualization. **Journal of Personality and Social Psychology**, 45: 357–376.

Amabile, T. M. 1988. A model of creativity and innovation in organizations. **Research in Organizational Behavior**, 10: 123–167.

Ang, S., Van, D. L., Koh, C., Ng, K. Y., Templer, K. J., Tay, C., & Chandrasekar, N. A. 2007. Cultural intelligence: Its measurement and effects on cultural judgment and decision making, cultural adaptation and task performance. **Management and Organization Review**, 3: 335–371.

Baer, J., & Kaufman, J. C. 2008. Gender differences in creativity. **Journal of Creative Behavior**, 42: 75–105.

Baer, M., Vadera, A. K., Leenders, R. T. J., & Oldham, G. R. 2014. Intergroup competition as double-edged sword: How sex composition regulates the effects of competition on group creativity. **Organization Science**, 25: 892–908.

Baumeister, R. F., & Sommer, K. L. 1997. What do men want? Gender differences and two spheres of belongingness: Comment on Cross and Madson (1997). **Psychological Bulletin**, 122: 38–44.

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.

Bell, S. T., Villado, A. J., Lukasik, M. A., Belau, L., & Briggs, A. L. 2011. Getting specific about demographic diversity variable and team performance relationships: A meta-analysis. **Journal of Management**, 37: 709–743.

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

Bowles, H., & Flynn, F. 2010. Gender and persistence in negotiation: A dyadic perspective. **Academy of Management Journal**, 53: 769–787.

Boyer, M. A., Urlacher, B., Hudson, N. F., Niv-Solomon, A., Janik, L. L., Butler, M. J., Brown, S. W., & Ioannou, A. 2009. Gender and negotiation: Some experimental findings from an international negotiation simulation. **International Studies Quarterly**, 53: 23–47.

Brahnam, S. D., Margavio, T. M., Hignite, M. A., Barrier, T. B., & Chin, J. M. 2005. A gender-based categorization for conflict resolution. **Journal of Management Development**, 24: 197–208.

Brescoll, V. L., & Uhlmann, E. L. 2008. Can an angry woman get ahead? Status conferral, gender, and expression of emotion in the workplace: Research article. **Psychological Science**, 19: 268–275.

Brett, J. M., & Okumura, T. 1998. Inter-and intracultural negotiation: US and Japanese negotiators. **Academy of Management Journal**, 41: 495–510.

Burt, R. S. 2004. Structural holes and good ideas. **American Journal of Sociology**, 110: 349–399.

Chua, R. Y. J. 2018. Innovating at cultural crossroads: How multicultural social networks promote idea flow and creativity. **Journal of Management**, 44: 1119–1146.

Chua, R. Y. J., Morris, M. W., & Mor, S. 2012. Collaborating across cultures: Cultural metacognition and affect-based trust in creative collaboration. **Organizational Behavior and Human Decision Processes**, 118: 116–131.

Chua, R. Y. J., Roth, Y., & Lemoine, J. F. 2015. The impact of culture on creativity: How cultural tightness and cultural distance affect global innovation crowdsourcing work. **Administrative Science Quarterly**, 60: 189–227.

Curhan, J. R., Neale, M. A., Ross, L., & Rosencranz-Engelmann, J. 2008. Relational accommodation in negotiation: Effects of egalitarianism and gender on economic efficiency and relational capital. **Organizational Behavior and Human Decision Processes**, 107: 192–205.

Dahlin, K. B., Weingart, L. R., & Hinds, P. 2005. Team diversity and information use. **Academy of Management Journal**, 48: 1107–1123.

Davis, M. H., Capobianco, S., & Kraus, L. A. 2010. Gender differences in responding to conflict in the workplace: Evidence from a large sample of working adults. **Sex Roles**, 63: 500–514.

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.

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.

Deaux, K., & Lafrance, M. 1998. Gender. In D. T. GilbertS. T. FiskeG. Lindzey (Eds.), **The handbook of social psychology**: 788–827. New York, NY: McGraw-Hill.

Derfler-Rozin, R., Baker, B., & Gino, F. 2018. Compromised ethics in hiring processes? How referrers' power affects employees' reactions to referral practices. **Academy of Management Journal**, 61: 615–636.

Dezso, C. L., & Ross, D. G. 2012. Does female representation in top management improve firm performance? A panel data investigation. **Strategic Management Journal**, 33: 1072–1089.

Dorfman, P. W., & Howell, J. P. 1988. Dimensions of national culture and effective leadership patterns: Hofstede revisited. In R. FarmerE. McGoun (Eds.), **Advances in international comparative management**, vol. 3: 127–150. London, U.K.: JAI Press.

Eagly, A. H. 1987. **Sex differences in social behavior: A social role interpretation**. Hoboken, NJ: Psychology Press.

Eagly, A. H., Diekman, A. B., Johannesen-Schmidt, M. C., & Koenig, A. M. 2004. Gender gaps in sociopolitical attitudes: A social psychological analysis. **Journal of Personality and Social Psychology**, 87: 796–816.

