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Over the Top: Team Composition and Performance in Himalayan Expeditions

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Abstract

Using a large sub-sample of expeditions from the "Himalayan Database", we analyze the impact of a climbing team's cultural value diversity on various performance outcomes. Irrespective of an already large (and still growing) body of theoretical and empirical research on the diversity-performance link, the study of the multifaceted concept "culture" under rather extreme conditions has hitherto been largely ignored. We extend the literature by focusing on the effects of the cultural value diversity of a commercial climbing team on expedition outcomes. We test our hypotheses using data from 1,168 expeditions that took place between 1990 and 2014 involving mostly "amateur" climbers from all over the world. We find that the probability of team success is positively influenced by a culturally more heterogeneous team composition. Individual-level analyses further reveal that an increase in a team member's cultural distance increases the probability of individual success, but also the probability of experiencing an injury or death. This result shows that the higher collective performance in culturally diverse teams is driven by the isolation of single team members.

Keywords: team diversity; team performance; cultural value diversity

INTRODUCTION

In almost every firm in the world activity is organized such that at least some people work together as a team. The main rationale for teamwork is that team members' inputs are complementary and that, therefore, "the whole exceeds the sum of its parts" (Lazear & Gibbs, 2014). While it is often obvious when to use teamwork, it is much more difficult to structure teams efficiently. In general, an organization can either design a homogeneous team consisting of people with similar characteristics or a heterogeneous one. Due to the increase in firms' access to workers with different cultural backgrounds on the one hand and the conventional wisdom that a diverse workforce will increase performance on the other hand, firms often rely on culturally dissimilar team members as a strategic resource. Even though diversity is a crucial issue for societies as well as organizations, its consequences can hardly be predicted from a theoretical perspective: On the one hand, a culturally diverse team may possess a broad variety of complementary skills. On the other hand, heterogeneous teams may suffer from intra-group conflicts and communication problems, which may lead to a separation between team members who are unable to "speak the same language" because of their distinct attitudes or working styles. Moreover, clear-cut empirical evidence on whether cultural diversity is an asset or a liability is missing. Although organizational researchers have long studied the effects of team composition on team performance, culture was found to be an attribute "for which the double-edged sword of diversity is most salient" (Pieterse, van Knippenberg, & van Dierendonck, 2013: 784). Even though cultural diversity seems to have rather no significant or negative effects on performance outcomes, the different methodological and contextual approaches of the available studies prevent generalizations (Horwitz & Horwitz, 2007; Joshi & Roh, 2009).

In this paper, we aim to contribute to the debate on whether the "business case" for diversity reflects reality or fiction. First, we use unique archival data retrieved from the "Himalayan

Database" – an almost complete census of all expeditions to the Nepalese Himalayan region – including detailed information on more than 8,000 Alpine tourists in over 1,000 commercial expeditions. Hence, our dataset is larger than most other datasets, which typically contain only a few hundred observations. Even though individual climbers – who pay between 30,000 and 100,000 USD each – choose their expedition organization based on both price and on past success ratios, the teams consist of randomly assigned individuals. Anyone who can afford the necessary means can take part – be it an experienced or an amateur climber. Due to the fascination of the world's highest mountain, the Mount Everest, trips to the Himalaya have received global attention, which provides us with a broad range of 104 different nationalities (clustered to ten different cultures). Second, we are able to establish empirical links between cultural diversity and team-level as well as individual-level outcomes. In this paper, an expedition will be defined as successful, if the summit of the target mountain is reached and the following descent, which is known to be the most dangerous part of an expedition, is mastered without any losses of human lives. The analysis of both team- and individual-level data allows convincing statements not only about the general effect of diversity on group outcomes, but also on group processes, which are activated by heterogeneity. Third, this paper contributes to the diversity literature in that we analyze team dynamics in an extraordinary competitive and high-pressure context, in which team members fear life-threatening situations at any moment. While diversity should not have any significant effects when teams complete rather ordinary or trivial tasks, more challenging and complex problems require a high level of task interdependence and member interaction in order to succeed (Timmerman, 2000). Hence, diversity effects – if any – are most likely to occur in our context. Our results, thus, have implications for members of high-stakes teams, such as soldiers or surgeons, but also for business leaders from whom an exceptional performance is required.

Taken together, due to the mountaineering business's global orientation, the randomly assigned teams as well as the high-pressure environment, the "Himalayan Business" offers a particularly appropriate field for investigating the effects of teams' cultural compositions on various performance outcomes. Controlling for a large number of individual-, expedition-, and peak-level characteristics, we find the probability of team success to be positively influenced by the cultural heterogeneity of its members. Individual-level analyses further reveal that the beneficial effects, however, are not evoked by an increase in variety, but rather by an increase in the team members' risk-taking behavior: The greater a team member's cultural distance from the rest of the group, the higher the probability of individual success, but also the probability of experiencing injury or death.

CULTURAL DIVERSITY AND PERFORMANCE OUTCOMES: THEORETICAL FOUNDATIONS AND REVIEW OF PREVIOUS RESEARCH

In his seminal paper on the "theory of global firms", Lazear (1999) argues that skill heterogeneity will generate performance benefits in multicultural teams, if three conditions are met: i) team members' skills, abilities or information sets need to be *complementary*, ii) these complementarities must be *relevant* for the performing tasks, and iii) they need to be *communicated* in order to foster knowledge transfer. According to the first two requirements, people from diverse cultures contribute a variety of task-relevant and complementary skills or information and might, thus, increase the teams' productivity and performance outcomes. In our context, individuals differ, for example, with respect to their values, attitudes or behavioral patterns but might also differ in their culture-specific experiences and climbing styles. These differences in the human capital endowments of heterogeneous team members may promote task-related debates, which impede myopic team decisions and yield more sophisticated solutions. Innovative ideas are particularly crucial in critical situations and may help teams to overcome times of crisis and uncertainties more efficiently (O'Reilly, Williams, & Barsade, 1997; Williams & O'Reilly, 1998). With regard to Lazear's (1999) third requirement, the diverse perspectives, abilities or experiences that culturally diverse team members bring with them can only lead to enhanced decision-making quality through information sharing (Horwitz & Horwitz, 2007; Kochan et al., 2003; Lazear, 1999; Van Knippenberg, de Dreu, & Homan, 2004). Nevertheless, the knowledge transfer between team members could be inhibited due to intra-group biases. First, biases can be evoked by transaction costs, which rise as the number of different cultures and languages increases. The coordination of team members becomes more difficult and the exchange of information is likely to suffer. Second – and maybe more important – biases can be activated by social-categorization processes: According to the Similarity Attraction Paradigm (Byrne, 1971), individuals prefer to cooperate with socially similar people in order to maintain their self-image. An individual's social identity is primarily defined by readily observable attributes, such as ethnicity (Tajfel & Turner, 1986). A separation between in-group and out-group members on the basis of social categories, such as culture and the corresponding markers, were found to lead to strong in-group favoritism (Efferson, Lalive, & Fehr, 2008). As soon as intra-group biases between opposing sub-groups emerge (such as favoritism or stereotyping), disagreement is more likely to occur and to evoke time- and energy-consuming debates. Hence, since empathy among homogeneous team members is larger than among heterogeneous individuals, cooperation will be more pronounced in homogeneous groups (Kandel & Lazear, 1992). As a consequence, effective interaction and knowledge sharing is inhibited in multicultural teams (Tajfel & Turner, 1979).

