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Cultural Brokerage and Creative Performance in Multicultural Teams

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Abstract. This paper presents a novel theoretical framework of how members of multicultural teams leverage their diverse knowledge to produce creative outcomes. I develop and test a model of *cultural brokerage*, which I define as the act of facilitating interactions between actors across cultural boundaries. I find that team members with multicultural backgrounds engage in cultural brokerage on behalf of monocultural team members. Among multiculturals, “cultural insiders” (those whose cultural background overlaps with other team members’) brokered by *integrating* knowledge from different cultures, whereas “cultural outsiders” (those whose cultural background has no overlap with any other team members’) brokered by *eliciting* knowledge from different cultures. Both integrating and eliciting significantly enhanced creative performance at the team level. These findings advance our understanding of the process of creativity in culturally diverse teams.

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Keywords: cultural brokerage • multicultural teams • cultural diversity • creativity • multicultural individuals • cultural overlap

Introduction

Multicultural teams are becoming increasingly prevalent and important as tools for creative collaboration. Against the backdrop of accelerating globalization, organizations ranging from Pixar (Solomon 2016) to NASA (Montagnon 2012) are bringing together culturally diverse groups of individuals to enhance organizational creativity and innovation. Multicultural teams are work units whose members collectively represent two or more national cultures (Earley and Gibson 2002) and are jointly responsible for producing goods or providing services (Hackman 2002). Because multicultural teams have access to a rich collection of knowledge and ideas from various cultures, they are increasingly called on to leverage those resources for creative outcomes (Hoever et al. 2012).

However, simply assembling multicultural teams does not always translate to high levels of creativity, as cultural diversity functions not only as a resource but also as a barrier to team effectiveness (van Knippenberg and Schippers 2007, Williams and O’Reilly 1998). On the one hand, members of multicultural teams hold diverse perspectives and knowledge that can be leveraged to produce creative outcomes (Mannix and Neale 2005, Stahl et al. 2010). On the other hand, cultural differences between team members can lead to inconsistent

norms (Gelfand et al. 2011) and conflicting assumptions (Earley and Gibson 2002), making it difficult to access and synthesize the diverse knowledge they hold.

Thus, an important question arises: How do multicultural teams leverage their diverse knowledge, ideas, and resources to generate creative outcomes while avoiding the pitfalls of cultural diversity? Examining intrateam processes is critical to understanding teamwork (McGrath 1964, Gladstein 1984), and researchers have posited that in multicultural teams, the diversity in individuals’ knowledge, values, and assumptions will give rise to a unique and consequential set of group dynamics (Gelfand et al. 2007, van Knippenberg and Schippers 2007). However, existing theories do not adequately address the process of collective creativity in multicultural teams, more often than not treating these dynamics as a black box (Stahl et al. 2010, Hinds et al. 2011). As a result, we have a limited understanding of what happens in such teams as members collaborate on creative tasks.

Recently, scholars have started to theorize about the unique role that *multiculturals*, or individuals who have internalized two or more cultural schemas (Hong et al. 2000), can play in culturally diverse collectives (e.g., Brannen and Thomas 2010, Hong 2010). While these theories have important implications for the internal

dynamics of multicultural teams, they have a critical shortcoming: they are either agnostic to the cultural composition of the setting in which the multicultural operates (e.g., Thomas et al. 2010) or assume that a multicultural can provide the most value when his or her cultural background matches those of others in a given setting (e.g., Di Marco et al. 2010). The problem is that such simplifications and assumptions have persisted without a systematic examination of how a multicultural's cultural background may interact with the cultural backgrounds of others to shape team dynamics and outcomes.

Meanwhile, existing theories of team composition have largely ignored the presence of multiculturals, resting on the outdated assumption that national diversity exists along a continuum, with each team member representing a single country (for reviews, see Mannix and Neale 2005, van Knippenberg and Schippers 2007). For example, a Brazilian American member of a multicultural team would be categorized as either Brazilian or American, but not both. This hardly reflects the current reality of global organizations and teams, given that a growing number of individuals are identifying with more than one culture (Benet-Martinez et al. 2006). Forcing membership in a single category therefore means losing critical information about the individual and the team as a whole.

Thus, there is currently a lack of cross-fertilization between the literatures on multicultural individuals and multicultural teams. The former has yet to examine whether and how multiculturals' behaviors are influenced by the cultural composition of their team; meanwhile, the latter has remained largely agnostic to the presence of multiculturals, assuming that each team member belongs to a single national culture. The lack of integration between these literatures has resulted in an understanding of multicultural teams that is at best incomplete and at worst misleading. To arrive at a deeper and more meaningful understanding of how multicultural teams collaborate, I argue that the composition of the team needs to be examined jointly with the full cultural background of each individual member.