Eagly, A. H., & Wood, W. 2013. The nature–nurture debates: 25 years of challenges in understanding the psychology of gender. **Perspectives on Psychological Science**, 8: 340–357.

Eagly, A. H., Wood, W., & Diekman, A. 2000. Social role theory of sex differences and similarities: A current appraisal. In T. EckesH. Trautner (Eds.), **The developmental social psychology of gender**: 123–174. Mahwah, NJ: Lawrence Erlbaum.

Ellemers, N. 2018. Gender stereotypes. **Annual Review of Psychology**, 69: 275–298.

Elmore, K. C., & Luna-Lucero, M. 2016. Light bulbs or seeds? How metaphors for ideas influence judgments about genius. **Social Psychological & Personality Science**, 8: 200–208.

Farh, J.-L., Lee, C., & Farh, C. I. C. 2010. Task conflict and team creativity: A question of how much and when. **Journal of Applied Psychology**, 95: 1173–1180.

Fiske, S. 1998. Stereotyping, prejudice, and discrimination. In T. GilbertS. Fiske (Eds.), **Handbook of social psychology** (4th ed.): 357–411. Boston, MA: McGraw-Hill.

Fiske, S. T. 2017. Prejudices in cultural contexts: Shared stereotypes (gender, age) versus variable stereotypes (race, ethnicity, religion). **Perspectives on Psychological Science**, 12: 791–799.

Florea, N. B., Boyer, M. A., Brown, S. W., Butler, M. J., Hernandez, M., Weir, K., Meng, L., Johnson, P. R., Lima, C., & Mayall, H. J. 2003. Negotiating from Mars to Venus: Gender in simulated international negotiations. **Simulation & Gaming**, 34: 226–248.

Gardner, H. 2017. **Smart collaboration: How professionals and their firms succeed by breaking down silos**. Boston, MA: Harvard Business Review Press.

George, G., Howard-Grenville, J., Joshi, A., & Tihanyi, L. 2016. Understanding and tackling societal grand challenges through management research. **Academy of Management Journal**, 59: 1880–1895.

Giambatista, R. C., & Bhappu, A. D. 2010. Diversity's harvest: Interactions of diversity sources and communication technology on creative group performance. **Organizational Behavior and Human Decision Processes**, 111: 116–126.

Gibson, C. B., & Gibbs, J. L. 2006. Unpacking the concept of virtuality: The effects of geographic dispersion, electronic dependence, dynamic structure, and national diversity on team innovation. **Administrative Science Quarterly**, 51: 451–495.

Glick, P., Fiske, S. T., Mladinic, A., Saiz, J. L., Abrams, D., Masser, B., Adetoun, B., Osagie, J. E., Akande, A., Alao, A., Brunner, A., Willemsen, T. M., Chipeta, K., Dardenne, B., Dijksterhuis, A., Wigboldus, D., Eckes, T., Six-Materna, I., Expósito, F., Moya, M., Foddy, M., Kim, H. J., Lameiras, M., Sotelo, M. J., Mucchi-Faina, A., Romani, M., Sakalli, N., Udegbe, B., Yamamoto, M., Ui, M., Ferreira, M. C., & López, L. W. 2000. Beyond prejudice as simple antipathy: Hostile and benevolent sexism across cultures. **Journal of Personality and Social Psychology**, 79: 763–775.

Godart, F. C., Maddux, W. W., Shipilov, A. V., & Galinsky, A. D. 2015. Fashion with a foreign flair: Professional experiences abroad facilitate the creative innovations of organizations. **Academy of Management Journal**, 58: 195–220.

Goncalo, J. A., Chatman, J. A., Duguid, M. M., & Kennedy, J. A. 2015. Creativity from constraint? How the political correctness norm influences creativity in mixed-sex work groups. **Administrative Science Quarterly**, 60: 1–30.

Guadagno, R. E., & Cialdini, R. B. 2007. Gender differences in impression management in organizations: A qualitative review. **Sex Roles**, 56: 483–494.

Guilford, J. 1950. Creativity. **American Psychologist**, 5: 444–454.

Hajro, A., Gibson, C. B., & Pudelko, M. 2017. Knowledge exchange processes in multicultural teams: Linking organizational diversity climates to teams' effectiveness. **Academy of Management Journal**, 60: 345–372.

Halpern, J. J., & Parks, J. M. 1996. Vive la difference: Differences between males and females in process and outcomes in a low-conflict negotiation. **International Journal of Conflict Management**, 7: 45–70.

Harrison, D. a., & Klein, K. J. 2007. What's the difference? Diversity constructs as separation, variety, or disparity in organizations. **Academy of Management Review**, 32: 1199–1228.

Hayes, A. F., & Preacher, K. J. 2014. Statistical mediation analysis with a multicategorical independent variable. **British Journal of Mathematical & Statistical Psychology**, 67: 451–470.

