

## CULTURAL DIVERSITY AND TEAM PERFORMANCE: THE ROLE OF TEAM MEMBER GOAL ORIENTATION

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**As workforce diversity increases, knowledge of factors influencing whether cultural diversity results in team performance benefits is of growing importance. Complementing and extending earlier research, we develop and test theory about how achievement setting readily activates team member goal orientations that influence the diversity-performance relationship. In two studies, we identify goal orientation as a moderator of the performance benefits of cultural diversity and team information elaboration as the underlying process. Cultural diversity is more positive for team performance when team members' learning approach orientation is high and performance avoidance orientation is low. This effect is exerted via team information elaboration.**

Throughout the world, the workforce is becoming more diverse in cultural background. Because many organizations make use of teams as their basic structure, great attention has been paid to the effects of cultural diversity on team performance (Jackson, Joshi, & Erhardt, 2003; Milliken & Martins, 1996; Williams & O'Reilly, 1998). This research has identified cultural diversity as a “double-edged sword” (Milliken & Martins, 1996; Phillips, Northcraft, & Neale, 2006) and suggested that identifying when teams are able to benefit from cultural diversity and when cultural diversity may be detrimental is of great importance. Increasingly, research has therefore called for theories that take into account contingencies of (cultural) diversity's effects (e.g., Joshi & Roh, 2009; Pelled, Eisenhardt, & Xin, 1999; van Knippenberg & Schippers, 2007). To address these issues, the categorization-elaboration model (CEM; van Knippenberg, De Dreu, & Homan, 2004) was developed. According to the CEM, the performance benefits of (cultural) diversity arise to the extent that diversity engenders *information elaboration*—that is, the exchange, discussion, and integration of task-relevant information and perspectives. The CEM also identifies a double challenge in this respect, however. First,

information elaboration does not automatically follow from cultural diversity, but is contingent on team members' motivated effort to mobilize the team's diverse informational resources. Second, cultural diversity may also engender intergroup biases that invite a closing of minds to the contributions of culturally different others and thus disrupt information elaboration. Viewed through the conceptual lens of the CEM, the challenge in realizing the performance benefits of cultural diversity thus is to identify moderating influences that motivate elaboration of diverse informational resources and prevent intergroup biases that may stand in the way of elaboration.

Complementing and extending research on the moderators of the performance effects of (cultural) diversity, we develop and test theory about team member goal orientations in the relationship between cultural diversity and performance. Goal orientations capture individuals' motivational focus and self-regulatory strategies in achievement settings (Dweck, 1986). Because goal orientations are inherently tied to achievement situations, goal orientations may play out in any setting in which cultural diversity's effects on performance may be relevant. They constitute a fundamental and universal influence in achievement settings and thus also an influence that may be broadly relevant to understanding of the diversity-performance relationship. As we argue in the following, goal orientation theory suggests that team member goal orientations may speak to both the likelihood that

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members are motivated to pursue the informational benefits of cultural diversity and the likelihood that cultural diversity gives rise to intergroup biases that disrupt information elaboration.

Our goal orientation analysis is positioned within the framework of the CEM but makes a unique contribution within this framework and within the study of the moderators of the performance effects of diversity more broadly. A variety of moderating influences have been proposed and studied in this respect (Joshi & Roh, 2009; van Knippenberg & Schippers, 2007), but an underdeveloped aspect of these perspectives is the role of the achievement context in which the diversity-performance relationship plays out. Researchers have recognized that the performance benefits of diversity are more likely to emerge on more complex tasks with stronger creative, problem-solving, and decision-making requirements (Jehn, Northcraft, & Neale, 1999; van Knippenberg et al., 2004; cf. Joshi & Roh, 2009). Missing from this perspective, however, is a recognition that not only relatively objective task characteristics may play a role here, but also the motivational orientations that are invited by a given achievement situation. The basic fact that task performance is required can be expected to trigger team member goal orientations, and different goal orientations invite different approaches to task performance. This goal orientation perspective constitutes a shift in focus that complements and extends earlier diversity research in an important way by looking at the motivational orientations and self-regulation strategies associated with achievement situations. Because this analysis is firmly rooted in the CEM, the present study can also be seen as a further development and test of the propositions advanced in that model and thus as a further step in developing an integrative theory of the performance effects of team diversity.

## THEORY AND HYPOTHESES

### The Double-Edged Sword of Cultural Diversity

Team diversity offers a complex challenge because it has the potential to both benefit and disrupt team performance (van Knippenberg & Schippers, 2007; Williams & O'Reilly, 1998). In keeping with this broader perspective, the CEM recognizes that at the basis of the performance benefits of diversity lies the fact that it may form an informational resource. Diverse backgrounds are associated with diverse information, knowledge, and perspec-

tives, and accordingly more diverse teams may bring together a larger and more diverse pool of task-relevant informational resources to draw from. Realizing the performance benefits of diversity requires an effortful information elaboration process to integrate diverse task-relevant information and perspectives. Information elaboration does not automatically follow from team diversity, however. Diverse informational resources often remain "hidden" because team members are insufficiently aware of the benefits of the exchange and integration of information or insufficiently motivated to pursue these (Stasser, 1999; van Ginkel & van Knippenberg, 2008). Developing an understanding of the conditions under which diversity can be expected to yield performance benefits thus includes developing theory about factors that motivate elaboration of diverse informational resources.

One influence here in particular is associated with diversity: differences between people may invite social categorization distinguishing similar (in-group) others from dissimilar (out-group) others, which may result in intergroup biases—attitudinal and behavioral favoring of in-group over out-group (van Knippenberg et al., 2004). Of particular relevance to the performance benefits of diversity, intergroup biases may disrupt information elaboration. They may invite a closing of the mind to dissimilar others, reducing the willingness to share and discuss information and diverse perspectives, as well as a tendency to see diverse others as less trustworthy and knowledgeable sources of information, and thus lead members to pay less attention to diverse viewpoints even if they are shared. According to the CEM, these intergroup biases do not automatically follow from differences between team members but are contingent on other factors (van Knippenberg et al., 2004). Thus, in understanding the role of social categorization processes in disrupting information elaboration, identifying the contingencies of these processes is highly relevant.

The CEM is not limited to any particular diversity attribute. One and the same diversity attribute may both be associated with valuable informational resources that invite information elaboration and engender intergroup biases that hamper information elaboration, and this in principle holds for all diversity dimensions. In support of the CEM, evidence from lab and field has established the key mediating role of information elaboration in the diversity-performance relationship and the disruptive influence of social categorization processes on

this process for a range of diversity attributes (Homan, Hollenbeck, Humphrey, van Knippenberg, Ilgen, & Van Kleef, 2008; Homan, van Knippenberg, Van Kleef, & De Dreu, 2007a; Kearney & Gebert, 2009; Kearney, Gebert, & Voelpel, 2009; Kooij-De Bode, van Knippenberg, & van Ginkel, 2008).

Even so, diversity's potential to both stimulate and disrupt team performance may hold more strongly for some diversity attributes than for others, and cultural diversity may be the diversity attribute for which the double-edged sword of diversity is most salient. Members of cultural identity groups share certain worldviews, sociocultural heritages, norms, and values (Cox, 1993; Ely & Thomas, 2001; Worchel, 2005). People from different cultural backgrounds may therefore have different belief structures, priorities, perceptions, assumptions about future events, beliefs about the role of information, and information-processing methods (Cox & Blake, 1991; Ely & Thomas, 2001; Hall, 1976; Maznevski, 1994; Tsui & O'Reilly, 1989; cf. Hambrick & Mason, 1984; Pelled et al., 1999). These differences may translate into different perspectives on a task and a focus on different information, which may produce corresponding differences in knowledge. In line with the notion of diversity as an informational resource, these differences in perspectives and information may be a valuable resource for a team. However, the negative side of diversity may be salient in culturally diverse teams too. People often hold well-developed stereotypes about people from different cultural backgrounds that may invite intergroup biases favoring culturally similar over dissimilar team members and invite a closing of minds to the diverse perspectives associated with cultural backgrounds. Cultural diversity may thus result in both the positive and negative outcomes captured in the CEM (Stahl, Maznevski, Voigt, & Jonsen, 2010).

