Perceived Diversity and Team Functioning: The Role of Diversity Beliefs and Affect

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Abstract

Based on data from 38 organizational teams (N = 241), we investigated the influence of perceived diversity on team identification and relationship conflict. Moreover, we examined the roles of diversity beliefs as a moderator and group affective tone as a mediator of these relationships. Objective diversity in age, gender, educational level, nationality, or tenure was not related to perceived diversity, team identification, or emotional conflict. But as hypothesized, perceived diversity was negatively associated with team identification and positively associated with relationship conflict. Diversity beliefs moderated these effects. Negative group affective tone mediated the relationship among perceived diversity, diversity beliefs, and relationship conflict. We found a similar trend for positive group affective tone with regard to the relationship among perceived diversity, diversity beliefs, and team identification. These results illustrate the central role of shared affect and diversity beliefs in determining whether work group diversity is an asset or a liability.

Keywords

diversity, diversity beliefs, identification, relationship conflict, group affective tone

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In the face of demographic changes and increasing globalization, diversity is not only inevitable but also to some extent desirable, because it broadens the pool of potentially task-relevant resources. Thus, both managers and researchers want to learn how diversity can be managed in ways that minimize its risks and capitalize on its benefits. Williams and O'Reilly (1998) identified several theoretical positions that help to understand when diversity is harmful or helpful for team functioning. First, the social categorization perspective (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) posits that if people are different from one another (or more accurately, perceive themselves to be different from one another), then categorization within a team is likely to occur, which often leads to negative team outcomes (van Knippenberg & Schippers, 2007). Second, the similarity/attraction paradigm (Byrne, 1971) states that similarities among people lead to social attraction. Both perspectives predict that teams with similar members, or members who at least perceive themselves to be similar, will be more productive than teams with diverse members. Finally, the information/decision-making perspective postulates that diverse work teams are likely to have access to a greater pool of task-relevant resources, which might facilitate problem solving and enhance creativity.

At this stage, research findings regarding the outcomes of diversity in the workplace are inconclusive (e.g., Jackson & Joshi, 2011; van Knippenberg & Schippers, 2007; Williams & O'Reilly, 1998), van Knippenberg, De Dreu, and Homan (2004) tried to integrate the social categorization and information/ decision-making perspectives in their categorization-elaboration model. This model suggests that to understand the influence of diversity on team performance and other outcomes, researchers should examine mediators and moderators and explore new aspects of diversity. This is what we do in this article. First, we explore perceptions of diversity. Most researchers have examined objective diversity; fewer have considered how members' perceptions of diversity affect team functioning. We investigate the influence of perceived diversity on two important team processes—identification and relationship conflict. Second, with respect to these relationships, we examine the moderating role of diversity beliefs and the mediating role of team affect. Team affect is a mediating process that has never before been studied directly in diversity research.

Perceived Diversity

Most diversity research has focused on actual demographic and informational differences among members—that is, differences concerning variables such as age, gender, tenure, educational specialization, and functional

background (van Knippenberg, & Schippers, 2007). We acknowledge the importance of objective diversity but also believe that there is a need to examine more closely the impact of perceived diversity on team functioning. Perceived diversity captures members' beliefs about the diversity within their team.

We focus on perceived diversity for the following reasons: First, prevalent definitions of diversity emphasize its subjective aspects. For example, van Knippenberg et al. (2004) defined diversity as distinct differences among members of a group with regard to characteristics that may foster the perception that another person differs from oneself. Yet subjective diversity has been studied much less often than objective diversity. Moreover, perceived and objective diversity are two separate constructs that are sometimes, but by no means always, aligned. Some researchers who measured both variables have found only weak or no correlations between them (see Curry & Kenny, 1974; Harrison, Price, Gavin, & Florey, 2002). This may be due to the fact that some diversity attributes, in certain teams, are so salient that they overshadow other diversity attributes. For example, in a team in which nationality diversity is highly salient (and leads to subgroup categorizations), differences in members' ages may be less influential.

Second, in their study of differences between demographic and deeplevel diversity (diversity in team members' psychological attributes) over time, Harrison and colleagues (2002) confirmed that the effects of actual diversity are mediated by perceived diversity. As Harrison and Klein (2007) later suggested, perceived diversity may have more proximal explanatory power than actual diversity. The importance of perceived diversity has thus been documented both theoretically and empirically. In particular, the social categorization perspective states that people categorize themselves and others into in-groups and out-groups based on perceived similarities and differences. Several studies have acknowledged the importance of measuring such perceptions at the individual level. For example, Turban and Jones (1988) showed that the perception of attitudinal similarity between supervisors and subordinates, and not so much attitudinal similarity itself, was positively related to subordinates' satisfaction, performance ratings, and pay ratings. In another study, employee perceptions of diversity at the senior management and nonmanager levels were strongly related to overall performance (Allen, Dawson, Wheatley, & White, 2008). At the team level, several researchers have found that actual diversity in work teams has only an indirect influence on team outcomes, an effect mediated by perceptions of diversity (Harrison et al., 2002; Ries, Diestel, Wegge, & Schmidt, 2010).