Heilman, M. E., & Chen, J. J. 2005. Same behavior, different consequences: Reactions to men's and women's altruistic citizenship behavior. **Journal of Applied Psychology**, 90: 431–441.

Hoever, I. J., Zhou, J., & van Knippenberg, D. 2018. Different strokes for different teams: The contingent effects of positive and negative feedback on the creativity of informationally homogeneous and diverse teams. **Academy of Management Journal**, 61: 2159–2181.

Hoffman, E. 1959. Homogeneity of member personality and its effect on group problem-solving. **Journal of Abnormal and Social Psychology**, 58: 27–32.

Holt, J. L., & DeVore, C. J. 2005. Culture, gender, organizational role, and styles of conflict resolution: A meta-analysis. **International Journal of Intercultural Relations**, 29: 165–196.

Hoogendoorn, S., Oosterbeek, H., & van Praag, M. 2013. The impact of gender diversity on evidence from a field experiment the performance of business teams. **Organization Science**, 59: 1514–1528.

Hülsheger, U. R., Anderson, N., & Salgado, J. F. 2009. Team-level predictors of innovation at work: A comprehensive meta-analysis spanning three decades of research. **Journal of Applied Psychology**, 94: 1128–1145.

Humphrey, S. E., Aime, F., Cushenbery, L., Hill, A. D., & Fairchild, J. 2017. Team conflict dynamics: Implications of a dyadic view of conflict for team performance. **Organizational Behavior and Human Decision Processes**, 142: 58–70.

Jackson, S. E., Joshi, A., & Erhardt, N. L. 2003. Recent research on team and organizational diversity: SWOT analysis and implications. **Journal of Management**, 29: 801–830.

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

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

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.

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.

Keener, E., & Strough, J. N. 2017. Having and doing gender: Young adults' expression of gender when resolving conflicts with friends and romantic partners. **Sex Roles**, 76: 615–626.

Kenny, D., Kashy, D., & Cook, W. 2006. **Dyadic data analysis**. New York, NY: Guilford Press.

Kilmann, R. H., & Thomas, K. W. 1977. Developing a forced-choice measure of conflict-handling behavior: The "MODE" instrument. **Educational and Psychological Measurement**, 37: 309–325.

Klein, K. J., & Kozlowski, S. W. J. 2000. **Multilevel theory, research and methods in organizations: Foundations, extensions, and new directions**. San Francisco, CA: Jossey-Bass.

Knight, A. P., & Baer, M. 2014. Get up, stand up: The effects of a non-sedentary workspace on information elaboration and group performance. **Social Psychological & Personality Science**, 5: 910–917.

Kurzban, R., Tooby, J., & Cosmides, L. 2001. Can race be erased? Coalitional computation and social categorization. **Proceedings of the National Academy of Sciences of the United States of America**, 98: 15387–15392.

Lee, S. Y., Kesebir, S., & Pillutla, M. M. 2016. Gender differences in response to competition with same-gender coworkers: A relational perspective. **Journal of Personality and Social Psychology**, 110: 869–886.

Leung, A. K. Y., & Chiu, C. Y. 2008. Interactive effects of multicultural experiences and openness to experience on creative potential. **Creativity Research Journal**, 20: 376–382.

Lovelace, K., Shapiro, D. L., & Wiengart, L. R. 2001. Maximizing cross-functional new product teams' innovativeness and constraint adherence. **Academy of Management Journal**, 44: 779–783.

Loyd, D. L., Wang, C. S., Phillips, K. W., & Lount, R. B. 2013. Social category diversity promotes premeeting elaboration: The role of relationship focus. **Organization Science**, 24: 757–772.

Maccoby, E. E. 1990. Gender and relationships: A developmental account. **American Psychologist**, 45: 513–520.

Maddux, W. W., & Galinsky, A. D. 2009. Cultural borders and mental barriers: The relationship between living abroad and creativity. **Journal of Personality and Social Psychology**, 96: 1047–1061.

Makela, K., Kalla, H. K., & Piekkari, R. 2007. Interpersonal similarity as a driver of knowledge sharing within multinational corporations. **International Business Review**, 16: 1–22.

Milliken, F. J., & Martins, L. L. 1996. Searching for common treads: Understanding the multiple effects of in organizational diversity. **Academy of Management Review**, 21: 402–433.

Moreland, R. L. 2010. Are dyads really groups? **Small Group Research**, 41: 251–267.

Morris, M. W., Williams, K. Y., Leung, K., Larrick, R., Mendoza, M. T., Bhatnagar, D., Li, J., Kondo, M., Luo, J.-L., & Hu, J.-C. 1998. Conflict management style: Accounting for cross-national differences. **Journal of International Business Studies**, 29: 729–747.

Moskowitz, D. S., Suh, E. J., & Desaulniers, J. 1994. Situational influences on gender differences in agency and communion. **Journal of Personality and Social Psychology**, 66: 753–761.

Nemeth, C. J., Personnaz, B., Personnaz, M., & Goncalo, J. A. 2004. The liberating role of conflict in group creativity: A study in two countries. **European Journal of Social Psychology**, 34: 365–374.

