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Karen Van Der Zee, Nelleke Atsma and Felix Brodbeck

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# THE INFLUENCE OF SOCIAL IDENTITY AND PERSONALITY ON OUTCOMES OF CULTURAL DIVERSITY IN TEAMS

KAREN VAN DER ZEE
*University of Groningen*

NELLEKE ATSMA
*Royal Netherlands Navy*

FELIX BRODBECK
*Aston Business School*

The present study examined the influence of social identity and personality on work outcomes among business students who worked together in culturally diverse teams. As predicted, a negative effect of identification with one's cultural background and a positive effect of identification with the team on well-being were found under conditions of high diversity. For commitment, the same pattern of findings was obtained, but now the impact of identification with the team was found regardless of the level of diversity. No support was found for strong positive outcomes associated with the case in which individuals identify with the team and with their cultural background. With respect to personality, the intercultural traits of Emotional Stability and Flexibility were found to have a positive effect on work outcomes under conditions of high diversity. Interestingly, whereas Flexibility had a positive effect on exam grades under conditions of high diversity, a negative effect of this trait was found under conditions of low diversity.

**Keywords:** cultural diversity; personality; social identity; work outcomes

**The workplace is becoming** more culturally diverse. Due to migration and a growth in international assignments, work units are less and less dominated by White male majority group members. What are the consequences of an increasing diversification of groups in organizations? How does the mixture of cultures impact on the well-being, commitment, and productivity of team members?

Empirical research on the effects of diversity in workgroups has provided mixed results (Williams & O'Reilly, 1998). On one hand, interactions between individuals with different norms and perspectives may create conflicts and tensions that may prevent teams from putting effort into their basic tasks. On the other hand, the creative tensions associated with diversity may encourage mutual inspiration and facilitate learning. Diversity ensures richness of input that may facilitate creative and innovative work outcomes (Mumford & Gustafson, 1988). Research has shown that multicultural groups develop more and better alternatives to a problem and criteria for evaluating those alternatives than do culturally homogeneous groups (McLeod & Lobel, 1992), and that they are more creative than homogenous groups (Ling, 1990; see also B. E. Jackson, 1991). In the present study, we were interested in the psychological factors that may buffer against the potential negative effects of cultural diversity and that may pave the way for its benefits. Because the negative outcomes of

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diversity seem primarily associated with lower attraction among individuals with different attitudes, whereas its potential virtue is linked to superior problem solving and higher creativity, we focused on the impact of diversity on affective outcomes (work satisfaction and commitment) and performance indicators.

## NEGATIVE OUTCOMES OF CULTURAL DIVERSITY

Cultural diversity refers to the representation, in a social system, of people with distinctly different group affiliations of cultural significance (Cox, 1993). Research suggests a seemingly universal human tendency to respond positively to similarity and negatively to dissimilarity (e.g., Byrne, 1999). In general, we are attracted by people who have similar attitudes because they confirm our norms and values and because they are easy to communicate with (similarity attraction hypothesis; see Newcomb, 1956). Social identity (Tajfel & Turner, 1986) and self-categorization theory (Turner, 1982) predict that individuals tend to classify their social environment into subcategories and that they tend to create a favorable picture of their own category relative to other categories to retain a positive self-image. In-group favoritism, combined with out-group bias, may prohibit productive team processes and may affect team outcomes negatively. Similarity provides a strong basis for categorization.

In work organizations, observable differences such as race and gender often lead to negative consequences, eliciting stereotypes, prejudice, and negative work outcomes (McLeod, Lobel, & Cox, 1996; Milliken & Martins, 1996). In the phase of group formation, members become organized into networks of social relations that are driven by the principles of similarity—attraction and social categorization. Detectable differences are by nature of these principles more likely to result in fragmentation within the group, and this may have a strong negative impact on subsequent group functioning (Milliken, Bartel, & Kurtzberg, 2003). Indeed, Watson, Kumar, and Michaelsen (1993) found that newly formed heterogeneous groups of students working on a task performed less well than homogeneous groups. In the present study, we focused on intercultural teams of business students who worked together for a number of weeks in a course. It was predicted that diversity would be negatively associated with work outcomes (Hypothesis 1).

## DIVERSITY, SOCIAL IDENTITY, AND WORK OUTCOMES

It seems that groups have to pass through a number of stages before they can perform efficiently (e.g., Tuckman, 1965). Starting from a stage of high member uncertainty and a search for group goals, they have to develop common group norms and start to exchange information to stabilize and perform effectively as a group. In the present study, it was assumed that groups only are able to do so if they are able to develop a common social identity. Members of multicultural teams are part of different social groups, and each of these groups makes up part of their social identity. If team members primarily stress their membership of a cultural group, the emphasis in interactions will be on cultural values, which differ for the different cultural subgroups within the team (see Abrams & Hogg, 1990; Tajfel & Turner, 1986). Under those circumstances, incompatibility of cultural values may harm constructive group processes, which may negatively affect the subjective well-being of team members as well as their performance (Messick & Mackie, 1989). But even in the absence of strong differences

in values, if cultural subgroups become salient, a tendency to favor in-group members and to derogate out-group members may affect team outcomes negatively.

The patterns of group identification that emerge during group formation are likely to affect its performance in the operational phases of a group (Milliken et al., 2003). As a group begins to work toward its task goals, members elaborate and act on the patterns of interaction established during the formation period. In the present study, the influence of social identity on outcomes in culturally diverse team was examined. It was expected that a strong identification with one's cultural background is negatively related to well-being, team commitment, and ultimate performance (Hypothesis 2a). Moreover, it was expected that this negative relationship would be moderated by diversity: The more culturally diverse a team is, the stronger is the negative relationship between identification with one's cultural background and work outcomes (Hypothesis 2b). Hence, in highly diverse teams, there are many cultural groups with different norms and values making a common norming extremely difficult if members stick to their cultural values.

A predominance of their cultural identity among members of diverse groups is not likely to be beneficial. However, if in the phase of group formation, patterns of social relations emerge that exceed the borders of cultural groups, and if group norms evolve that are shared by all team members, a common group identity may develop. Under those circumstances, group members are more inclined to interpret the world and their own place in it in a manner that is consistent with its values, ideology, and culture (Mael & Ashforth, 1992), and will become more strongly focused on shared goals. Empirical studies indicate that high identifiers regard their group as more homogeneous and show a propensity to stand and fight for their group (e.g., Ellemers, Spears, & Doosje, 1997; Spears, Doosje, & Ellemers, 1997). We therefore assumed that identification with the team has a positive influence on team members' well-being, commitment, and ultimate performance (Hypothesis 3a). Moreover, it was expected that the relationship between identification with the team and work outcomes is moderated by diversity. The more culturally diverse a team is, the stronger is the positive relationship between identification with the team and work outcomes (Hypothesis 3b). A strong team identity is more important under conditions of high diversity, in which case differences in norms and values and subgroup formation may prohibit the emergence of common norms and goals. The study by Watson et al. (1993) that showed inferior performance among diverse groups in the beginning revealed that in the long run, heterogeneous groups outperformed homogeneous groups. Apparently, these groups had been able to overcome the difficulties they encountered in the formation stage, and a strong group identity may have moderated their outcomes.