It is a truism that the performance effects of diversity occur in contexts where performance is on the agenda. Perhaps as a consequence of the obviousness of this fact, diversity research to date has not engaged with the possibility that motivational orientations associated with achievement contexts may play a role in the performance effects of diversity. There has been attention to the moderating influence of task characteristics in the notion that diversity is more likely to yield performance benefits the more a task is complex and has strong requirements for creativity, problem solving, and decision making (Jehn et al., 1999; van Knip-

penberg et al., 2004; cf. Joshi & Roh, 2009; van Knippenberg & Schippers, 2007). Yet one and the same achievement context may invite different task approaches contingent on team member motivational orientations, and such orientations may thus affect the influence of diversity on performance. The analysis of such influences inherent to achievement contexts is unexplored in diversity research. Outside of the diversity domain, however, there is a prospering tradition of studying such motivational orientations through the lens of the goal orientation framework (Payne, Youngcourt, & Beaubien, 2007; Porath & Bateman, 2006; VandeWalle, Brown, Cron, & Slocum, 1999). Some goal orientations may be particularly relevant to the role of diversity, because they can be expected to speak to information elaboration directly as well as indirectly via their influence on intergroup biases.

### Team Member Goal Orientations

Goal orientations reflect goal preferences in achievement contexts that affect individuals' actions and reactions (Dweck, 1986; Dweck & Leggett, 1988; VandeWalle, Cron, & Slocum, 2001). Goal orientations are relatively stable individual differences even when they may also be influenced by the environment (Button, Mathieu, & Zajac, 1996; Murayama & Elliot, 2009). As individual difference variables, goal orientations reflect four related but distinct dispositions. The primary distinction here is between learning and performance orientations. The secondary distinction is between approach and avoidance variants of these orientations (Dweck, 1986; Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Elliot & McGregor, 2001; VandeWalle, 1997). *Learning approach orientation* is associated with a focus on developing knowledge and increasing competence, and performance evaluation revolves around self-improvement or some absolute standard; (i.e., that is, an individual desires to improve her/his earlier level of knowledge, expertise, or skills or desires to master a specific task. *Learning avoidance orientation* also has such a self-referent or absolute norm for performance evaluation but also a focus on avoiding a loss of knowledge and competence; that is, an individual desires to avoid a decrease in his/her level of knowledge, expertise, or skills or desires to avoid not mastering a task (e.g., avoid forgetting what one has learned). *Performance approach orientation* is a focus on demonstrating competence by outperforming others. Thus, the norm for performance evaluation is ex-

ternal—comparison with others. *Performance avoidance orientation* also reflects this other-referent performance norm, but here the focus is on avoiding performing worse than others; the motivation here is to avoid looking incompetent.

These four orientations can be expected to be moderately correlated because they share communalities either in the focus on learning or performance, or in the focus on approach or avoidance. Even so, they can exist independently from each other. Research has related learning orientation to the belief that competence can be developed (incremental theory) and has mainly related it to positive outcomes (e.g., Payne et al., 2007). Most prior research on learning orientation does not explicitly refer to approach or avoidance dimensions but consistently has an approach focus. To date, little is known about the effects of learning avoidance orientation as it is a relatively new concept and little examined (Cury, Elliot, Da Fonseca, & Moller, 2006). Performance (approach and avoidance) orientations have been associated with the belief that ability is fixed (entity theory). Research has shown that performance avoidance orientation is dysfunctional for numerous outcomes, because it relates to negative avoidance motivations such as fear of failure (e.g., Elliot & McGregor, 1999; Kaplan & Maehr, 2007; Payne et al., 2007; Porath & Bateman, 2006). Performance approach orientation reflects a focus on positive events in that it revolves around the motivation of demonstrating one's competence. Performance approach orientation is not so consistently linked to positive outcomes as learning approach orientation, however, and may have positive as well as negative effects (e.g., Elliot & McGregor, 1999; Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002; Kaplan & Maehr, 2007; Payne et al., 2007; Porath & Bateman, 2006). The reason for this presumably is that the focus on demonstrating competence may also imply a reduced motivation to engage with situations (and behaviors) in which the likelihood of performing well is not particularly high (Elliot & Church, 1997).

Goal orientation theory has received substantial research attention at the individual level, demonstrating its relevance for outcomes including task approach, motivation, and performance (e.g., Elliot & Church, 1997; Payne et al., 2007; Phillips & Gully, 1997) and establishing its applicability in organizational settings (Janssen & van Yperen, 2004; Payne et al., 2007; Porath & Bateman, 2006; Sujana, Weitz, & Kumar, 1994; VandeWalle et al.,

1999). In line with a broader tradition of studying personality and individual differences as team composition variables (Bell, 2007) and in recognition of the fact that much of the work in organizations is structured in teams, research has started to explore the effects on team functioning of team composition in terms of team member goal orientations. These studies have shown that team composition in goal orientation is related to team efficacy (Porter, 2005), backing-up behavior (Porter, 2005), team commitment (Porter, 2005), team adaptation (LePine, 2005), and performance (Nederveen Pieterse, van Knippenberg, & van Ginkel, 2011).

In the current study, we build on these earlier extensions of goal orientation theory to the team level as well as on individual-level research that speaks to the present analysis in terms of the information elaboration and social categorization processes associated with cultural diversity. Drawing on an integration of this work with insights from the CEM, we advance the proposition that team composition in terms of learning approach and performance avoidance orientations moderates the relationship between cultural diversity and performance, because these goal orientations speak to the relationship between diversity and information elaboration directly as well as indirectly through their influence on the relationship between diversity and intergroup biases. In our analysis, we consider all four orientations, however, to more firmly establish that the relationships we propose should be attributed to the unique combinations of learning and approach, and of performance and avoidance.

For individual differences as team composition variables, an important question is what the appropriate aggregation model is (Barrick, Stewart, Neubert, & Mount, 1998). There seems to be some consensus that the nature of a team's task ("disjunctive," "conjunctive," "compensatory," or "additive" [Steiner, 1972]) is a key consideration in this respect (Barrick et al., 1998; Beersma, Hollenbeck, Humphrey, Moon, Conlon, & Ilgen, 2003; LePine, 2003; Neuman & Wright, 1999). The process of interest underlying the effects of cultural diversity, information elaboration, at heart is an additive task in which the contributions of all team members are required to achieve the highest levels of information elaboration. Accordingly, an additive (i.e., mean) composition model is most appropriate to study the role of team member goal orientation in the diversity-performance relationship (cf. van Knippenberg, Kooij-De Bode, & van Ginkel,

2010). The issue we address here thus is how team composition in terms of the average goal orientation of members affects the relationship between cultural diversity and performance. We first consider the potential moderating influence of learning approach and learning avoidance orientation and subsequently consider performance approach orientation and performance avoidance orientation.

### **Cultural Diversity and Learning Approach and Avoidance Orientation**

Team members higher in learning approach orientation are interested in developing their competence on tasks. As a result, they are inclined to put more effort into getting a thorough understanding of tasks (Fisher & Ford, 1998), and they make more use of deep-level information processing (Dupeyrat & Mariné, 2005; Elliot, McGregor, & Gable, 1999; Ford, Smith, Weissbein, Gully, & Salas, 1998; Harackiewicz, Barron, Tauer, Carter, & Elliot, 2000; Meece, Blumenfeld, & Hoyle, 1988; Phan, 2009; Radosevich, Vaidyanathan, Yeo, & Radosevich, 2004). The focus on gaining an in-depth understanding reflected in learning approach orientation motivates team members to explore different perspectives within a team and renders them more open-minded and more accepting of diverse points of view (Gully & Phillips, 2005; Kroll, 1988). Learning-approach-oriented team members may also be motivated by the challenges posed by working in culturally diverse teams, where social interaction and coordination may prove to be less self-evident, because these team members view challenging situations as opportunities for learning and development (Ames, Ames, & Felker, 1977; Ames & Archer, 1988; cf. Farr, Hofmann, & Ringenbach, 1993; LePine, 2005; Porter, 2005). Thus, teams with members higher in learning approach orientation may be more likely to engage in information elaboration when confronted with cultural diversity as members are more motivated to explore the more diverse pool of information inherent in cultural diversity.

Because of the innate tendency to engage in more deep-level information processing, team members higher in learning approach orientation may throughout their lives also have been less inclined to use superficial information-processing heuristics such as categorizations (cf. Chen & Chaiken, 1999; Fiske & Neuberg, 1990; Smith & DeCoster, 2000). Thus, for these team members social categorizations may be less cognitively salient, and they may

be less likely to rely on social stereotypes in reacting to dissimilar others (Dweck, 1999; Levy, Strossner, & Dweck, 1998). This conclusion is corroborated by research showing that information-processing goals related to a target may diminish stereotyping of that target (Pendry & Macrae, 1996). Moreover, research has shown that the basis of learning orientation, the belief that people can change (incremental theory), is related to diminished stereotyping (Dweck, 1999; Levy et al., 1998). As team members are higher in learning approach orientation, intergroup biases may thus also be less likely to disrupt information elaboration in culturally diverse teams.