The aim of this paper is to shed light on the internal dynamics of multicultural teams as they work to generate creative outcomes, examining how each team member's cultural background interacts with the cultural composition of the team in this process. To study these dynamics, I use a brokerage lens, which provides a useful framework for examining how knowledge is identified and combined across cultural boundaries. Brokerage is the act of mediating interactions between two or more actors across boundaries (Fernandez and Gould 1994, Marsden 1982). Although members of multicultural teams are structurally connected to one another by shared team membership, they belong to different subgroups based on their cultural backgrounds

(Carton and Cummings 2012, van Knippenberg et al. 2004). In this context, I posit that exchanges and syntheses of knowledge between cultural subgroups take place through a process of *cultural brokerage*. Building on existing definitions of brokerage, I define cultural brokerage as the act of facilitating interactions between actors across cultural boundaries. I distinguish between two types of cultural brokerage in the context of creative work teams: *eliciting* and *integrating* knowledge from different cultures.

This paper presents a model of cultural brokerage in multicultural teams and tests it in two empirical studies using archival and experimental data. To examine how the cultural composition of the team affects team members' behaviors, I introduce the idea of *cultural overlap*, or the extent to which an individual shares cultural membership with others in the team. I found that cultural overlap shapes the type of brokerage that emerges in a culturally diverse team. Specifically, multicultural members with full cultural overlap were found to broker primarily by integrating, whereas multicultural members with no cultural overlap brokered primarily by eliciting. Both types of cultural brokerage, when enacted by a multicultural member, enhanced the creative performance of the team.

In drawing these distinctions, this paper makes three critical contributions to the literature. First, it introduces the idea of cultural brokerage, illuminating the process through which members of multicultural teams leverage and synthesize their diverse knowledge for creative outcomes. Second, it advances our current theories of team composition by accounting for the presence of multiculturals, and it presents cultural overlap as a theoretically novel and useful concept. Finally, it identifies cultural outsiders as overlooked yet important contributors to team creative performance.

A Model of Cultural Brokerage and Team Creative Performance

Theoretical Domain

This paper focuses on diversity in national culture.¹ Culture is a set of values, assumptions, and patterns of behavior that are shared by a group of individuals and that distinguish it from other groups (Geertz 1973, Mead and Metraux 1953). Diversity in national culture is becoming increasingly prevalent in teams and organizations, with significant implications for interpersonal dynamics and collective outcomes (Cramton and Hinds 2005, Stahl et al. 2010). However, despite its increasing prevalence and importance, national diversity has received little attention in the management literature (Hinds et al. 2011). By focusing on national culture, this paper therefore addresses an important but underresearched dimension of global work.

In particular, this paper investigates the relationship between national culture and team creative

performance. Creative performance refers to the production of novel and appropriate ideas, processes, or solutions to an open-ended task (Amabile 1983, Shalley 1991). In teams, creative ideas are developed through interactions between members (Gilson and Shalley 2004, Hargadon and Bechky 2006). Although creativity can emerge in any setting, I focus on tasks that explicitly call for creative solutions (i.e., creativity tasks). Creativity tasks are those that have no single correct answer and require an individual or team to generate and select ideas (McGrath 1984). In the context of multicultural teams, creativity tasks can be multicultural, requiring team members to draw on culture-specific knowledge and information (e.g., Chua 2013), or culture neutral (e.g., Chatman et al. 1998). Regardless of whether the task contains a cultural component or not, however, creativity is enhanced when knowledge, perspectives, and ideas from different sources are brought together and combined (Mannix and Neale 2005, Stahl et al. 2010, Triandis et al. 1965). I therefore theorize about creative performance in general, without distinguishing between multicultural and culture-neutral tasks.

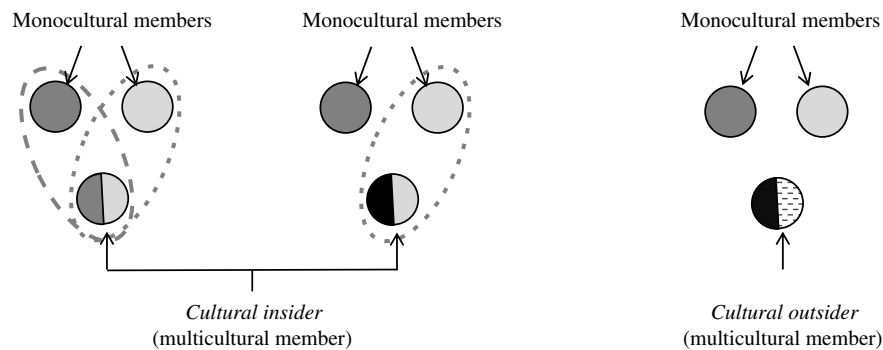
Multicultural Individuals and Team Creative Performance