The previous paragraphs suggest that identification with the team is crucial to team functioning in culturally diverse teams. Whether team members should at the same time be forced to give up their cultural identities is questionable, however. Studies among immigrants have revealed that immigrants reach the highest level of functioning if they identify themselves with the new culture, but at the same time maintain aspects of their original culture (Berry, 1997). Our cultural background forms an important part of the self that has affected our behaviors, feelings, and cognitions from early childhood and that is not easily denied. This apparently also holds for behavior at work. Moreover, the positive outcomes associated with diversity in terms of better problem solving and higher creativity will get lost if members of minority groups completely conform to majority perspectives.

In the present study, it was assumed that for effective collaboration in culturally diverse teams, it is important that employees identify themselves with their cultural background and their team. This pattern of identification in groups with a subgroup (cultural group) and a

superordinate group (the team) is usually referred to in the literature as dual identity (e.g., Gaertner & Dovidio, 2000). In the context of cultural diversity in organizations, a dual identity parallels what at societal level is called integration. The term *integration* is used when immigrants regard contact with the members of the host culture as important but at the same time wish to maintain their native culture, in contrast to being only focused on their original culture (separation) or being solely oriented toward the new culture (assimilation) (Berry, 1997). Studies on acculturation strategies in adjustment to new societies have revealed more positive outcomes associated with integration than with assimilation (Berry, 1997). Empirical evidence has also revealed support for the positive outcomes of a dual identity in terms of more harmonious intergroup relationships (Gaertner, Rust, Dovidio, Bachman, & Anastasio, 1994).

In sum, we predicted that the relationship between identification with the team and work outcomes is moderated by identification with one's cultural background. More specifically, it was expected that the positive outcomes associated with strong identification with the team particularly occur if team members also identify with their culture (Hypothesis 3c). In addition, we expected that the interaction between team and cultural identification on team outcomes is in turn moderated by diversity. Again, it was predicted that the higher the diversity of the group, the stronger the moderating effect of identification with one's culture on the relationship between identification with the team and work outcomes (Hypothesis 3d).

## DIVERSITY, PERSONALITY, AND WORK OUTCOMES

Work outcomes in intercultural teams seem not only to be under the influence of social identities but also under the influence of personal identities. An important part of individuals' personal identities is formed by their personalities. Whereas in general personality seems to affect the way people interact in a work setting, recent research has pointed at the relevance of personality traits to effective functioning in an intercultural work context (e.g., Arthur & Bennet, 1995; Ones & Viswesvaran, 1997). The present study focused on five traits that have been detected as contributing to success in intercultural settings (Van der Zee & Van Oudenhoven, 2000, 2001): Cultural Empathy, Open-Mindedness, Social Initiative, Flexibility, and Emotional Stability. In comparison to general traits such as the Big Five (e.g., Costa & McCrae, 1992), these intercultural traits cover more narrowly behavioral tendencies that are of relevance to multicultural success. First evidence suggests that the five traits are related to feelings of self-efficacy, health, well-being, and performance in an international context (e.g., Mol, Van Oudenhoven, & Van der Zee, 2001; Van Oudenhoven & Van der Zee, 2002).

Cultural Empathy, as a first dimension, can be defined as the capacity to clearly project an interest in others, as well as to obtain and reflect a reasonably complete and accurate sense of another's thoughts, feelings, and/or experiences (e.g., B. Ruben, 1976). In other words, this dimension refers to the ability to empathize with the feelings, thoughts, and behaviors of members from different cultural groups. Their sensitivity makes individuals high in this trait less likely to experience communication problems in culturally diverse teams. A second relevant dimension to acquiring the rules and values of a new culture is Open-Mindedness, referring to an open and unprejudiced attitude toward out-group members and toward different cultural norms and values (see Arthur & Bennett, 1995). Open individuals are less inclined to develop negative stereotypes of group members from different cultural subgroups, but are on the contrary curious and interested in their perspectives. Indeed, in an earlier experimental

study among students, a combined factor encompassing Cultural Empathy and Open-Mind-edness was associated with a tendency to appraise intercultural situations as a challenge and to respond positively to those situations (Van der Zee, Van Oudenhoven, & De Grijs, in press). The third intercultural dimension is Social Initiative, defined as a tendency to actively approach social situations and to take initiatives. A related construct is Extraversion, which several researchers argue to be important for multicultural success (Deller, 1997; Ones & Viswesvaran, 1997). Emotional Stability refers to a tendency to remain calm in stressful situations versus a tendency to show strong emotional reactions under stressful circumstances (Church, 1982; Tung, 1981). Flexibility as the fifth dimension of multicultural effectiveness has been discussed as an important dimension by a number of authors (Arthur & Bennett, 1995; I. Ruben & Kealey, 1979). In intercultural situations, people need to be able to switch easily from one strategy to another because familiar ways of handling things may no longer work. In the earlier experimental study, we found that a factor encompassing Emotional Stability and Flexibility was associated with a tendency to appraise intercultural situations as less threatening and to respond with less negative affect to these situations (Van der Zee et al., in press).

In the present study, it was assumed that the intercultural traits buffer against the negative outcomes associated with diversity and enhance its potential benefits. The five traits seem on one hand related to less communication problems, stereotyping, and feelings of threat among team members. On the other hand, individuals high on these traits seem to regard differences more strongly as a challenge and will be more inclined to use them for the benefit of the group. It was therefore predicted that the intercultural traits are positively related to team members' well-being, commitment, and performance (Hypothesis 4a). Because these traits are assumed to be helpful in adjusting to an intercultural environment, we further assumed that the relationship between each trait and work outcomes is moderated by diversity, that is, the higher the level of diversity, the stronger the relation between personality and work outcomes (Hypothesis 4b).

## METHOD

### SAMPLE

The data for the present study were collected at Aston Business School (Aston University, Birmingham, UK). The sample consisted of 228 students of the postgraduate course Organizational Behavior, who worked together in 43 syndicate groups throughout the academic year. Syndicate groups were created basically randomly, with three limiting factors.

Homogeneous foreign student groups were avoided; if possible, groups had at least one U.K. student, and, finally, students within one syndicate group are from the same program (MBA, MSc in Business, MSc Work Psychology and Business, etc.). Group size varied from four to eight students ($M = 5.69$, $SD = 1.05$). The majority of the students were MBA students (22% full-time and 8% part-time). The rest of the students did an MSc in business (13%), international business (16%), business and information technology (16%), marketing (1%), personnel management and business (13%), work psychology and business (6%), and public service management (5%). The age of the students varied between 20 and 55 years ($M = 27.2$, $SD = 6.8$). At the group level, strong age differences were found: mean group age varied from 21.0 years to 35.7 years. The age dispersion was reasonably balanced across groups and varied between 7.3 to 9.6 years of age difference between the eldest and youngest group

member. In terms of gender, 51% of the total sample was male versus 49% female. All groups except one were mixed in terms of gender. Thirty-six cultural groups were represented in the sample, varying from Chinese (7.6%; an additional 1.3% came from Hong Kong), African (2.1%), Greek (5.5%), Taiwanese (3.4%), and Indian (5.8%). The majority of the respondents were British (52.5%). It must be noted that from this latter group, 76% was native British; the remaining respondents were originally from 11 different cultures, in majority Anglo-Indian (14.9%), Anglo-Pakistani (4.1%), and Anglo-African (1.7%). The number of cultural backgrounds represented within a group varied between 1 and 6 ($M = 3.19$, $SD = 1.17$).