In sum, individual-level goal orientation research suggests that individuals higher in learning approach orientation may both be more likely to engage in in-depth information processing and less prone to develop stereotypes and intergroup biases. These insights integrated with the analysis advanced in the CEM thus suggest that the relationship between cultural diversity and performance is more positive in teams with members higher in learning approach orientation, because they are more likely to engage in team information elaboration.

*Hypothesis 1. The relationship of cultural diversity with team performance is moderated by learning approach orientation: Cultural diversity is more positively related to team performance for teams with members higher in learning approach orientation.*

The focus of learning avoidance orientation is on avoiding loss in terms of knowledge, skills, and expertise (Elliot & McGregor, 2001). This focus may for instance motivate practice to maintain skill levels and to avoid “not learning,” but it is not clearly associated with an intrinsic motivation to explore potential opportunities for learning and an eagerness for new information and insights. The opportunities to expand one’s knowledge and perspectives inherent to cultural diversity are more “hidden”; that is, people often do not recognize that they are there (cf. van Ginkel & van Knippenberg, 2008). As a result, in diverse teams learning avoidance orientation is unlikely to motivate information elaboration to explore this informational resource. At the same time, exploring the informational value of cultural diversity is not a challenge actively avoided by learning-avoidance-oriented team members; learning avoidance cannot be expected to either motivate or reduce team elaboration.

tion of the diverse perspectives associated with cultural diversity. In line with this argument, prior individual-level research shows little impact of learning avoidance orientation on information-processing strategies (Elliot & McGregor, 2001; Kaplan & Maehr, 2007). Moreover, we do not expect that team members' learning avoidance orientation affects information elaboration through intergroup bias. Learning avoidance orientation invites a focus on task mastery rather than a concern with the social environment and thus neither invites individuals to look beyond surface differences (i.e., which would reduce social categorization) nor to overly focus on such differences (i.e., which would invite social categorization). In sum, we do not expect learning avoidance orientation to moderate the role of cultural diversity in teams.

### **Cultural Diversity and Performance Avoidance and Approach Orientation**

Team members higher in performance avoidance orientation are focused on avoiding others' perceiving them as incompetent. This invites team members with high performance avoidance orientation to rely on true-and-tested routines and to stay clear of challenging tasks that would offer the opportunity for learning and development, but also hold the risk of appearing to fail (cf. LePine, 2005). Indeed, developing a thorough understanding of tasks is not their aim, which makes team members higher in performance avoidance orientation less inclined to use deep-level information processing (e.g., Elliot & McGregor, 2001; Elliot et al., 1999; Radosevich et al., 2004). Also, because of their concern with their relative (in)competence, they may be more prone to feel threatened by differing perspectives and therefore less motivated to explore them. Faced with the challenges introduced by working in a culturally diverse team, members high in performance avoidance orientation may focus their attention on these difficulties and on task-irrelevant thoughts such as concerns about ability perceptions, instead of putting extra effort into tasks (Dweck & Leggett, 1988; Elliot & McGregor, 1999; Farr et al., 1993; cf. LePine, 2005). This may further result in defensive behaviors such as task withdrawal or self-handicapping (Midgley & Urdan, 1995) that in turn may cause not only decreased performance via a decline in task effort, but also via decreased utilization of diverse perspectives. Thus, groups with members high in performance avoidance orientation are less inclined to

elaborate on task-relevant information when working in a diverse team, and therefore the positive effects of cultural diversity are more likely in teams with members lower in performance avoidance orientation.

Performance avoidance orientation may also feed into stereotyping and intergroup bias that may disrupt information elaboration in diverse groups. Team members with high performance avoidance orientation are more likely to use superficial information-processing strategies (Elliot et al., 1999; Elliot & McGregor, 2001) such as categorization-based heuristics (cf. Chen & Chaiken, 1999; Fiske & Neuberg, 1990; Smith & DeCoster, 2000). Stereotypes may thus be more subjectively meaningful and salient to them. Because performance avoidance orientation is associated with a fear of failure, intergroup bias may also be more readily activated because the challenges of working in a culturally diverse team induce feelings of threat. Performance avoidance orientation is also related to competitiveness. Owing to the higher salience of social categories, this competitiveness may shift from an individual focus to a subgroup focus, and intergroup competition has been related to increased intergroup bias (Gaertner & Dovidio, 2000; Sassenberg, Moskowitz, Jacoby, & Hansen, 2007). Moreover, the belief that people's attributes are fixed is related to performance orientation and has also been shown to relate to increased stereotyping (Dweck, 1999; Levy et al., 1998).

Thus, individual-level goal orientation research suggests that individuals higher in performance avoidance orientation may be both less likely to engage in in-depth information processing and more likely to rely on stereotype-based perceptions. Integrating these insights with the perspective provided by the CEM, we propose the following hypothesis:

*Hypothesis 2. The relationship of cultural diversity with team performance is moderated by performance avoidance orientation: Cultural diversity is more positively related to team performance for teams with members lower in performance avoidance orientation.*

Performance approach orientation is not clearly associated with motivation to elaborate on information or stereotyping and intergroup biases. The issue here is that the motivation to demonstrate competence cannot be equated with the motivation for information elaboration. Particularly relevant here is research in teams' use of diverse informational

resources that suggests that team members often do not recognize the importance of information elaboration and as a result underuse their diverse informational resources (van Ginkel & van Knippenberg, 2008, 2009). Where learning approach orientation motivates team information elaboration through an intrinsic interest in new knowledge, performance approach orientation thus does not. At the same time, a focus on performing well would not discourage information elaboration either—the point is that the importance of elaboration to high-quality performance often is insufficiently recognized, not that elaboration would be seen as a bad thing (cf. van Ginkel & van Knippenberg, 2008, 2009). Corroborating this analysis, individual-level research shows that performance approach orientation is not related to deep-level information processing (Elliot et al., 1999; Phan, 2009; Radosevich et al., 2004).

Performance approach orientation should also not affect information elaboration because of increased or decreased stereotyping and intergroup biases. On the one hand, team members high in performance orientation are more competitive, and this may render them less open to diverse perspectives. On the other hand, performance approach orientation is associated with a focus on positive outcomes and high need for achievement. This may lead team members to see challenges as opportunities (Porath & Bateman, 2006), which may be beneficial to diverse teams. We expect that these effects counterbalance each other and therefore that performance approach orientation will not strongly affect the extent to which stereotyping and intergroup bias hamper information elaboration in diverse teams. Thus, we do not expect that performance approach orientation affects information elaboration in, and thus the performance of, culturally diverse teams.

Even though we do not expect moderation by learning avoidance orientation and performance approach orientation, we have included these aspects in our model to provide a more comprehensive test of the role of goal orientation in the effects of cultural diversity. This also allows us to establish that the effect of performance avoidance orientation is specific to performance avoidance and not to performance orientation or avoidance orientation more generally and similarly that the effect of learning approach orientation is specific to learning approach and not to learning orientation or approach orientation more generally.

## METHODS, STUDY 1

### Sample and Procedure

Respondents in this study were students of a Dutch business school working on a business simulation for a human resource management class. At the start of the course students formed four-person teams of their own choice. These teams worked together intensively over a period of three weeks. Each team represented a company and was to make several decisions on how to run the company on a daily basis. At the start of the simulation each team wrote a business plan for its company. As a second assignment, the teams were to give extensive rationales for their decisions. Halfway through the simulation they wrote a management audit on their performance, and after the simulation they wrote an evaluation report.

Before the simulation started, surveys were sent out by e-mail. Three hundred seventy-six usable questionnaires were returned (a 94% response rate). Twenty-two teams with incomplete data were deleted from the study, because team composition in goal orientation and culture can only be reliably measured when all members of a team participate. Thus, only teams with a 100 percent response rate were included in the analyses. The remaining sample contained 79 teams and 312 students. Seventy-three percent were male, and mean age was 22.57 (s.d. = 2.06). Seventy-five percent were Dutch; 5 percent had a Surinamese background; 5 percent, Chinese; 3 percent, Indonesian; 3 percent, Antillean; and the remaining 8 percent, various other cultural backgrounds (e.g., Moroccan, Serbian, Vietnamese).