Olekalns, M. 2013. Natural-born peacemakers? Gender and the resolution of conflict. In P. Coleman M. Deutsch E. Marcus J. Dillard (Eds.), **The handbook of conflict resolution: Theory and practice** (3rd ed.): 335–384. San Francisco, CA: Jossey-Bass.

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

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.

Perry-Smith, J. E. 2006. Social yet creative: The role of social relationships in facilitating individual creativity. **Academy of Management Journal**, 49: 85–101.

Pieterse, N. A., van Knippenberg, D., & van Dierendonck, D. 2013. Cultural diversity and team performance: The role of team member goal orientation. **Academy of Management Journal**, 56: 782–804.

Proudfoot, D., Kay, A. C., & Koval, C. Z. 2015. A gender bias in the attribution of creativity: Archival and experimental evidence for the perceived association between masculinity and creative thinking. **Psychological Science**, 26: 1751–1761.

Rahim, M. A. 1983. A measure of styles of handling interpersonal conflict. **Academy of Management Journal**, 26: 368–376.

Rahim, M. 2010. **Managing conflict in organizations** (4th ed.). New Brunswick, NJ: Transaction Publishers.

Rietzschel, E. F., Nijstad, B. A., & Stroebe, W. 2007. Relative accessibility of domain knowledge and creativity: The effects of knowledge activation on the quantity and originality of generated ideas. **Journal of Experimental Social Psychology**, 43: 933–946.

Rose, A. J., & Rudolph, K. D. 2006. A review of sex differences in peer relationship processes: Potential trade-offs for the emotional and behavioral development of girls and boys. **Psychological Bulletin**, 132: 98–131.

Rouse, E. 2020. Where you end and I begin: Understanding intimate co-creation. **Academy of Management Review**, 45: 181–204.

Samba, C., van Knippenberg, D., & Miller, C. C. 2018. The impact of strategic dissent on organizational outcomes: A meta-analytic integration. **Strategic Management Journal**, 39: 379–402.

Sarala, R. M., & Vaara, E. 2010. Cultural differences, convergence, and crossvergence as explanations of knowledge transfer in international acquisitions. **Journal of International Business Studies**, 41: 1365–1390.

Shenk, J. 2014. **Power of two: How relationships drive creativity**. New York, NY: Houghton Mifflin Harcourt.

Shenkar, O. 2001. Cultural distance revisited: Towards a more rigorous conceptualization and measurement of cultural differences. **Journal of International Business Studies**, 32: 519–535.

Siemsen, E., Roth, A., & Oliveira, P. 2010. Common method bias in regression models with linear, quadratic, and interaction effects. **Organizational Research Methods**, 13: 456–476.

Skilton, P. F., & Dooley, K. J. 2010. The effects of repeat collaboration on creative abrasion. **Academy of Management Review**, 35: 118–134.

Sosa, M. E. 2011. Where do creative interactions come from? The role of tie content and social networks. **Organization Science**, 22: 1–21.

Stahl, G. K., Maznevski, M. L., Voigt, A., & Jonsen, K. 2010. Unraveling the effects of cultural diversity in teams: A meta-analysis of research on multicultural work groups. **Journal of International Business Studies**, 41: 690–709.

Stangor, C., Lynch, L., Duan, C., & Glass, B. 1992. Categorization of individuals on the basis of multiple social features. **Journal of Personality and Social Psychology**, 62: 207–218.

Strough, J., & Berg, C. A. 2000. Goals as a mediator of gender differences in high-affiliation dyadic conversations. **Developmental Psychology**, 36: 117–125.

Suh, E. J., Moskowitz, D. S., Fournier, M. A., & Zuroff, D. C. 2004. Gender and relationships: Influences on agentic and communal behaviors. **Personal Relationships**, 11: 41–59.

Taggar, S. 2002. Individual creativity and group ability to utilize individual creative resources: A multilevel model. **Academy of Management Journal**, 45: 315–330.

Tajfel, H., & Turner, J. C. 1986. The social identity theory of intergroup behavior. In S. WorchelW. G. Austin (Eds.), **Psychology of intergroup relations**. Chicago, IL: Nelson-Hall.

Thomas, K. W., Thomas, G. F., & Schaubhut, N. 2008. Conflict styles of men and women at six organization levels. **International Journal of Conflict Management**, 19: 148–166.

Tröster, C., & van Knippenberg, D. 2012. Leader openness, nationality dissimilarity, and voice in multinational management teams. **Journal of International Business Studies**, 43: 591–613.

Tung, R. L. 2008. The cross-cultural research imperative: The need to balance cross-national and intra-national diversity. **Journal of International Business Studies**, 39: 41–46.

van Knippenberg, D. L. 2017. Team innovation. **Annual Review of Organizational Psychology and Organizational Behavior**, 4: 211–233.

van Knippenberg, D., De Dreu, C. K. W., & Homan, A. C. 2004. Work group diversity and group performance: An integrative model and research agenda. **Journal of Applied Psychology**, 89: 1008–1022.

van Knippenberg, D., Haslam, S. A., & Platow, M. J. 2007. Unity through diversity: Value-in-diversity beliefs, work group diversity, and group identification. **Group Dynamics**, 11: 207–222.