## PROCEDURE

All students who took the course on Organizational Behavior were approached for participation in the study at the first lecture of the course. During a 10-week period, students followed lectures, and each week they worked together on coursework assignments that helped them to understand the literature of the course and prepare for the examination. For the assignment, the students had to reflect on the composition, processes, development, and outcomes of their team during the course. They had to present an analysis of the team (based on a weekly record of the group's functioning) and how its effectiveness could be improved. In their analysis, they had to rely on theory, models, and empirical evidence from the study of Organizational Behavior.

Students were asked to fill out a questionnaire during the 2nd week of the first term (T1), and again 6 weeks later, in the 8th week of the first term (T2). The questionnaire was phrased in English. The students had 10 minutes to complete each questionnaire. If they needed more time, they could finish the questionnaire during the break. At the end of the Organizational Behavior course, the students had to perform an individual exam. The exam mark was used as a performance measure.

## INSTRUMENTS

*T1 measures*. All students were asked to indicate their cultural background. As a definition for cultural background, we used the social setting in which they were brought up. It was explained that every nation has its own culture and that often there are different cultural groups in one nation. As an indicator of cultural diversity, we used a formula developed by Tsui, Egan, and O'Reilly (1992):

$$D = \sqrt{\left[ 1/n \sum_{i}^{j} \left( Si - Sj \right)^2 \right]}$$

This measure represents the square root of the summed square differences between individual $S_i$'s value on a specific demographic variable (in this case, cultural background as indicated by each student) and the value on the same variable (cultural background) for every other individual $S_j$ in the sample for the work unit, divided by the total number of respondents in unit ($n$), in this case the syndicate group (Tsui et al., 1992). The score on cultural diversity was computed by considering the differences among all the cultural backgrounds in the syndicate group. For example, in a group with 1 African, 1 Asian, and 2 British, the score for the African and the Asian student, respectively, would be 3 (1 for being different from each other

and 2 for being different from each of the British), and 2 for each of the British (1 for being different from the African, 1 for being different from the Asian, and 0 for being equal to each other). The $n$ used in this formula is the total number of individuals in the unit, including the person $i$ whose difference score is being calculated. Using $n$ rather than $n - 1$ allows us to derive a metric that captures the size and the compositional effects. For example, 1 Asian in a group with 9 British would have a difference score of .95 (square root of 9/10). One Asian in a group with 99 British would have a difference score of .99 (square root of 99/100). In both cases, the denominator is $n$. If $n - 1$ were used, the difference score for the individual Asian in both cases would be 1.00 (square root of 9/9 in the first case and 99/99 in the second case). This metric shows that the Asian in the second case is more different from the others (99 men) than the Asian in the first case (9 men). Their respective difference scores (.99 vs. .95), using $n$ as the denominator, reflect the relative degree of difference (Tsui et al., 1992). In the present study, individual diversity scores ranged from 0 to .93 ($M = .70$, $SD = .26$).

*Multicultural Personality Questionnaire (MPQ)*. The intercultural traits were measured with the English version of the 91-item MPQ (Van der Zee & Van Oudenhoven, 2000, 2001). Each trait was measured by items that describe concrete behaviors or tendencies, which were considered to be indicative of the specific dimension. Participants could give their answers on a 5-point scale, ranging from 1 (*not at all applicable*) to 5 (*totally applicable*). Cultural Empathy was measured by 18 items ($M = 3.85$, $SD = .41$; $\alpha = .93$). Examples of items are "Tries to understand other people's behavior" (+) and "Finds it hard to empathize with others" (–). Open-Mindedness was measured by 18 items ($M = 3.68$, $SD = .41$; $\alpha = .93$). Examples of items are "Is interested in other cultures" (+) and "Is fascinated by new technological developments" (+). Social Initiative was measured with 17 items ($M = 3.55$, $SD = .50$; $\alpha = .94$). Examples of items are "Takes initiatives" (+) and "Finds it difficult to make contact" (–). Emotional Stability was measured by 20 items ($M = 3.19$, $SD = .48$; $\alpha = .95$). Examples of items are "Keeps calm at ill-luck" (+) and "Suffers from conflicts with others" (–). Flexibility was measured by 18 items ($M = 3.28$, $SD = .44$; $\alpha = .93$). Examples of items are "Changes easily from one activity to another" (+) and "Wants to know exactly what will happen" (–). The MPQ was filled out at the beginning of the academic year.

*T2 measures*. Six items were included for Social Identification. Identification with the team was measured with six items ($M = 3.81$, $SD = .76$; $\alpha = .86$) derived from Hinkle, Taylor, and Fox-Cardamone (1989). Sample items are "I feel good about being a member of my syndicate group" and "Being a member of my syndicate group is important to me." For identification with the cultural background, the same items were used, replacing "syndicate group" with "cultural background." Cronbach's alpha of this scale was .83. Participants could give their answers on a 5-point scale ranging from 1 (*totally disagree*) to 5 (*totally agree*) ($M = 4.09$, $SD = .66$). The correlation between identification with the team and with the cultural background was significantly positive ($r = .32$, $p < .001$).

*Well-being*. Students' well-being was measured by a 12-item questionnaire developed by Warr (1990). Participants were asked to rate 12 feelings on a 6-point scale ranging from 1 (*never*) to 6 (*all of the time*) ("Thinking of the past 8 to 10 weeks, how often has your syndicate group made you feel each of the following . . ."). Cronbach's alpha of this scale was .91 ($M = 4.15$, $SD = .67$). The negative feelings were tense, uneasy, worried, depressed, gloomy, and miserable. The positive feelings were relaxed, optimistic, enthusiastic, and calm. In factor analysis, two factors were extracted prior to rotation with eigenvalues greater than 1.

However, all the items had a greater loading on the first factor (all items loaded above .59). Taken together with the size of the first principal component relative to the second component (with, respectively, 49.2% vs. 18.8% of variance explained), these prerotated factor loadings offer strong evidence for a general factor of work-related psychological well-being (see also Daniels & Guppy, 1994). It was therefore decided to combine all items into one dimension. The overall scale score was obtained by taking the unweighted mean of the item scores after first recoding the items that referred to negative feelings.

*Commitment to the team*. Students' commitment to the team was measured by a scale consisting of five statements, and participants were asked to rate each statement on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The internal consistency of this scale was high ($M = 3.34$, $SD = .93$; $\alpha = .91$). Examples of statements are "I would welcome the chance to continue working in this group" (+) and "I sometimes wished that I were in a different group" (−).