### Measures

**Goal orientation.** Goal orientation was measured with an adjustment of the 12-item questionnaire by Elliot and McGregor (2001), with 3 items for each goal orientation. Sample items are “I want to learn as much as possible from studying at college” (learning approach), “I am often concerned that I may not learn all that there is to learn in class” (learning avoidance), “It is important for me to do better than other students” (performance approach), “My goal in my schoolwork is to avoid performing poorly” (performance avoidance); all items were rated on a scale ranging from 1 (“totally disagree”) to 7 (“totally agree”). Confirmatory factor analysis showed that the intended four-factor structure fitted the data satisfactorily ( $\chi^2 = 127.09$ ,

$df = 48$ , CFI = .94, GFI = .94, RMSEA = .07,  $p < .001$ ). This model had a better fit than a two-factor solution with learning versus performance or approach versus avoidance ( $\chi^2 = 534.09$ ,  $df = 53$ , CFI = .65, GFI = .75, RMSEA = .17,  $p < .001$ ;  $\Delta\chi^2 = 407.00$ ,  $p < .001$ ;  $\chi^2 = 384.35$ ,  $df = 53$ , CFI = .76, GFI = .81, RMSEA = .14,  $p < .001$ ;  $\Delta\chi^2 = 257.26$ ,  $p < .001$ ).

**Cultural diversity.** Participants indicated their cultural background. The recommended index for calculating the diversity of categorical variables is Blau's index of heterogeneity (Blau, 1977; Harrison & Klein, 2007):  $1 - \sum(P_i)^2$ , where  $P_i$  is the proportion of a team's members in the  $i$ th category. Fifty-one percent of the teams were homogeneous; 29 percent had one member from a different culture; 3 percent had half their members from one culture and half from another; 10 percent had two members from one culture, one from another, and one from yet another; and 8 percent were completely heterogeneous.<sup>1</sup>

**Team performance.** All assignments were graded on a ten-point scale based on strict criteria by three human resource management experts employed by the school and blind to the teams and unaware of the research purpose. The raters carefully drafted the criteria in close collaboration with the lead faculty of the course until they were sufficiently clear to reach perfect agreement on a subsample of assignments. Team performance was determined by each team's performance on the four group assignments and the simulation. Z-scores were calculated for each assignment and the simulation and averaged into an overall performance score.

**Control variables.** Member familiarity may affect team performance and diversity effects (Gruenfeld, Mannix, Williams, & Neale, 1996; Phillips, Mannix, Neale, & Gruenfeld, 2004). In the present study, member familiarity was also related to team performance. Therefore, we used member familiarity as a control variable. Respondents judged how well they knew each team member on a scale from 1 ("not at all") to 5 ("very well"). These scores were

added together and aggregated to the team level to create a team familiarity score.

Some teams consisted of three members instead of four. Therefore, we examined team size as a control variable. Incorporating team size in our model did not alter our findings, and team size was not related to performance. Therefore, we did not incorporate team size in our final model. Variations in goal orientation may affect team functioning (Nederveen Pieterse et al., 2011). In the present study, however, the team standard deviations for each dimension of goal orientation did not affect team performance, nor did they alter our findings. As these variables are beyond the scope of the present study and substantially enlarge our model, we decided to leave them out of our final model. Even though cultural diversity is the most relevant diversity dimension for testing our theoretical rationale, this rationale is not specific to cultural diversity and may apply to other types of diversity. Therefore, one might argue for testing our model with other types of diversity, such as age, gender, and functional background. In the present study this is not a viable option for age and educational background, because our sample was very homogeneous in these aspects. There is variation in gender, but gender issues play such a different role in student populations that researchers have argued against studying gender diversity in these populations (Kooij-De Bode et al., 2008). Because there is no reason to expect gender diversity to affect findings for cultural diversity, we did not control for gender diversity in our final model, but controlling for gender diversity does not alter our findings.

## RESULTS, STUDY 1

### Preliminary Analyses

Two outliers with extremely divergent combinations of scores on multiple variables (multivariate outliers) were identified using Mahalanobis distances ( $\chi^2 = 29.86$ ,  $p < .001$ ;  $\chi^2 = 30.06$ ,  $p < .001$ ). This statistic, the distance of a case from the centroid of remaining cases, is recommended to identify multivariate outliers (Tabachnick & Fidell, 2001). As these cases may distort statistics, they were removed from analyses. The remaining sample consisted of 77 teams.

Table 1 displays correlations among all variables. Only member familiarity was found to correlate significantly with team performance. As expected,

<sup>1</sup> As in most demographic research our diversity measure was positively skewed. Therefore, we tested our model with a log transformation to correct for skewness (following Tabachnick and Fidell [2001], we first added a constant so all values were above 0). This resulted in similar findings. For reasons of comparability, we report the results for the uncorrected Blau's index.



the goal orientation dimensions that overlap in overarching dimensions (approach versus avoidance or learning versus performance) were moderately correlated. In addition, learning approach and performance avoidance and learning avoidance and performance approach were positively correlated.<sup>2</sup>

### Hypothesis Testing

We used hierarchical multiple regression to test our hypotheses; Table 2 presents these results. In the first step, the regression model included member familiarity, cultural diversity, and the aspects of goal orientation. In the second step, the interactions of each aspect of goal orientation with cultural diversity were added. The second step added significant value over step 1.

The interaction between cultural diversity and learning approach orientation was significant (see Table 2, Figure 1). To establish the nature of this interaction, we performed simple slopes analysis (Aiken & West, 1991). When learning approach orientation was high (plus 1 s.d.), cultural diversity was positively related to team performance ( $b = 0.96$ ,  $\beta = .45$ ,  $p < .05$ ). Cultural diversity was negatively related to team performance when learning approach orientation was low (minus 1 s.d.) ( $b = -1.11$ ,  $\beta = -.52$ ,  $p < .01$ ). Hypothesis 1 is thus supported.

In support of Hypothesis 2, an interaction was found between cultural diversity and mean performance avoidance orientation (see Table 2 and Fig-

ure 2). Simple slopes analysis showed that, with low performance avoidance orientation, cultural diversity was positively related to team performance ( $b = 0.80$ ,  $\beta = .38$ ,  $p < .05$ ). Cultural diversity was negatively related to team performance when performance avoidance orientation was high ( $b = -0.95$ ,  $\beta = -.45$ ,  $p < .05$ ). No interactions between cultural diversity and learning avoidance orientation or performance approach orientation were found (see Table 2).<sup>3</sup>

### DISCUSSION, STUDY 1

Study 1 established mean goal orientations as moderators of the effects of cultural diversity in teams. As expected, the relationship of cultural diversity to team performance was moderated by both (mean) learning approach orientation (Hypothesis 1) and (mean) performance avoidance orientation (Hypothesis 2). Cultural diversity was more positively related to team performance for teams with high learning approach orientation or low performance avoidance orientation. Building on the CEM, we argued that in these teams (high in learning approach orientation or low in performance avoidance orientation), members are more motivated and less hampered (by a tendency to employ intergroup bias) to elaborate on the enlarged pool of information present in diverse teams. Although the results of Study 1 were in line with

<sup>2</sup> This may be caused by the overarching goal-directed focus in achievement situations inherent in all goal orientations, which may be stronger in some people than in others.

<sup>3</sup> Bunderson and Sutcliffe (2003) found that collective learning orientation (as a team attribute [see also DeShon, Kozlowski, Schmidt, Milner, & Wiechmann, 2004]) was curvilinearly related to team performance. Therefore, we also tested for a curvilinear effect of mean learning approach orientation. However, this effect was not significant.

**TABLE 1**  
Descriptive Statistics and Correlations among the Variables, Study 1<sup>a</sup>

Variable	Mean	s.d.	1	2	3	4	5	6
1. Familiarity	2.85	0.91						
2. Cultural diversity	0.24	0.27	-.25*					
3. Learning approach	5.30	0.50	.03	.11	(.76)			
4. Learning avoidance	4.16	0.72	-.07	.18	.25*	(.86)		
5. Performance approach	4.29	0.73	.11	-.03	.54**	.26*	(.85)	
6. Performance avoidance	4.37	0.61	.15	.07	.39**	.56**	.32**	(.60)
7. Team performance	0.00	0.57	.26*	-.10	-.05	-.10	.13	.03

<sup>a</sup>  $n = 77$ . Cronbach alphas are reported on the diagonal between parentheses.