Third, in this study, we were mainly interested in the general subjective perception of differences among team members. Measuring objective levels of diversity (based on, for example, team members' age or educational specializations) is problematic insofar as it presupposes that such characteristics are all salient to team members. Indeed, it has been shown that different aspects of diversity can be salient for different people (see Oosterhof, van der Vegt, van de Vliert, Sanders, & Kiers, 2009). In fact, Harrison, Newman, and Roth (2006) advised researchers to conceptualize an attribute of interest at a high level of abstraction when investigating work behavior through attitudes of team members. Thus, we asked team members about their general perception of diversity (the extent to which their team was diverse with regard to whatever differences were most pronounced) without suggesting certain attributes. In other words, the perception of diversity that we captured reflected all of the constructs relevant to a specific team. We refer to this construct as (general) perceived diversity. We believe that people have a broad impression of their team's diversity. Previous research has supported this belief, in the sense that diversity perceptions are often shared by team members (Ely & Thomas, 2001; van Dick, van Knippenberg, Hägele, Guillaume, & Brodbeck, 2008).

Perceived Diversity and Identification

Identification with a team is usually described as an emergent state (Kearney, Gebert, & Voelpel, 2009), meaning that it develops over time and only then has an impact on team outcomes. Identification has been described as a key factor for a team's success (van der Vegt, van de Vliert, & Oosterhof, 2003) and has been associated with greater work motivation and better performance (van Knippenberg, 2000). Riketta and van Dick (2005) have provided metaanalytical support that identification with a team is positively related to team climate and satisfaction with colleagues and supervisors, as well as altruistic behaviors. Following other authors (Kearney & Gebert, 2009), we conceptualize team identification at the team level as the emotional value that team members attach to their membership (van der Vegt & Bunderson, 2005). Research suggests that people, on average, are less fond of working in diverse teams than they are of working in homogeneous teams (McLeod, Lobel, & Cox, 1996). For example, members that differ more from other team members show less psychological attachment to the team and may thus be more likely to leave it (Tsui, Egan, & O'Reilly, 1992). In addition, the act of identification is assumed to be the culmination of self-categorization (e.g., Kearney & Gebert, 2009; van Knippenberg & Schippers, 2007). Social categorization

theory (Turner et al., 1987) suggests that when diversity is salient, categorization will occur and team members will see themselves as more similar to members of their in-group (Brewer, 1979). Thus, members of diverse teams are more likely to identify with smaller subgroups within the team, rather than identifying with the team as a whole. Hence, perceived diversity is likely to have a negative effect on identification with the entire team.

Hypothesis 1: Perceived diversity is negatively associated with team identification.

Perceived Diversity and Relationship Conflict

Relationship conflict develops from interpersonal disagreements within a team and is often characterized by tension among team members (Jehn, 1995). Relationship conflict is negatively linked to performance, as shown by the meta-analyses of De Dreu and Weingart (2003) and De Wit, Greer, and Jehn (2012). In fact, the emergence of conflict has been called the main risk of diversity (Moreland, Levine, & Wingert, 1996). Research findings are in line with this claim (e.g., Hobman, Bordia, & Gallois, 2003; Pelled, Eisenhardt, & Xin, 1999; Randel, 2002) and fit the social categorization perspective. When diversity is salient and intragroup categorization takes place, individuals are more likely to favor in-group members and discriminate against out-group members, which in turn is likely to cause disagreements and conflicts within teams. Thus, we predict that relationship conflict will increase as perceived diversity increases.

Hypothesis 2: Perceived diversity is positively associated with relationship conflict.

The Moderating Role of Diversity Beliefs

People have different beliefs about diversity. They may see value in the idea of working with others who are different from themselves, or they may think that working with people who are similar to themselves is preferable. This notion was introduced to diversity research only recently and has been described under different names, such as diversity beliefs (van Dick et al., 2008), diversity perspectives (Ely & Thomas, 2001), and openness to diversity (Mitchell, Nicholas, & Boyle, 2009). These differences in ideas may stem from socialization and education, or from personal experiences people have had while working with others who were similar (or dissimilar) to

themselves. Diversity beliefs might also be related to personality characteristics, such as tolerance for ambiguity or need for cognition (Kearney et al., 2009). In this article, we use the term *diversity beliefs* to refer to people's beliefs about the value of working in diverse teams. It is important to note that diversity beliefs are not necessarily static (Phillips & Lount, 2007), but rather change over time or due to specific events.

van Knippenberg and colleagues (2004) have noted that categorization within a team often leads to negative outcomes such as increased relationship conflict or decreased team identification. However, these effects are not inevitable. Only when team members have negative beliefs about diversity will they respond negatively to heterogeneous colleagues in ways that impede team functioning. When team members hold positive diversity beliefs, they are more likely to respond positively to perceived diversity, and thus, team functioning may be unaffected, or may even improve. In other words, diversity beliefs determine whether perceived diversity will result in improved or impeded team functioning (van Dick et al., 2008).

In student samples, diversity beliefs have already been shown to moderate the relationship between actual or perceived diversity and identification with a team (van Dick et al., 2008; see also Wegge, Schmidt, Liebermann, & van Knippenberg, 2011). But to the best of our knowledge, no field study has yet investigated the relationship between perceived diversity and identification. This is important, because the members of established teams have more time to get to know each other, and thus may find ways to "deal" with their diversity (Moreland et al., 1996). Harrison and colleagues (2002) found that the influence of diversity in deep-level characteristics increases over time (whereas the influence of demographic diversity decreases). Because there are arguably more psychological than demographic attributes on which people can differ, perceived diversity may thus have more negative effects in organizational settings. Therefore we propose that if perceived diversity is high, and team members have negative beliefs about diversity, they will identify less with their team and experience more relationship conflict.

Hypothesis 3a: The negative relationship between perceived diversity and team identification will be moderated by diversity beliefs—the relationship will be stronger when team members have negative rather than positive diversity beliefs.