So far, empirical studies using field data have found mainly detrimental effects of racial or ethnic diversity on team-level outcomes, while laboratory studies have mainly found beneficial diversity effects (Richard, Barnett, Dwyer, & Chadwick, 2004). Due to the generally low level of racial diversity within organizations, however, field studies are relatively sparse (Kochan et al., 2003; Williams & O'Reilly, 1998). In the remainder, we will focus on the literature in competitive settings, in which – similar to our context – team members have to perform extraordinarily challenging tasks, requiring a high level of intra-group interaction and cooperation (Timmerman, 2000). As an example, research from the educational context provides evidence that culturally more heterogeneous student teams produce worse group outcomes (Lau & Murnighan, 2005; Umans, Collin, & Tagesson, 2008). Similarly, Pferdmenges, Pull, and Backes-Gellner (2015) show that a high level of cultural team diversity negatively impacts the completion rate in Ph.D. research teams financed by a competitive research foundation. A further appropriate field to study team diversity effects is league sports. Haas and Nüesch (2012) use data from the German Bundesliga (1999 until 2006) and find evidence that multinational teams perform worse in terms of game-level outcomes than teams with less national diversity. Also using data from German soccer (seasons 2001 until 2006), Brandes, Franck, and Theiler (2009) fail to find a statistically significant effect of the number of nationalities on team performance using season-level outcomes. They do, however, show that diversity effects depend on the specific tasks to be performed within the team: For example, the number of nationalities among defensive players has a negative effect on team outcomes. Presumably, communication among members in this sub-group is more important and more nationalities hinder effective interaction. The impact of task structure and type has also been found to be an influential moderator in other studies (Nouri, Erez, Rockstuhl, Ang, Leshem-Calif, & Rafaeli, 2013; Stahl, Maznevski, Voigt, & Jonsen, 2010). Ben-Ner, Licht, and Park (2014) use team-level data from the German Bundesliga between 2000 and 2010 to study the effects of various diversity measures on teams' points at the end of the season. Instead of using players' national backgrounds only, they also use players' ethnicities, native languages, and geographical origins. In line with Brandes et al. (2009), the overall diversity effects on annual team productions are insignificant. Using game-level performance as a further outcome variable to account for the fact that the diversity in the team's roster varies from match to match, they find that diversity among defenders has a positive effect, whereas a heterogeneous composition among forwards has rather negative consequences for the teams' game-level performance. Kahane, Longley, and Simmons (2013) investigate the effects of national heterogeneity in NHL teams in the 2001 through 2008 season. The authors find that U.S. hockey teams will perform better, if the non-North American players (Czech, Swedish, Finnish, and Russian players) come from the same European country. Hence, within the group of foreign players, diversity seems to produce costs of integration and communication, which outweigh the benefits of diversity.

Summarizing the available empirical findings from competitive team settings suggests that ethnic/cultural diversity negatively impacts team-level outcomes. According to the results presented so far, communication costs seem to be the source of these negative effects, hindering effective cooperation among group members in critical situations. Hitherto, however, the literature did not focus on the actual deep-level attributes that are associated with culture. Instead, the rather surface-level characteristics race or nationality were typically utilized as proxies to measure cultural differences between team members (Richard et al., 2004). The direct visibility of both features, however, can more easily evoke stereotyping and trigger social-categorization processes than underlying characteristics (Bell, Villado, Lukasik, Belau, & Briggs, 2011; Mannix & Neale, 2005; Milliken & Martins, 1996). Hence, the measure of deep-level cultural traits can be expected to lead to fewer process losses that might occur due to integration problems and task conflicts (Stahl et al., 2010). Apart from the diversity level, the organizational-level aspects, such as the organizational strategy or culture, were found to have a moderating impact. In more detail, an organization's general emphasis on cultural values or the organization's cultural composition determine how individuals react to cultural diversity per se (Kochan et al., 2003). In our context, we expect that climbers are well aware of the multiculturalism in the Himalayas and that they are open-minded with respect to different cultures. Hence, in contrast to the rather pessimistic empirical findings on racial and ethnic diversity presented above, we conjecture that the diversity in the teams' deep-level cultural attributes will lead to better team outcomes:

Hypothesis 1: The marginal benefits of cultural diversity will outweigh the marginal costs. The relationship between cultural diversity and team performance will be positive.

The positive effects notwithstanding, we do not want to entirely rule out possible dysfunctional effects of cultural diversity on team performance. In line with Lazear (1999), we assume the existence of an optimal degree of diversity: First, beyond a certain point an additional increase in cultural diversity may be associated with decreasing marginal benefits, since the arrival of new members bringing with them complementary and relevant information does not contribute to the team's problem-solving capacity. Moreover, as team members are confronted with high levels of cultural diversity, it is no longer possible to appreciate each member's contribution. Second, the marginal costs from an additional unit of cultural diversity increase, as separation effects and communication failures are more likely to occur (Pferdmenges et al., 2015). Hence, cultural diversity may only contribute positive effects up to a certain diversity level. As demanded by Horwitz and Horwitz (2007) and Van Knippenberg et al. (2004), we, thus, propose a curvilinear diversity effect:

Hypothesis 2: The marginal costs of cultural diversity will outweigh the marginal benefits after an optimal degree has been reached. The relationship between cultural diversity and team performance will be inversely u-shaped.

Apart from group-level outcomes, the consideration of each team member's individual response to cultural diversity is crucial in order to better understand intra-group processes and, thus, the forces driving team performance outcomes. In other words, the influence of a team member's relational demography, i.e., an individual's (dis)similarity to the rest of the group, on his or her individual behavior and performance needs to be considered (Van Knippenberg & Schippers, 2007; Williams & O'Reilly, 1998). So far, the empirical literature on comparative demographics has focused on superior-subordinate dyads with regard to, for example, performance evaluations. The available findings suggest a "same-race bias", i.e., worse outcomes for ratees who are socially dissimilar from the rater (Dee, 2005; Giuliano, Levine, & Leonard, 2011; Greenhouse, Parasuraman, & Wormley, 1990; Wesolowski & Mossholder, 1997). There is, however, a lack of field evidence on the effects of an individual's cultural distance to the remaining team members on individual-level outcomes. In a laboratory experiment, Espinoza and Garza (1985) find that cooperation will be most pronounced, if one's own culture is in the majority. Belonging to the majority also means to be more similar to the rest of the group than those who belong to the minority. One might assume that social-categorization processes are more likely to be activated as soon as one group becomes dominant. As a consequence, socially dissimilar individuals will be excluded and the information transfer will be inhibited. Moreover, the authors also find that the individuals who are different from the majority are more likely to be competitive (Espinoza & Garza, 1985). Inter-individual competition or rivalry can have positive effects on team members' motivation to succeed in effort-based tasks (Kilduff, Elfenbein, & Staw, 2010). Similarly, competition might trigger learning and lead to a lower performance avoidance orientation, which was found to positively moderate the diversity-performance link (Pieterse et al., 2013). Socially dissimilar group members in particular activate such an increase in motivation (Lount & Phillips, 2007). In our specific context, a higher motivation due to team heterogeneity can lead to an increase in risk-taking. Sherman and Chatman (2013), who analyze non-commercial expedition teams, find that national heterogeneity increases the share of summited team members, but also the accident probability. Accordingly, we predict that cultural distance intensifies the individuals' risk-taking behavior, which may be constructive with regard to an individual's success ratio but which may also be destructive as the likelihood of an accident increases.