One of the biggest challenges of engaging in creative work across boundaries lies in identifying and synthesizing relevant information from different domains (Lingo and O'Mahony 2010). In this context, it can be useful to have someone who can bridge such boundaries. In culturally diverse teams, the boundaries are across cultural divides; thus, individuals with knowledge of and connections to multiple cultures (i.e., multiculturals) are well positioned to span these boundaries (Di Marco et al. 2010, Hong 2010). Multiculturals not only possess culture-specific knowledge, but also have various culture-general skills, such as high levels of integrative complexity, or the ability to accept different perspectives and combine them into a coherent whole (Tadmor and Tetlock 2006), and cultural metacognition, or the ability to think about one's cultural assumptions (Chua et al. 2012, Thomas et al. 2010). These skills allow multiculturals to identify and synthesize relevant information and ideas across different cultures in creative ways. Moreover, having experience in multiple cultures increases one's willingness to learn from and work with people from other cultures, as well as one's appreciation for the value of cultural diversity (Orr and Scott 2008). This means that multiculturals are likely to have the willingness, in addition to the ability, to enhance the creative performance of culturally diverse teams. Thus, I predict the following:

Hypothesis 1 (H1). *The presence of multicultural individuals will enhance the creative performance of multicultural teams.*

I propose that multicultural members can be further distinguished based on the degree of *cultural overlap* they have with other members of the team. I define cultural overlap as the extent to which an individual shares the cultural background of other members in a given team or collective. Although previous research has overlooked this distinction, I argue that it is critical to understand how a multicultural's cultural background interacts with those of the other members in a team. For example, a Chinese Australian member in a team with monocultural Chinese and Australian members overlaps with all of the cultures represented in the team. The same multicultural in a team of Indian and German members, however, would overlap with none of the other cultures represented. This has meaningful implications for the behaviors that are likely to be available to and expected of the multicultural in each setting. Indeed, research has shown that individuals behave differently toward other team members based on whether they are part of the same subgroup (Cramton and Hinds 2005, Zellmer-Bruhn et al. 2008). Thus, accounting for cultural overlap between team members allows us to capture an important dimension of multicultural teams with important implications for team dynamics and performance. Based on the degree of cultural overlap, then, I propose that multiculturals can be categorized as *cultural insiders* (those who share the cultural background of some or all members in a team) or *cultural outsiders* (those who share the cultural background of none of the members in a team). Figure 1 provides a visual depiction of this categorization.

Cultural insiders are obvious assets to a multicultural team. Given their knowledge of and connections to other cultures present in the team, they are "natural bridges" (Brannen et al. 2009) between cultures.² Across various contexts, researchers have found that individuals who have more connections to others are capable of shaping collective creative performance (e.g., Fleming et al. 2007, Obstfeld 2005). For example, in their study of the music industry, Lingo and O'Mahony (2010) found that producers who were connected to various parties engaged in a set of brokerage behaviors that ultimately enhanced the creative performance of the collective. In the context of multicultural teams, the connections afforded by shared cultural membership are likely to enable cultural insiders to enhance team creative performance. Indeed, an implicit assumption in the literature as well as in common organizational practice has been that one needs to have cultural overlap to provide value to a multicultural collective. For example, in presenting a theory of how multiculturals influence team effectiveness, Hong (2010, p. 105) posited that "a French-Korean would work best in a team with other members from these two cultures."

Figure 1. Different Types of Multicultural Members Based on Cultural Overlap

Without dismissing the importance of cultural insiders, however, I propose that the literature has overlooked another type of multicultural capable of enhancing team creative performance: *cultural outsiders*. In a rare nod to cultural outsiders, Hong (2010) speculated that culture-specific knowledge might not always be necessary for a multicultural to contribute to team effectiveness, and that a multicultural with no existing knowledge of the other cultures present in his or her team could be perceived as a “trustworthy third party” (Hong 2010, p. 105). Other than this brief acknowledgement, however, cultural outsiders have gone unmentioned in the literature. Yet there is ample reason to believe that cultural outsiders are capable of enhancing the creative performance of multicultural teams. Cultural outsiders are akin to Simmel’s (1950) concept of the “stranger,” in that they are simultaneously an insider (in terms of team membership) and an outsider (in terms of cultural background). Simmel (1950) suggested that because of the stranger’s unique position in the group, such an individual is often capable of carrying out tasks that other members are unwilling or unable to do. In the context of multicultural teams, I posit that cultural outsiders will be able to leverage their unique position to help the team in a different way from cultural insiders, ultimately enhancing the team’s creative performance. Although they do not have significant knowledge of the cultures represented in their team, cultural outsiders still possess culture-general skills, such as high levels of cultural metacognition (Chua et al. 2012, Thomas et al. 2010) and integrative complexity (Tadmor and Tetlock 2006). I posit that this unique combination of possessing culture-general skills without culture-specific knowledge can enable and motivate outsiders to draw on the team’s diverse knowledge as needed.

