

## **Fostering innovation in functionally diverse teams: The two faces of transformational leadership**

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Empirical research on the effects of functional diversity on team innovation has yielded largely inconsistent results, showing positive, negative, as well as nonsignificant effects. For capitalizing on the positive potential inherent in functionally diverse teams, opening the black box between cross-functionality and team innovation by analysing mediating and moderating processes thus seems to be highly relevant. In this article, task and relationship conflicts are introduced as mediators of functional diversity and team innovation. Within this framework, transformational leadership is discussed as a moderator. It will become apparent that the role of transformational leadership in fostering the innovativeness of cross-functional teams is rather ambiguous. The discussed mediators and the moderator transformational leadership are integrated into a comprehensive framework and propositions for future research are derived.

**Keywords:** Functional diversity; Team innovation; Transformational leadership; Work team conflicts.

In organizations, teams working on creative and innovation-related tasks are often characterized by high levels of diversity (Jackson, Joshi, & Erhardt, 2003). In particular, functional diversity, i.e., “the extent to which team members differ in the functional areas in which they have spent the greater part of their careers” (Bunderson & Sutcliffe, 2002, p. 878), is considered to be of high relevance in this context (Brown & Eisenhardt, 1995; Pearce & Ensley, 2004). Theoretical reasoning thereby allows for the prediction of either positive or negative effects of functional diversity on

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team innovation (van Knippenberg & Schippers, 2007; Williams & O'Reilly, 1998). On the one hand, according to the information/decision-making perspective, the differences in expertise, knowledge, and perspectives of the team members may promote the development of creative and innovative solutions (van Knippenberg, de Dreu, & Homan, 2004). On the other hand, the social categorization perspective proposes negative diversity effects due to ingroup/outgroup categorizations that may disrupt group functioning (Brewer, 1979; Tajfel & Turner, 1986).

Accordingly, empirical research on the impact of functional diversity on team innovation has also yielded largely inconsistent results (Gebert, Boerner, & Kearney, 2006; Jackson et al., 2003; Joshi & Roh, 2009). In fact, positive (e.g., Keller, 2001; Lovelace, Shapiro, & Weingart, 2001), negative (e.g., Cabrales, Medina, Lavado, & Cabrera, 2008), as well as nonsignificant (e.g., Pelled, Eisenhardt, & Xin, 1999; Sethi, Smith, & Park, 2001) effects of cross-functionality on team innovation have been found. One explanation for these inconsistencies may be that the relationship between cross-functionality and team innovation is contingent on moderating variables. Nonetheless, extant research on cross-functionality and team innovation has largely neglected the analysis of moderators (van Knippenberg et al., 2004; van Knippenberg & Schippers, 2007). In particular, the moderating role of leadership has only marginally been examined (Jackson et al., 2003).

Our article aims at filling this gap by analysing the moderating effects of transformational leadership on the relationship between cross-functionality and team innovation. Transformational leadership (Bass, 1985, 1998; Bass & Avolio, 1994; Bass & Riggio, 2006) has been largely discussed as a trigger for team innovation both theoretically (Cascio, 1995; Waldman & Bass, 1991) and empirically (e.g., Eisenbeiss, van Knippenberg, & Boerner, 2008; Kearney, 2005; Keller, 1992, 2006). Against this background, transformational leadership also appears to be a promising approach in the context of diverse teams working on innovation-related tasks. Accordingly, Dionne, Yammarino, Atwater, and Spangler (2004, p. 189) conclude that "future research could examine the impact of transformational leadership on diverse teams". However, to date only two empirical studies have investigated the role of transformational leadership in the context of diversity and team performance (Kearney & Gebert, 2009; Shin & Zhou, 2007). Both of these studies analyse transformational leadership as a moderator, though focusing exclusively on its positive moderating effect.

Building on this body of research, our article provides an integrated framework explaining the moderating effects of transformational leadership on the relationship between functional diversity and team innovation. In addition to previous work, our approach attempts to consider both positive and negative moderating effects of transformational leadership. Our

framework is developed in two steps. First, taking a conflict-theoretical perspective, we introduce task conflicts and relationship conflicts (Jehn, 1995, 1997) as mediators of the relationship between functional diversity and team innovation (Gebert et al., 2006; Jehn, Northcraft, & Neale, 1999; Vodosek, 2007). Integrating the information/decision-making perspective and the social categorization perspective (van Knippenberg et al., 2004), we assume functional diversity to entail both positive (i.e., via task conflicts) and negative (i.e., via relationship conflicts) effects on team innovation.

Second, we analyse the moderating effects of transformational leadership within this mediation model. By fostering team identification (Ashforth & Mael, 1989; Kark, Shamir, & Chen, 2003; Shamir, House, & Arthur, 1993), transformational leadership may reduce the emergence of innovation-impeding relationship conflicts in functionally diverse teams. With regard to innovation-enhancing task conflicts, however, the influence of transformational leadership appears to be rather ambivalent. On the one hand, transformational leadership may strengthen team members' conflict openness norms, thereby having a positive effect on the emergence of task conflicts caused by cross-functionality (Bass & Avolio, 1994; Bass & Riggio, 2006). On the other hand, personal identification with the transformational leader contains the risk of dependency on the leader, thereby reducing the level of task conflicts emerging from functional diversity (Kark & Shamir, 2002; Kark et al., 2003). Taken together, transformational leadership appears to be a kind of "double-edged sword" with respect to innovation in functionally diverse teams.

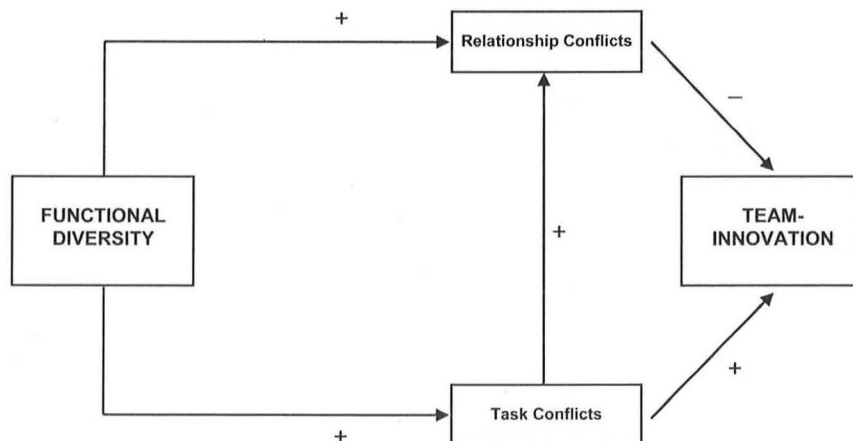
Our contribution to the existing literature is manifold. First, we contribute to explain the largely inconsistent results of previous research. In addition to existing theoretical frameworks that may account for inconsistent empirical findings on the relationship between functional diversity and team innovation (e.g., the categorization-elaboration model; van Knippenberg et al., 2004), we develop a framework that combines a conflict-theoretical mediation model on the functional diversity-team innovation relationship with a moderation model on transformational leadership. Second, echoing the calls in both the diversity and transformational leadership literature (Dionne et al., 2004; Jackson et al., 2003), we systematically integrate research on diversity and research on transformational leadership into a common framework. We thereby consider for the first time both positive and negative moderating effects of transformational leadership on the diversity-outcome relationship. Third, we are among the first to systematically examine the role of transformational leadership with regard to conflict management in teams. Although the potential of transformational leadership for conflict management has early been recognized (Atwater & Bass, 1994), theoretical and empirical analyses on this topic are still very scarce (for two exceptions see Dionne et al., 2004, and Kotlyar & Karakowsky, 2006, 2007). Finally, by formulating propositions

in the course of elaborating our framework, we hope to inspire future research on the role of transformational leadership in managing conflict and innovation in functionally diverse teams.