Von Glinow, M. A., Shapiro, D. L., & Brett, J. M. 2004. Can we talk, and should we? Managing emotional conflict in multicultural teams. **Academy of Management Review**, 2: 578–592.

Weingart, L. R., Behfar, K. J., Bendersky, C., Todorova, G., & Jehn, K. A. 2015. The directness and oppositional intensity of conflict expression. **Academy of Management Review**, 40: 235–262.

West, M. A. 2002. Sparkling fountains or stagnant ponds: An integrative model of creativity and innovation implementation in work groups. **Applied Psychology**, 51: 355–387.

Williams, K. D. 2010. Dyads can be groups (and often are). **Small Group Research**, 41: 268–274.

Williams, K. Y., & O'Reilly, C. A. 1998. Demography and diversity in organizations: A review of 40 years of research. **Research in Organizational Behavior**, 20: 77–140.

Woolley, A. W., Chabris, C. F., Pentland, A., Hashmi, N., & Malone, T. W. 2010. Evidence for a collective intelligence factor in the performance of human groups. **Science**, 330: 686–688.

Yuki, M., & Yokota, K. 2009. The primal warrior: Outgroup threat priming enhances intergroup discrimination in men but not women. **Journal of Experimental Social Psychology**, 45: 271–274.

Zarate, M. A., & Smith, E. R. 1990. Person categorization and stereotyping. **Social Cognition**, 8: 161–185.

Zhou, J., & Hoever, I. J. 2014. Research on workplace creativity: A review and redirection. **Annual Review of Organizational Psychology and Organizational Behavior**, 1: 333–359.

APPENDIX A: CONFLICT MANAGEMENT APPROACHES (STUDY 1)

Throughout our theory development and empirical investigation, we focused on the social role account of gender differences in conflict management as the main explanation for our hypotheses on task conflict. To provide evidence for this account, we coded the video data in Study 1 for conflict management approaches during task conflict. We identified five conflict management approaches at the dyadic level drawing on the classic conflict management frameworks; specifically, Blake and Mouton's (1964) conflict management grid, Kilmann and Thomas's (1977) conflict management of difference (MODE) approach, and Rahim's (1983) model of conflict management styles. The five conflict management approaches were as follows: (1) "dominating," or imposing one's opinion on the other party; (2) "integrating," defined as seeking a solution that satisfies both parties; (3) "obliging," or giving in to the other party's opinion; (4) "avoiding," or moving away from the conflicted point without a solution; and (5) compromising, a mutual concession.

Measures

We presented the definition of each of the conflict management approaches to three RAs. We then asked them to watch *all* the task conflict episodes in Study 1 and rate, on a scale from 1 ("*not at all*") to 7 ("*to a great extent*"), the extent to which each person in the collaborating dyad used the five conflict management approaches to handle the observed conflict in each collaboration. Across all five conflict management approaches, the three RAs achieved high levels of inter-rater consistency (all ICC(2) > .75) and inter-rater agreement (all mean $r_{WG} \geq .80$). We therefore aggregated across the three RAs' ratings. We also averaged each of the five conflict management approaches from both collaborating parties in a given dyad into five single scores to derive dyad-level conflict management approaches.

Results

At the individual level, we found that a focal person's gender interacted with the partner's gender in predicting two conflict management approaches (dominating: $b = .67$, $p < .01$; integrating: $b = -.28$, $p = .03$). Specifically, for focal men, the partner's gender significantly influenced their adoption of *dominating* conflict management approaches, such that they were more likely to be dominating in handling intercultural task conflict with other men (simple effect for focal men participants, effect of partner's gender: $b = -.27$, $p = .05$); focal women were less likely to adopt *dominating* conflict management approaches when working in same-gender intercultural collaboration (simple effect for focal women participant, effects of partner's gender: $b = -.39$, $p = .01$). Conversely, focal women were more likely to adopt *integrating* conflict management approaches when working in same-gender intercultural collaboration (simple effect for focal women participant, effects of partner's gender: $b = .25$, $p = .05$). There was no effect of partner's gender on focal men in the use of *integrating* conflict management approaches in intercultural collaboration ($b = -.04$, n.s.).