\*  $p < .05$

\*\*  $p < .01$

**TABLE 2**  
**Results of Hierarchical Regressions, Study 1<sup>a</sup>**

Variable	Step 1				Step 2			
	<i>b</i>	s.e. ( <i>b</i> )	$\beta$	<i>t</i>	<i>b</i>	s.e. ( <i>b</i> )	$\beta$	<i>t</i>
Familiarity	0.14	.08	.22	1.79 <sup>+</sup>	0.16	.07	.25	2.10*
Cultural diversity	-0.01	.25	-.01	-0.05	-0.08	.23	-.04	-0.32
Learning approach	-0.19	.16	-.16	-1.16	-0.06	.15	-.06	-0.41
Learning avoidance	-0.11	.11	-.14	-1.02	-0.17	.11	-.21	-1.53
Performance approach	0.16	.11	.21	1.51	0.25	.11	.32	2.39*
Performance avoidance	0.07	.14	.08	0.51	0.04	.13	.04	0.32
Learning approach × cultural diversity					2.05	.58	.43	3.52**
Learning avoidance × cultural diversity					-0.05	.46	-.02	-0.11
Performance approach × cultural diversity					0.45	.38	.17	1.20
Performance avoidance × cultural diversity					-1.43	.50	-.40	-2.86**

<sup>a</sup>  $R^2 = .11$  for Step 1;  $\Delta R^2 = .33 \times$  for Step 2.  $n = 77$ .

<sup>+</sup>  $p < .10$

\*  $p < .05$

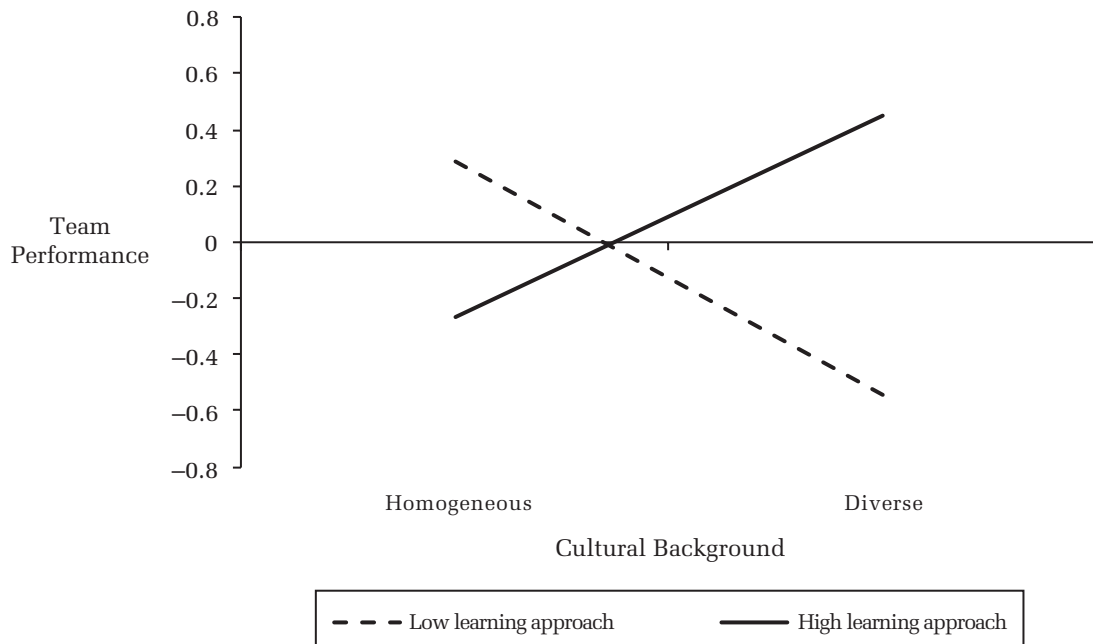
\*\*  $p < .01$

our hypotheses, an important limitation of this study is that we were unable to test this underlying process. Therefore, we conducted a second study to extend findings with process evidence.

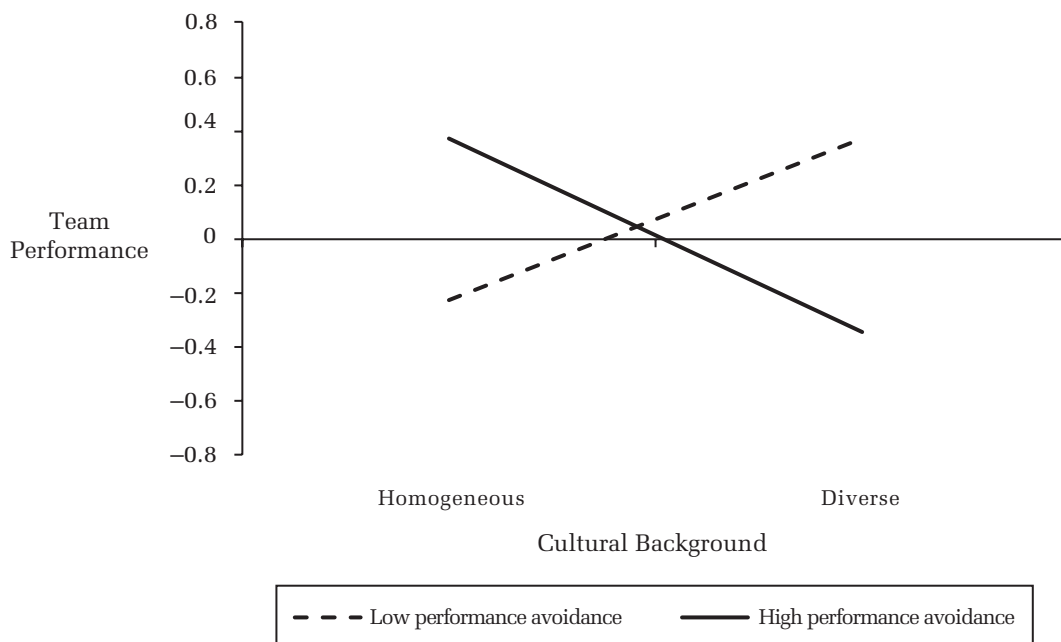
Study 2 used the same set-up as Study 1, with student teams in a business simulation, because this again allowed us to ensure the very high re-

sponse levels needed for the valid study of diversity and team composition in individual differences. However, we were now in the position to add a measure of team information elaboration to a small evaluation survey at the end of the simulation. This allowed us to test the following hypotheses:

**FIGURE 1**  
**Interaction of Cultural Diversity and Learning Approach Orientation on Team Performance**



**FIGURE 2**  
**Interaction of Cultural Diversity and Performance Avoidance Orientation on Team Performance**



*Hypothesis 3. Information elaboration mediates the interaction of cultural diversity and learning approach orientation on team performance: A positive relationship between diversity and performance mediated by information elaboration only obtains with higher learning approach orientation.*

*Hypothesis 4. Information elaboration mediates the interaction of cultural diversity and performance avoidance orientation on team performance: A positive relationship between diversity and performance mediated by information elaboration only obtains with lower performance avoidance orientation.*

## METHODS, STUDY 2

### Sample and Procedure

As in Study 1, respondents were students of a Dutch business school working intensively for a period of three weeks in teams of four on a business simulation. Before the simulation, surveys were sent by e-mail to the students. Five hundred sixty-six usable questionnaires were returned (a 94% response rate). At the end of the simulation, another short survey was administered to measure team information elaboration. Five hundred forty-

nine usable questionnaires were returned (a 96% response rate). Only teams with a 100 percent response rate for both surveys were included in the analyses, resulting in the deletion of 41 teams. The remaining sample consisted of 109 complete four-person teams. Men comprised 72.5 percent of the sample, and sample mean age was 21.5 (s.d. = 2.17). Seventy-seven percent were Dutch; 5 percent had a Surinamese background; 4 percent, Chinese; 2 percent, Indonesian; 2 percent, Moroccan; 1 percent, Antillean; the remaining 9 percent were from various other cultural backgrounds (e.g., Serbian, Vietnamese).

### Measures

**Team information elaboration.** We used a three-item scale for team information elaboration based on van Dick, van Knippenberg, Hägele, Guillaume, and Brodbeck (2008) and Homan, van Knippenberg, van Kleef, and De Dreu (2007b). An example item is “Team members discussed the rationales underlying their ideas and viewpoints.”