### CROSS-FUNCTIONALITY AND TEAM INNOVATION: THE MEDIATING ROLE OF CONFLICTS

According to West and Farr (1990, p. 9), we define team innovation as “the intentional introduction and application within a role, group or organization of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group, organization or wider society”. This definition allows for a process-based perspective on team innovation comprising two broad phases (Axtell et al., 2000; West, 2002). The first phase, idea generation, is closely related to creativity (Amabile, 1988; Anderson, de Dreu, & Nijstad, 2004; Pirola-Merlo & Mann, 2004) and involves the generation of new and creative ideas in the team; the second phase, idea implementation, describes the realization of creative ideas into practice (West, 2002). Furthermore, cross-functional diversity is conceptualized as “the extent to which team members differ in the functional areas in which they have spent the greater part of their careers” (Bunderson & Sutcliffe, 2002, p. 878).

Several existing theoretical frameworks may account for the ambivalent effects revealed by previous research (e.g., the categorization-elaboration model; van Knippenberg et al., 2004). In this article, we concentrate on task



**Figure 1.** Task and relationship conflicts as mediators of the relationship between functional diversity and team innovation.

and relationship conflicts as mediators of the connection between functional diversity and team innovation (see Figure 1). A conflict-theoretical perspective seems to be appropriate for our analysis for several reasons: First, the analysis of task and relationship conflicts has been popular in both diversity research and team innovation research for several years (Gebert et al., 2006; Hülshager, Anderson, & Salgado, 2009). Both types of conflict have proved to be particularly relevant for team innovation (Jehn & Bendersky, 2003) and have been most widely investigated and confirmed by empirical research (Jehn, Bezrukova, & Thatcher, 2008). Thus, a conflict-theoretical model allows integrating both theoretical reasoning and existing empirical findings. Second, it allows for further developing and refining the framework developed by Gebert and colleagues (2006) in which task and relationship conflicts are specified as mediators of cross-functionality and team innovation.

### Fostering team innovation through task conflicts

The positive effects of functional diversity on team innovation could be well accounted for by several mechanisms, for instance, enhanced external communication and a wider social network that provides more information and cognitive resources (e.g., Cummings, 2004; Fay, Borrill, Amir, Haward, & West, 2006; Keller, 2001). In this article, we focus on task conflicts as a mediator of the relationship between functional diversity and team innovation (Jehn, 1995, 1997), as they have proved to be particularly suitable for representing conducive effects of diversity on creativity and work team innovation (Jehn & Bendersky, 2003; Jehn et al., 2008). Task conflicts constitute disagreements about the content of the tasks being performed (Jehn, 1995).

In cross-functional teams, group members differ with regard to their knowledge, experiences, and perspectives (Bunderson & Sutcliffe, 2002). According to their respective "thought worlds" (Douglas, 1987), cross-functional team members have developed different understandings of how to approach certain tasks or problems. As a consequence, when being faced with a problem, they are likely to end up in task-related conflicts (Jehn, 1995; Jehn et al., 1999). A positive relationship between cross-functionality and the level of task conflicts has also been found empirically (Jehn et al., 1999; Lovelace et al., 2001; Pelled et al., 1999).

A high level of task conflicts resulting from functional diversity, in turn, may trigger a process in which team members' different knowledge and points of views are exchanged and integrated (de Dreu, 2006; Gebert et al., 2006). In the extant literature, such a process of "debate" (Simons, Pelled, & Smith, 1999), "elaboration of task-relevant information" (van Knippenberg et al., 2004), or "synergistic communication" (Gebert et al., 2006) has been

repeatedly linked to the development of creative and innovative solutions in the team. Thus, with idea generation being an essential part of innovation processes, task-related conflicts promoting the exchange of different knowledge and ideas will be conducive to team innovation. Several empirical studies support the notion that task conflicts positively influence team innovation. Pelled and colleagues, for instance, found a positive relationship between task conflicts and the cognitive task performance of teams, thereby concluding that task conflict “evidently fosters a deeper understanding of task issues and an exchange of information that facilitates problem solving, decision making, and the generation of ideas” (1999, pp. 22–23). Van Dyne and Saaverda (1996) showed that minority dissent in diverse work teams was positively correlated to team innovation; in a similar vein, social-psychological research on decision making has shown that dissent leads to higher consideration of unshared information in groups and thereby enhances decision quality (Brodbeck, Kerschreiter, Mojzisch, Frey, & Schulz-Hardt, 2002). Furthermore, de Dreu (2006) found a positive impact of task conflicts on team innovation via collaborative problem solving in the team.

However, previous research has also indicated that task-related dissent may only under certain circumstances lead to positive team outcomes (e.g., de Dreu & Weingart, 2003a; van Knippenberg et al., 2004). For instance, task complexity as well as team members’ motivation and ability to engage in information exchange and problem solving have been identified as crucial contextual conditions (e.g., Gebert et al., 2006; Jehn, 1995; Jehn et al., 1999; van Knippenberg et al., 2004). We might assume that these preconditions are met in the context of functionally diverse teams (in particular, new product development or research and development teams) as high complexity and nonroutineness of tasks are two of the building blocks of these teams (Brown & Eisenhardt, 1995; Jain & Triandis, 1990; Keller, 1986). Moreover, members of teams working on creative and innovation-related tasks have been shown to possess high levels of task-related motivation (Feist, 1999); they are expected to be motivated to perform a task not only extrinsically, but also highly intrinsically, thereby strengthening their willingness to engage in constructive and goal-oriented problem solving (Mumford, Scott, Gaddis, & Strange, 2002).

Taken together, based on theoretical analysis and existing empirical evidence, the following proposition can be derived:

*Proposition 1:* Task conflicts will mediate the relationship between cross-functionality and team innovation.

### Relationship conflicts as a barrier for team innovation

Functional diversity may also have a negative influence on team innovation, which can be explained via relationship conflicts (Jehn, 1995, 1997).

Relationship conflicts exist when there are interpersonal incompatibilities among members of a team, including emotional tensions, animosities, and annoyances. They are emotional conflicts on a personal rather than on a task-related level (Jehn, 1995; Pelled, 1996).