Comparing the relative effectiveness of the two types of multiculturals, I expect that cultural insiders will have a greater positive impact than cultural outsiders on team creative performance, because of differences in their influence over other team members. Based on social identity theory (Tajfel and Turner 1979), I predict

that cultural insiders will be perceived by other members as part of the in-group, allowing them to exert more influence (Hogg 2001). By the same token, cultural outsiders should be perceived as being part of the out-group, affording them relatively less influence over others. Thus, I expect cultural insiders to enhance team creative performance to a greater degree. Regardless of a multicultural’s overlap with other members’ cultures, however, formal roles can provide a source of legitimacy and influence (French and Raven 1959, Katz and Kahn 1978). Thus, when a multicultural is formally assigned to facilitate between cultures, I predict that team members will be receptive to such efforts, regardless of whether they are enacted by a cultural insider or outsider. Formal assignment as a cultural broker should therefore enable both types of multiculturals to enhance team creative performance to a similar extent. In sum, I predict the following:

Hypothesis 2A (H2A). *The presence of cultural insiders will enhance the creative performance of culturally diverse teams.*

Hypothesis 2B (H2B). *The presence of cultural outsiders will enhance the creative performance of culturally diverse teams.*

Hypothesis 2C (H2C). *In the absence of formal role assignment, cultural insiders will enhance the creative performance of culturally diverse teams to a greater extent than cultural outsiders; however, this difference will disappear if the cultural insider or outsider is given a formal role to facilitate across cultures.*

Cultural Brokerage in Multicultural Teams

I use a brokerage lens to examine the process of *how* multiculturals contribute to the creative performance of culturally diverse teams. Brokerage is typically depicted as taking place between actors who have no access to one another—for instance, at the intersection of organizational (Hargadon and Sutton 1997) or professional (Burt 2005, Lingo and O’Mahony 2010) boundaries. However, brokerage can also occur between subgroups within a single group or entity

(Gould and Fernandez 1989). In the case of multicultural teams, individuals from different cultures do not share the same set of norms, beliefs, and assumptions (Earley and Gibson 2002, Gelfand et al. 2011), and hence belong to different subgroups (van Knippenberg et al. 2004) with barriers to communication and collaboration between them. In this context, I propose that *cultural brokerage* takes place between the cultural subgroups, with multicultural individuals taking on the role of the cultural broker. Although much of the literature has portrayed brokerage as an act that serves the individual broker at the cost of those being brokered (e.g., Burt 2004), there is a growing body of work that explores how brokerage benefits those being brokered, or the collective as a whole (e.g., Lingo and O'Mahony 2010, Tortoriello et al. 2014). I join this more recent stream of research in examining the effect of cultural brokerage on multicultural teams.

While acknowledging that cultural brokerage can take many forms, this paper focuses specifically on the types of cultural brokerage that emerge in multicultural teams working on creative tasks. Drawing on existing frameworks of brokerage and collective creativity (Burt 2004, Hargadon and Bechky 2006, Lingo and O'Mahony 2010), I focus on two types of cultural brokerage in this context: *eliciting* and *integrating* knowledge from different cultures. Eliciting refers to inquiring about or requesting relevant cultural information, ideas, or knowledge that other members hold, therefore making resources from various cultures accessible to the other members of the team. Integrating refers to putting together or synthesizing information, ideas, or knowledge from different cultures into a novel whole. While scholars have identified these two distinct types of brokerage in other contexts (e.g., Burt 2004, Lingo and O'Mahony 2010), existing theories do not address whether and how these types of brokerage emerge in multicultural teams, whom they are enacted by, or how they shape team creativity.

I propose that multicultural members of culturally diverse teams engage in cultural brokerage on behalf of the team. Scholars have theorized that individuals rely on different tactics and take on different roles depending on the group or subgroup to which they belong (Friedman and Podolny 1992, Rogers and Agarwala-Rogers 1976). Following this logic, I posit that multiculturalists enact the cultural brokerage role in different ways, based on their cultural membership vis-à-vis the other cultures in the team. In developing this theory, I turn to the extreme ends of the spectrum, focusing on the brokerage behavior of cultural insiders with full cultural overlap with other members, and cultural outsiders (who, by definition, have no cultural overlap with other members).