Hypothesis 3b: The positive relationship between perceived diversity and relationship conflict will also be moderated by diversity beliefs—the relationship will be stronger when team members have negative rather than positive diversity beliefs.

The Mediating Role of Team Affect

Affective states such as moods or emotions are important in the workplace (Barsade & Gibson, 2007). Some authors (e.g., George, 1990) have claimed that affect can be shared within teams. Phillips and Lount (2007) proposed that homogeneity is associated with feelings of agreement in the team and may thus lead to positive team affect. In contrast, diversity in teams may indicate the potential for difficult interactions with other team members and may therefore foster a negative team affect. Moreover, Phillips and Lount argue that members of diverse teams with positive rather than negative diversity beliefs will experience less negative affect and more positive affect. They propose that team affect mediates the relationship between diversity and information processing—a relationship that they propose is moderated by diversity beliefs and that can influence performance. We claim that this proposition also holds with respect to other team processes such as team identification and emotional conflict:

Positive Affect. In a group with a positive affective tone, members are likely to experience higher levels of happiness or pleasure. Because people prefer to work in homogeneous teams (e.g., McLeod et al., 1996), members of diverse teams may experience fewer positive emotions than members of homogeneous teams. Thus, a positive affective tone may serve as the basis for the relationships among perceived diversity, diversity beliefs, and identification in groups. For example, appraisals of perceived diversity and the diversity beliefs of team members may be closely related to the affect that members experience. In addition, group identification involves affective convergence in teams (Tanghe, Wisse, & van der Flier, 2010), and it has been proposed that positive affective states such as interest or joy encourage development (Scherer & Tran, 2001). Thus, positive affect should mediate the relationship among perceived diversity, diversity beliefs, and identification (see Figure 1) and we propose the following:

Hypothesis 4a: The moderating effect of diversity beliefs (on the relationship between perceived diversity and team identification) is mediated by positive team affect.

Negative Affect. Adverse feelings such as anger or frustration can engender a negative group affective tone. Phillips and Lount (2007) theorized that the anticipation of working in a heterogeneous team, and thus, the anticipation of relationship conflict can influence team members' affect. In a similar vein, Garcia-Prieto, Bellard, and Schneider (2003) claimed that relationship conflict

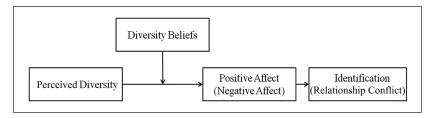


Figure 1. Proposed model of the relationship among perceived diversity (IV), diversity beliefs (moderator), positive (negative) affect (mediator), and team identification (relationship conflict; DV)

has cognitive causes as well as affective causes. Accordingly, team members who perceive their team to be diverse may be more likely to experience negative affect, which can give rise to relationship conflict. Moreover, Ng and Sorensen (2009) showed in their meta-analysis that negative affect is more strongly related to relationship conflict than is positive affect. Hence, we argue that a negative group affective tone underlies the relationship among perceived diversity, diversity beliefs, and relationship conflict in teams. As shown in Figure 1, we assume that diversity beliefs play a moderating role in these relationships (cf. Phillips & Lount, 2007, see above). Therefore we propose the following:

Hypothesis 4b: The moderating effect of diversity beliefs (on the relationship between perceived diversity and relationship conflict) is mediated by negative team affect.

Method

Sample

We invited (by email) small- to medium-sized companies from the yellow pages to take part in a research study by a large German university on team functioning. The management of 21 companies decided that at least some of their teams would participate (in some companies, certain teams were not allowed to participate because of time constraints or project deadlines). We told the management of these companies that our research was about diversity in teams. However, the participants themselves were simply told that the research was about team processes and that the management would receive

an anonymous team-level evaluation. Despite the continuous assurance of anonymity, two teams chose not to participate because members did not believe that their responses would be treated anonymously. Eventually, we collected data from 271 individuals (out of 392 possible respondents) in 44 teams. Most of the participating teams were from the manufacturing and technological sectors, with almost all teams (73.6%) performing administrative and developmental work in an office environment. Two teams (5.3%) were production teams. The remaining 21.1% of the teams came from the medical sector. We conducted a one-way ANOVA for all variables to check whether there were significant differences among the companies. We found no such differences. Two 2-person teams were excluded from the analyses because dyads may be qualitatively different from larger groups (Moreland, 2010). In addition, we excluded four teams from the analysis because we received data from fewer than half of their members. The final sample thus included 38 teams with 241 individual members. Team size ranged from 3 to 19 members, with an average of 8 members per team (SD = 4.64). The mean age of team members was 38.28 years (SD = 11.24). Male employees comprised 51.9% of the sample. On average, 80.23% of team members responded, with a range from 3 to 19 members. Several weeks after participation, teams and organizations received either a written or a personal debriefing, including analyses of the results and information about the average responses from the entire sample.

Measures

Objective Diversity. We included age, gender, educational level, nationality, team tenure, and organizational tenure as relevant characteristics of team members. All demographic measures were collected via self-reports. Withingroup standard deviations were used to measure diversity in age, team tenure, and organizational tenure of team members (Bedeian & Mossholder, 2000). We used Blau's (1977) index to measure diversity in team members' gender, educational level (no training, completed training, advanced training degree, BA, diploma, or MA, PhD, other), and nationality (German, Polish, Dutch, Greek, Czech, Russian, or Austrian).