The emergence of relationship conflicts in functionally diverse teams can be explained by social categorization processes (Tajfel, 1981; Turner, 1987). Based on various attributes and characteristics, people tend to classify themselves and others into different social categories. In order to maintain a high level of self-esteem, people are prone of evaluating others belonging to the same social category or “ingroup” better than those belonging to an “outgroup”. As a consequence, people belonging to the outgroup are perceived to be less trustworthy, honest, and cooperative (Brewer, 1979; Tajfel & Turner, 1986). In cross-functional teams, social categorizations based on functional background will become “salient”, forming an important part of team members’ social identity (Hogg & Abrams, 1988). This tendency might be strengthened by the fact that functionally diverse team members may differ in the use of language and the modes of interaction which are, in part, determined by their professional socialization (Dougherty, 1992; Lovelace et al., 2001). This in turn may cause tensions between team members belonging to different functional backgrounds, resulting in relationship conflicts. Empirical evidence supports the notion that cross-functionality increases the likelihood of relationship conflicts (de Wit & Greer, 2008; Hobman & Bordia, 2006; Jehn et al., 1999).

Relationship conflicts will impede effective collaboration and the exchange of knowledge and diverse perspectives in cross-functional teams (Gebert et al., 2006; Jehn, 1995), thereby having a negative influence on the generation of new ideas. As a consequence, team innovation will diminish. Again, empirical evidence supporting this assertion can be found. Mortensen and Hinds (2001), for example, established a negative connection between relationship conflicts and team performance, of which innovativeness was one part. Moreover, Keller (2001) showed that cross-functionality negatively affects internal communication in teams and, as a consequence, has detrimental effects on team innovation. Fay and colleagues (2006) found that a cooperative climate is indispensable for a cross-functional team to be innovative. Both Keller’s and Fay et al.’s studies indicate that cooperation and communication are important for team innovation, thereby indirectly supporting the assumption that relationship conflicts are destructive for innovation in cross-functional teams. On other levels of analysis, a negative impact of relationship conflicts on innovativeness could also be confirmed (Matsuo, 2006; Song, Dyer, & Thieme, 2006).

*Proposition 2:* Relationship conflicts will mediate the relationship between cross-functionality and team innovation.

### The link between task and relationship conflicts

Albeit having reverse effects on team innovation, task and relationship conflicts seem to be closely intertwined. In several meta-analyses, they show high intercorrelations (e.g.,  $r = .54$ , de Dreu & Weingart, 2003a;  $r = .47$ , Simons & Peterson, 2000). Based on different argumentations, the extant literature primarily assumes that task conflicts lead to relationship conflicts (Mooney, Holahan, & Amason, 2007; Simons & Peterson, 2000). First, misattributions in the course of task-related discussion may induce relationship conflicts. Objective criticism of arguments, then, is taken personally, leading to emotional conflicts and personal affection (Simons & Peterson, 2000). Second, the use of harsh language, inadequate behaviours, or even intimidation tactics in the course of task-related discussions may elicit relationship conflicts by threatening the self-esteem of team members (Lazarus, 1991). Accordingly, the meta-analysis by Simons and Peterson (2000) identified task conflicts to be highly significant and strong predictors of relationship conflicts; further empirical studies have confirmed this finding (e.g., Peterson, Ranganathan, Chi, Tsai, & Chen, 2006; Tidd, McIntyre, & Friedman, 2004). Taken together, theoretical reasoning and empirical findings suggest that task conflicts induce relationship conflicts.

*Proposition 3:* Task conflicts are positively related to relationship conflicts.

### THE MODERATING ROLE OF TRANSFORMATIONAL LEADERSHIP

Based on Burns' (1978) distinction between transforming and transactional political leadership, Bass (1985) first introduced the concept of transformational leadership into the organizational context. Its basic assumption is that transformational leaders succeed in motivating their followers to do their best and perform "beyond expectations" (p. 15). By articulating an attractive vision, developing emotional attachment, and transforming central attitudes, beliefs, and values, transformational leaders move their followers to transcend their own self-interest for a higher purpose or vision (Bass, 1985, 1998; Bass & Riggio, 2006). According to Bass and Avolio (1994), transformational leadership comprises four components. *Idealized influence* relates to charismatic role modelling behaviour of transformational leaders which results in trust, respect, and emulation on the part of the followers. Via *inspirational motivation*, transformational leaders give meaning to followers' work by articulating an appealing vision, encouraging them to strive for challenging goals. Furthermore, team spirit may be enhanced among followers (Bass & Avolio, 1994). *Intellectual stimulation* means that

transformational leaders induce followers to scrutinize existing assumptions, to view old problems in a new light, and to challenge the status quo; in doing so, these leaders stimulate the creative and innovative capabilities of their followers (Bass, 1985). The fourth component of transformational leadership, *individualized consideration*, points out the necessity that leaders pay attention to the individual needs of their followers, thereby accompanying them as a coach and mentor.

By emphasizing change and vision (Avolio, 1994; Conger & Kanungo, 1992), transformational leadership differs from traditional leadership styles that focus more on controlling and supervision (Bryman, 1992). Hence, transformational leadership is considered to be a promising approach for fostering creativity and innovation (Bass & Avolio, 1994; Cascio, 1995; Jung, Chow, & Wu, 2003), especially in teams (Waldman & Bass, 1991). The majority of empirical studies seem to confirm the positive relationship between transformational leadership and team innovation (e.g., Eisenbeiss et al., 2008; Jung, 2001; Kearney, 2005; Keller, 1992, 2006; Sosik, Kahai, & Avolio, 1998).

In our framework, transformational leadership is analysed as a moderator of the relationship between cross-functionality and team innovation (see Figure 2). Based on the conflict-theoretical mediation model outlined earlier in this paper, both positive and negative moderating effects of transformational leadership are considered.

### Transformational leadership and relationship conflicts

According to Proposition 2, cross-functionality may entail relationship conflicts in teams. By strengthening the level of team identification, transformational leadership may cushion this effect (see Figure 2).

Transformational leadership can strengthen team members' identification with their team (Kark & Shamir, 2002; Kark et al., 2003; Shamir et al., 1993). First, by providing an attractive common vision for the team as a whole, transformational leaders' idealized influence may enhance team members' identification with team goals (Shamir et al., 1993). Likewise, his or her team-oriented behaviour will serve as a role model for team members (Bass & Avolio, 1994), further strengthening their identification with the team. Second, inspirational motivation will strengthen team members' commitment to team goals and the emergence of team spirit (Antonakis & House, 2002). This, in turn, will foster a common social identification with the team.