**Goal orientation.** Again, we measured goal orientation with the 12-item Elliot and McGregor (2001) scale, and the team average for each dimension was used as measure of team goal orientation. Confirmatory factor analysis (CFA) showed that the

intended four-factor structure fitted the data satisfactorily ( $\chi^2 = 127.45$ ,  $df = 48$ , CFI = .96, GFI = .95, RMSEA = .06,  $p < .001$ ) and fitted better than a two-factor solution with learning versus performance or approach versus avoidance ( $\chi^2 = 880.22$ ,  $df = 53$ , CFI = .53, GFI = .71, RMSEA = .19,  $p < .001$ ;  $\Delta\chi^2 = 752.77$ ,  $p < .001$ ;  $\chi^2 = 492.41$ ,  $df = 53$ , CFI = .75, GFI = .84, RMSEA = .14,  $p < .001$ ;  $\Delta\chi^2 = 364.96$ ,  $p < .001$ ).

**Cultural diversity.** Blau's index of heterogeneity was used for cultural diversity. Fifty-three percent of the teams were homogeneous; 25 percent had one member from a different culture; 2 percent had half their members from one culture and half from another; 13 percent had two members from one culture, one from another, and one from yet another; and 7 percent had each member from different culture.<sup>4</sup>

**Team performance.** Team performance was measured in the same way as in Study 1. It was determined by the team's performance on the four group assignments rated on the same strict criteria by three experts and on the simulation. Z-scores were calculated for each assignment and the simulation and averaged into an overall performance score.

**Control variables.** As in Study 1, we added the same measure of member familiarity as a control variable. Again, variation in goal orientation and gender diversity were not added as controls, but adding them did not alter our findings.

<sup>4</sup> As in Study 1, we tested our model with a log transformation to correct for skewness. This again resulted in similar findings.

## RESULTS, STUDY 2

### Preliminary Analyses

Table 3 displays correlations among all variables. Member familiarity and team information elaboration were positively correlated with team performance. As expected, the goal orientation dimensions that overlap in the overarching approach or avoidance dimensions or overarching learning or performance dimensions were moderately correlated, except for performance approach and performance avoidance orientation. We again also found a positive correlation between performance avoidance and learning approach orientations.

### Hypothesis Testing

We used the bootstrapping method of Preacher, Rucker, and Hayes (2007) to test the conditional indirect effect of cultural diversity through team information elaboration with high learning approach orientation and low performance avoidance orientation on team performance. Table 4 displays the regression coefficients for our first-stage moderation model (Edwards & Lambert, 2007) and the results of our hypothesis testing. Because we tested directional hypotheses firmly rooted in Study 1 findings and interactions are underestimated in survey research, we relied on one-sided testing (cf. Harrison, Price, & Bell, 1998). With high learning approach orientation, a positive conditional indirect effect was found of cultural diversity on team performance through team information elaboration, in line with Hypothesis 3. With low learning approach orientation, the conditional indirect effect of cultural diversity through information elaboration

TABLE 3  
Descriptive Statistics and Correlations among the Variables, Study 2<sup>a</sup>

Variable	Mean	s.d.	1	2	3	4	5	6	7
1. Familiarity	3.28	0.91							
2. Cultural diversity	0.24	0.27	-.13						
3. Learning approach	5.21	0.50	.06	.13	(.73)				
4. Learning avoidance	4.19	0.65	-.09	.30**	.24*	(.85)			
5. Performance approach	4.47	0.61	.22*	-.14	.30**	.10	(.84)		
6. Performance avoidance	4.44	0.65	-.03	.28**	.26**	.38**	.13	(.63)	
7. Team information elaboration	3.46	0.54	.04	.15	.22*	.16	.02	.17	(.70)
8. Team performance	0.00	0.52	.22*	-.06	.12	-.03	.06	-.08	.30**

<sup>a</sup>  $n = 109$ . Cronbach alphas are reported on the diagonal between brackets.

\*  $p < .05$

\*\*  $p < .01$

**TABLE 4**  
**Results of Mediation Analysis, Study 2**

**(A) Regression Coefficients, First-Stage Moderation Model**

Variables	$a_X$	$a_{Z1}$	$a_{Z2}$	$a_{XZ1}$	$a_{XZ2}$	$a_M$	$R^2$
Team information elaboration <sup>a, c</sup>	.07	.11*	.00	.07 <sup>+</sup>	-.12*		.13
Team performance <sup>b, c</sup>	-.04					.29**	.14

**(B) Results of Hypothesis Tests**

Variables	Indirect Effect of Interaction with Cultural Diversity on Performance through Information Elaboration				Conditional Indirect Effect of Cultural Diversity on Performance through Information Elaboration				
	Point Estimate	s.e.	BC CI <sup>d</sup>			Point Estimate	s.e.	BC CI <sup>d</sup>	
			Lower	Upper				Lower	Upper
Learning approach	.02	.01	.0002	.0483	Low	.00	.03	-.0423	.0411
					High	.04	.03	.0063	.0926
Learning avoidance	-.00	.02	-.0357	.0289					
Performance approach	-.01	.01	-.0395	.0060					
Performance avoidance	-.03	.02	-.0725	-.0051	Low	.05	.03	.0054	.1191
					High	-.01	.02	-.0521	.0206

<sup>a</sup>  $n = 109$ . Based on the regression equation for the first-stage moderation model (Edwards & Lambert, 2007),  $M = a + a_F F + a_X X + a_{Z1} Z_1 + a_{XZ1} XZ_1 + a_{Z2} Z_2 + a_{XZ2} XZ_2 + a_{Z3} Z_3 + a_{XZ3} XZ_3 + a_{Z4} Z_4 + a_{XZ4} XZ_4 + e_M$ , where  $M$  is team information elaboration,  $F$  is familiarity,  $X$  is cultural diversity,  $Z_1$  is learning approach orientation,  $Z_2$  is performance avoidance orientation,  $Z_3$  is learning avoidance orientation, and  $Z_4$  is performance approach orientation.

<sup>b</sup> Based on the regression equation for the first-stage moderation model (Edwards & Lambert, 2007),  $Y = a + a_F F + a_X X + a_M M + e_{Y4}$ , where  $Y$  is team performance.

<sup>c</sup> Only those estimates relevant for our mediation analyses are portrayed. Other values can be requested from the authors. When cells are empty they are not part of the respective equation.

<sup>d</sup> 90% confidence interval.

<sup>+</sup>  $p < .10$

\*  $p < .05$

\*\*  $p < .01$

tion was not significant (see Table 4, Figure 3). In line with Hypothesis 4, we also found a positive conditional indirect effect through team information elaboration with low performance avoidance orientation. No indirect effect on team performance was found with high performance avoidance orientation (see Table 4, Figure 4).

Next, we used the Preacher and Hayes (2008) method to test the indirect effect of the interaction of cultural diversity with learning approach orientation and performance avoidance orientation on team performance through information elaboration. The model had significant variance explained ( $R^2 = .21, p = .01$ ). The indirect effect of the interaction of learning approach orientation with cultural diversity on performance through information elaboration was significant (see Table 4), in support of Hypothesis 3. Also the indirect effect through in-

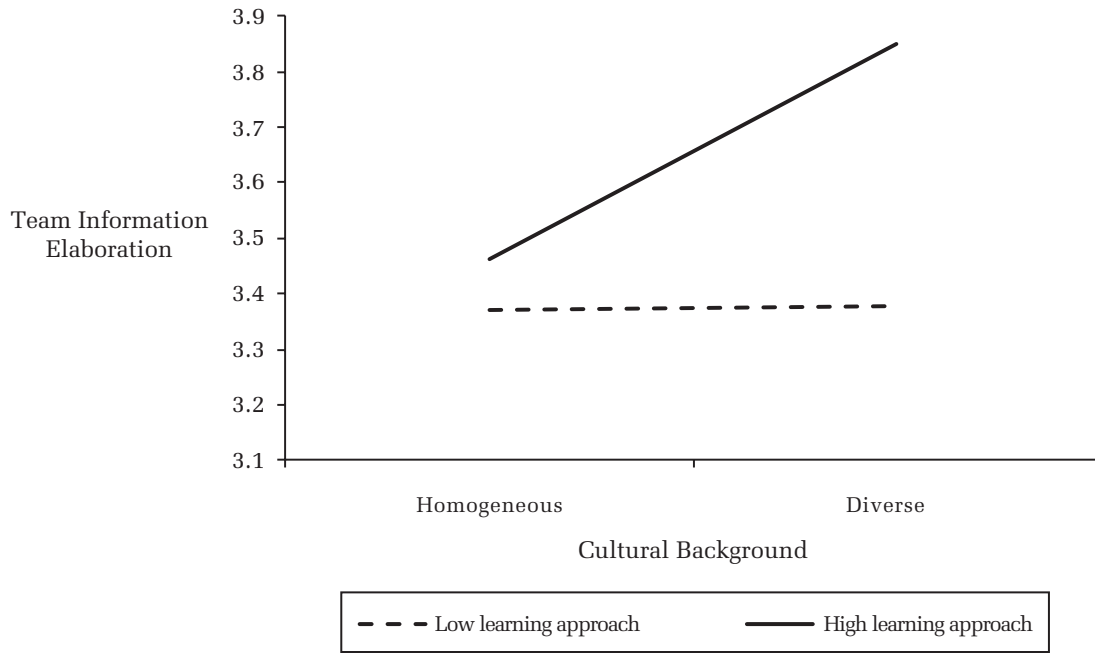
formation elaboration of the interaction of performance avoidance orientation with cultural diversity was significant (see Table 4), in support of Hypothesis 4.