*T3 measure: Performance*. By the end of the first term, students had to perform an individual exam on the Organizational Behavior course. The examination was an open-book case study. The case study was provided 2 weeks before the examination. The examination consisted of questions related to the case study. Students had to identify and describe the relevant areas of knowledge from the study of Organizational Behavior, apply this knowledge to an analysis of the issues in the case study, and make relevant and useful recommendations based on their analysis. The examination was marked in percentages, ranging from 25% (lowest mark) to 85% (highest mark); 40% was the pass rate ($M = 60.37$, $SD = 7.79$). Although the examination was independent of the course work, it was assumed that because the group sessions were explicitly meant to help students master the study materials, the effectiveness of the group process would be reflected in students' individual grades.

## RESULTS

### DIVERSITY, SOCIAL IDENTITY PATTERNS, AND WORK OUTCOMES

First, we were interested in the influence of identification with the team and identification with one's cultural background on team members' well-being. Two levels of measurement can be distinguished in the data: the individual level (Level 1) and the group level (Level 2). In our analyses, the units of interest were the individuals rather than the groups. However, to control for dependencies in the data as a result of the fact that individuals were nested in teams, the team level had to be taken into account in the data analysis. If the group level is ignored in the analyses, the within and between slopes are mixed, resulting in a very misleading estimate of the relationship between the lower level predictor variables and the outcome measures (see Bosker & Snijders, 1990; Kenny, Kashy, & Bolger, 1998).

Therefore, we performed regression analysis with the multilevel application for Windows (MlWiN 1.1; Rasbash, Healy, Browne, & Cameron, 1998) instead of the standard OLS-regression procedure from the SPSSX package. This program more adequately takes into account the hierarchical structure of the data. In multilevel analysis, random effects provide estimates of the variation in the independent variable that is due to differences between groups (Level 2 variation) and between individuals (Level 1 variation). The modeling of fixed effects is comparable to the derivation of regression weights in ordinary regression

**TABLE 1**
**Results of Multilevel Analyses of the Effect of Diversity, Identification**
**With Cultural Background, and Identification With the Team on Well-Being**

| | Model 1 | | Model 2 | | Model 3 | | Model 4 | |
|---|---|---|---|---|---|---|---|---|
| | Coefficient | SE | Coefficient | SE | Coefficient | SE | Coefficient | SE |
| Fixed effect | | | | | | | | |
| Intercept | –0.012 | 0.057 | –0.006 | 0.044 | 0.009 | 0.046 | 0.007 | 0.046 |
| Diversity | | | –0.375* | 0.169 | –0.479** | 0.175 | –0.513** | 0.178 |
| Identification With Cultural Background | | | –0.019 | 0.064 | –0.053 | 0.066 | –0.047 | 0.066 |
| Identification With the Team | | | 0.344** | 0.054 | 0.341** | 0.054 | 0.339** | 0.054 |
| Diversity × Identification With Cultural Background | | | | | –0.499* | 0.233 | –0.496* | 0.233 |
| Diversity × Identification With the Team | | | | | 0.633* | 0.253 | 0.661** | 0.256 |
| Identification With Cultural Background × Identification With the Team | | | | | –0.002 | 0.073 | –0.013 | 0.074 |
| Diversity × Identification With Cultural Background × Identification With the Team | | | | | | | 0.262 | 0.311 |
| | Variance | SE | Variance | SE | Variance | SE | Variance | SE |
| Variance | | | | | | | | |
| Between-group variances $\theta^2 = \mathrm{var}(U_{0j})$ | 0.068 | 0.030 | 0.020 | 0.019 | 0.025 | 0.019 | 0.024 | 0.019 |
| Between-individual variances $\phi^2 = \mathrm{var}(R_{ij})$ | 0.376 | 0.038 | 0.339 | 0.034 | 0.323 | 0.033 | 0.323 | 0.033 |
| Deviance | 468.549 | | 426.725 | | 418.489 | | 417.787 | |

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

analysis. As in the standard regression procedure, interaction effects are represented by the product term of the independent variables that were assumed to interact. To prevent problems of multicollinearity, in all the analyses, variables have to be centered before they are entered in the equation (Aiken & West, 1991). Significance of effects was tested by means of the likelihood ratio test. This test uses the difference between two model fits as a test statistic. The difference in model fit follows a chi-square distribution, with the number of added parameters as degrees of freedom.

A two-level model was estimated, whereby the levels were formed by the team (Level 2) and the individual (Level 1). We started with an empty model in which the random effects of group and individual on well-being were modeled (see Table 1, Model 1). This empty model was tested against alternative models in which the fixed effects of cultural identity, team identity, and level of diversity were modeled. The intraclass correlation, indicating the proportion of variance in the dependent variables that is accounted for by the group level, was .15, pointing at the usefulness of taking the multilevel structure of the data into account.[1]
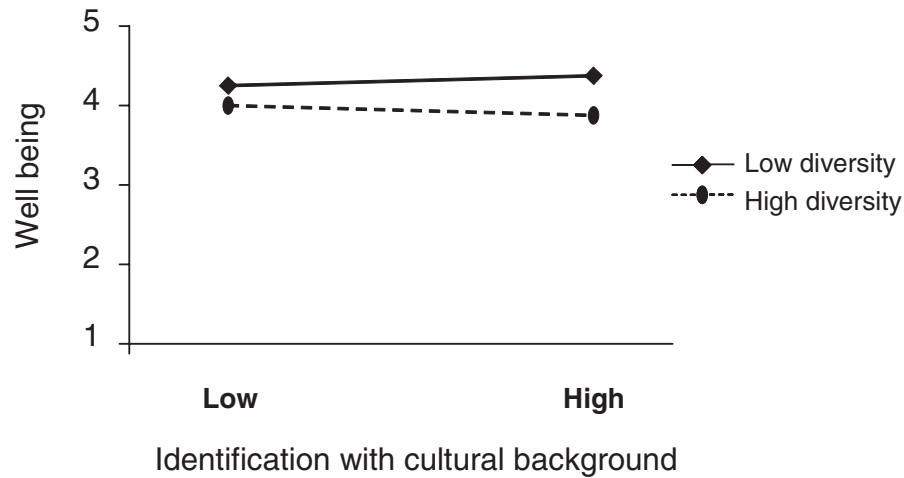
**Figure 1:  Interaction Effect of Diversity and Identification With Cultural Background on Well-Being**

Adding the fixed main effects of diversity, identification with the team and identification with one's culture resulted in a significant model improvement (Model 2). The deviance decreased with 41.824 ($df = 3, p < .001$). Significant main effects were found of diversity ($z = -2.22, p < .05$), with higher diversity resulting in lower well-being; and of identification with the team ($z = 6.37, p < .01$), indicating higher well-being associated with stronger identification with the team. A third model, whereby the two-way interaction effects were added, resulted in further improvement (decrease in deviance = 8.236, $df = 3, p < .05$). Two interaction effects were found. The data revealed a significant Negative Diversity × Identification With One's Culture interaction ($z = -2.14, p < .05$) and a significant Positive Diversity × Identification With the Team interaction ($z = 2.50, p < .05$). Figure 1 shows the regression lines representing the effect of identification with one's cultural background on well-being among individuals low and high in diversity.[2] As Figure 1 shows, the negative effect of identification with one's cultural background on well-being only occurred under circumstances of high diversity. This finding is in line with our hypothesis. Figure 2 graphically represents the regression lines for the effect of identification with the team on well-being. As Figure 2 shows, again as expected, the positive effect of identification with the team on well-being was stronger under conditions of high diversity. Finally, including the Diversity × Identification With the Team × Identification With One's Culture three-way interaction (Model 4) in the model did not lead to a significant improvement (decrease in deviance = .702, *ns*). Consistently, the coefficient representing the interaction term failed to reach significance ($z = .84$, *ns*).