Perceived Diversity. We used three items to assess the extent to which differences in the team were salient to team members (see van Dick et al., 2008): "When I am supposed to describe my work team, I automatically think about the differences among my colleagues", "I am very aware of the differences among my colleagues", and "I sometimes think about the differences among

the colleagues in our team" ($\alpha=.72$). The items were aggregated to create a single score. Respondents used 5-point Likert-type scales, with response options ranging from 1=don't agree at all to $5=agree\ very\ much$. Because we were interested in the team level of analysis, we calculated median r values (James, Demaree, & Wolf, 1984), which indicate the degree of agreement among team members within teams, as well as intraclass correlation coefficients (ICCs; Bliese, 2000), which represent the ratio of between-group to total variance (ICC1) and the reliability of average group perceptions (ICC2), respectively. The intrateam agreement (r_{wg}) for perceived diversity was .73 (SD=.17), and 68% of the teams had an r_{wg} above the cutoff standard of .70. The intraclass correlation coefficient ICC(1) was .39, which is often considered a large effect (LeBreton & Senter, 2008), and the ICC(2) was .83 and beyond the acceptable standard value of .60 (Glick, 1985). Overall, these results justified aggregating responses to the team level (Bliese, 2000).

Diversity Beliefs. We adapted a measure developed by van Dick and colleagues (2008) to assess general beliefs about working in a diverse team. Participants responded on 7-point Likert-type scales, with response options ranging from 1 = don't agree at all to 7 = totally agree. The items were "Teams are more effective when they include people who are different from one another", "I prefer to work with people who are different from me", and "Teams perform better when they include people who are different from one another". The scale had a reliability of $\alpha = .85$, an r_{wg} score of .81 (SD = .17), an ICC(1) of .62, and an ICC(2) of .93.

Group Affective Tone. We used the Job-Related Affective Well-Being Scale (JAWS; Van Katwyk, Fox, Spector, & Kelloway, 2000) to measure positive and negative affect within the teams. Participants were asked to state which mood was usually dominant within their team, using 5-point Likert-type scales with response options ranging from 1 = never to 5 = extremely often or always. Positive group affective tone was measured using the items cheerful, excited, happy, inspired, pleased, proud, relaxed ($\alpha = .85$). Negative group affective tone was measured using the items angry, annoyed, anxious, bored, depressed, frustrated, fatigued ($\alpha = .78$). For both positive and negative affective tone, each seven-item set was averaged to create a single overall score. The withinteam agreement index (r_{wg}) for positive group affective tone was .92 (SD = .15) and .95 (SD = .03) for negative group affective tone. The ICC(1) values were .44 (positive affect) and .29 (negative affect), and the ICC(2) values were .86 (positive affect) and .76 (negative affect), respectively.

Relationship Conflict. We measured relationship conflict by adapting items from Jehn's (1995) relational conflict measure: "It is quite evident that there are personal conflicts in our team", "The relationships in our team are not

always harmonious", and "Interpersonal friction is an issue in our team". By averaging ratings across all items, we created a single overall score. Team members answered on 5-point Likert-type scales, with response options ranging from 1 = don't agree at all to $5 = agree \ very \ much$. The reliability was $\alpha = .88$ and the within-team agreement (r_{wg}) was .82 (SD = .13). The ICC(1) was .67, and the ICC(2) was .94.

Team Identification. We adapted Mael and Ashforth's (1992) identification scale to the workplace by replacing the word *school* with the word *team*. Respondents used 5-point Likert-type scales, with response options ranging from 1 = don't agree at all to $5 = agree \ very \ much$. The items were: "When I talk about this team, I usually say 'we' rather than 'they'", "When someone praises this team, it feels like a personal compliment", "This team's successes are my successes", and "When someone criticizes this team, it feels like a personal insult". The scale had an internal reliability of $\alpha = .70$, a within-team agreement of $r = .89 \ (SD = 0.07)$, and an ICC(1) of .30 and an ICC(2) of .77.

All scales were in German. The items were translated and back-translated from English to German by two bilingual assistants working independently (see Brislin, 1980).

Results

We conducted a confirmatory factor analysis (CFA) using structural equation modeling (AMOS) to show that negative team affect and relationship conflict were two distinct constructs. A two-factor model fit the data well ($\chi^2 = 38.32$, df = 34, $\chi^2/df = 1.13$; Comparative Fit Index [CFI] = .98, standardized root mean square residual [SRMR] = .07, root mean square error approximation [RMSEA] = .06) and had a better fit than a one-factor model ($\chi^2 = 72.85$, df = 35, $\chi^2/df = 2.08$; CFI = .83, SRMR = .10, RMSEA = .17). Overview of Analyses. In a preanalysis, we tested the influence of objective

diversity (i.e., age, gender, educational level, nationality, team tenure, and organizational tenure) on perceived diversity, team identification, and emotional conflict. As shown in Table 1, none of the objective diversity measures had a significant relationship with any of the other variables. Table 2 presents the means, standard deviations, and correlations for all the study variables. All hypotheses were tested using hierarchical linear regression analyses with mean-centered independent variables (Aiken & West, 1991). Because the teams in our sample differed somewhat in size, and team size effects have been found in other studies (e.g., Wegge, Roth, Neubach, Schmidt, & Kanfer, 2008), we included team size as a control variable. Although it did not change our results, it was left in as a control because it had significant relationships

	Perceived	Team Emotional		Collinea	rity
Variable	diversity β	identification β	conflict β	Tolerance	VIF
Age	.30	19	.09	.718	1.39
Gender	01	.08	.11	.921	1.09
Educational level	.09	.12	04	.921	1.09
Nationality	.03	08	.22	.970	1.03
Team tenure	.17	22	.25	.788	1.27
Organizational tenure	.19	01	.07	.649	1.54
R^2	.25	.09	.18		
Adjusted R ²	.14	09	.02		

Table 1. Results of Regression Analyses Testing the Effects of Actual Diversity on Perceived Diversity, Team Identification, and Emotional Conflict (N = 38)

Note: VIF = variance inflation factor.

with some of the other variables (see Table 2). Controlling for team type (medicine or company work teams) did not change the results, and so this variable was not included in later analyses.