Graphical depictions of the effects with high and low learning approach orientation and high and low performance avoidance orientation can be found in Figures 5a, 5b, 6a, and 6b. Only with high learning approach orientation and low performance avoidance orientation was diversity positively related to elaboration, which in turn was related to performance.

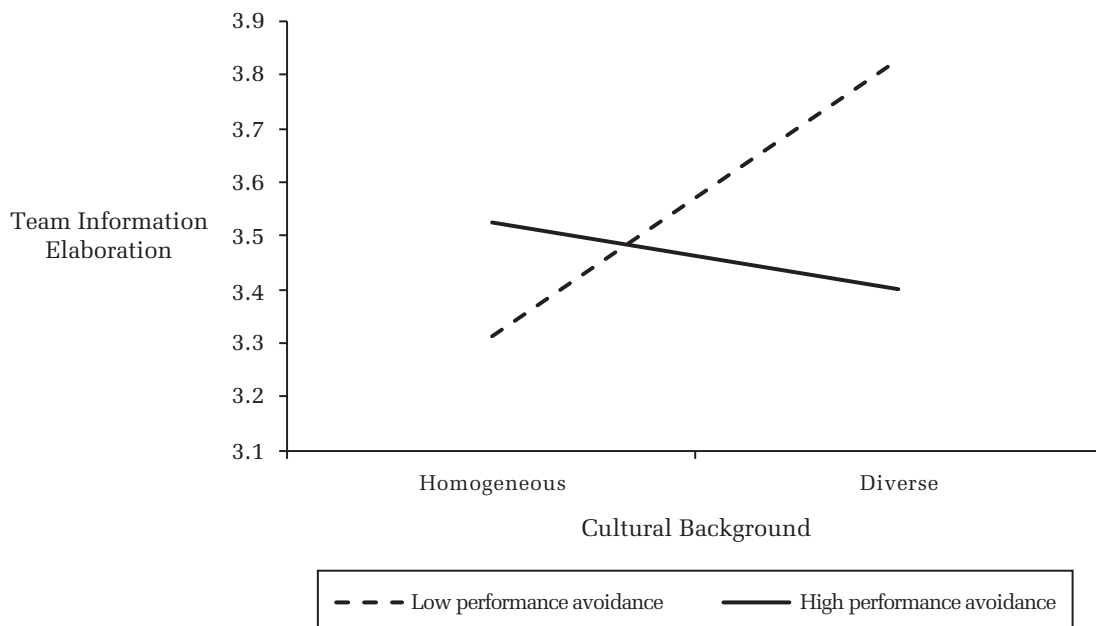
## GENERAL DISCUSSION

Goal orientations are inherently triggered by achievement settings and may thus be quite univer-

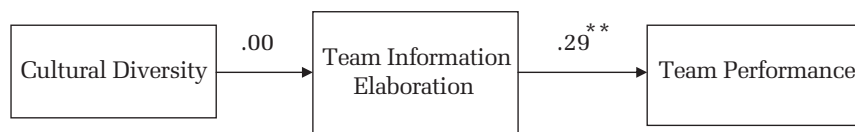
**FIGURE 3**  
**Interaction of Cultural Diversity and Learning Approach Orientation on Team Information Elaboration**



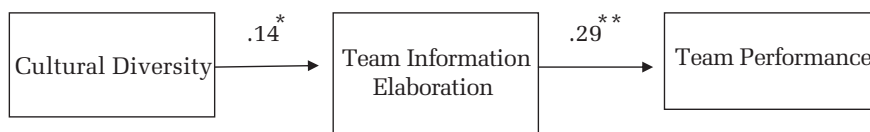
**FIGURE 4**  
**Interaction of Cultural Diversity and Performance Avoidance Orientation on Team Information Elaboration**



**FIGURE 5A**  
**Indirect Effect with Low Learning Approach Orientation<sup>a</sup>**



**FIGURE 5B**  
**Indirect Effect with High Learning Approach Orientation<sup>a</sup>**



<sup>a</sup>  $n = 109$ .

\*  $p < .05$

\*\*  $p < .01$

sal influences in the relationship between cultural diversity and team performance. Building on the conceptual framework provided by the CEM, we developed theory to capture the moderating influences of these motivational orientations in the diversity performance relationship and found that cultural diversity is more positively related to team performance when team members have higher learning approach orientation and when members have lower performance avoidance orientation. In line with the key role the CEM accords to information elaboration in mobilizing diversity as an informational resource, we also established that these influences are mediated by team information elaboration. These findings complement and extend research in team diversity, and the CEM in particular, and moreover hold clear implications for the management of the double-edged sword of cultural diversity.

### Theoretical Implications

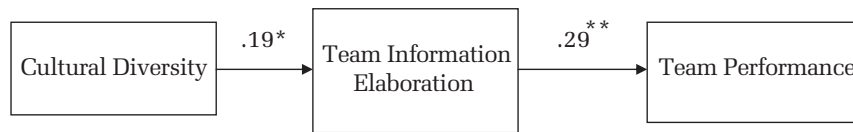
The evidence for the moderating role of goal orientation in the effects of cultural diversity mediated by information elaboration provides further support for the CEM as an integrative framework through which to understand the performance effects of team diversity. At the same time, the current study also is an important extension of this perspective by adding a focus on the motivational orientations and associated self-regulatory strategies that are inherently triggered by achievement situations. An understanding of the influence of the

achievement context is underdeveloped in diversity research, and the goal orientation perspective suggests that there is value in further development of this element of the analysis.

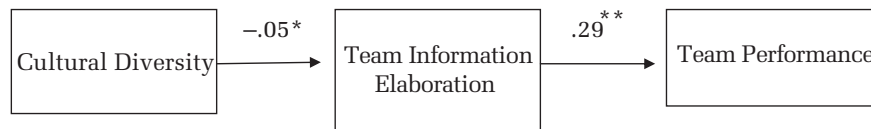
In this respect, one particularly interesting and relevant aspect of the goal orientation framework is that goal orientations not only are traits, but also have a state aspect that can be triggered by contextual influences. These influences could thus exert a moderating effect in the relationship between cultural diversity and performance. Research has shown that several variables may affect an individual's goal orientation. For example, normative feedback (performance relative to others) may heighten performance orientation of employees relative to self-referent feedback systems (Farr et al., 1993). A similar argument can be made for reward systems. In addition, leaders may instigate higher learning approach or lower performance avoidance orientations through goal setting or creating learning (approach) oriented work group climates or preventing performance avoidance climates (Dragoni, 2005).

Viewed from this perspective of contextual influences on goal orientations, it may also be fruitful to extend the goal orientation perspective by developing bridges with related literatures. Future research may for example study whether an error management culture as opposed to error prevention culture (Frese, 1991; Van Dyck, Frese, Baer, & Sonnentag, 2005) may help reap the benefits of cultural diversity, as the former type of culture reflects a focus on learning from errors (compare with learning approach), whereas the latter reflects a focus on pre-

**FIGURE 6A**  
**Indirect Effect with Low Performance Avoidance Orientation<sup>a</sup>**



**FIGURE 6B**  
**Indirect Effect with High Performance Avoidance Orientation<sup>a</sup>**



<sup>a</sup>  $n = 109$ .

\*  $p < .05$

\*\*  $p < .01$

venting errors (compare with performance avoidance). Thus, a team's or organization's perspective on errors may moderate the diversity-performance relationship because it impacts team goal orientations. These suggestions for future research illustrate the wide applicability of the goal orientation perspective for the diversity-performance relationship.