Hypothesis 3a: The relationship between cultural distance and individual performance will be positive.

Hypothesis 3b: The relationship between cultural distance and individual risk-taking will be positive.

Previous research on the diversity-performance link shows that generalizations must take into account the studies' methodological conceptualizations (Alesina & La Ferrara, 2005) as well as their contextual moderators and mediators (Joshi & Roh, 2009; Kochan et al., 2003). Obviously, prior empirical studies differ considerably in their understanding of "culture" and "cultural diversity". First, while the majority of these studies equate the overt demographic characteristics race, ethnicity or nationality with culture, they fail to recognize that culture is below the level of consciousness and, therefore, less distinctive. In the remainder, we add to this literature by using the term "culture" as a deep-level framework that does not only embody a person's national, linguistic, ethnic, religious, or political backgrounds, but also the associated underlying skills and attitudes. Second, the literature so far does not fully account for the teams' diversity, i.e., team members are often categorized as either "domestic" or "non-domestic" (Kahane et al., 2013; Umans et al., 2008). Moreover, field as well as laboratory experiments often suffer from a small number of observations and, thus, from a small variation in the diversity variables employed. Very often neither completely homogeneous nor completely heterogeneous teams can be observed (Hoogendoorn & Van Praag, 2012; Richard et al., 2004). We encounter this drawback by analyzing data on more than 1,000 teams, which are composed of individuals from more than 100 different nations providing us with a large range of heterogeneity. Our third contribution is that we use data on teams where self-selection can be neglected. Previous field studies suffer from the fact that very often team members selfselected into teams on the basis of either social ties or prior joint experience (Sherman & Chatman, 2013; Umans et al., 2008), or with the intention to improve the teams' performance (Kahane et al., 2013). Due to the expedition teams' random assignment, we are able to rule out possible confounding biases stemming from issues of endogeneity.

THE HIMALAYAN DATABASE

The data used in this paper is drawn from an almost complete census of all expeditions to the Himalayas (Salisbury & Hawley, 2011). In total, the database covers a time span of 109 years (1905-2014) and comprises 62,458 climber-expedition observations from 8,596 expeditions to 320 Himalayan peaks in the Nepalese Himalayan region for 32,163 unique climbers (which includes paying tourists, leaders, organizers, Sherpas, and high-altitude porters).

In our analyses, we use data from the "commercial mountaineering phase" that started in 1990 when the elite climber Rob Hall first arranged organized expeditions for Alpine tourists. His aim was to give even amateur climbers and adventurers the chance to summit the world's highest peaks guided by a professional leader and lots of Sherpas. Mountaineering has become an increasingly popular activity since then. Since other experienced mountaineers followed to make the Himalaya accessible for everyone, competition among organizers increased. As an example, in 2013 there were 19 different operators guiding tourists to Mount Everest in a period of just three months. The commercialization of the Himalaya has been criticized due to the large number of tourists causing congestion and, thus, increasing fatality risks, which are already extraordinarily high per se.

The main advantage of our focus on the composition of commercial expeditions is that team members do not self-arrange into commercial expedition teams. They rather choose the organization based on reputation or price but obviously independent of the other team members. Hence, by looking at commercial teams we can better handle issues of self-selection and other confounding effects caused by endogeneity. In the remainder, we use the term "team" to refer to groups of at least three people (see Harrison & Klein, 2007). Moreover, we will treat each individual member – be it a tourist, leader or Sherpa – as an equal part of the team. The rationale behind this is that they all have specific human capital, which contributes to the overall success of the team to a certain extent. Furthermore, we will not include those expeditions, which are officially coded as "commercial" but in which there is neither a leader nor a support member. The reduced final dataset still comprises 1,168 team- and 8,804 climber-expedition observations.

Conceptualization of Expedition Success

In order to examine the relationship between team diversity and team performance, we use different definitions for the teams' collective as well as the climbers' individual expedition success (see Table 1 for summary statistics). We assume that all team members are highly incentivized to perform as best as possible. Comparable to other profit-oriented businesses, commercial mountaineering organizations strive to maximize revenues. Since above-average success records help attracting clients, organizers and leaders are motivated to increase the ratio of summited customers. In order to reach this goal they usually have a tight schedule of only three months (which is one expedition per year). Thus, competition among organizations to attract customers, who have to pay 30,000 to 100,000 USD, is fierce. In exchange, clients expect a well-organized tour, which guarantees to reach the expedition's highest point. This ambition, however, often conflicts with a leader's duty of taking care of his clients. In order to guarantee as much safety as possible, commercial expeditions employ a large number of Sherpas and high-altitude porters who are used to the thin air and are, thus, indispensable for preparing the routes and carrying the equipment. Due to an increasing number of tourists, many Sherpas can nowadays earn their living: While the average income of a Nepali is about 700 USD, Sherpas can earn around 4,000 USD per season (Economist, 2015). In order to secure this source of revenue, we assume that they also have a strong interest in the success and health of the customers.

According to Karpoff (2001), a participant's death is an indicator for a failed expedition. On average, 0.7 percent of the teams' paying members died during an expedition. Most climbers either die above 8,000 meters (death zone) or when descending (Firth et al., 2008). Hence, a high share of summited team members does not necessarily imply team success. Success rather has to be defined by taking safety into account. In line with these arguments, the share of team members who summited (i.e., reached the expedition's highest point) and survived is used as our first measure of a team's collective expedition success (*S_SUCCESS*). This definition excludes the summiting success of the leading and support members, since their primary aim is not to reach the summit personally but, as described above, to help the customers to succeed. On average, 41.68 percent of the customers were successful according to this first definition. As an alternative measure of team success, we use a binary variable, which takes the value of 1, if at least one of the paying team members was successful (i.e., summited) and none of them died during the expedition (*TEAMSUCCESS*). Herewith, we take into account that not all paying team members may have the intention to reach the peak. In our sample, 67.81 percent of the commercial teams were successful according to our second definition of team success.