The same analyses were performed for commitment (see Table 2). For this variable, an intraclass correlation of .27 was found, suggesting that the team level was responsible for a considerable amount of variance in the data. As Table 2 reveals, Model 2 provided a significant better prediction as compared to the empty model (decrease in deviance = 55.128; $df = 3, p < .001$). In line with our predictions, a significant negative effect of identification with one's culture was found ($z = -2.33, p < .05$). Identification with the team had a positive effect on commitment, ($z = 7.93, p < .01$). Adding the interaction terms to the equation (see Model
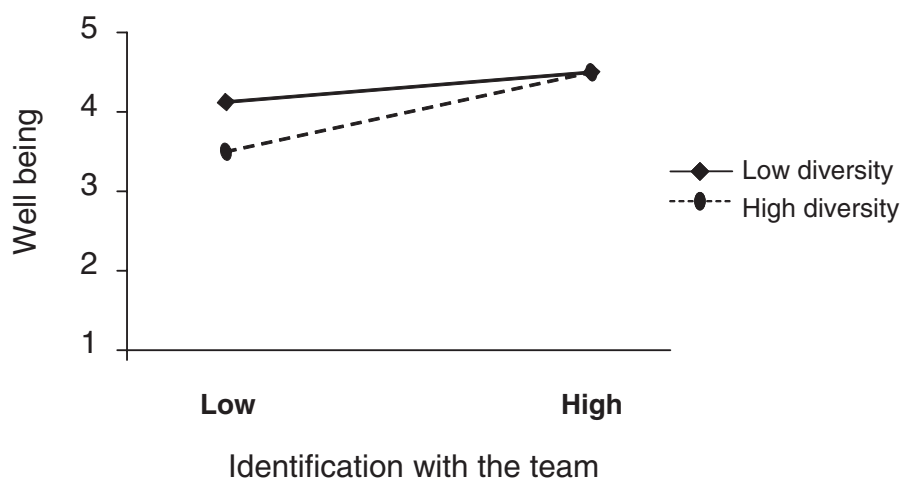
**Figure 2: Interaction Effect of Diversity and Identification With the Team on Well-Being**

3), we found a significant interaction effect between diversity and identification with one's culture ($z = 2.12$, $p < .05$). The regression lines for the relationship between identification with one's cultural background and commitment under conditions of high and low diversity are given in Figure 3. Again, in line with the predictions, the negative effects of identification with one's culture were only found under conditions of high diversity. As a whole, Model 3 did not lead to significant improvement in prediction compared to Model 2 (decrease in deviance = 4.608; $df = 3$, $ns$). However, the decrease in deviance for the more parsimonious model, in which in addition to the main effects only the Diversity × Identification With One's Culture interaction was included, was significant (decrease in deviance = 4.01; $df = 1$, $p <$ .05).[3] The three-way Diversity × Identification With the Team × Identification With One's Culture failed to reach significance. The same analyses did not provide support for identity effects on exam grades.

To summarize, diversity had a negative effect on well-being, but unexpectedly not on commitment (Hypothesis 1). Identification with one's cultural background had a negative effect on commitment, and for well-being, this effect was only found among team members who experienced a high level of diversity (Hypotheses 2a and 2b). Identification with the team had a positive effect on both well-being and commitment, and for well-being, this effect was stronger the higher level of diversity (Hypotheses 3a and 3b). We failed to find an interaction effect of identification with the team and identification with one's culture on work outcomes, nor did we find support for the predicted Diversity × Identification With the Team × Identification With One's Culture interaction (Hypotheses 3c and 3d).

### DIVERSITY, INTERCULTURAL TRAITS, AND WORK OUTCOMES

Again, multilevel analyses were performed to test the effects of diversity and intercultural traits on work outcomes. Two models were tested against the empty model. In Model 2, the main effects of diversity and personality were entered into the equation, whereas Model 3 represented the main effects as well as the diversity by personality interaction effects. For

**TABLE 2**
**Results of Multilevel Analyses of the Effect of Diversity, Identification**
**With Cultural Background, and Identification With the Team on Commitment**

| | Model 1 | | Model 2 | | Model 3 | | Model 4 | |
|---|---|---|---|---|---|---|---|---|
| | Coefficient | SE | Coefficient | SE | Coefficient | SE | Coefficient | SE |
| **Fixed effect** | | | | | | | | |
| Intercept | –0.017 | 0.008 | –0.012 | 0.067 | 0.009 | 0.069 | 0.007 | 0.069 |
| Diversity | | | 0.033 | 0.239 | –0.016 | 0.242 | – 0.025 | 0.246 |
| Identification With Cultural Background | | | –0.168* | 0.072 | –0.206 | 0.074 | –0.204** | .075 |
| Identification With the Team | | | 0.484** | 0.061 | 0.505** | 0.062 | 0.504** | .062 |
| Diversity × Identification With Cultural Background | | | | | –0.555* | 0.262 | –0.554* | 0.261 |
| Diversity × Identification With the Team | | | | | 0.151 | 0.287 | 0.175 | 0.289 |
| Identification With Cultural Background × Identification With the Team | | | | | –0.064 | 0.083 | 0.068 | 0.084 |
| Diversity × Identification With Cultural Background × Identification With the Team | | | | | | | 0.109 | 0.355 |
| | Variance | SE | Variance | SE | Variance | SE | Variance | SE |
| **Variance** | | | | | | | | |
| Between-group variances $\theta^2 = \mathrm{var}(U_{0j})$ | 0.183 | 0.060 | 0.119 | 0.042 | 0.122 | 0.043 | 0.121 | 0.042 |
| Between-individual variances $\phi^2 = \mathrm{var}(R_{ij})$ | 0.496 | 0.050 | 0.403 | 0.041 | 0.393 | 0.040 | 0.393 | 0.040 |
| Deviance | 551.410 | | 496.282 | | 491.674 | | 491.572 | |