We next consider the use of conflict management approaches at the dyadic level. Table A1 presents the degree to which each conflict management approach was observed within each type of collaborating dyad. Our analyses indicate that, for intercultural men dyads, their conflict management approach was significantly higher in *dominating* (mean = 3.61, $SD = 1.08$) compared to dyads of all other cultural and gender compositions (intercultural women dyads: mean difference = 0.62, $p = .01$, Cohen's $d = 0.68$; intracultural women dyads: mean difference = 0.50, $p = .03$, Cohen's $d = 0.50$; intracultural mixed-gender dyads: mean difference = 0.63, $p = .01$, Cohen's $d = 0.67$) except for intercultural mixed-gender dyads (mean difference = 0.26, n.s.); intercultural men dyads used significantly less *integrating* approaches (mean = 4.31, $SD = 0.95$) compared to intercultural women (mean difference = 0.56, $p = .01$, Cohen's $d = 0.54$). Conversely, for intercultural women dyads, their conflict management approach is significantly lower in *dominating* than is that of intercultural men dyads; and significantly higher in *integrating* than is that of intercultural men dyads, intercultural mixed-gender dyads (mean difference = 0.49, $p = .02$, Cohen's $d = 0.50$), and intracultural mixed-

gender dyads (mean difference = 0.65, $p < .01$, Cohen's $d = 0.71$). The differences between the *integrating* conflict management approach of intercultural women dyads and intracultural women (mean difference = 0.25, *n.s.*) as well as intracultural men dyads (mean difference = 0.26, n.s.) were not significant. For *compromising* (mean difference = 0.20, n.s.), *avoidance* (mean difference = −0.15, n.s.), and *accommodating* (mean difference = 0.20, n.s.), there was no significant difference between intercultural women and men dyads. We therefore excluded these three conflict management approaches in our analyses going forward.

TABLE A1 Conflict Management Approaches: Mean Comparisons by Gender and Cultural Compositions (Study 1, Appendix A)

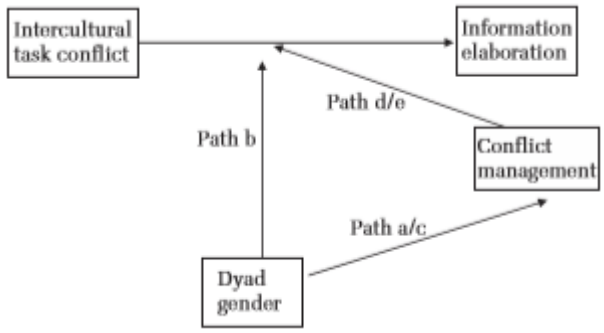
	Interculturalwomen	Interculturalmen	Interculturalmixed-gender	Intra-culturalwomen	Intra-culturalmen	Intra-culturalmixed-gender	Between-subjectseffects (partial η^2)
Integrating	4.87 (1.11)	4.31 (0.95)	4.38 (0.82)	4.62 (0.57)	4.61 (0.64)	4.22 (0.65)	$F(5, 191) = 2.73$, $p = .02$, $\eta^2 = .07$
Dominating	2.99 (0.71)	3.61 (1.08)	3.35 (1.03)	3.11 (0.89)	3.17 (0.98)	2.98 (0.81)	$F(5, 191) = 2.17$, $p = .06$, $\eta^2 = .06$
Compromising	4.62 (0.77)	4.42 (0.63)	4.15 (0.83)	4.18 (0.62)	4.51 (0.62)	4.44 (0.76)	$F(5, 191) = 2.43$, $p = .04$, $\eta^2 = .06$
Avoidance	2.10 (0.83)	1.95 (0.50)	2.10 (1.09)	1.97 (0.83)	1.89 (0.85)	1.95 (0.83)	$F(5, 191) = 0.62$, n.s.
Accommodating	4.62 (0.77)	4.42 (0.63)	4.44 (0.46)	4.51 (0.65)	4.18 (0.62)	4.44 (0.46)	$F(5, 191) = 2.43$, $p = .04$, $\eta^2 = .06$

Notes: Standard deviation in brackets. Conflict management approaches were measured on a 7-point scale.

Given our focus on intercultural collaborations, we next conducted mediated moderation analyses wherein the interactive effect of dyad gender (men dyad vs. women dyad) and intercultural task conflict on information elaboration was mediated by the interactive effect of conflict management approaches and intercultural task conflict. Specifically, we ran a path model and modeled the effects of dyad gender on the two types of conflict management approaches (*dominating* and *integrating*) as paths a and c, and the interactive effects of two types of conflict management approaches and intercultural task conflict on information elaboration as paths d and e. Path b was the interactive effective between dyad gender and intercultural task conflict on information elaboration (see Figure A1). We then ran two separate bootstrapping indirect effects analyses via *dominating* and *integrating* conflict management approaches (a*d; c*e) based on 5,000 iterations. The results indicate two separate significant mediation effects: for the *integrating* approach, the indirect effect was .03 (*SE* = 0.02), 95% CI [0.002, 0.07]; for the *dominating* approach, the indirect effect was .04 (*SE* = 0.02), 95% CI [0.01, 0.08]. These analyses provide evidence that conflict management approaches—in particular, dominating and integrating behaviors—explain how women versus men intercultural dyads harness task conflict for creative benefits. Specifically, men intercultural dyads tend to use a dominating approach toward task conflict management, undermining information elaboration; conversely, women intercultural dyads tend to use an integrating approach toward task conflict management, engendering information elaboration. Information elaboration has a positive effect on creative collaboration effectiveness ($b = .96$, $p < .001$).