Cultural insiders are highly capable of combining information and ideas from different cultures represented in the team, as they are already familiar with

the cultural schemas in question. Indeed, previous research has shown that multiculturalists are able to access and combine knowledge from their cultures of affiliation to produce creative outcomes (Cheng et al. 2008, Godart et al. 2015, Maddux and Galinsky 2009). For cultural insiders, integrating knowledge from the cultures represented in the team is akin to integrating knowledge from their own cultures of affiliation; thus, integrating is an easily accessible and convenient way for cultural insiders to engage in cultural brokerage. Meanwhile, when it comes to eliciting, cultural insiders have little incentive to inquire about information and ideas from the other cultures represented in the team. Since they already possess knowledge of the other members' cultures, they are likely to expect that eliciting will yield information that is redundant with their own. For the same reason, other team members are likely to be less welcoming of cultural insiders' eliciting efforts, seeing their engagement in this type of brokerage as unnecessary. For these reasons, I expect that cultural insiders will broker more by integrating than by eliciting.

Cultural outsiders, on the other hand, do not have significant knowledge of any of the other cultures represented in their team. This places them in an entirely different position from insiders. While eliciting is likely to be considered unnecessary by cultural insiders, outsiders have an incentive to gather relevant information and ideas from the different cultures represented in the team. Moreover, cultural outsiders' eliciting efforts will likely be seen as legitimate or necessary by the other members, as cultural outsiders do not already possess this knowledge. Meanwhile, when it comes to integrating, cultural outsiders will face significant barriers, as it is difficult to integrate elements of different cultures without first having knowledge of those cultures (Maddux and Galinsky 2009). Thus, I predict the following:

Hypothesis 3A (H3A). *Cultural insiders are more likely to broker by integrating than by eliciting.*

Hypothesis 3B (H3B). *Cultural outsiders are more likely to broker by eliciting than by integrating.*

Cultural Brokerage and Team Creative Performance

I posit that integrating and eliciting will both, through different processes, enhance team creative performance. Creativity is enhanced when knowledge, perspectives, and ideas from different sources are brought together and combined (Triandis et al. 1965). Indeed, a key rationale for bringing together diverse groups of people is that their diverse perspectives and knowledge can be combined to result in greater creativity (Mannix and Neale 2005). To broker by integrating is to directly engage in combining and synthesizing knowledge from different cultures, therefore enhancing team

creative performance. It is important to note, however, that the act of combining aspects of different cultures is challenging, as it requires understanding and spanning multiple meaning systems (Hong 2010). Given multiculturals' high level of integrative complexity and metacognition (Chua et al. 2012, Tadmor and Tetlock 2006, Thomas et al. 2010), I posit that they will be able to effectively integrate knowledge from multiple cultural domains. In sum, I expect that integrating, when enacted by a multicultural member, will enhance team creative performance.

Meanwhile, eliciting enhances team creative performance in a more indirect way. Members of multicultural teams collectively hold diverse perspectives, information, and ideas that could be leveraged to produce creative outcomes. In this setting, eliciting enables team members to identify and share relevant knowledge with other members, triggering a set of collaborative dynamics; that is, as a result of eliciting, team members become exposed to new information and viewpoints, and are given a chance to build on one another's ideas (Hargadon and Bechky 2006). This allows the team to produce novel combinations of ideas that would not have been accessible to any one member (Paulus and Brown 2003, Tadmor et al. 2012). Although seemingly straightforward, eliciting is not simply about asking questions; one needs to know what kind of information or ideas to elicit, whom to elicit them from, and when to do so. The high levels of cultural metacognition and integrative complexity that multiculturals possess should enable them to engage in this type of cultural brokerage effectively (Brannen and Thomas 2010, Chua et al. 2012). Thus, I predict that eliciting, when enacted by a multicultural member, will enhance team creative performance. Figure 2 provides an overview of the full theoretical model.

Hypothesis 4A (H4A). *Integrating by a multicultural team member will enhance the creative performance of culturally diverse teams.*

Hypothesis 4B (H4B). *Eliciting by a multicultural team member will enhance the creative performance of culturally diverse teams.*

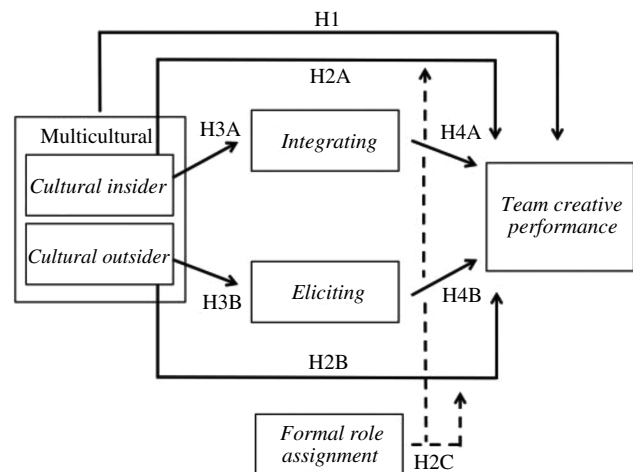
Overview of Empirical Strategy

I conducted two studies to test the hypotheses. In Study 1, I tested Hypotheses 1, 2A, and 2B using a large archival data set of multicultural teams working on creative tasks. In Study 2, I tested Hypotheses 2C–4B in an experimental study of multicultural teams working on a set of creative tasks.