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

well-being (see Table 3), adding the main effects of diversity and the intercultural traits to the equation resulted in a significant model improvement (decrease in deviance = 12.378, $df = 6$, $p < .05$, one-sided). A significant effect of Emotional Stability on well-being was found ($z = 2.55$, $p < .05$). Adding the interaction terms (Model 3) again resulted in a significant model improvement (decrease in deviance = 9.859, $df = 6$, $p < .05$, one-sided). A significant Diversity × Emotional Stability interaction was found ($z = 2.42$, $p < .05$). The regression lines for high and low levels of diversity show that, in line with the expectations, the effect of Emotional Stability on well-being was only supported among team members who experienced high diversity (see Figure 4). No significant effects of personality on commitment were found. Finally, for exam grades, Model 2 did not lead to a significantly better fit, as compared with the empty model (decrease in deviance = 8.88, $df = 6$, $ns$). We did find a significant main effect of Flexibility ($z = 1.78$, $p < .05$, one-sided), suggesting better grades associated with higher levels of Flexibility (see Table 4).
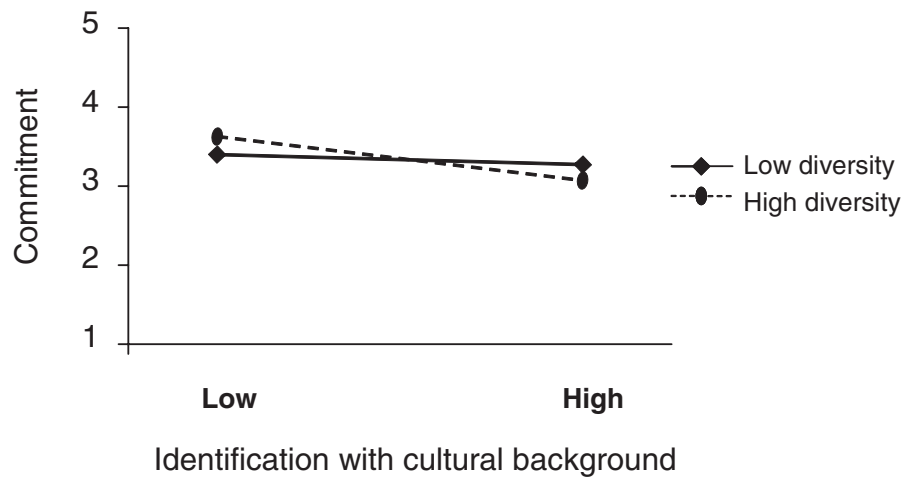
**Figure 3: Interaction Effect of Diversity and Identification With Cultural Background on Commitment**

**TABLE 3**
**Results of Multilevel Analyses of the Effect of Diversity**
**and Multicultural Traits on Well-Being**

|  | Model 1 | | Model 2 | | Model 3 | |
|---|---|---|---|---|---|---|
|  | *Coefficient* | *SE* | *Coefficient* | *SE* | *Coefficient* | *SE* |
| Fixed effect |  |  |  |  |  |  |
| Intercept | –0.014 | 0.0057 | –0.011 | 0.054 | 0.003 | 0.057 |
| Diversity |  |  | –0.301 | 0.204 | –0.369 | 0.222 |
| Cultural Empathy |  |  | –0.020 | 0.130 | –0.021 | 0.128 |
| Openmindedness |  |  | 0.150 | 0.194 | 0.114 | 0.149 |
| Social Initiative |  |  | –0.050 | 0.110 | –0.046 | 0.112 |
| Emotional Stability |  |  | 0.283* | 0.111 | 0.292* | 0.109 |
| Flexibility |  |  | –0.201 | 0.121 | –0.199 | 0.122 |
| Diversity × Cultural Empathy |  |  |  |  | 0.926 | 0.513 |
| Diversity × Openmindedness |  |  |  |  | –0.916 | 0.589 |
| Diversity × Social Initiative |  |  |  |  | –0.526 | 0.519 |
| Diversity × Emotional Stability |  |  |  |  | 1.117* | 0.461 |
| Diversity × Flexibility |  |  |  |  | –0.504 | 0.579 |
|  | *Variance* | *SE* | *Variance* | *SE* | *Variance* | *SE* |
| Variance |  |  |  |  |  |  |
| Between-group variances |  |  |  |  |  |  |
| $\theta^2 = \text{var}(U_{0j})$ | 0.069 | 0.031 | 0.058 | 0.028 | 0.072 | 0.030 |
| Between-individual variances |  |  |  |  |  |  |
| $\phi^2 = \text{var}(R_{ij})$ | 0.376 | 0.038 | 0.361 | 0.037 | 0.337 | 0.233 |
| Deviance | 468.470 | | 456.092 | | 446.233 | |

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

**TABLE 4**
**Results of Multilevel Analyses of the Effect of Diversity**
**and Multicultural Traits on Grades**

|  | Model 1 | | Model 2 | | Model 3 | |
|---|---|---|---|---|---|---|
|  | *Coefficient* | *SE* | *Coefficient* | *SE* | *Coefficient* | *SE* |
| Fixed effect |  |  |  |  |  |  |
| Intercept | 0.021 | 0.545 | 0.025 | 0.539 | –0.117 | 0.564 |
| Diversity |  |  | –2.064 | 2.131 | –1.378 | 2.378 |
| Cultural Empathy |  |  | 1.839 | 1.540 | 1.807 | 1.536 |
| Openmindedness |  |  | 0.596 | 1.748 | 1.176 | 1.770 |
| Social Initiative |  |  | –0.579 | 1.307 | –0.163 | 1.355 |
| Emotional Stability |  |  | –0.837 | 1.318 | –0.799 | 1.319 |
| Flexibility |  |  | 2.550* | 1.433 | 1.879 | 1.465 |
| Diversity × Cultural Empathy |  |  |  |  | –5.147 | 6.162 |
| Diversity × Openmindedness |  |  |  |  | 0.460 | 6.860 |
| Diversity × Social Initiative |  |  |  |  | –3.153 | 6.309 |
| Diversity × Emotional Stability |  |  |  |  | –8.325 | 5.546 |
| Diversity × Flexibility |  |  |  |  | 14.115* | 7.001 |
|  | *Variance* | *SE* | *Variance* | *SE* | *Variance* | *SE* |
| Variance |  |  |  |  |  |  |
| Between-group variances[a] |  |  |  |  |  |  |
| $\theta^2 = \mathrm{var}(U_{0j})$ | 2.653 | 2.915 | 2.779 | 2.842 | 3.146 | 2.855 |
| Between-individual variances |  |  |  |  |  |  |
| $\phi^2 = \mathrm{var}(R_{ij})$ | 55.208 | 5.611 | 52.986 | 5.388 | 51.385 | 5.224 |
| Deviance | 1,626.400 | | 1,617.516 | | 1,611.842 | |

a. This value corresponds to an intraclass correlation of .05.
*$p < .05$. **$p < .01$.
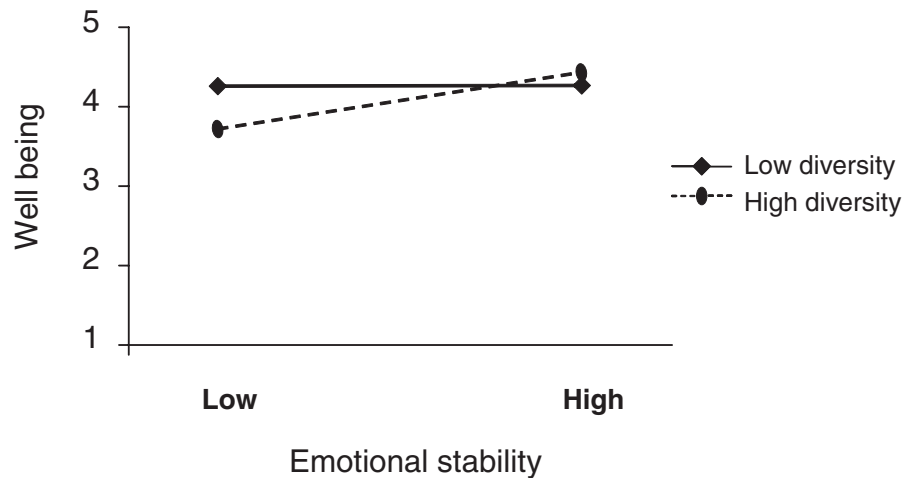