As team membership becomes the "salient" social category for the team members (Hogg & Abrams, 1988), other social categorizations, for instance those based on different functional backgrounds (e.g., marketing, finance), are getting less important. Thus, the formation of in- and outgroups based

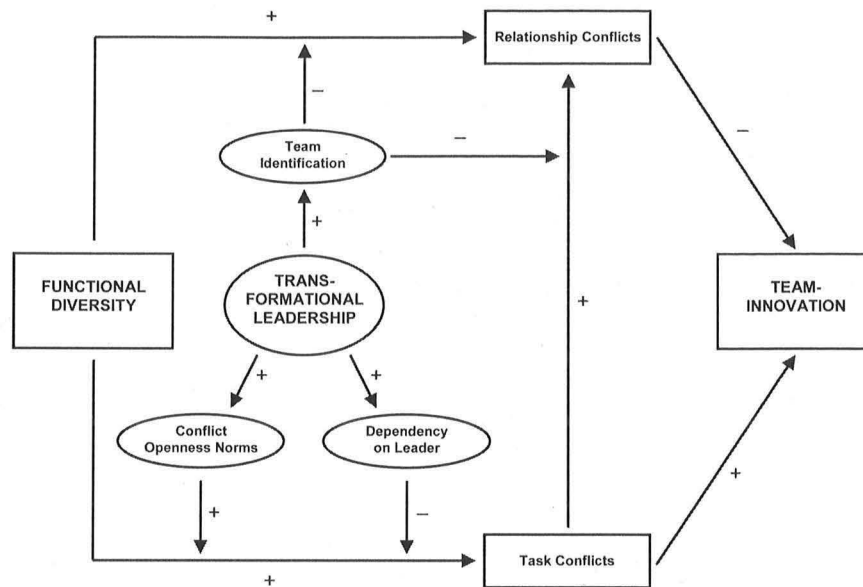


Figure 2. The moderating role of transformational leadership.

on team members' functional backgrounds is getting less likely, which facilitates communication and cooperation among the diverse team members (Hogg & Abrams, 1988; van Knippenberg et al., 2004). The feeling of belonging to one team and the commitment to common team goals decrease the risk of relational tensions and conflicts resulting from interpersonal differences (Gaertner & Dovidio, 2000; Hobman & Bordia, 2006). Inspired by the common vision and shared identity, team members feel the desire to accomplish the team goals; they try to act together as one team and put more effort into gaining common ground (van Knippenberg & Ellemers, 2003).

Empirical studies have confirmed the positive effect of transformational leadership on the identification with a team (Kark & Shamir, 2002; Kark et al., 2003; Shamir, Zakay, Breinin, & Popper, 1998, 2000). Moreover, empirical investigations show that team members' similarity is not a necessary condition for the emergence of a common social identification (Ashforth & Mael, 1989; Billig & Tajfel, 1973; Turner, 1984). We therefore assume that members of a cross-functional team may develop a common social identification with their team under high levels of transformational leadership. Given strong identification with the team, functional diversity is less likely to enhance relationship conflicts.

*Proposition 4:* Transformational leadership, in particular idealized influence and inspirational motivation, will moderate the relationship between cross-functionality and the level of relationship conflicts in the team such that this relationship is weaker under high levels of transformational leadership. The moderating effect of transformational leadership is mediated by team members' identification with their team.

Moreover, the identification with the team resulting from transformational leadership is likely to unlock the link between task conflicts and relationship conflicts (see Figure 2). Strong team identification may, first, prevent misattribution processes in the course of task-related conflicts (Simons & Peterson, 2000). Objective critique will not be taken personally if all team members can be confident that task-related discussions are guided by shared team goals (Shamir et al., 1993) rather than by goals of specific functional subsystems. Second, by strengthening team spirit, transformational leaders may be successful in preventing team members from using harsh language or inadequate behaviours in the course of task-related discussions (Simons & Peterson, 2000). This may also restrain the emergence of relationship conflicts. Thus, by strengthening the identification with the team, transformational leadership is assumed to directly contribute to reduce the link between task and relationship conflicts. First empirical support for a positive effect of a common social identity in decoupling the connection between task and relationship conflicts has been found by Schäffner, Gebert, and Kearney (2008).

*Proposition 5:* Transformational leadership, in particular idealized influence and inspirational motivation, will moderate the relationship between task conflicts and relationship conflicts in the team such that this relationship is weaker under high levels of transformational leadership. The moderating effect of transformational leadership is mediated by team members' identification with their team.

### Transformational leadership and task conflicts

Cross-functionality will raise the level of task conflicts in cross-functional teams (see Proposition 1). Transformational leadership may moderate this relationship both positively and negatively; we therefore develop two competing propositions on this relationship.

On the one hand, transformational leadership is considered to foster the development of task conflicts in cross-functional teams. In particular by providing intellectual stimulation, transformational leaders contribute to the development of "conflict openness norms" in a team (de Dreu, Harinck, &

van Vianen, 1999; Jehn, 1995), i.e., the valuation of open discussion and open confrontation on the part of the team members (Jehn, 1995; Lovelace et al., 2001). As Bass and Avolio (1994) point out, intellectual stimulation encourages followers to express diverging views clearly without being publicly criticized. This, in turn, constitutes an important prerequisite for the development of task conflicts, since the diverse perspectives, knowledge, and experiential bases of team members necessarily have to be voiced in order to contribute to the exchange and integration of ideas in task-related discussions (Lovelace et al., 2001; Okhuysen & Eisenhardt, 2002; Taggar, 2002). Extant empirical research has indicated that conflict openness norms are conducive to constructive task-related controversies (e.g., Amason & Sapienza, 1997; Jehn, 1997; Jehn, Greer, Levine, & Szulanski, 2008). Thus, it can be assumed that conflict openness norms are likely to have a positive effect on the emergence of task conflicts in functionally diverse teams.

*Proposition 6:* Transformational leadership, in particular intellectual stimulation, will moderate the relationship between cross-functionality and task conflicts in the team such that this relationship is stronger under high levels of transformational leadership. The moderating effect of transformational leadership is mediated by team members' conflict openness norms.

On the other hand, however, transformational leadership may also have detrimental effects on the emergence of task conflicts in cross-functional teams. The fact that transformational leadership may not only entail positive, but also negative effects on followers has been repeatedly discussed in the literature (e.g., Howell, 1988; Shamir, 1991; Yukl, 2006). According to Kark et al. (2003) and Kark and Shamir (2002), transformational leadership strengthens followers' personal identification with their leader, especially by means of individualized consideration. Showing supportive and caring behaviours, transformational leaders match the individual needs of the followers, who, in turn, respond to this high level of individual appraisal and consideration by strong identification with the leader (Kark & Shamir, 2002). Yet, this strong personal identification may result in followers' dependency on the transformational leader (Kark et al., 2003). This, in turn, may have obstructive consequences for the emergence of task conflicts in cross-functional teams. A high level of dependency will, first, reduce the range of perspectives, ideas, and opinions in the team. Second, under high levels of dependency, members of a cross-functional team are less able and willing to express their opinions and to critically discuss other members' ideas, raising the risk of groupthink (Janis, 1972, 1997). Empirical support for the assertion that transformational leadership increases followers' dependency on their leader can be found in the studies by Kark and

colleagues (2003) and Eisenbeiss (2008). Eisenbeiss also found that team members' dependency is significantly and negatively related to the level of open and critical discussion in the team. In sum, under high levels of team members' dependency on their transformational leader, cross-functionality is less likely to result in task conflicts.