For completeness, we also investigated the patterns of conflict management approaches in intracultural collaborations. We did not find statistically significant differences between intracultural women and men dyads for any of the five conflict management approaches. This finding implies that, within a culture, dyad gender may not greatly influence the use of conflict management approaches; how people manage conflict may be more likely to shaped by shared cultural norms (Morris et al., 1998).

FIGURE A1 Mediated Moderation Model of Intercultural Task Conflict, Gender Composition on Creative Collaboration through Conflict Management Approaches (Study 1, Appendix A)



Note: Path a = dyad gender → dominating approach; path b = dyad gender × intercultural task conflict → information elaboration; path c = dyad gender → integrating approach; path d = dominating approach × intercultural task conflict → information elaboration; path e = integrating approach × intercultural task conflict → information elaboration.

APPENDIX B: CULTURAL DISTANCE ANALYSES (STUDY 2)

Given that intercultural collaboration inherently involves cultural differences, it is likely that cultural distance—the degree of differences between key aspects of cultures, including values, beliefs, and customs of their cultural in-groups (e.g., Shenkar, 2001; Stahl et al., 2010)—between the collaborators will play a role in how conflict arises and is handled (Sarala & Vaara, 2010). Hence, we also analyzed the effects of cultural distance alongside that of dyad gender. We focused our analyses in Study 2 and asked participants to report their own cultural values, and then used these reported measures to compute cultural distance between collaborators.

Measures

We first measured each participant's cultural values pertaining to power distance, collectivism, feminism, and uncertainty avoidance by asking them to report their personal assessment for these four values (Dorfman & Howell, 1988). Sample items included "Employees should not disagree with management decisions" (power distance), "Group welfare is more important than individual rewards" (collectivism), "Managers expect employees to closely follow instructions and procedures" (uncertainty avoidance), and "Women value working in a friendly atmosphere more than men do" (masculinity). Participants rated the extent to which they agreed with the statements based on their own values (with reference to a scale ranging from 1 = "*strongly disagree*" to 7 = "*strongly agree*"). Cronbach's alphas were .80, .79, .75, and .90 for power distance, collectivism, uncertainty avoidance, and masculinity, respectively. We operationalized dyadic cultural distance with the absolute difference for each cultural dimension and averaged across the four dimensions. The cultural distance scores ranged from 0.15 to 4.27.

Analyses

We ran stepwise regression models featuring cultural distance and its interaction terms with task and relationship conflicts, as well as gender compositions as predictors for both creative collaboration effectiveness and information elaboration. The results are reported in Table B1.

TABLE B1 Effects of Task Conflict, Relationship Conflict, and Cultural Distance on Creative Collaboration Effectiveness (Study 2)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Constant	4.89**	4.89**	4.90**	4.86**	4.88**	4.88**	3.10**
Cultural distance	−0.11	−0.25	−0.30*	−0.30*	−0.22	−0.23	−0.26*
Task conflict	−0.21	−0.27	−0.30	−0.31*	−0.22*	−0.23*	−0.21*
Relationship conflict	−0.30*	−0.36**	−0.34**	−0.29**	−0.30*	−0.33**	−0.30**
Women vs. men dyads (WM)	0.29*	0.37**	0.39**	0.26*	0.23	0.21	0.11
Mixed-gender vs. men dyads (XM)	0.11	0.15	0.15	0.07	0.17	0.14	0.06
WM × Task conflict		0.38*	0.43*	0.42			
XM × Task conflict		0.12	0.13	0.14			
WM × Relationship conflict					−0.10	−0.13	−0.09
XM × Relationship conflict					0.01	0.01	0.06
Cultural distance × Task conflict		−0.33**	−0.68**	−0.48**			
Cultural distance × Relationship conflict					−0.46**	−0.68**	−0.52**
Cultural distance × WM		0.31	0.32*	0.26	0.11	0.06	0.07
Cultural distance × XM		0.19	0.25	0.24	0.11	0.04	0.09
Cultural distance × WM × Task conflict			0.65*	0.45*			
Cultural distance × XM × Task conflict			0.31	0.21			
Cultural distance × WM × Relationship conflict						0.06	0.06
Cultural distance × XM × Relationship conflict						0.49*	0.34
Control variables							
Higher cultural metacognition in dyad				0.10*			0.10*
Age difference				0.01			0.01
Creative collaboration frequency				0.33**			0.33**
Functional diversity				0.16			0.17*
Adjusted R^2	.36	.43	.45	.58	.43	.44	.58

** $p < .01$
* $p < .05$

Results

First, we observed in Table 4 that cultural distance itself does not have a significant correlation with dyadic relationship conflict perceptions (r = .01, n.s.) but has a marginally significant correlation with task conflict perceptions (r = .12, p = .06). Furthermore, cultural distance has a significantly negative correlation with information elaboration perceptions (r = −.17, p = .04). These findings suggest that cultural distance is not only a boundary condition to our theorized effect of dyad gender on intercultural task and relationship conflict and collaborative creativity but also a potential antecedent to the level of task conflict and information elaboration.