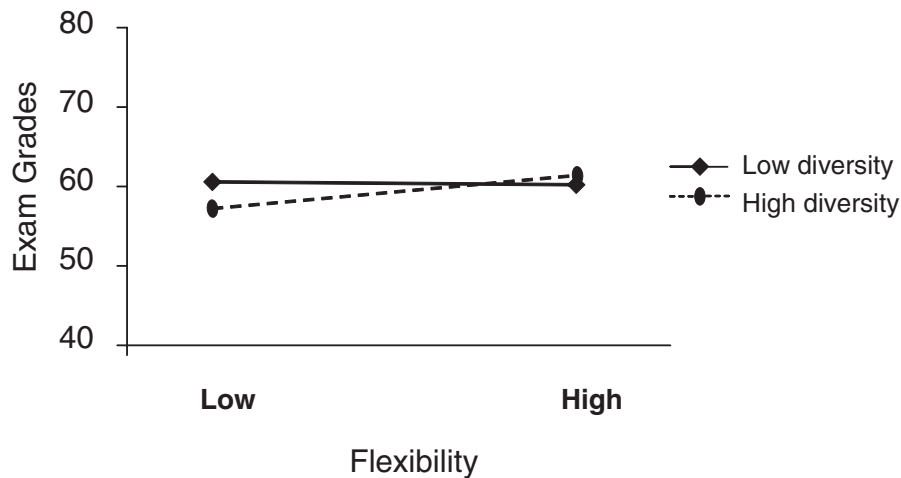**Figure 4:  Interaction Effect of Diversity and Emotional Stability on Well-Being**

**Figure 5:  Interaction Effect of Diversity and Flexibility on Exam Grades**

Model 3, representing the Diversity × Personality interaction effects, also did not result in a significant decrease in deviance (decrease in deviance = 5.67, *df* = 5, *ns*), although the parameter estimates for Model 3 revealed a significant interaction effect of diversity and Flexibility ($z = 2.01$, $p < .05$). The more parsimonious model, including only the main effects of diversity and Flexibility, and the diversity by Flexibility interaction, did result in a significant model improvement (decrease in deviance = 6.589, *df* = 3, $p < .05$, one-sided). This points to the significant contribution of Flexibility and the diversity by Flexibility interaction in the prediction of grades. The interaction effect is presented graphically in Figure 5. Again, consistent with the predictions, the positive effect of Flexibility was only found under conditions of high diversity. Under conditions of low diversity, the relationship even went in the opposite direction, with less favorable grades associated with higher levels of Flexibility. To conclude, the expected personality effects on work outcomes were supported for Emotional Stability and Flexibility, whereby, as predicted, the personality effects increased with levels of diversity.

## DISCUSSION

The present study examined the role of social identity and personality as determinants of work outcomes in intercultural teams. The study was performed among groups of business students who worked together in syndicate groups for a 10-week period. Learning groups of students have often been used in team research (e.g., Watson, Johnson, & Zgourides, 2002). Although these groups have some characteristics that make them different from real work teams, in most aspects they provide an excellent opportunity to examine ongoing processes in teams. The data first show that cultural diversity in teams is negatively related to well-being. This finding is in line with earlier findings that show lower well-being associated with cultural diversity (Tsui et al., 1992; for a discussion, see S. E. Jackson, Stone, & Alvarez, 1993). Moreover, it is consistent with approaches within organizational psychology that

assume tendencies toward homogeneity in organizations (O'Reilly, Chatman, & Caldwell, 1991; Schneider, Goldstein, & Smith, 1995). A fit of people's values to the values of the organization they join seem to predict satisfaction, commitment, and performance. In the present study, we did find an effect of diversity on well-being, but failed to find significant outcomes for commitment and performance.

Identification with one's cultural background was, as predicted, negatively related to well-being and commitment under conditions of high diversity. Brickson (2000), for example, argues that if relations between cultural groups are conflictual and emotionally charged, diversity will highlight intergroup relations outside the organization or unit, thus making membership of the cultural group salient and strengthening adherence to cultural but not to organizational norms. The present study suggests that individuals differ in their identification with their cultural background and that the extent to which they do so influences their well-being at work and their commitment to the job in a negative way.

In line with the expectations, positive effects of a strong team identity were found on team members' well-being and on their commitment to the team. In general, a high team identity seems associated with higher motivation. This finding is consistent with recent findings by Van Knippenberg and Van Schie (2000), who found that identification with the work unit was related to job satisfaction, intention to continue working for the organization, motivation, and job involvement among local government workers and university employees. What is new here is that we were able to show that the effects of team identity were stronger under conditions of high diversity. Under those conditions, communication problems and conflicts are more likely to occur, and having a common basis in a strong team identity seems even more crucial than in homogeneous teams.

It is important to realize that in the context of real organizations there may be a "dark side" to a strong team identity. Identification with the immediate work unit allows employees to feel that their in-group is in some way special and distinct from others (see Haslam, 2001). However, cooperation with other groups is at stake, and it is there that the risk of intergroup conflict arises. Hennesy and West (1999) argue that for team-based organizations to function effectively, a balance between identification with the team and with the organization as a whole is needed. Otherwise, widespread discriminatory in-group favoritism may endanger intergroup integration, coordination, and cooperation that are vital to organizational effectiveness. Our study was performed among business students on a learning task. The purpose was that students would gain knowledge on the subject of the course and that they would help each other in reaching this goal. The learning groups were by no means interdependent in their task performance. Moreover, the business school as the higher level organization has no goals that are threatened if the individual teams would try to outperform each other. The present data are in that respect not representative of most team-based organizations, where there is at least some coordination and cooperation between teams required to reach organizational goals.

No support was found for the prediction that the positive outcomes associated with identification with the team would be enhanced if team members would also identify with their cultural background. We assumed that team members would feel denied in an important part of self if they would give up their cultural identity. Brewer (1991), for example, has argued against focusing on a collective identity because stressing similarities among group members strengthens distinctiveness needs. However, if a superordinate identity is created that allows for differences between group members, team members can feel acknowledged in who they are without necessarily strongly identifying with their original cultures. In this regard, Harquail and Cox (1993) define an intercultural group climate in terms of tolerance

for ambiguity, amount of prescriptions with respect to behavior, and having a valuing diversity norm. Although examination of the written assignments did not give us the impression that diversity was something that was highly valued by the students, these temporary student groups are usually not highly prescriptive in terms of their members' behavior, nor do they have a strong need to avoid uncertainty. Moreover, the duration and the intensity of group membership in the syndicate groups was probably too limited to make recognition of one's cultural background vital to well-being and commitment to the group. Future studies may try to replicate these findings among actual working groups in organizations that are usually more intensive and have a longer lifetime. Moreover, future research may examine patterns of identification, affect, and performance over the course of group life to examine whether initial identity patterns do indeed stabilize over time and have long-lasting effects on the functioning of diverse groups (Milliken et al., 2003).