Apart from these team-level outcomes, we are able to examine each client's success probability. In line with the previous definitions, we use the probability of summiting and surviving the expedition as our first measure of individual performance (*SUCCESS*). On average, 51.11 percent of all customers in our dataset reached the highest point of the expedition and survived. In order to better understand team dynamics and the individuals' behavior, we use a climber's probability of being injured or dying as our second individual-level expedition outcome (*DEATHINJURY*). In only 2 percent of our observations clients experienced death or an injury – indicating that an accident is a relatively unlikely event in commercial expeditions.

[Insert Table 1 about here]

As described above, a leader's or support member's personal aim is not necessarily to reach the summit, but to help customers being successful. As a consequence, we refrain from conducting separate analyses for a leader's and support member's individual climbing success. Even though one might use the probability of surviving the expedition without any injuries as a leader's and support member's personal success variable, descriptive statistics show that an injury or death is a particularly unlikely event for these types of group members. Since there is almost no variance in these outcome variables, estimations do not yield any interpretable results.

Cultural Diversity

Our main explanatory variable of interest is the cultural composition of an expedition team. We include in the calculation of our diversity measure all team members, i.e., not only paying "tourists", but also leaders and support members due to their specific human capital endowments, their indispensable function within the team, and the high level of required cooperation between paying and organizing members.

The main drawbacks, which impede a comparison between the results presented in previous studies and ours are i) the way culture is defined, and ii) how diversity is operationalized. So far, the team members' nationalities were typically used as a measure of cultural differences. In contrast to previous studies (for example Sherman & Chatman, 2013), however, we refrain from using the surface-level attribute "nationality" as a feature distinguishing between individuals. We rather want to account for the fact that some nations are culturally closer to each other than others. As an example, U.S. citizens and Canadians should not be treated as being as different as U.S. citizens and Nepali. Instead, we prefer a framework that clusters nationalities according to their similarities in beliefs, preferences, or expectations. Such behavioral traits are not directly observable, but are distinctive ethnic markers of the deep-level attribute "culture" (Efferson et al., 2008). Therefore, we draw on the Global Leadership and Organizational Behavior Effectiveness (GLOBE) study, which is commonly used by organizational and management scientists to conceptualize cultural differences between nationalities (House, Hanges, Javidan, Dorfman, & Gupta, 2004; Mensah & Chen, 2013). The GLOBE framework suggests nine dimensions, on which countries are rated: Assertiveness, uncertainty avoidance, power distance, institutional collectivism, in-group collectivism, gender egalitarianism, future orientation, performance orientation, and human orientation. According to the countries' scores for each of these nine dimensions, they are grouped to ten cultural clusters: African, Anglo, Confucian, Eastern European, Germanic, Latin American, Latin European, Middle Eastern, Nordic and Southeast Asian. Due to globalization and the commercialization of the Himalayan, the individuals in our dataset are exceptionally diverse as they come from 104 different countries. While the majority stem from Nepal (which is clearly driven by the high-altitude porters), there is also a large percentage of climbers from the U.S., the U.K., and Germany. The majority of the team members come from the Anglo culture followed by Southeast Asian and Germanic, while Middle Eastern and African are the least represented cultures.

As mentioned above, prior research used different conceptualizations to measure the heterogeneity within a group. While many authors distinguished between two groups only (such as Whites and non-Whites) and used a simple majority-minority approach, others relied on more detailed diversity indices that do not only take into account the team members' different cultural backgrounds, but also the distribution of the team members across these categories (Williams & O'Reilly, 1998). In line with the latter, we operationalize cultural diversity using the Blau index (1977), which denotes the probability that two randomly selected individuals belong to different categories. It is defined as $BLAU = 1 - \sum_{i=1}^{K} p_k^{\,2}$, where p_k is the share of team members p in a certain category k. As the dataset includes ten different cultures ($k_{\max}$ = 10), while team size N varies from three to 65, the Blau index will be standardized by the division through their theoretical maximum values (Biemann & Kearney, 2010). Hence, we use the following formula to compute each team's cultural diversity:

$$CULTDIV = 1 - \sum_{i=1}^{K} \frac{N_i(N_i - 1)}{N(N - 1)}.$$

Here, N_i denotes the absolute frequency of team members in the i^{th} category k and N is the total number of team members. This normalized index ranges from 0 (minimum diversity) to 1 (maximum diversity), indicating that when all members have the same cultural background (i.e., the team is totally homogeneous) $CULTDIV$ = 0, and when all members come from a different culture (i.e., the team is completely heterogeneous) $CULTDIV$ = 1. In our dataset we observe teams with more than ten members (i.e., with more members than categories) in 52 percent of the observations. In such instances, the maximum of the diversity index will be reached, if all ten categories are equally represented. In general, a higher value reflects a higher degree of cultural diversity.

On average, there are 2.6 different cultures in a commercial expedition team, which means that, on average, 25.25 percent of the team members come from a different cultural background. The teams' average cultural diversity equals 0.47 (sd = 0.24). We observe 141 completely homogeneous expeditions and 6 teams in which all team members belong to a different culture. While 239 expeditions are rather homogeneous ($CULTDIV$ ranges between 0 and 0.4), 383 are rather heterogeneous ($CULTDIV$ ranges between 0.6 and 1). 399 teams are culturally balanced ($CULTDIV$ ranges between 0.41 and 0.59). The majority of our observations belong to the latter group. Mean comparison tests show that the 141 totally homogeneous teams have a lower average share of successful and alive team members (mean

= 0.25) than the remaining 1,027 teams that are culturally diverse (mean = 0.44). This difference is statistically highly significant (t = 6.217).

Control Variables

In addition to the teams' cultural compositions, we control for further possible effects stemming from the teams' demographic structure and composition (for example gender, age, and experience). Table 2 presents the summary statistics of these independent variables, which will be further explained in the following sub-section.

While the percentage of women on the Himalayan peaks has been increasing, the expeditions are still male-dominated. On average, only 10 percent of the observed climbers are female (*S_FEMALE*). Furthermore, we do not observe in our data a single commercial expedition that is composed of female climbers only. Boyce and Bischak (2010) find that female team members increase the teams' success probabilities. They use, however, data from 14 expeditions to peaks above 8,000 meters only, which limits the generalizability of their finding. Hence, in the following, we assume that those few women self-selecting into this rather dangerous environment are likely to be as qualified and as risk-loving as their male counterparts (Huey, Salisbury, Wang, & Mao, 2007). The teams' success probabilities should, therefore, not be affected by the percentage of female members. Apart from gender, Huey et al. (2007) find that climbers above the age of 40 have reduced odds of summiting and that those older than 60 years even have increased odds of dying. Commercial team members in our dataset are on average 39 years old (*AGE_MEAN*). Unfortunately, however, we do not know the individual climbers' age in a considerable number of cases which, in turn, might lead to biases in the estimation results. We will, therefore, display the results of analyses using the teams' age composition as an additional control variable only as a robustness check. Moreover, since a Himalayan expedition is an extraordinary complex venture, the level of prior experience within a team can be expected to be a crucial influential factor. Huey et al. (2007)

find that mountaineers with prior experience on a Nepalese peak have increased odds of summiting the Mount Everest, whereas Westhoff, Koepsell, and Littell (2012) fail to find any significant influence of expedition experience on the odds of death. Our dataset covers the Nepalese Himalayan region only, i.e., it does not include any other peak in the world outside this region, excluding six of the 14 eight-thousanders. Hence, we do not possess exact information on the prior climbing experiences of mountaineers. Nevertheless, we are able to proxy the individual climbers' prior experience by the number of times they appeared in the dataset before. In the data we use to estimate our regression models, the teams' average mean experience equals 4.83 (*EXPER_MEAN*), which is clearly driven by reappearing support members and leaders.