*Proposition 7:* Transformational leadership, in particular individualized consideration, will moderate the relationship between cross-functionality and task conflicts in the team such that this relationship is weaker under high levels of transformational leadership. The moderating effect of transformational leadership is mediated by team members' dependency on the leader.

### Transformational leadership and innovation in cross-functional teams

Integrating the moderating effects of transformational leadership on task and relationship conflicts into the mediation model developed earlier in this article (see Figure 1), the following conclusions can be drawn (see Figure 2). By fostering common team identification, transformational leadership will reduce the level of relationship conflicts emerging from cross-functionality (see Propositions 4 and 5). This, in turn, will reduce the negative effects of functional diversity on team innovation. However, with regard to task conflicts, the effects of transformational leadership are ambivalent. On the one hand, transformational leadership may strengthen team members' conflict openness norms, thereby encouraging them to voice and exchange different knowledge, ideas, and points of view. Thus, the relationship between functional diversity and task conflicts is amplified, which, in turn, will enhance team innovation (see Proposition 6). On the other hand, by fostering team members' dependency on the leader, transformational leadership may discourage the willingness of members in cross-functional teams to express their diverging opinions. As a consequence, the positive effect of functional diversity on the emergence of task conflicts is jeopardized (see Proposition 7) and the beneficial effects of task conflicts on team innovation are challenged. According to our analysis, transformational leadership is thus revealed to be a kind of "double-edged sword" with regard to innovation in functionally diverse teams.

## DISCUSSION

The need to analyse the role of transformational leadership in enhancing the effectiveness of diverse teams has been formulated in both the team diversity literature (Jackson et al., 2003) and the transformational leadership literature (Dionne et al., 2004). However, research on this topic is still very

scarce. In order to fill this gap, our article analyses the moderating effects of transformational leadership on the link between cross-functionality and team innovation.

Building on a framework provided by Gebert et al. (2006) and arguing from a conflict-theoretical perspective, we first introduced task conflicts and relationship conflicts as mediators of the relationship between functional diversity and team innovation (see Figure 1). On the basis of this model, we scrutinized the moderating role of transformational leadership (see Figure 2). Transformational leadership helps prevent the emergence of innovation-impeding relationship conflicts, but its effects on the development of innovation-enhancing task conflicts is double-edged. Thus, our analysis comes to the conclusion that this leadership style is rather ambivalent with regard to fostering innovation in functionally diverse teams.

### Managerial implications

Several studies have shown that transformational leadership is a skill that can be developed (e.g., Barling, Weber, & Kelloway, 1996). However, according to our analysis, blind enthusiasm for transformational leadership as a panacea for promoting innovation in functionally diverse teams seems to be out of place. In contrast to frequent recommendations to enhance innovativeness by transformational leadership (e.g., Bass & Avolio, 1994; Waldman & Bass, 1991), leaders rather have to be careful in their use of transformational leadership in cross-functional teams as the innovation-enhancing effects of this leadership style might be outweighed by negative secondary effects.

Apparently, the problem of negative secondary effects cannot be solved by simply adjusting the level of transformational leadership. Although moderate levels of transformational leadership would presumably decrease the detrimental effects that followers' dependency can have on the emergence of task conflicts resulting from cross-functionality, the beneficial effects of transformational leadership outlined previously would be reduced simultaneously. Nor can the problem be solved by applying only selected components of transformational leadership. Empirical investigations consistently show that the four components of transformational leadership are highly intercorrelated (Bass, 1999; Yukl, 2006).

A viable way to deal with the dilemma rather seems to raise the awareness of possible drawbacks of transformational leadership in human resource development and among leaders confronted with functionally heterogeneous teams. Once team leaders are aware of the ambivalent impact of transformational leadership on task conflicts, they could try to avoid the risk of follower dependency. They could hence give particular attention to their followers' level of identification with the leader, and, if necessary,

adjust their use of individualized consideration. The aim is to strengthen followers' feelings of self-confidence and self-efficacy by individual coaching and mentoring. However, this should not be accomplished by identification with the leader. Instead of "borrowing" self-confidence and self-efficacy from their leader, followers should be supported in basing self-confidence and self-efficacy on their own skills and competences.

For preventing the risk of dependency, team leaders could serve as role models by engaging in cross-functional communication themselves. Moreover, in addition to rather formalized kinds of cross-functional communication (i.e., team meetings), informal communication among team members should also be facilitated. For this purpose, transformational leaders could give team members the possibility to exchange knowledge and points of view without themselves being involved (e.g., by providing time frames for cross-functional communication in everyday work or by allowing self-directed informal meetings).

### Implications for future research

The propositions formulated in this article should be subject to empirical testing in the near future. By taking into account both positive and negative moderating effects of transformational leadership, the existing very small body of research on diversity and transformational leadership (Kearney & Gebert, 2009; Shin & Zhou, 2007) can be reasonably supplemented. Moreover, although the mediation model was based on existing empirical findings as far as possible, some relationships still need further empirical validation. If the mediation model outlined in this article is well confirmed by empirical research, it would constitute a great opportunity for further examinations of other moderating variables, too.

An empirical test of our model would also contribute to the field of work group conflict. Empirical studies concerning the vice and virtue of different kinds of work group conflict have yielded largely inconsistent results (de Dreu & Weingart, 2003a). The need for more contingency frameworks and the identification of moderators has been repeatedly discussed in the literature (de Dreu & Weingart, 2003b; Jehn & Bendersky, 2003). It is all the more surprising that the moderating role of leadership, and especially of transformational leadership, has only marginally been explored. Despite the early recognition of the potential of transformational leadership for managing conflict in teams (Atwater & Bass, 1994), to date only very few theoretical and empirical analyses have been attempted (Dionne et al., 2004; Kotlyar & Karakowsky, 2006, 2007). However, previous work considers transformational leadership to have an exclusively positive impact on the generation of cognitive conflicts in work teams. Furthermore, again in contrast to our model,

transformational leadership is regarded to be dysfunctional with regard to avoiding affective conflict (Kotlyar & Karakowsky, 2006, 2007). Against the background of these contrarian assumptions, an empirical analysis of our more balanced view on the promise of transformational leadership in establishing a positive conflict-outcome relationship seems to be desirable.

### Limitations

Our model is limited in that it contains some simplifications. For the sake of analytical clarity and parsimony, we did not, for example, take into account possible time effects on the relationships established in our framework. In particular, changing effects of cross-functionality on work team conflicts over time appear to be possible. On the one hand, the emergence of relationship conflicts resulting from functional diversity could diminish the longer a team exists, since the collaboration and adaption of diverse team members may strengthen ability, trust, and willingness to cooperate in the team (Gruenfeld, Mannix, Williams, & Neale, 1996; Jehn & Mannix, 2001). On the other hand, however, longer team tenure may also result in a decrease of task conflicts as the diverse perspectives of the team members converge and assimilate over time (Katz, 1982; Pelled et al., 1999), thereby raising the risk of groupthink phenomena (Janis, 1972, 1997).