Study 1: Archival Study of Multicultural Teams

I tested Hypotheses 1, 2A, and 2B using archival data from a global student collaboration project that

Figure 2. Theoretical Model of Cultural Brokerage in Creative Multicultural Teams



involved undergraduate and graduate students from over 40 countries. Participants were assigned to multicultural teams, in which each student was typically from a different country (see Table 1 for examples of team composition). The teams collaborated virtually on a creative project for eight weeks. All data were collected between 2010 and 2014 and included responses from both the student participants and their instructors during the course of the project. This setting provides a unique opportunity to study a large number of multicultural work teams collaborating on creative tasks. (For more information about the project and data set, see Taras et al. 2013.)

Team Task

Teams were given the task of coming up with a business plan for the “next big idea” for a company of their choice. While the business plan was to be based on a rigorous analysis of the company’s current portfolio and market opportunities, the core of the task was to develop and present a creative new product or service for the company. All teams received clear instructions regarding the task requirements, after which they were given a high degree of autonomy regarding how they would work together.

Overview of Data

The original data set included 2,663 teams (16,121 individuals) from 2010 to 2014. Before conducting data analysis, I removed teams with missing data and those that fell outside the domain of the study. Specifically, I excluded teams in which data from one or more participants were completely missing ($N = 53$) and teams in which one or more members had given incomplete data on their country of residence and country of origin ($N = 400$), as this information is indispensable for testing the hypotheses. I also excluded teams for which

Table 1. Sample Team Compositions in Study 1

	Country of origin	Country of study	Classification
(a) Example of team with no multicultural			
Team member 1	Malaysia	Malaysia	Monocultural
Team member 2	Colombia	Colombia	Monocultural
Team member 3	United States	United States	Monocultural
Team member 4	New Zealand	New Zealand	Monocultural
Team member 5	United States	United States	Monocultural
Team member 6	Spain	Spain	Monocultural
Team member 7	Brazil	Brazil	Monocultural
(b) Example of team with one multicultural			
Team member 1	Malaysia	Malaysia	Monocultural
Team member 2	Colombia	Colombia	Monocultural
Team member 3	United States	United States	Monocultural
Team member 4	New Zealand	New Zealand	Monocultural
Team member 5	United Kingdom	United States	Multicultural (<i>cultural insider</i>)
Team member 6	Spain	Spain	Monocultural
Team member 7	Brazil	Brazil	Monocultural
(c) Example of team with more than one multicultural			
Team member 1	United States	United States	Monocultural
Team member 2	Korea	Korea	Monocultural
Team member 3	Colombia	Colombia	Monocultural
Team member 4	Turkmenistan	United Arab Emirates	Multicultural (<i>cultural outsider</i>)
Team member 5	Indonesia	Indonesia	Monocultural
Team member 6	Spain	Spain	Monocultural
Team member 7	Spain	United States	Multicultural (<i>cultural insider</i>)

the dependent variable (the overall performance rating) was missing ($N = 311$). In addition, I removed cases in which there were fewer than three members ($N = 70$) because the theory is concerned with teams, rather than individuals or dyads. I also excluded teams in which all of the members were from the same country ($N = 60$), since culturally homogenous teams fall outside the domain of the study. The remaining data set included 2,117 teams (13,086 individuals). All of the analyses were performed with this final data set. Table 2 shows the number of teams in the original and final data sets, as well as key statistics.

Measures

Number of Multicultural Individuals. I coded whether each individual was multicultural or monocultural

based on the reported country of origin and current country of study. Those who indicated that they were currently studying in a country other than their country of origin were classified as multicultural; those who listed the same country as their country of origin and country of study were classified as monocultural. Based on this coding, I created a variable at the team level that indicated the *number of multicultural individuals* in each team.

Cultural Overlap. For each multicultural, I created a measure of his or her *cultural overlap* with monocultural members. If the cultural background of the multicultural overlapped with that of at least one of the monoculturals (for example, see Table 1(b) or 1(c)), he or she was categorized as a cultural insider. If the cultural background of the multicultural did not overlap with any of the monocultural members' cultures (for example, see Table 1(c)), the multicultural was categorized as a cultural outsider. Based on this coding, I created variables at the team level indicating the *number of cultural insiders and outsiders*.