Apart from the team members' demographic characteristics, we control for the personnel as well as technological resources used during an expedition. With regard to personnel, it can be expected that a higher support ratio is positively related to team success. This includes (deputy) leaders as well as Sherpas or other high-altitude workers who are used to the altitude and are familiar with the routes. On average, 23 percent of the team members are non-paying members (*S_SUPPORT*). In addition to that, 29 percent of the team members in our dataset use bottled oxygen for ascending, descending or while sleeping (*S_O2*). The direction of the effect of the use of oxygen is not clear yet. On the one hand, oxygen is intended to have beneficial health effects: When using bottled oxygen climbers reduce the level of difficulty of an eight-thousander to the difficulty level of a peak with 6,000 meters. Using data from the world's highest peaks (Mount Everest and K2), Eguskitza and Huey (2000) find that the waiving of oxygen leads to more deaths during descent. On the other hand, carrying the heavy oxygen bottles can cause early exhaustion. Moreover, with reference to the Peltzman effect (Peltzman, 1975), relying on oxygen can make climbers feel invincible and, thus, lead to a more risky behavior, which increases the probability of accidents.

In addition to the demographic characteristics of the teams as well as the resources available to them, we control for the number of team members (*TEAMSIZE*). There are on average 12.53 members in a commercial expedition. On the one hand, we assume that an increase in team members increases the need for supervision and coordination. Moreover, conflicts become more likely. On the other hand, know-how increases. Due to these potential negative as well as positive effects, we control for non-linear relationships and include the squared term of *TEAMSIZE*, too. Furthermore, we will consider peak-specific attributes. We include the number of prior expeditions to a particular peak (*EXPER_PEAK*), for example to control for knowledge spillover effects. This indicator proxies the number of publications about prior expeditions to that peak, which are considered indispensable for mountaineers to prepare for an expedition (Boyce & Bischak, 2010). The average peak in our dataset was climbed more than 600 times. This large number is particularly driven by the most prominent summits: Mount Everest, Cho Oyu, and Ama Dablam. However, since the government of Nepal regularly announces the opening of new routes and peaks, four observations in our sample represent expeditions to previously unexplored peaks. Along with that, we include information on the height of the peak (*HEIGHT*). On average, the mountaineers in our dataset climb peaks of almost 8,000 meters.

The year of the expedition (*YEAR*) is introduced as a trend variable to proxy gradual technological shifts, such as the weight reductions of oxygen bottles as well as increasing quality of equipment (Boyce & Bischak, 2010). Finally, we control for weather conditions by including the season of the expedition. Since summer and winter are known for their particularly harsh conditions, spring and fall are the preferred climbing season nowadays – even though unpredictable weather changes cannot be ruled out entirely (Boyce & Bischak, 2010; Huey & Salisbury, 2003).

[Insert Table 2 about here]

Econometric Approach

In order to empirically analyze the impact of cultural diversity in high-stakes settings, we introduced different outcome variables to describe team performance. We first estimate a set of generalized linear models (GLM) using the outcome variable *S_SUCCESS*, which is a proportion and, thus, restricted to vary between 0 and 1. Second, we estimate a set of probit regressions using the binary outcome variable *TEAMSUCCESS*. Since the error terms across peaks are likely to be correlated, we cluster standard errors in all our regressions at the observed 51 peaks.

In the individual-level analyses we use conditional fixed-effects logistic regressions, which account for the panel structure of the dataset as some individuals took part in more than one expedition (N = 6,580). Fixed-effects models consider the relationship between the predictor and the outcome variables within each individual entity. It is assumed that there are time-invariant but unobserved characteristics, which are unique to the individual and, thus, likely to bias the success rates (i.e., we assume a correlation between the individual's error term and the predictor variables). A fixed-effects model removes these biases, which are caused by omitted time-invariant characteristics, and provides the net effect of the predictor variables on the outcome variable.

EMPIRICAL ANALYSES

The Influence of Cultural Diversity on Expedition Teams

Table 3 reports the team-level results regarding the effects of cultural diversity on both of the alternative dependent variables measuring expedition success. The coefficients indicate that cultural diversity within a team has a positive effect on the share of summited and alive team members (column 1). This positive effect is also apparent when the teams' overall success probability is considered (column 3): The probability that at least one of the paying team members reaches the top of the mountain and that all paying members survive, increases with growing cultural diversity. Marginal effects after probit regressions reveal that the predicted likelihood of expedition success (*TEAMSUCCESS*) is 72.86 percent, given that all independent variables are at their mean value (see Table 2). An increase in a team's cultural diversity index by 0.1-unit, increases this average success probability by 1.6 percentage points. While a culturally completely homogeneous team's probability of being successful is 65 percent, a culturally completely heterogeneous team has an 81 percent success probability. According to these baseline findings, we can confirm hypothesis 1.

As postulated in hypothesis 2, the beneficial effects of cultural diversity might only appear until a specific level of team heterogeneity has been reached. Therefore, columns 2 and 4 in Table 3 account for possible curvilinear effects of cultural diversity on team outcomes. The insignificant coefficients, however, lead us to reject hypothesis 2.

[Insert Table 3 about here]

So far, the effect of cultural heterogeneity has been identified with all other covariates at their respective mean values. Due to interaction effects, however, the impact of *CULTDIV* is likely to differ at other values of the remaining explanatory variables. Hence, as requested in previous works, faultlines may help to produce more complex and informative conclusions about the impact of cultural diversity on team performance (Lau & Murnighan, 2005; Van Knippenberg & Schippers, 2007; Williams & O'Reilly, 1998). As presented in Table 3, an increase in the share of team members using bottled oxygen (*S_O2*) positively affects the teams' success rates. This effect is the by far largest throughout all model specifications. The calculation of marginal effects reveals that a 10 percent increase in the share of members with supplementary oxygen, increases a team's success probability by 6.9 percentage points. However, as argued above, availability of bottled oxygen can indeed lower effort levels. The interaction between *CULTDIV* and *S_O2* further supports the strong effect of supplementary oxygen. The effect of *CULTDIV* is still positive and statistically significant in teams, in which all members use oxygen bottles but is less pronounced than in teams with no or only a small share of members using oxygen.