In addition to the influence of team members' social identities, we were also interested in the influence of personality on well-being and performance of employees in intercultural work groups. Of the five intercultural traits, we only found support for a role of Emotional Stability and Flexibility. Earlier findings among international students who spent a year abroad for study purposes also supported the importance of Emotional Stability in the first phase of adjustment to an intercultural situation (Van Oudenhoven & Van der Zee, 2002). In the phases of team formation, unstable persons may experience a large amount of distress facing an unknown, conflictive, and challenging situation. Stable individuals will probably appraise the intercultural situation as less stressful and will therefore show less negative emotional reactions to it. The same seems to hold for flexible persons, who generally tend to perceive new and unknown situations as a challenge rather than as a threat.

Interestingly, the effect of Flexibility on exam grades seemed to be opposite under conditions of high and low diversity. Whereas in line with our predictions the effect of Flexibility on grades was positive under conditions of high diversity, the same trait had a negative effect on performance under conditions of low diversity. Apparently, the low diverse context provided little challenge to the highly flexible team members, resulting in them becoming bored and distracting them from putting effort into their study. Indeed, in earlier work, we found evidence that whereas individuals with high scores on the MPQ revealed less negative cognitive and affective reactions to high-stress intercultural situations, they responded more negatively to low-stress situations compared to individuals with low scores on the MPQ (Van der Zee et al., in press).

One could argue that the individual performance ratings are irrelevant to team functioning and outcomes and that Flexibility is simply related to better performance on an individual task. Hence, the intraclass correlation that we found for exam grades was rather low. However, that does not explain the diversity by personality interaction effect on grades. We assumed that because the group sessions were explicitly meant to help students mastering the study materials, the effectiveness of the group process would be reflected in students' individual grades. Possibly, the overall effects of specific environment on grades were masked by relatively strong individual differences between team members in how the environment affected their performance. This does not imply that the environment had no impact. It seemed to have a clear impact, dependent on team members' personality traits.

No support was found for a relationship between the other three traits and work outcomes. Perhaps these traits are more important in the long run. Indeed, the Van Oudenhoven and Van der Zee (2002) study showed that whereas Emotional Stability was the most potent predictor in the early phase of adjustment, after 6 months, Cultural Empathy became a significant predictor of well-being. Over time, stress reduction may become less important, and the more

interpersonal traits gain importance to establish satisfying informal and collaborative relationships with colleagues in the team.

As predicted, the importance of the traits appeared to be dependent on the level of cultural diversity. Higher diversity implies a stronger need for cultural learning and induces greater conflict. Under those conditions, the intercultural traits seem to be more vital to work outcomes. This finding not only supports our theoretical assumptions—it also points to the validity of the MPQ (Van der Zee & Van Oudenhoven, 2000, 2001). The moderating role of diversity on the predictive value of the MPQ dimensions suggests that the instrument is especially relevant in an intercultural context. Future studies may further examine to which extent this effect is restricted to diversity in cultures or also holds for differences associated with other culturally determined differences in perspective, for example, due to professional background or educational level.

What are the implications of the present findings? First, interventions may be developed aimed at promoting identification patterns among team members. Social identity theory distinguishes a number of strategies aimed at reducing problems in intergroup relations by creating alternative categorizations among individuals (Messick & Mackie, 1989; Tajfel & Turner, 1986). These strategies can be used to enhance identification with the team. Examples are the creation of subordinate goals and recategorization. Identification patterns with social groups can be enforced, for example, by rituals aimed at identification of the group as an entity, making membership easily recognizable, and focusing on the celebration of a common goal. Symbols and periodic face-to face gatherings seem to be important means to reach this purpose, as well as defining the relation of the group with other groups (Lindenberg, 1998). Again, it is important to note that by priming a collective identity, people become motivated to ensure the welfare of their own group, even at the expense of the welfare of other groups. It is therefore important to not only emphasize the team level but also pay attention to the broader organizational context.

Finally, with respect to personality, the MPQ (Van der Zee & Van Oudenhoven, 2001, 2002) could be used for the assessment of training needs of employees who have to perform their work in intercultural teams. Until now, despite an increasing attention for assessment issues related to global assignments, organizations pay little attention to competencies in dealing with an intercultural context when it comes to culturally diverse teams in the local firm. Apparently, the assumption or the norm is that employees from different cultural backgrounds will assimilate in the dominant culture of the organization. To be able to fully benefit from the creative potential of a diverse work force, it seems important to pay attention to competencies that minority and majority members need to possess to facilitate constructive interactions.

## NOTES

1. The intraclass correlation (ICC) is the proportion of the Level 2 variance compared to the total variance. As can be derived from Table 1, the variance within groups is .068 and the variance between individuals is .376, respectively; ICC = .068/(.068 + .376) = .15.

2. The values corresponding to low and high levels of diversity and identification with one's cultural background were computed by taking for each variable one standard deviation above (high) and below (low) the mean and computing the $y$ value from the equation represented in Model 3 in Figure 1. Thereby, $y$ values corresponding with low and high levels of diversity and cultural identification were computed for a mean level of identification with the

team. For example, for a low level of diversity ($SD = .25$) and identification with the team ($SD = .63$), and a mean level of identification with the team ($M = 0$), the equation becomes: $y$(well-being) $= (-.479 \times -.25) + (-.053 \times -.63) + (-.499 \times -.25 \times -.63) = .074$. Note that the resulting $y$ value represents a centered score and corresponds to a raw score of $4.15 + .074 = 4.224$.

3. For reasons of clarity, the parsimonious model is not included in the table.

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*Karen van der Zee is a professor of organizational psychology at the University of Groningen. In 1996 she received her Ph.D. in social psychology at the same university. Her current research interest is in the influence of personality, threat, and social identities on work outcomes in culturally diverse teams. In addition, her work focuses on selection and (personality) assessment, as well as on personality predictors of successful expatriation.*

*Nelleke Atsma is a lieutenant junior grade in the Royal Netherlands Navy and works as a researcher at the Department of Behavioral Sciences. She studied work, organization, and personnel psychology at the University of Groningen and did her dissertation at the Work and Organizational Psychology Group at the Aston Business School in Birmingham. Her research interests include cross-cultural issues in organizations and the turnover of personnel.*

*Felix Brodbeck is a professor of social and organizational psychology at Aston Business School, Birmingham, UK. He received his Ph.D. in 1993 at the University of Giessen in Germany and his Habilitation in 1999 at the University of Munich, also in Germany. His research interests include leadership, cross-cultural issues, decision making, and learning in groups and organizations—all related to effectiveness and well-being in business.*