In Step 1 of the analyses, we entered team size as a control variable. In Step 2, we entered perceived diversity and diversity beliefs as additional predictors. In Step 3, the interaction between perceived diversity and diversity beliefs was entered into the regression analyses. Afterward, we further analyzed significant interaction effects. In the final step, we added the mediator to the model to test for mediated moderation (Baron & Kenny, 1986) and to ascertain whether team affect (positive or negative) mediated the relationships among perceived diversity, diversity beliefs, and team outcomes (team identification or emotional conflict). Finally, we conducted a Sobel test (Sobel, 1982) and used bootstrapping (Preacher, Rucker, & Hayes, 2007) to test the significance of the indirect (mediated moderation) effect.

Test of hypotheses. Results of the regression analyses are presented in Table 3. Due to some high correlations among the variables, the results of multicollinearity diagnostics are also reported in this table. Hypothesis 1 proposed that perceived diversity is negatively associated with team identification. As shown in Table 2, this prediction was supported ($\beta = -.56$, p < .001; $R^2 = .33$). Hypothesis 2 proposed that perceived diversity and relationship conflict are positively associated. This prediction was also supported by the data, $\Delta R^2 = .22$ ($\beta = .49$, p < .01). In sum, we found support for Hypotheses 1

Table 2. Descriptive Statistics and Intercorrelations (N = 38)

Variable	×	SD	_	2	1 2 3 4		5	2 9	7	80	6	9 10 11 12	=	12
I. Perceived diversity	2.93	0.49												
2. Diversity beliefs	4.22	99.0	.12											
3. Identification	4.02		0.3357***16	<u>-</u> .16	I									
4. Relationship conflict	2.39	0.82	.56***14	<u>+</u>	35**									
5. Positive team	3.25		0.4247***	.02	.50***	48***	I							
affective tone														
6. Negative team affective tone	1.70	0.30	1.70 0.30 .47***2332*	23	32*	.70***	****69	1						
7. Team size	8.00	8.00 4.64	.27	<u>-</u> .	<u>-</u> .	.50***	58	** 19:						
8. Age	9.29	4.52	.42***	90:	<u>8</u>		16	80:	04					
9. Gender	0.22	0.19	.07	<u>-</u> .	00.	.20	17	.20	.29	60:				
10. Educational level	0.37	0.20	71.	6	90:	01	<u>+</u>	17	07	61.	<u>o</u> .			
II. Nationality	0.03	0.03 0.1101	-01	<u>-</u> .	90.–	.23	90.–	.24	.25	90.–	5	90.–		
 Team tenure 	40.87	40.87 37.90	.28	03	20	.30	42***	.I5	.28	80:	.21	<u>~</u>	10	
13. Organizational	94.58	94.58 75.27	.39**	.12	17	.21	*-14.	61.	.03	.47***	.05	0004	04	.37**
tenure														

 $^*p < .10$, $^{*pc}p < .05$, $^{*pc}p < .01$, $^{*pc}p < .00$.

Table 3. Results of Hierarchical Regression Analyses (N = 38)

	lde	Identification Relationship confl				
		Collinear	rity		Collinearity	
Variable	β	Tolerance	VIF	β	Tolerance	VIF
Step I						
Team size	13	1.00	1.00	.50***	1.00	1.00
R^2	.02			.25***		
Adjusted R ²	01			.23***		
Step 2						
Team size	.00	.90	1.11	.35**	.90	1.11
Perceived diversity (PD)	56***	.90	1.11	.49***	.90	1.11
Diversity beliefs (DB)	09	.96	1.05	15	.96	1.05
R^2	.33***			.47***		
Adjusted R ²	.27***			.42***		
ΔR^2	.32***			.22***		
Step 3						
Team size	.04	.89	1.13	.31**	.89	1.13
Perceived diversity (PD)	48***	.84	1.20	.41***	.84	1.20
Diversity beliefs (DB)	.06	.74	1.35	31**	.74	1.35
Interaction PD and DB	.33**	.69	1.45	34**	.69	1.45
R^2	.41**			.55**		
Adjusted R ²	.34**			.49**		
ΔR^2	.08**			.08**		
Step 4						
Team size	.22	.65	1.53	.16	.62	1.62
Perceived diversity (PD)	36**	.73	1.37	.31**	.72	1.40
Diversity beliefs (DB)	.04	.74	1.35	17	.58	1.73
Interaction PD and DB	.28*	.68	1.47	20	.55	1.81
Positive team affective tone	.39**	.55	1.83			
Negative team affective tone				.35*	.39	2.58
R^2	.49**			.60*		
Adjusted R ²	.41**			.53*		
ΔR^2	.08**			.05*		

b < .10. b < .05. b < .01. b < .001.

and 2, demonstrating both the negative relationship between perceived diversity and identification, and the positive relationship between perceived diversity and relationship conflict.