Moreover, team size has an inversely u-shaped effect, i.e., an additional team member increases a team's success probability only until an optimal number of members (here: 24) has been reached. This effect, however, is not economically relevant, since only few expeditions in our sample are larger. Similarly, the prior number of expeditions to the current peak has a statistically highly significant effect but is irrelevant from an economic perspective. Additionally, although each 100 meters in height decrease the success probabilities of expedition teams, this effect is not relevant either. Finally, a one-unit increase in the linear time trend has a statistically significant and negative effect on the teams' success probabilities, i.e., each year the success ratio decreases by 1.4 percentage points. This effect might simply be driven by the increase in expeditions per year leading to two different, yet closely related developments that need to be considered here: First, the "hype" may have attracted more and more people who lack the physical and mental fitness to climb some of the highest mountains in the world and, second, it may have changed climbers' risk perceptions in the presence of experienced high-altitude porters and/or the availability of bottled oxygen. Although, the favorable diversity effect has been steadily increasing over the past decades, this trend might simply be explained by the fact that the average cultural diversity in teams has increased from 0.2 in 1990 to more than 0.5 in 2014 due to the commercialization of the Himalaya.

Robustness Checks

So far, we have used the GLOBE framework for the conceptualization of cultural diversity. Alternatively, we also want to account for possible language barriers, since anecdotal evidence suggests that communication between climbers is indispensable: "Last year, (…) was the language barrier a source of personal frustration" (Boukreev & DeWalt, 1997: 233). Therefore, we introduce the teams' linguistic diversity (*LINGDIV*) as an alternative explanatory variable.

As we do not have information on the different language skills of each climber, we use the major official language spoken in each climber's home country (CIA, 2016). Descriptive results show that the cultural and linguistic diversity measures are highly correlated (r = 0.978), which is due to the fact that the GLOBE dimensions are partly influenced by the national languages. As a consequence, the use of linguistic diversity does not change our baseline findings.

Apart from that, we account for the fact that success probabilities are significantly higher on famous peaks, such as the Mount Everest. Since the majority of all tourists wish to climb the world's highest mountain, it has well-prepared and standardized routes. Hence, we restrict our sample and exclude expeditions to the Mount Everest. Even though the number of our team-level observations is now reduced to 841, the positive effect of cultural diversity is even larger than before (see column 1 in Table A1 in Appendix A).

Moreover, we split our sample into expeditions with non-experienced and experienced leaders, since we expect that team composition might have a lower impact on performance, if leaders are already experienced in guiding a group. Therefore, we distinguish between the 627 expeditions in which the leader has guided a maximum of two prior expeditions and the 3,535 expeditions with the leaders having guided three or more expeditions before. Our results show that the baseline findings are only robust when looking at less experienced leaders. Although the coefficient of our measure of cultural diversity is still positive, it loses its statistical significance when restricting the dataset to experienced leaders only (see columns 2 and 3 in Table A1 in Appendix A).

Why Do Teams Benefit from Cultural Diversity?

The empirical results presented so far indicate beneficial effects of cultural diversity on team outcomes. According to our theoretical assumptions, these benefits are driven by cultural variety. In the following, additional individual-level analyses will be performed to better understand the underlying intra-group processes as cultural team diversity affects the individual members' level of (dis)similarity to the rest of the group. Given our theoretical considerations, we assume that cultural distance may positively affect individuals' risk-taking behavior leading to higher success, but also to higher injury probabilities (see hypotheses 3a and 3b). In order to conceptualize a climber's relative difference from the other members in the group, we calculate each individual's average Euclidean distance (see Tsui & O'Reilly, 1989). Therefore, we take the square root of the mean squared distance between individual *i* and all the other team members *j*. In order to compare the Euclidean distance across teams that differ in size, we divide the original formula by each group's maximum. Hence, we have

$$DISTANCE = \sqrt{\frac{\Sigma(X_i - X_j)^2}{N}} \Big/ \sqrt{\frac{(N-1)}{N}},$$

where X_i is the value of interest for a particular individual and X_j is the value for the other team member. The pairwise distances X_i-X_j can only take the values of either 0 (i.e., same culture) or 1 (i.e., different culture) for categorical variables (Konrad et al., 2006). The score ranges from 0 to 1 and increases with rising distance. Hence, the minimum value *DISTANCE* = 0 is reached when an individual team member is identical to everyone else in the group, whereas *DISTANCE* = 1 means that this individual is different from everyone else. The average value of *DISTANCE* for the 8,804 individual climbers in our dataset is 0.58 (*sd* = 0.29) and is highly correlated with *CULTDIV* (*r* = 0.919). As a matter of fact, as soon as there will be no cultural diversity in a team, a member's value for *DISTANCE* = 0. Worth reminding, although a member can be different from the remaining team members (i.e., *DISTANCE* = 1), the cultural diversity in the team will nevertheless be low, if the remaining team members have the same culture.

As described above, we use two different binary outcome variables as proxies for a climber's primary interest: First, the individual's probability of summiting and surviving the expedition (*SUCCESS*), and second, the person's probability of dying or being injured (*DEATHINJURY*).

Table 4 displays the results of the conditional fixed-effects logistic regressions. Since the majority of the individuals in our data were either always or never successful at various points in time, these observations do not offer any variation in performance and are, therefore, eliminated from the dataset leaving us with 717 observations for individuals who have been successful as well as unsuccessful on different occasions. The odds ratios in column 1 first of all indicate a positive effect of one's cultural distance on the success probability. The odds of success are, ceteris paribus, 0.186 times greater for each 0.1-unit increase in the *DISTANCE* score. In other words, the odds of success are increased by 8.62 percent for a 0.1-unit change. Moreover, a one-unit increase in individual experience increases that particular person's success probability by 9.6 percent. Similar to the team-level analyses, using bottled oxygen has the strongest impact on a climber's success probability: If a climber moves from not using oxygen to using oxygen, the odds of success increase by 13.71. With regard to these results, hypothesis 3a, which postulates that the cultural distance is positively related to the group members' individual success, can be considered as confirmed.

The second column in Table 4 indicates that while the effect of *DISTANCE* on a climber's death or injury probability is positive, it is not statistically significant. This, however, might be driven by the low variation in the dependent variable (only 2 percent of our observations suffer from death or injury) as well as the small number of observations, which is caused by the fixed-effects model. As a consequence, the model fails to reach statistical significance. Additional random-effects models (see columns 1 and 2 in Table B1 in Appendix B), however, reveal that an increase in an individual's *DISTANCE* score indeed has a positive and significant effect on the accident probability. Hence, we support hypothesis 3b and conclude that an increase in the cultural distance triggers intra-group competition and, thus, risk-taking behavior.

[Insert Table 4 about here]

Interestingly, the differentiation between climbers who are part of an expedition that is led by an inexperienced versus experienced leader reveals a similar pattern as found for the team-level outcomes. While the beneficial effects of *DISTANCE* on a climber's success probability remain robust, the positive impact of *DISTANCE* on a climber's accident probability is significant only when an expedition is guided by a rather inexperienced leader (see columns 3-6 in Table B1 in Appendix B). This finding again emphasizes the particular role of a team's leader.