Team Creative Performance. While the set of variables used to evaluate teams differed from year to year, the overall quality of the report was measured consistently from 2010 to 2014. This variable represents the instructors' evaluation of the overall quality of each team's report, ranging from 1 (very low quality, does not meet expectations) to 7 (excellent, exceeds expectations), with 4 as a midpoint (acceptable quality, meets expectations). All instructors were given the same set

Table 2. Comparison of Original and Final Data Sets for Study 1

	Original data set	Final data set
Size of data set		
N (individuals)	16,212	13,086
N (teams)	2,663	2,117
Mean (SD) of key variables		
Team size	6.05 (1.35)	6.18 (1.15)
Percent female	0.46 (0.21)	0.47 (0.21)
Average age	23.17 (2.25)	23.06 (2.19)
Team diversity	0.71 (0.18)	0.74 (0.13)
Team creative performance	4.88 (0.80)	4.90 (0.78)

of criteria to rate the overall quality of the reports, and each team member received an evaluation from his or her own course instructor. Evaluations from multiple instructors were averaged for each team to form a measure of *team creative performance*; this measure served as the main dependent variable in this study. While overall quality is not a direct measure of creativity per se, the task—coming up with the “next big idea” for a company—is one that explicitly calls for creative solutions (McGrath 1984). Following the logic in the creativity literature, in which performance on creativity tasks is often used as a measure of creative performance (e.g., Mednick 1962, Torrance 1966), I use overall performance on this task as a measure of each team’s creative performance.

Control Variables. Given that team diversity has been found to influence team creativity (Stahl et al. 2010), I used Blau’s (1977) index to control for *team diversity*. Because *team size* influences the likelihood of a multicultural member being present and has been shown to affect team creativity (Valacich et al. 1992) and overall performance (Hackman and Vidmar 1970), I controlled for the number of members in each team. The *number of women* in a team also has been found to predict team performance (Woolley et al. 2010); hence, I controlled for the number of women in each team.

Results

Table 3 shows the descriptive statistics and pairwise correlations between the variables.

I tested Hypotheses 1, 2A, and 2B using ordinary least squares (OLS) regressions. To examine whether the presence of multicultural members would result in a higher level of team creative performance (H1), I regressed *team creative performance* on the variable indicating the *number of multicultural members*, controlling for *team diversity*, *team size*, and the *number of women* per team. As predicted in H1, I found that the presence of multicultural members significantly enhanced team creative performance. Model 1 in Table 4 shows

the multivariate linear regression analysis conducted to test H1. Next, I tested H2A and H2B, examining the effect of cultural insiders and cultural outsiders on team creative performance, respectively. I found that the presence of cultural insiders (Table 4, Model 2) and cultural outsiders (Table 4, Model 3) each led to a higher level of creative performance. Thus, H2A and H2B were supported. Figure 3 provides a graph with a comparison of the creative performance of teams with no multiculturals, teams with cultural insiders, and teams with cultural outsiders.

I also conducted a number of robustness checks. First, I conducted the same analyses using a binary variable indicating the *presence or absence of multiculturals* instead of the count variable indicating the number of multiculturals per team. The results were the same for all of the hypotheses. Second, I tested the hypotheses with a subset of the data, excluding teams with more than one multicultural. Because cultural overlap was calculated between each multicultural member and the monocultural members in a given team, the overlap between multicultural members is not captured in teams with more than one multicultural. To address this issue, I conducted the same analyses excluding teams with more than one multicultural member. The results remained unchanged. Finally, I reran the analyses controlling for the year in which the data were collected, because there were slight differences in the measures collected from year to year. The results remained the same.

Discussion

The findings of this study suggest that multiculturals—both cultural insiders and outsiders—indeed enhance the creative performance of culturally diverse teams. The mechanism proposed in this paper is that they do so by improving team processes. However, an alternative explanation for the findings is that multiculturals enhance team creativity not because they influence team processes, but because they increase the average level of individual creativity within the team. If this

Table 3. Means, Standard Deviations, and Correlations of Key Variables in Study 1
(*N* = 2,117 Teams)

	Mean	SD	Min	Max	1	2	3	4	5	6	7
1. <i>Number of multiculturals</i>	1.07	0.96	0	5	—						
2. <i>Number of cultural insiders</i>	0.35	0.58	0	3	0.46***	—					
3. <i>Number of cultural outsiders</i>	0.56	0.76	0	4	0.64***	−0.08***	—				
4. <i>Team diversity</i>	0.74	0.13	0	0.88	0.00	−0.33***	0.21***	—			
5. <i>Team size</i>	6.18	1.15	3	9	0.17***	0.05*	0.21***	0.46***	—		
6. <i>Number of women</i>	2.84	1.29	0	7	0.05**	−0.02	0.05*	0.22***	0.27***	—	
7. <i>Team creative performance</i>	4.90	0.78	1.5	7	0.05*	−0.01	0.06**	0.14***	0.01	0.08***	—

p* < 0.05; *p* < 0.01; ****p* < 0.001.