Hypothesis 3a predicted that the negative relationship between perceived diversity and identification would be stronger in teams with negative

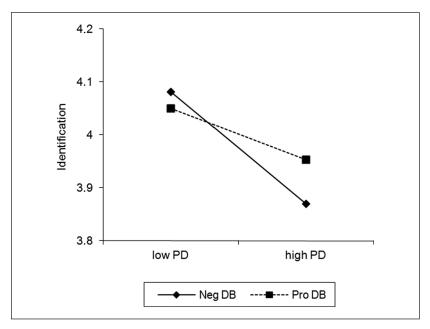


Figure 2. Team identification as a function of perceived diversity and diversity beliefs (DB)

Note: Teams with negative diversity beliefs (Neg DB) score I SD below the mean, teams with positive diversity beliefs (Pro DB) score I SD above the mean.

diversity beliefs than in teams with positive diversity beliefs. As expected, diversity beliefs moderated the relationship between perceived diversity and team identification, $\Delta R^2 = .08$ ($\beta = .33$, p < .05). Significance tests of the slopes revealed that perceived diversity was not related to identification in teams with positive diversity beliefs, $\beta = -.10$, t(34) = 1.59, ns, but that perceived diversity had a significant negative relationship with identification in teams with negative diversity beliefs, $\beta = -.21$, t(34) = 4.43, p < .001 (see Figure 2).

In line with Hypothesis 3b, the positive relationship between perceived diversity and relationship conflict was found to be stronger in teams with negative diversity beliefs, $\Delta R^2 = .08$ ($\beta = -.34$, p < .05). Slope analysis tests showed that perceived diversity was not related to relationship conflict in teams with positive diversity beliefs, $\beta = .18$, t(34) = 1.36, ns, but that perceived diversity was significantly related to relationship conflict in teams with negative diversity beliefs, $\beta = .48$, t(34) = 4.51, p < .001 (see Figure 3).

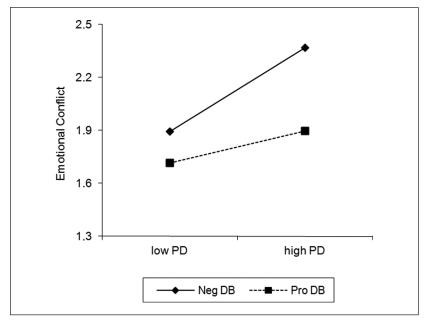


Figure 3. Relationship conflict as a function of perceived diversity and diversity beliefs (DB)

Note: Teams with negative diversity beliefs (Neg DB) score I SD below the mean, teams with positive diversity beliefs (Pro DB) score I SD above the mean.

Hypothesis 4a stated that a positive group affective tone would mediate the interactive effects of perceived diversity and diversity beliefs on team identification. Similarly, Hypothesis 4b stated that a negative group affective tone would mediate the interactive effect of perceived diversity and diversity beliefs on relationship conflict. We analyzed these mediated moderation predictions using Baron and Kenny's (1986) causal steps approach. First, we tested for an interaction between perceived diversity and diversity beliefs on team identification and relationship conflict. As mentioned earlier, we found such an effect. Second, we checked whether the interaction effect of perceived diversity and diversity beliefs had a significant influence on negative team affective tone and on positive team affective tone. We confirmed this for the former ($\beta = -.38$, p < .05; $R^2 = .61$) but not for the latter ($\beta = .19$, ns; $R^2 = .26$). Perceived diversity was significantly associated with positive team affect ($\beta = -.43$, $\rho < .05$), but neither diversity beliefs ($\beta = .16$, ns) nor the interaction between perceived diversity and

diversity beliefs were related to team affect. Third, we examined whether the mediators (negative team affective tone and positive team affective tone) had an association with relationship conflict and team identification, respectively. We found that negative affective tone was significantly associated with relationship conflict, ($\beta = .63$, p < .001; $R^2 = .50$), and that positive affective tone was significantly associated with team identification, ($\beta = .64$, p < .01, $R^2 = .29$). Finally, we added negative and positive affective tone into the overall regression model. Table 3 shows that the influence of the interaction between perceived diversity and diversity beliefs on relationship conflict was no longer significant when negative affective tone was controlled for. Results were similar, though not as strong, with team identification as the dependent variable. After adding positive team affective tone to the regression equation, the beta weight of the interaction term of perceived diversity and diversity beliefs decreased from $\beta = .33$, p < .05, to $\beta = .28$, p < .10, $\Delta R^2 = .08$, p < .05.

In sum, we can conclude that negative affective tone fully mediated the interactive effect of perceived diversity and diversity beliefs on relationship conflict. However, the mediated moderation of perceived diversity (IV), diversity beliefs (moderator), positive team affect (mediator), and team identification (DV) was not entirely supported because the path from the interaction term to the mediator was nonsignificant. A Sobel (1982) test confirmed that the drop in significance of the interaction term was significant for negative affective tone (Z = -2.02; p < .05), but not for positive affective tone (Z = 1.42, ns). Thus, although Hypothesis 4a was not fully supported, the data confirmed Hypothesis 4b. To further verify our results, we used the nonparametric method bootstrapping for estimating indirect effects (Preacher et al., 2007). As shown in Table 4, the bootstrap confidence intervals revealed an indirect and positive effect of perceived diversity on identification through positive team affective tone and on emotional conflict through negative team affective tone. This was observed when team members were holding negative (-1 SD) or moderate (mean) diversity beliefs but not when they were holding positive diversity beliefs (+1 SD).

Discussion

For both researchers and practitioners, it is important to understand when and why diversity engenders positive or negative outcomes. The goal of our study was to examine the influence of perceived diversity on team identification and relationship conflict, as well as the moderating role of diversity beliefs and the mediating role of group affective tone.