DISCUSSION AND CONCLUSION

Cultural diversity is a ubiquitous feature of societies and organizations worldwide. Every individual carries the cultural values of his or her home country and, thus, shows specific attitudes and behaviors. Individuals' cultural values are more likely to be important in situations requiring extraordinary team processes to deliver optimal performance. This, in turn, requires a high level of member interaction, cooperation, communication and adherence to joint agreements (Timmerman, 2000). In this paper, we examine the link between cultural diversity and performance outcomes in high-pressure teams using data from commercial mountaineering expeditions in the Nepalese Himalayan region. The "Himalayan Business" is a business that matters, as it generates tens of thousands of dollars from each Alpine tourist. Not only do the expedition organizers benefit from the increasing interest, but also governments issuing climbing permissions and local Sherpas or other high-altitude porters offering their services. With a particular focus on this specific setting, we contribute robust empirical evidence to the literature that is already extensive but still suffers from a lack of convincing empirical findings (Horwitz & Horwitz, 2007; Milliken & Martins, 1996; O'Reilly et al., 1997). In a first step, we study the effects of a team's cultural composition on group outcomes, which are of particular importance for expedition leaders and organizers, since success leads to the (gradual) emergence of a solid reputation that, in turn, attracts additional customers. In a second step, we focus at individual climbers in the expedition teams and analyze the effect of one's cultural distance from the remaining group members on the individual's success probability. This twofold approach enables us to better understand the effects of cultural diversity not only on group outcomes, but also on internal group dynamics.

Our research offers convincing support for the argument that cultural diversity positively influences collective as well as individual outcomes. However, contrary to our theoretical assumptions we do not find the beneficial group outcomes to be a function of increasing intra-group variety. In fact, our findings indicate that cultural diversity is likely to evoke categorization processes between people coming from different cultures. Our individual-level analyses reveal that the separation between culturally dissimilar team members increases intra-group competition, triggering the individuals' motivation to stand out and succeed. As a consequence, the probability of a team's and an individual climber's success increases. At the same time, however, the probability of experiencing an accident also increases as a team member's cultural distance from the rest of the group becomes larger. Competition, thus, can have both positive as well as negative consequences.

Summarizing, we conclude that diversity is a multi-level construct: Although it may adversely impact intra-group processes, leading to reduced intra-group cooperation and increased risk-taking behavior, the final outcome can be positive for the team (in particular for the organizers and leaders) as well as the individual climber. These findings are robust across different model specifications and alternative econometric approaches. The remaining challenge, however, is to attenuate the negative diversity effects on the climbers' accident probabilities so that the benefits can be fully exploited and transaction costs reduced. Here, sensitivity analyses reveal that the expedition leader plays a major role. The results suggest that cultural team diversity as well as individual cultural distance will no longer affect outcomes, if the leader has guided at least three prior expeditions. Hence, it seems that more experienced leaders are able to reduce excessive risk-taking behavior and, therefore, avoid negative health shocks to individual members – something that inexperienced climbers can obviously not do themselves. This skill, in turn, is particularly important to protect the reputation of an expedition organizer, whose financial performance is likely to suffer in case of injuries and fatalities. The skills leaders gain under such demanding circumstances can be transferred to other challenging business environments. As an illustration, the Wharton School organizes an annual two-week Executive MBA trek to Mount Everest to enhance (future) executives' "understanding of what true leadership is all about" (Useem, 2001: 51).

Mountaineering "is an activity that idealizes risk-taking" (Krakauer, 1997: 275). Hence, due to the extremely challenging environment, we have to deal with a very specific type of individuals who are more risk-seeking and adventurous than the average person. Nevertheless, the Himalayan Database offers a unique opportunity to study team diversity effects because, unlike in more "ordinary" situations, individuals are likely to reveal their preferences, since participating in an expedition is associated with considerable up-front costs.

Future empirical studies using this database should focus on the individual climbers' specific traits and prior experience, which might influence group processes as well as outcomes. As an example, Jakus and Shaw (1996) find that climbers' technical abilities influence their personal injury probability and, thus, their response to hazard warnings. Similarly, it would be interesting to include climbers' intentions for engaging in dangerous activities. As Loewenstein (1999) puts it, mountaineering cannot be described as a pleasurable consumption experience, but is rather driven by non-consumption motives, such as reputation, the need for goal completion, or reaching a mastery level. Identifying whether certain motives are specific for particular cultures could, thus, further strengthen the argumentation on why intra-group competition arises in diverse teams. This analysis would further benefit from more information on social ties among team members that are the result of prior joint experience (not necessarily restricted to Himalayan expeditions). So far, this relational information remains unobserved. Even though the specific characteristics of our research setting preclude generalization of the findings presented above, we expect comparable results for similar high-pressure contexts. Apart from that, our results have implications for the cultural composition of teams in an "everyday setting". Thus, we are confident to provide helpful insights for the efficient formation of teams and the education and training of team leaders in settings where they have to make important decisions within extremely short periods of time. Clearly, further research on diversity effects in similar settings is urgently required to allow broader generalizations.

TABLES & FIGURES

Table 1
Summary Statistics of the Alternative Dependent Variables

Variable	Definition	N	mean (sd)	min	max
TEAM SUCCESS					
S_SUCCESS	Share of summited and alive paying members	1,168	.42 (.35)	0	1
TEAMSUCCESS	1=At least one paying member summited and all alive, 0=Otherwise	1,168	.68	0	1
INDIVIDUAL SUCCESS					
SUCCESS	1=Summited and alive, 0=Otherwise	8,804	.51	0	1
DEATHINJURY	1=Dead or injured, 0=Otherwise	8,804	.02	0	1

Note: Summary statistics refer to commercial expeditions from 1990 to 2014 with more than two members.

Table 2
Summary Statistics of the Independent Variables

Variable	Definition	mean (sd)	min	max
TEAM DIVERSITY				
CULTDIV	Normalized BLAU index of cultural diversity	.47	0	1
		(.24)		
S_FEMALES	Share of female team members	.10	0	.67
		(.10)		
AGE_MEAN	Mean age of team	39.46	23.67	57.59
		(4.52)		
EXPER_MEAN	Mean experience of team	4.83	0	33.67
SUPPORT				
S_SUPPORT	Share of non-paying team members	.40	0.04	.94
		(.18)		
S_O2	Share of team members using bottled oxygen	.29	0	1
		(.38)		
CONTROLS				
TEAMSIZE	Number of team members	12.55	3	65
		(8.05)		
EXPER_PEAK	Number of prior expeditions to current peak	600.58	0	1,707
		(458.94)		
HEIGHT	Height of current peak in meters	7,919.57	5,890	8,850
		(823.53)		
YEAR	Year of expedition	2005	1990	2014
SPRING	1=Spring, 0=Otherwise	.46	0	1
SUMMER	1=Summer, 0=Otherwise	.01	0	1
FALL	1=Fall, 0=Otherwise	.53	0	1
WINTER	1=Winter, 0=Otherwise	.01	0	1

Note: Summary statistics refer to 1,168 team-level observations.