We focused our analysis on cultural diversity because of its great relevance to organizations and because cultural diversity perhaps most strongly represents the double-edged sword of diversity. Even so, our analysis, with its strong roots in the CEM, builds theory that should also apply to other diversity attributes. Thus, in further developing the goal orientation perspective on the diversity-performance relationship it would be valuable to also address diversity dimensions other than cultural diversity.

The current study is not only relevant to diversity, but also to team composition in goal orientations. The present study is the first to examine team composition in a full four-factor model of goal orientation. Previous studies only examined the broader categories of learning and performance orientation (LePine, 2005; Nederveen Pieterse et al., 2011; Porter, 2005). Furthermore, the finding that goal orientations can affect the way groups deal with diversity is an important extension of scholars' understanding of the impact of goal orientations in teams. Previous research has shown that mean goal orientation can affect team processes such as team efficacy and commitment but did not find effects on team performance (e.g., Nederveen

Pieterse et al., 2011; Porter, 2005). The present study suggests that the latter relationship may be contingent on other factors, such as team diversity. Learning orientation may only be useful for teams to the extent that deep information processing is valuable, a notion that corresponds to arguments made by previous authors that learning orientation may be mainly beneficial for new and relatively complex tasks or for individuals' adaptation to changing circumstances (LePine, 2005; Seijts, Latham, Tasa, & Latham, 2004; VandeWalle et al., 2001). The impact of performance avoidance orientation on team performance may also depend on the need for extensive information processing or on the harmfulness of competitiveness and fear of failure. This opens up interesting research opportunities. For example, performance avoidance may be more harmful when intense cooperation between team members is needed. Learning orientation may be more advantageous for teams working on tasks with distributed information, a situation in which information elaboration is particularly important (cf. van Ginkel & van Knippenberg, 2008).

Most goal orientation research has focused on individuals and how they deal with their tasks. However, people often function in social environments, and the way people respond to others may also be affected by goal orientations (Darnon, Butera, & Harackiewicz, 2007). This has led researchers to argue that not enough attention has been paid to the role of goal orientation in social contexts (Darnon et al., 2007; Janssen & van Yperen, 2004). The present study contributes to this relatively unexplored area in the literature by



demonstrating that goal orientations may affect the impact of team members' social environment (i.e., team cultural diversity) on team functioning. Integrating these insights with earlier findings that in dyadic relationships, learning-oriented individuals have higher-quality relationships with their leaders (Janssen & van Yperen, 2004), future research may (for instance) examine whether this effect is more pronounced when a leader has a different cultural background than the rest of his/her team.

The present study shows that individual differences may play an important role in the effects of cultural diversity. Only recently has research started to explore the role of individual differences in the effects of team diversity by showing that mean openness to experience and need for cognition may improve the effects of age, gender, and educational diversity (Homan et al., 2008; Kearney et al., 2009). We extend these prior findings as we show that individual differences may also affect the role of cultural diversity. More importantly though, goal orientation theory is more specific to achievement settings as organizations and may therefore be more relevant to diversity's performance effects. Also, goal orientation theory has a more comprehensive theoretical framework that allows us to bridge dispositional and situational influences, which opens up interesting research and management opportunities (Button et al., 1996). We also extend this earlier work by showing that individual differences may also be detrimental for diverse teams (i.e., performance avoidance orientation).

### Practical Implications

The present findings corroborate arguments that limiting diversity is not only unfair and unwise, because organizations miss out on valuable employees, but may also cause organizations to pass up the competitive advantage cultural diversity may hold. The present study suggests that for this purpose it may be valuable for organizations to select employees on the basis of their goal orientations. Previous research has argued that selection based on low performance avoidance orientation or high learning (approach) orientation may be useful (e.g., VandeWalle et al., 1999). We show that this may hold more strongly for culturally diverse teams.

Managing how teams deal with diversity may determine whether organizations realize the benefits of a diverse workforce. Because goal orientation can be influenced by situational factors (Button et al., 1996), the present study points to options for

dealing with diversity that differ from the more commonly proposed methods. Within the literature, cultural diversity is argued to be more positively related to performance when a team's members have a shared superordinate team identity or when they see themselves as separate individuals (Gaertner & Dovidio, 2000). However, these strategies have disadvantages. They may be difficult to apply, may induce identity threat, or may only be able to negate the detrimental effects of diversity but not to stimulate its positive effects, and thus these strategies may be suboptimal or even counterproductive (Swann, Polzer, Seyle, & Ko, 2004). Our findings indicate that to stimulate positive and preventing negative consequences of cultural diversity, it is not necessary to focus on social or cultural identities directly: organizations can focus on the goal orientations of the members of culturally diverse teams.

Inducing high learning approach orientation and preventing performance avoidance orientation may help teams deal with cultural diversity. Possible ways to do this may be emphasizing the importance of team and personal development, de-emphasizing competition, and creating an environment where employees feel secure and mistakes are seen as learning opportunities and are not punished. This can be highlighted by training and appropriate compensation and feedback systems (Farr et al., 1993; VandeWalle et al., 1999). In addition, leaders may be made aware of the role of goal orientation in teams through training as well as learn how to influence goal orientations.

### Limitations and Future Research

A limitation of our study is the use of student samples. This had the clear and crucial advantage of enabling us to achieve the very high response rates needed to validly study effects of team composition in trait variables. For diversity and team composition in terms of individual differences, the scores of one team member cannot be expected to converge with the scores of another, which means that any missing response is a threat to validity. Despite its limitations, the student team context provided us with the opportunity to work with 100 percent team response rates and thus with measures of team composition of very high validity.

To maximize generalizability to organizations, we used a task similar to work in organizations for which performance is personally relevant (significant part of course grade). Furthermore, it is un-

likely that students differ from other populations in their behavior in achievement settings (e.g., Brown & Lord, 1999; Dipboye, 1990; Locke, 1986), and previous research has shown that both goal orientation theory (e.g., Janssen & van Yperen, 2004; Porath & Bateman, 2006; VandeWalle et al., 1999) and the CEM (Kearney et al., 2009; Kearney & Gebert, 2009) apply to organizational settings. Moreover, research has shown that goal orientation effects should be even more pronounced with older samples (Utman, 1997). Even so, replicating the current findings in an organizational setting would be valuable.

Another limitation of our study is inherent to the study of cultural diversity where minority groups have low representation in research populations. This may cause restriction of range in diversity. In our study too a large part of the sample consisted of majority members, and there were more teams at the lower end of the diversity spectrum. However, there was no restriction of range in our samples; both studies included fully diverse teams. Testing our model with a correction for skewness also did not alter our findings. Thus, although the distribution for diversity was not perfectly normal, it did not bias our results.

In both studies performance avoidance orientation had a relatively low Cronbach's alpha coefficient. A possible explanation for this is the small number of items. Although we acknowledge that higher alphas would have been better, a lower alpha enlarges error variance and thus yields more conservative tests. Thus, the lower alpha should pose no threat to the validity of our conclusions (i.e., it might more plausibly explain the absence of a relationship). Therefore, we conclude the reliability was sufficiently high to warrant our conclusions.

We also note that whereas we did assess the primary mediating process identified in the CEM (information elaboration), we did not assess intergroup biases as an influence standing in the way of elaboration. This means that the evidence can only indirectly speak to intergroup biases (i.e., as implied by elaboration data). Inclusion of a measure of intergroup bias (e.g., interpersonal liking) would have added value for the current analysis.

Finally, because we used a survey design we cannot draw conclusions about causality. However, the reversed pattern is unlikely in the present study, because cultural background is a demographic variable, and goal orientations were measured as a trait variable before teams started. Even

so, future experimental research would be valuable in this respect.

## Conclusion

With today's increasingly diverse workforce, the ability to manage the double-edged sword of cultural diversity is of ever greater importance to organizations. The finding that team members' goal orientations play a role in how culturally diverse teams profit from their diversity by elaborating on their enhanced pool of information is particularly interesting from that perspective. Not only does it allow us to build new theory by linking the effects of diversity to the orientations team members take in engaging with the job at hand, it also points to what is arguably an aspect of teams that is more manageable than many of the other factors implicated as moderators of the influence of diversity. Developing understanding of the role of goal orientations in the effects of team diversity may thus be a particularly worthwhile avenue of research both from a theoretical and an applied perspective.

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