(Emotional Confli	ct) vi	a Positiv	ve (Negati	ve) Affective	e Tone	at Sp	ecific Value	s of
Diversity Beliefs								
		Team i	dentificati	on		Emot	ional confl	ict
Divorcity boliefs	ß	SE.	II BCA	III BCA	B	CE	II BCA	III BC

Table 4. Bootstrapped Indirect Effects of Perceived Diversity on Identification

		Team id	dentificatio	n	Emotional conflict				
Diversity beliefs	β	SE	LL BCA	UL BCA	β	SE	LL BCA	UL BCA	
-1 SD	102	0.068	-0.270	-0.004	.578	0.226	0.149	1.022	
М	075	0.053	-0.199	-0.009	.291	0.147	0.036	0.634	
+I SD	047	0.056	-0.226	0.026	.019	0.173	-0.488	0.530	

Note: N = 5,000 bootstrapping resamples; LL BCA and UL BCA = Lower level and upper level of the bias corrected and accelerated confidence interval for $\alpha = .05$. The indirect effect is significant (region of significance) where the confidence band does not contain zero.

The fact that, in our sample, objective diversity had no influence on perceived diversity or on the two dependent variables was a bit surprising. Harrison and colleagues (2002) showed that when teams work together for longer periods of time, differences in deep-level factors (such as personality or motivation) have a stronger influence on perceived diversity and team outcomes than do differences in surface-level factors (such as age or gender). Our results are in line with these findings. The organizational teams of this sample had been together for longer periods of time, which may have made demographic diversity less influential. In an exploratory approach, we asked participants which particular attributes seemed to vary among the members of their teams. Many of the attributes mentioned included work-related issues such as punctuality, work speed, or reliability—deep-level attributes that, to the best of our knowledge, have not yet been examined in research on diversity (but see Klein, Knight, Ziegert, Lim, & Saltz, 2011, who examined related diversity attributes).

The fact that perceived diversity was directly related to identification and relationship conflict was in line with predictions based on the social categorization perspective. That is, categorization leads to higher levels of conflict between in-group and out-group(s) and diminishes identification with the team. Our results also provided evidence for the important role of diversity beliefs as a moderator of the relationship between perceived diversity and team outcomes. Specifically, the negative relationship between perceived diversity and identification was strongest in teams with negative diversity beliefs. We found the same pattern for relationship conflict: Relationship conflict was highest in teams where diversity was salient and members held negative diversity beliefs.

Our findings differ from the only other study that has examined the relationships among perceived diversity, attitudes toward diversity, and relational conflict: Hobman and colleagues (2003) found that the interaction between perceived value diversity and openness to value diversity influenced task but not relationship conflict. One possible reason for this discrepancy is that Hobman et al. collected individual ratings, whereas we examined aggregated team member ratings. Perhaps the team members who participated in Hobman et al.'s survey differed from their fellow team members in the perception of relationship conflict. However, after analyzing our data set without aggregation to the team level (i.e., the individual responses), as well as a subsample that consisted of 38 randomly selected participants (one from each team), we abandoned this line of reasoning. Outputs were very similar to our unit-level results. There is another methodological difference between our study and that of Hobman et al. Although openness to diversity and diversity beliefs may be similar constructs, they are not identical. Openness to diversity means being open to learning from diverse others and making an effort to understand others' viewpoints (Hobman et al., 2003). Diversity beliefs, in contrast, are opinions about the value of heterogeneous teams and about possible benefits to be derived from assembling diverse members in a team (van Dick et al., 2008). Thus, being willing to make an effort to learn from dissimilar others (i.e., openness to diversity), and seeing a value in diverse teams (i.e., diversity beliefs) may be somewhat different.

Our results are in line with the findings of van Dick and colleagues (2008). In their study, as well as in ours, diversity beliefs moderated the relationship between perceived diversity and team identification. Thus, we were able to replicate their findings in an organizational setting. Positive diversity beliefs have often been found to buffer the negative consequences of diversity in teams and thereby lead to more favorable team outcomes (e.g., van Dick et al., 2008). In contrast, our findings (see also Homan, Greer, Jehn, & Koning, 2010; van Dick et al., 2008) suggest that negative diversity beliefs intensify the negative consequences of perceived diversity. Both patterns have been found in diversity research (Stegmann & van Dick, 2009). van Dick et al. concluded that these differences in moderation might be due to different methodologies. Indeed, we used methods like those used in van Dick et al.'s second study (2008), and our patterns of results were similar to theirs. In particular, we used similar scale anchors and asked only about differences (not similarities). We also conceptualized diversity in a very broad way, not asking about a few specific dimensions. This may have affected the moderation results (cf. van Dick et al., 2008).

Finally, we analyzed a construct that is rarely examined in diversity research, namely, team affect. The relationship of perceived diversity and relationship conflict, moderated by diversity beliefs, was mediated by negative group affective tone. In other words, the interaction of perceived diversity and diversity beliefs affected relationship conflict via negative group affective tone. This mediation effect was more strongly pronounced under medium and negative diversity beliefs. This finding is in line with a recent meta-analysis that found that negative affect was more strongly related to stressors, whereas positive affect had a stronger relationship with variables related to positive work contexts (Ng & Sorensen, 2009). In addition, people tend to rate their affect more negatively when experiencing relationship conflict rather than task conflict (Sessa, 1996). Furthermore, the link between diversity and group affective tone supports the claim that affective events are initiated through diversity (Ashkanasy, Härtel, & Daus, 2002). Few studies have integrated the constructs of diversity and affect (see Ashkanasy et al., 2002; Barsade, Ward, Turner, & Sonnenfeld, 2000).