Table 3
Regression Estimates of Cultural Diversity on Team Performance

	S_SUCCESS		**TEAMSUCCESS**	
CULTDIV	**0.24***	0.42	**0.50****	1.37
	(0.14)	(0.77)	**(0.24)**	(0.93)
$CULTDIV^2$		-0.22		-1.09
		(0.82)		(1.03)
S_FEMALE	-0.15	-0.14	-0.06	-0.03
	(0.22)	(0.22)	(0.36)	(0.36)
EXPER_MEAN	0.01**	0.01**	0.00	0.00
	(0.01)	(0.01)	(0.01)	(0.01)
S_SUPPORT	0.39***	0.38***	-0.41	-0.44
	(0.11)	(0.11)	(0.31)	(0.28)
S_O2	1.70***	1.70***	2.08***	2.08***
	(0.27)	(0.27)	(0.28)	(0.28)
TEAMSIZE	0.02	0.01	0.05***	0.04***
	(0.01)	(0.01)	(0.02)	(0.01)
$TEAMSIZE^2$	-0.00	-0.00	-0.00***	-0.00***
	(0.00)	(0.00)	(0.00)	(0.00)
EXPER_PEAK	0.00**	0.00**	0.00**	0.00**
	(0.00)	(0.00)	(0.00)	(0.00)
HEIGHT	-0.00***	-0.00***	-0.00***	-0.00***
	(0.00)	(0.00)	(0.00)	(0.00)
YEAR	-0.03**	-0.03**	-0.04**	-0.04**
	(0.01)	(0.01)	(0.02)	(0.02)
SUMMER	-1.14***	-1.13***	-0.78**	-0.77**
	(0.32)	(0.31)	(0.36)	(0.34)
FALL	0.18**	0.18**	0.10	0.09
	(0.09)	(0.09)	(0.15)	(0.15)
WINTER	-0.01	-0.02	0.87***	0.83***
	(0.11)	(0.12)	(0.22)	(0.23)
CONSTANT	58.14**	57.89**	91.40**	91.19**
	(24.33)	(23.72)	(36.01)	(36.23)
Observations	1,168	1,168	1,168	1,168
Clusters	51	51	51	51
Pseudo R^2	./.	./.	0.161	0.163

Notes: Table reports coefficients after GLM (columns 1 and 2) and probit regressions (columns 3 and 4) with S_SUCCESS and TEAMSUCCESS as the dependent variables, respectively. HEIGHT multiplied by 100 for ease of interpretation. Robust standard errors clustered at peak-level in parentheses. Reference season: Spring.
* $p < .1$
** $p < .05$
*** $p < .01$

Table 4
Fixed-Effects Regression Estimates of Cultural Distance on Individual Performance

	SUCCESS	**DEATHINJURY**
DISTANCE	**1.86***	0.21
	(0.62)	(0.25)
FEMALE	./.	./.
EXPER	1.10*	1.12
	(0.06)	(0.23)
O2	13.71***	1.43
	(2.56)	(0.75)
CONTROLS	INCL.	
Observations	1,994	190
Groups	717	68
Chi^2	409.21***	16.00

Notes: Table reports odds ratios after conditional fixed-effects logistic regression with SUCCESS or DEATHINJURY as the dependent variables, respectively. Team-level, peak-level controls, and season dummies included. FEMALE omitted because of no within-group variance.
* $p < .1$
** $p < .05$
*** $p < .01$

APPENDIX A: ROBUSTNESS CHECKS TEAM ANALYSES

Table A1
Regression Estimates of Cultural Diversity on Team Performance – Restricted Samples

	EVEREST EXCLUDED	**LEADING EXPERIENCE <= 2**	**LEADING EXPERIENCE > 2**
CULTDIV	**0.63*** **	**0.56***	0.28
	(0.22)	**(0.30)**	(0.26)
S_FEMALE	-0.06	-0.02	-0.30
	(0.40)	(0.38)	(0.61)
EXPER_MEAN	-0.00	0.01	0.01
	(0.01)	(0.02)	(0.02)
S_SUPPORT	-0.31	-0.30	-0.33
	(0.41)	(0.46)	(0.52)
S_O2	2.46***	2.11***	2.16***
	(0.37)	(0.29)	(0.29)
TEAMSIZE	0.04*	0.10***	0.02
	(0.03)	(0.03)	(0.01)
$TEAMSIZE^2$	-0.00	-0.00***	0.00
	(0.00)	(0.00)	(0.00)
EXPER_PEAK	0.00***	0.00***	0.00
	(0.00)	(0.00)	(0.00)
HEIGHT	-0.00***	-0.00***	-0.00***
	(0.00)	(0.00)	(0.00)
YEAR	-0.06***	-0.06**	-0.03*
	(0.02)	(0.03)	(0.02)
CONSTANT	127.23***	116.73**	62.94*
	(34.95)	(50.14)	(34.19)
Observations	841	627	3,535
Clusters	50	35	41
Pseudo R^2	0.14	0.17	0.17

Notes: Table reports coefficients after probit regressions with TEAMSUCCESS as the dependent variable. HEIGHT multiplied by 100 for ease of interpretation. Season dummies included. Robust standard errors clustered at peak-level in parentheses.
* $p < .1$
** $p < .05$
*** $p < .01$

APPENDIX B: ROBUSTNESS CHECKS INDIVIDUAL ANALYSES

Table B1
Random Effects Regression Estimates of Cultural Distance on Individual Performance

			LEADING EXPERIENCE <= 2		**LEADING EXPERIENCE > 2**	
	SUCCESS	**DEATHINJURY**	**SUCCESS**	**DEATHINJURY**	**SUCCESS**	**DEATHINJURY**
DISTANCE	**1.58***** **(0.18)**	**1.94**** **(0.54)**	**1.73**** **(0.48)**	**3.73**** **(2.04)**	**1.66***** **(0.22)**	1.52 (0.53)
FEMALE	0.88 (0.07)	0.90 (0.19)	0.68* (0.14)	0.34* (0.21)	0.98 (0.10)	1.23 (0.27)
EXPER	1.08*** (0.02)	0.93* (0.04)	1.17** (0.08)	0.71 (0.18)	1.07*** (0.02)	0.92* (0.04)
O2	22.48*** (2.59)	1.27 (0.28)	14.42*** (6.24)	1.34 (1.03)	27.49*** (3.61)	1.28 (0.28)
Observations	8,804	8,804	2,149	2,142	6,655	6,554
Clusters	6,580	6,580	2,013	2,006	4,995	4,911
Chi^2	839.50***	57.61***	45.16***	48.65***	690.90***	60.19***

Notes: Table reports odds ratios after random-effects logistic regression with SUCCESS and DEATHINJURY as the dependent variables, respectively. Team-level, peak-level controls, and season dummies included. Robust standard errors are in parentheses.
* $p < .1$
** $p < .05$
*** $p < .01$

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