Table B1 presents the regression results on creative collaboration effectiveness including the effects of cultural distance. Model 1 adds cultural distance, task and relationship conflict, and the gender dummy indicators. Cultural distance was not found to have any significant main effect on creative collaboration effectiveness (b = −.11, n.s.).

Task Conflict

Model 2 adds the two-way interaction effects among task conflict, cultural distance, and the gender dummy indicators. Model 3 adds the three-way interaction effects among task conflict, cultural distance, and gender dummy indicators. We found that the three-way interactions among the task conflict, WM, and cultural distance was significant, indicating that cultural distance significantly moderated the interactive effect of task conflict and gender composition on creative collaboration (Table B1, Model 3: b = .65, SE = 0.25, t = 2.62, p = .01). In Model 4, we added the control variables (cultural metacognition, age difference, collaboration frequency, and functional diversity) and the effect remained essentially unchanged. Simple slope tests indicated that cultural distance moderated the negative effect of task conflict on creative collaboration effectiveness for men dyads (b = −.67, SE = 0.19, t = −3.60, p < .01) but not the positive effect for women dyads (b = −.16, n.s.). The moderating effects of cultural distance were marginally significant for mixed-gender dyads (b = −.37, SE = 0.21, t = −1.7, p = .09). We further broke down these effects into high (+1 SD) cultural distance

versus low (−1 *SD*) cultural distance for men dyads. When cultural distance was high, the link between task conflict and creative collaboration was negative and significant ($b = -.76$, $SE = 0.25$, $t = -3.00$, $p < .01$); for low cultural distance, the link was not significant ($b = .11$ n.s.). We found the same effect for mixed-gender dyads, such that, when cultural distance was high, the effect of task conflict on creative collaboration was negative and significant ($b = -.36$, $SE = 0.18$, $t = -2.04$, $p = .05$), whereas, for low cultural distance, the effect was insignificant ($b = .03$, n.s.). For women dyads, task conflict was positively related to creative collaboration at both low (−1 *SD*) ($b = .57$, $SE = 0.18$, $t = 3.11$, $p < .01$) and high (+1 *SD*) ($b = .34$, $SE = 0.16$, $t = 2.12$, $p = .04$) cultural distances.

Relationship Conflict

Model 5 adds the two-way interaction effects among relationship conflict, cultural distance, and the gender dummy indicators. Model 6 adds the three-way interaction effects among relationship conflict, cultural distance, and gender dummy indicators. The three-way interaction involving WM, cultural distance, and relationship conflict was not significant (Table B1, Model 6: $b = .06$, n.s.) but the three-way interaction involving XM was significant (Table B1, Model 6: $b = .49$, $SE = 0.24$, $t = 2.02$, $p = .05$). Simple slope tests indicated that cultural distance moderated the negative effect of relationship conflict on creative collaborative effectiveness for both men dyads ($b = -.67$, $SE = 0.16$, $t = -4.25$, $p < .01$) and women dyads ($b = -.62$, $SE = 0.16$, $t = -2.35$, $p = .02$). Specifically, for men dyads, when cultural distance was high (+1 *SD*), relationship conflict had a significantly negative effect on creative collaboration effectiveness ($b = -.69$, $SE = 0.15$, $t = -4.52$, $p < .01$) but not when cultural distance was low (−1 *SD*) ($b = -.06$, n.s.). For women dyads, the effects at both high (+1 *SD*) ($b = -.79$, $SE = 0.17$, $t = -4.75$, $p < .01$) and low (−1 *SD*) ($b = -.33$, $SE = 0.07$, $t = -5.06$, $p < .01$) cultural distance were negative and significant.

For mixed-gender dyads, cultural distance did not moderate the effect of relationship conflict on creative collaboration ($b = -.18$, n.s.); relationship conflict was negatively related to creative collaboration regardless of the level of cultural distance ($b = -.31$, $SE = 0.12$, $t = -2.47$, $p = .02$). In Model 7, we added the control variables. The effect of XM's interaction with relationship conflict and cultural distance became marginally significant ($b = .34$, $SE = 0.21$, $t = 1.62$, $p = .10$).

Overall, cultural distance appeared to affect the influence of intercultural task conflict on creative collaboration effectiveness more strongly for men dyads than for women and mixed-gender dyads; cultural distance accentuated the negative link between intercultural relationship conflict and creative collaboration for both men and women dyads.

About the Authors

Roy Chua (royyjchua@smu.edu.sg) is an associate professor of organizational behavior and human resources at Singapore Management University, Lee Kong Chian School of Business. He received his PhD from Columbia Business School. His current research focuses on the impact of culture on creativity and innovation.

Mengzi Jin (mengzijin@gsm.pku.edu.cn) is an assistant professor in the Department of Organization and Strategic Management at Peking University's Guanghua School of Management. She received her PhD from Singapore Management University. Her research focuses on employee creativity, organizational innovation, and women in innovation.