Though hypothesized, we did not confirm that positive team affect mediated the effect of diversity beliefs on the relationship between perceived diversity and team identification. We found that the path from the interaction of perceived diversity and diversity beliefs to the mediating variable of positive emotions was not significant. Therefore, one of the preconditions for mediation could not be met. This result may also have methodological reasons: Maybe in different teams from our sample, members perceived different types of diversity. Some types of diversity might be associated with negative affect, whereas other types might be associated with positive affect. However, similar to the relationship of perceived diversity, diversity beliefs, negative affective tone, and emotional conflict, the strength of the mediation effect depended on the positivity or negativity of diversity beliefs in the teams. There was no effect in teams with positive diversity beliefs but a small effect in teams with moderate to negative diversity beliefs. Hence, for diversity beliefs to influence the amount of identification and positive affect experienced in a diverse team, strong and consolidated negative diversity beliefs may be needed. This is in line with theories proposing that positive and negative affect have distinct implications. For example, it has been found that people usually weigh negative information more heavily than positive information (e.g., Rozin & Royzman, 2001; Skowronski & Carlston, 1989). To analyze this issue, laboratory experiments could be conducted that allow the manipulation of both diversity beliefs and diversity perceptions.

Limitations and Future Research

This study had several limitations. First, all of the data were self-reported. We do not think this diminishes the value of our findings, however, because the main purpose of this study was to investigate the impact of perceived diversity and *perceived* diversity beliefs. Identification could have possibly been measured by monitoring the use of collective pronouns in teams and affective tone through the analyses of group recordings or the adoption of biological measures. However, measuring affect or identification objectively may have created problems due to discomfort or time constraints within the teams. A cross-sectional design was another limitation of our study. Hence, our data set did not lend itself to causal interpretations. Some may argue that the incremental variance with adding the diversity beliefs and affect to the regression equation was not sizable. However, it has been argued that moderator effects are especially difficult to identify, so even effects that explain only 1% of the variance should be regarded as meaningful (Evans, 1985). Moreover, McClelland and Judd (1993) declared that interactions are more difficult to detect in field settings. By calculating the Sobel test (Sobel, 1982) and using the bootstrapping method (Preacher et al., 2007), we were able to corroborate our results across analyses and are thus confident that we found an important effect.

Notwithstanding these limitations, our results lead to new questions in diversity research. Future studies might integrate diversity beliefs and clarify their moderating impact on perceived (and objective) diversity and positive group affective tone. Researchers might also examine questions concerning the antecedents of diversity beliefs and how diversity beliefs can be influenced. Possible antecedents may include task requirements, time pressure (Kruglanski & Webster, 1991), and organizational culture (Ely & Thomas, 2001), as well as intolerance and prejudices (Corral-Verdugo et al., 2009). Moreover, we believe that the diversity literature would benefit from further consideration of group affect. Researchers might examine objective or perceived diversity with respect to specific member attributes such as (work-related) values and study the influence of this diversity type on group affective tone. Moreover, affect and cognition often have a bidirectional relationship (Lazarus, 1991). Perhaps influencing team members' affect, for example, through positive team feedback, would foster positive diversity beliefs or the perception of similarities in the team. Or, alternatively, influencing team members' perceptions of similarity may likely lead to more positive affect as it leads to other positive outcomes (e.g., Moreland & Zajonc, 1982). We found negative affect to be

an important mediator in the relationships among perceived diversity, diversity beliefs, and relationship conflict. Perhaps specific kinds of affect mediate similar relationships between diversity and other team outcomes (such as team climate or elaboration). It might also be promising to test whether the shared perception of diversity in teams spreads via affective processes, as a sort of emotional contagion. In other words, team members' shared negative (or positive) affect might lead to a shared perception of team diversity (or homogeneity).

Practical Implications and Conclusion

Our results suggest that when team members perceive differences in their team, undesirable effects may occur. Thus, organizations need to enhance the perception of similarities and decrease the perception of differences in work teams. In general, the salience of diversity attributes is affected by the surrounding context (e.g., Williams & O'Reilly, 1998). Managers are therefore well-advised to make more salient the attributes that all group members share—for example, being part of the team or the company and benefiting (or suffering) from the same outcomes (cf. "common ingroup identity"; Dovidio, Gaertner, & Saguy, 2008). Also, team design aspects that facilitate and reward cooperation and open communication (e.g., through goal interdependence and task interdependence) influence the extent to which members focus on their differences (Sherif, Harvey, White, Hood, & Sherif, 1961). Often, it is the team leader who must initiate such processes. He or she may do this implicitly, by modeling the required behavior, or explicitly, by commending appropriate and sanctioning inappropriate behaviors by team members (Dose & Klimoski, 1999). In addition, Kulik and Roberson (2008) found that diversity awareness trainings can improve team members' overall attitudes toward diversity (i.e., their diversity beliefs)—which we found to buffer the negative effects of perceived diversity. Furthermore, focusing on improving the affective tone within a team might be a new starting point to enhance team outcomes: Affective events theory suggests that (negative) work situations determine affective states, which then shape the thoughts and behaviors of employees in organizations (Weiss & Cropanzano, 1996; see also mood theory, Forgas & George, 2001). Thus, organizations and leaders should try to minimize these negative situations. Leaders might also want to work on their personal affective tone, because subordinates may adopt that tone through a process of emotional contagion (Sy, Côté, & Saavedra, 2005).

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