Another simplification of our model is the neglect of nonlinear effects work group conflicts may have on team innovation. Some empirical studies have shown that moderate (as opposed to low or high) levels of task conflict relate to greater innovativeness (de Dreu, 2006; Lovelace et al., 2001). However, research on this issue is still at an early stage; nevertheless, further elaborations of our model following first empirical validations may consider a curvilinear relationship between task conflicts and team innovation as well. Moreover, we did not further elaborate on the possibility that relationship conflicts may also lead to the emergence of task conflicts. This connection has been paid much less attention to in the literature than the task conflict–relationship conflict connection (Simons & Peterson, 2000), and it does not seem to be of particular relevance for our framework. As we consider transformational leadership to cushion the formation of relationship conflicts in functionally diverse teams anyway, the causation of task conflicts by relationship conflicts does not seem to be likely. All in all, in order to keep our framework as parsimonious as possible, we decided to concentrate only on the major linkages. Nevertheless, additional moderators and mediators could be included in the model and should be explored. We believe that our model provides a good basis for future theoretical elaborations and empirical analyses.

## REFERENCES

- Amabile, T. M. (1988). A model of creativity and innovation in organizations. *Research in Organizational Behavior*, 10, 123–167.
- Amason, A. C., & Sapienza, H. J. (1997). The effects of top management team size and interaction norms on cognitive and affective conflict. *Journal of Management*, 23(4), 495–516.
- Anderson, N. R., de Dreu, C. K. W., & Nijstad, B. A. (2004). The routinization of innovation research: A constructively critical review of the state-of-the-science. *Journal of Organizational Behavior*, 25(2), 147–173.
- Antonakis, J., & House, R. J. (2002). The full-range leadership theory: The way forward. In B. J. Avolio & F. J. Yammarino (Eds.), *Transformational and charismatic leadership: The road ahead* (pp. 3–33). Amsterdam, The Netherlands: JAI Press.
- Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review*, 14(1), 20–39.
- Atwater, D. C., & Bass, B. M. (1994). Transformational leadership in teams. In B. M. Bass & B. J. Avolio (Eds.), *Improving organizational effectiveness through transformational leadership* (pp. 84–103). Thousand Oaks, CA: Sage.
- Avolio, B. J. (1994). Total quality and leadership. In B. M. Bass & B. J. Avolio (Eds.), *Improving organizational effectiveness through transformational leadership* (pp. 121–145). Thousand Oaks, CA: Sage.
- Axtell, C. M., Holman, D. J., Unsworth, K. L., Wall, T. D., Waterson, P. E., & Harrington, E. (2000). Shopfloor innovation: Facilitating the suggestion and implementation of ideas. *Journal of Occupational and Organizational Psychology*, 73(3), 265–285.
- Barling, J., Weber, T., & Kelloway, E. K. (1996). Effects of transformational leadership training on attitudinal and financial outcomes: A field experiment. *Journal of Applied Psychology*, 81(6), 827–832.
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York, NY: Free Press.
- Bass, B. M. (1998). *Transformational leadership: Industry, military, and educational impact*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Bass, B. M. (1999). Two decades of research and development in transformational leadership. *European Journal of Work and Organizational Psychology*, 8(1), 9–32.
- Bass, B. M., & Avolio, B. J. (1994). Introduction. In B. M. Bass & B. J. Avolio (Eds.), *Improving organizational effectiveness through transformational leadership* (pp. 1–9). Thousand Oaks, CA: Sage.
- Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Billig, M., & Tajfel, H. (1973). Social categorization and similarity in intergroup behaviour. *European Journal of Social Psychology*, 3(1), 27–52.
- Brewer, M. B. (1979). In-group bias in the minimal intergroup situation: A cognitive-motivational analysis. *Psychological Bulletin*, 86(2), 307–324.
- Brodbeck, F. C., Kerschreiter, R., Mojzisch, A., Frey, D., & Schulz-Hardt, S. (2002). The dissemination of critical, unshared information in decision-making groups: The effects of pre-discussion dissent. *European Journal of Social Psychology*, 32(1), 35–56.
- Brown, S. L., & Eisenhardt, K. M. (1995). Product development: Past research, present findings, and future directions. *Academy of Management Review*, 20(2), 343–378.
- Bryman, A. (1992). *Charisma and leadership in organizations*. London, UK: Sage.
- Bunderson, J. S., & Sutcliffe, K. M. (2002). Comparing alternative conceptualizations of functional diversity in management teams: Process and performance effects. *Academy of Management Journal*, 45(5), 875–893.

- Burns, J. M. (1978). *Leadership*. New York, NY: Harper & Row.
- Cabrales, A. L., Medina, C. C., Lavado, A. C., & Cabrera, R. V. (2008). Managing functional diversity, risk taking and incentives for teams to achieve radical innovations. *R&D Management*, 38(1), 35–50.
- Cascio, W. F. (1995). Whither industrial and organizational psychology in a changing world of work? *The American Psychologist*, 50(11), 928–939.
- Conger, J. A., & Kanungo, R. N. (1992). Perceived behavioural attributes of charismatic leadership. *Canadian Journal of Behavioural Science*, 24(1), 86–102.
- Cummings, J. N. (2004). Work groups, structural diversity, and knowledge sharing in global organizations. *Management Science*, 50(3), 352–364.
- De Dreu, C. K. W. (2006). When too much and too little hurts: Evidence for a curvilinear relationship between task conflict and innovation in teams. *Journal of Management*, 32(1), 83–107.
- De Dreu, C. K. W., Harinck, F., & van Vianen, A. E. M. (1999). Conflict and performance in groups and organizations. In C. L. Cooper & I. T. Robertson (Eds.), *International review of industrial and organizational psychology* (Vol. 14, pp. 369–414). Chichester, UK: Wiley.
- De Dreu, C. K. W., & Weingart, L. R. (2003a). Task versus relationship conflict, team performance, and team member satisfaction: A meta-analysis. *Journal of Applied Psychology*, 88(4), 741–749.
- De Dreu, C. K. W., & Weingart, L. R. (2003b). Toward a contingency theory of conflict and performance in groups and organizational teams. In M. A. West, D. Tjosvold, & K. Smith (Eds.), *International handbook of organizational teamwork and cooperative working* (pp. 151–166). Chichester, UK: Wiley.
- De Wit, F. R. C., & Greer, L. L. (2008). *The black-box deciphered: A meta-analysis of team diversity, conflict, and team performance*. Paper presented at the 2008 Academy of Management Annual Meeting, Anaheim, CA.
- Dionne, S. D., Yammarino, F. J., Atwater, L. E., & Spangler, W. D. (2004). Transformational leadership and team performance. *Journal of Organizational Change Management*, 17(2), 177–193.
- Dougherty, D. (1992). Interpretative barriers to successful product innovation in large firms. *Organization Science*, 3(2), 179–202.
- Douglas, M. (1987). *How institutions think*. London, UK: Routledge.
- Eisenbeiss, S. A. (2008). *Zwei Seiten einer Medaille: Effekte transformationaler Führung auf Teaminnovation* [Two sides of the same coin: Effects of transformational leadership on team innovation]. Unpublished dissertation, University of Konstanz, Konstanz, Germany.
- Eisenbeiss, S. A., van Knippenberg, D., & Boerner, S. (2008). Transformational leadership and team innovation: Integrating team climate principles. *Journal of Applied Psychology*, 93(6), 1438–1446.
- Fay, D., Borrill, C., Amir, Z., Haward, R., & West, M. A. (2006). Getting the most out of multidisciplinary teams: A multi-sample study of team innovation in health care. *Journal of Occupational and Organizational Psychology*, 79(4), 553–567.
- Feist, G. J. (1999). The influence of personality on artistic and scientific creativity. In R. J. Sternberg (Ed.), *Handbook of creativity* (pp. 273–296). Cambridge, UK: Cambridge University Press.
- Gaertner, S. L., & Dovidio, J. F. (2000). *Reducing intergroup bias: The common ingroup identity model*. Philadelphia, PA: Psychology Press.
- Gebert, D., Boerner, S., & Kearney, E. (2006). Cross-functionality and innovation in new product development teams: A dilemmatic structure and its consequences for the management of diversity. *European Journal of Work and Organizational Psychology*, 15(4), 431–458.
- Gruenfeld, D., Mannix, E. A., Williams, K. Y., & Neale, M. A. (1996). Group composition and decision making: How member familiarity and information distribution affect process and performance. *Organizational Behavior and Human Decision Processes*, 67(1), 1–15.

- Hobman, E. V., & Bordia, P. (2006). The role of team identification in the dissimilarity-conflict relationship. *Group Processes and Intergroup Relations*, 9(4), 483–507.
- Hogg, M. A., & Abrams, D. (1988). *Social identifications: A social psychology of intergroup relations and group processes*. London, UK: Routledge.
- Howell, J. M. (1988). Two faces of charisma: Socialized and personalized leadership in organizations. In J. A. Conger & R. N. Kanungo (Eds.), *Charismatic leadership: The elusive factor in organizational effectiveness* (pp. 213–236). San Francisco, CA: Jossey-Bass.
- Hülshager, 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(5), 1128–1145.
- Jackson, S. W., Joshi, A., & Erhardt, N. L. (2003). Recent research on team and organizational diversity: SWOT analysis and implications. *Journal of Management*, 29(6), 801–830.
- Jain, R. K., & Triandis, H. C. (1990). *Management of research and development organizations: Managing the unmanageable*. New York, NY: Wiley.
- Janis, I. L. (1972). *Groupthink: Psychological studies of policy decisions and fiascoes*. Boston, MA: Houghton Mifflin.
- Janis, I. L. (1997). Groupthink. In R. P. Vecchio (Ed.), *Leadership: Understanding the dynamics of power and influence in organizations* (pp. 163–176). Notre Dame, IN: University of Notre Dame Press.
- Jehn, K. A. (1995). A multimethod examination of the benefits and detriments of intragroup conflict. *Administrative Science Quarterly*, 40(2), 256–282.
- Jehn, K. A. (1997). A qualitative analysis of conflict types and dimensions in organizational groups. *Administrative Science Quarterly*, 42(3), 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., Bezrukova, K., & Thatcher, S. (2008). Conflict, diversity, and faultlines in workgroups. In C. K. W. de Dreu & M. J. Gelfand (Eds.), *The psychology of conflict and conflict management in organizations* (pp. 179–210). New York, NY: Lawrence Erlbaum Associates, Inc.
- Jehn, K. A., Greer, L. L., Levine, S., & Szulanski, G. (2008). The effects of conflict types, dimensions, and emergent states on group outcomes. *Group Decision and Negotiation*, 17(6), 465–495.
- Jehn, K. A., & Mannix, E. A. (2001). The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance. *Academy of Management Journal*, 44(2), 238–251.
- 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(4), 741–763.
- Joshi, A., & Roh, H. (2009). The role of context in work team diversity research: A meta-analytical review. *Academy of Management Journal*, 52(3), 599–627.
- Jung, D. I. (2001). Transformational and transactional leadership and their effects on creativity in groups. *Creativity Research Journal*, 13(2), 185–195.
- Jung, D. I., Chow, C., & Wu, A. (2003). The role of transformational leadership in enhancing organizational innovation: Hypotheses and some preliminary finding. *Leadership Quarterly*, 14(4–5), 525–544.
- Kark, R., & Shamir, B. (2002). The dual effect of transformational leadership: Priming relational and collective selves and further effects on followers. In B. J. Avolio & F. J. Yammarino (Eds.), *Transformational and charismatic leadership: The road ahead* (pp. 67–91). Amsterdam, The Netherlands: JAI Press.
- Kark, R., Shamir, B., & Chen, G. (2003). The two faces of transformational leadership: Empowerment and dependency. *Journal of Applied Psychology*, 88(2), 246–255.

- Katz, R. (1982). The effects of group longevity on project communication and performance. *Administrative Science Quarterly*, 27(1), 81–104.
- Kearney, E. (2005). *Innovationsorientierte transformationale Führung von F&E-Teams—Eine empirische Analyse* [Innovation-oriented transformational leadership of R&D teams—An empirical analysis]. Taunusstein, Germany: Driesen.
- Kearney, E., & Gebert, D. (2009). Managing diversity and enhancing team outcomes: The promise of transformational leadership. *Journal of Applied Psychology*, 94(1), 77–89.
- Keller, R. T. (1986). Predictors of the performance of project groups in R&D organizations. *Academy of Management Journal*, 29(4), 715–726.
- Keller, R. T. (1992). Transformational leadership and the performance of research and development project groups. *Journal of Management*, 18(3), 489–501.
- Keller, R. T. (2001). Cross-functional project groups in research and new product development: Diversity, communications, job stress, and outcomes. *Academy of Management Journal*, 44(3), 547–555.
- Keller, R. T. (2006). Transformational leadership, initiating structure, and substitutes for leadership: A longitudinal study of research and development project team performance. *Journal of Applied Psychology*, 91(1), 202–210.
- Kotlyar, I., & Karakowsky, L. (2006). Leading conflict? Linkages between leader behaviors and group conflict. *Small Group Research*, 37(4), 377–403.
- Kotlyar, I., & Karakowsky, L. (2007). Falling over ourselves to follow the leader: Conceptualizing connections between transformational leader behaviors and dysfunctional team conflict. *Journal of Leadership and Organizational Studies*, 14(1), 38–49.
- Lazarus, R. S. (1991). *Emotion and adaptation*. New York, NY: Oxford University Press.
- Lovelace, K., Shapiro, D. L., & Weingart, L. R. (2001). Maximizing cross-functional new product teams' innovativeness and constraint adherence: A conflict communications perspective. *Academy of Management Journal*, 44(4), 779–793.
- Matsuo, M. (2006). Customer orientation, conflict, and innovativeness in Japanese sales departments. *Journal of Business Research*, 59(2), 242–250.
- Mooney, A. C., Holahan, P. J., & Amason, A. C. (2007). Don't take it personally: Exploring cognitive conflict as a mediator of affective conflict. *Journal of Management Studies*, 44(5), 733–758.
- Mortensen, M., & Hinds, P. J. (2001). Conflict and shared identity in geographically distributed teams. *International Journal of Conflict Management*, 12(3), 212–238.
- Mumford, M. D., Scott, G. M., Gaddis, B., & Strange, J. M. (2002). Leading creative people: Orchestrating expertise and relationships. *Leadership Quarterly*, 13(6), 705–750.
- Okhuysen, G. A., & Eisenhardt, K. M. (2002). Integrating knowledge in groups: How formal interventions enable flexibility. *Organization Science*, 13(4), 370–386.
- Pearce, C. L., & Ensley, M. D. (2004). A reciprocal and longitudinal investigation of the innovation process: The central role of shared vision in product and process innovation teams (PPITs). *Journal of Organizational Behavior*, 25(2), 259–278.
- Pelled, L. H. (1996). Demographic diversity, conflict, and work group outcomes: An intervening process theory. *Organization Science*, 7(6), 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), 1–28.
- Peterson, R. S., Ranganathan, R., Chi, S.-C. S., Tsai, H.-H., & Chen, S.-C. (2006). *The key role of personal values in decoupling task conflict from relationship conflict*. Paper presented at the 2006 Academy of Management Annual Meeting, Atlanta, GA.
- Pirola-Merlo, A., & Mann, L. (2004). The relationship between individual creativity and team creativity: Aggregating across people and time. *Journal of Organizational Behavior*, 25(2), 235–257.

- Schäffner, M., Gebert, D., & Kearney, E. (2008). Separating task and relationship conflicts: Is there reason to be optimistic? Paper presented at the 2008 Academy of Management Annual Meeting, Anaheim, CA.
- Sethi, R., Smith, D. C., & Park, C. W. (2001). Cross-functional product development teams, creativity, and the innovativeness of new consumer products. *Journal of Marketing Research*, 38(1), 73–85.
- Shamir, B. (1991). The charismatic relationship: Alternative explanations and predictions. *Leadership Quarterly*, 2(2), 81–104.
- Shamir, B., House, R. J., & Arthur, M. B. (1993). The motivational effects of charismatic leadership: A self-concept based theory. *Organization Science*, 4(4), 577–594.
- Shamir, B., Zakay, E., Breinin, E., & Popper, M. (1998). Correlates of charismatic leader behavior in military units: Subordinates' attitudes, unit characteristics, and superiors' appraisals of leader performance. *Academy of Management Journal*, 41(4), 387–409.
- Shamir, B., Zakay, E., Breinin, E., & Popper, M. (2000). Leadership and social identification in military units: Direct and indirect relationships. *Journal of Applied Social Psychology*, 30(3), 612–640.
- Shin, S. J., & Zhou, J. (2007). When is educational specialization heterogeneity related to creativity in research and development teams? Transformational leadership as a moderator. *Journal of Applied Psychology*, 92(6), 1709–1721.
- Simons, T., Pelled, L. H., & Smith, K. A. (1999). Making use of difference: Diversity, debate, and decision comprehensiveness in top management teams. *Academy of Management Journal*, 42(6), 662–673.
- Simons, T. L., & Peterson, R. S. (2000). Task conflict and relationship conflict in top management teams: The pivotal role of intragroup trust. *Journal of Applied Psychology*, 85(1), 102–111.
- Song, M., Dyer, B., & Thieme, R. J. (2006). Conflict management and innovation performance: An integrated contingency perspective. *Journal of the Academy of Marketing Science*, 34(3), 341–356.
- Sosik, J. J., Kahai, S. S., & Avolio, B. J. (1998). Transformational leadership and dimensions of creativity: Motivating idea generation in computer-mediated groups. *Creativity Research Journal*, 11(2), 111–121.
- Taggar, S. (2002). Individual creativity and group ability to utilize individual creative resources: A multilevel model. *Academy of Management Journal*, 45(2), 315–330.
- Tajfel, H. (1981). *Human groups and social categories: Studies in social psychology*. Cambridge, UK: Cambridge University Press.
- Tajfel, H., & Turner, J. C. (1986). Social identity theory and intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7–24). Chicago, IL: Nelson-Hall.
- Tidd, S. T., McIntyre, H. H., & Friedman, R. A. (2004). The importance of role ambiguity and trust in conflict perception: Unpacking the task conflict to relationship conflict linkage. *International Journal of Conflict Management*, 15(4), 364–380.
- Turner, J. C. (1984). Social identification and psychological group formation. In H. Tajfel (Ed.), *The social dimension: European developments in social psychology* (Vol. 2, pp. 518–538). Cambridge, UK: Cambridge University Press.
- Turner, J. C. (1987). *Rediscovering the social group: A self-categorization theory*. Oxford, UK: Blackwell.
- Van Dyne, L., & Saaverda, R. (1996). A naturalistic minority influence experiment: Effects on divergent thinking, conflict, and originality in work-groups. *British Journal of Social Psychology*, 35(1), 151–168.
- 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(6), 1008–1022.

- Van Knippenberg, D., & Ellemers, N. (2003). Social identity and group performance: Identification as a key to collective effort. In S. A. Haslam, D. van Knippenberg, M. Platow, & N. Ellemers (Eds.), *Social identity at work: Developing theory for organizational practice* (pp. 29–42). New York, NY: Psychology Press.
- Van Knippenberg, D., & Schippers, M. C. (2007). Work group diversity. *Annual Review of Psychology*, 58, 515–541.
- Vodosek, M. (2007). Intragroup conflict as a mediator between cultural diversity and work group outcomes. *International Journal of Conflict Management*, 18(3–4), 345–375.
- Waldman, D. A., & Bass, B. M. (1991). Transformational leadership at different phases of the innovation process. *Journal of High Technology Management Research*, 2(2), 169–180.
- West, M. A. (2002). Sparkling fountains or stagnant ponds: An integrative model of creativity and innovation implementation in work groups. *Applied Psychology: An International Review*, 51(3), 355–424.
- West, M. A., & Farr, J. L. (1990). Innovation at work. In M. A. West & J. L. Farr (Eds.), *Innovation and creativity at work: Psychological and organizational strategies* (pp. 3–13). Chichester, UK: Wiley.
- 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.
- Yukl, G. A. (2006). *Leadership in organizations* (6th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.