Table 4. Regression Results, Study 1

DV: Team creative performance			
Variable	Model 1 (N = 2,117)	Model 2 (N = 1,463)	Model 3 (N = 1,666)
Number of multiculturals	0.06***		
Number of cultural insiders		0.07**	
Number of cultural outsiders			0.06*
Team diversity	0.17***	0.17***	0.17***
Team size	−0.10***	−0.10**	−0.11***
Number of women	0.07**	0.08**	0.06**
F	17.82***	11.09***	13.13***
R ²	0.03	0.03	0.03
Adj. R ²	0.03	0.03	0.03

Note. Standardized OLS regression coefficients are shown.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

alternative hypothesis were true, it would mean that the presence of multiculturals would boost the creative performance of *any* team, regardless of the cultural composition of the team. To examine this alternative hypothesis, I conducted post hoc analyses examining whether the positive effect of multicultural members was contingent on the level of diversity in the team. I found that the effect of multiculturals was moderated by the team's diversity; specifically, teams with greater cultural diversity (as indicated by the Blau index) benefited more from the presence of a multicultural than teams with lower levels of cultural diversity ($\beta = 0.28, p < 0.01$). Moreover, teams that were culturally homogenous with the exception of one multicultural member did not perform better than culturally homogenous teams with no multicultural members ($\beta = -0.16, p = 0.30$). This provides support for the original mechanism proposed in this paper: that multicultural members are valuable to culturally diverse teams because of their ability to enhance team dynamics.

This study has a number of noteworthy strengths and weaknesses. A key strength is that it tested the hypotheses with a large sample of multicultural teams working together for a substantial period of time. Another

strength is that the creative outputs were directly comparable across teams, as all teams were working on the same task during an equal amount of time. However, the study also has several weaknesses. First, because information on the precise cultural backgrounds and cultural knowledge of team members was limited, I used a proxy (i.e., country of origin versus country of study) to determine whether an individual was multicultural, as well as to determine cultural overlap. Second, the behaviors enacted by the team members remain unknown, as I could only observe the inputs (i.e., team composition) and outputs (i.e., team creative performance). Study 2 addresses and complements these limitations and provides a test of the remaining hypotheses.

Study 2: Experimental Study of Multicultural Teams

Study 2 examines how multiculturals engage in cultural brokerage and to what effect, providing a test of Hypotheses 2C, 3A, 3B, 4A, and 4B.

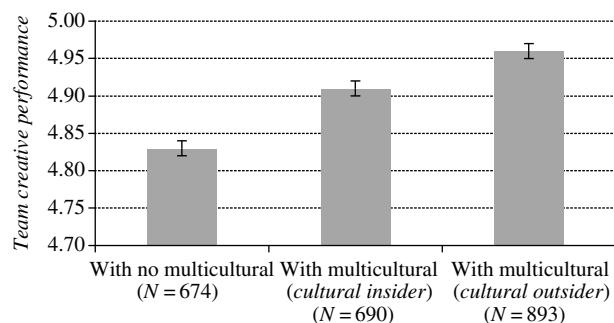
Study Design

I tested the hypotheses in an experiment using a two (cultural background of multicultural member: insider versus outsider) by two (multicultural member assigned as cultural broker versus no one assigned as cultural broker) between-groups design. Unlike Study 1, in which the composition of teams varied, this study held the cultural background of the monocultural members constant, focusing on cultural brokerage between two specific cultures. There are three reasons for this focus. First, holding the monoculturals' cultures constant allowed me to isolate the variance in brokerage dynamics that result as a function of the multicultural member's cultural background. Second, this focus made it possible for the final outputs to be assessed by the same set of judges with expertise in specific cultural domains, as recommended by the Consensual Assessment Technique (Amabile 1983, 1996). Finally, holding the cultures constant facilitated the process of assembling teams as required by the study design.

Cultural Background of Multicultural Individual. Each team was composed of three members: two monoculturals and one multicultural who was either a cultural insider or cultural outsider in relation to the monoculturals.

Formal Appointment of Cultural Broker. Once composed, half of the teams were randomly assigned to a condition in which the multicultural member was formally appointed to play the role of a cultural broker. In the other half, there was no mention of such a role.

Figure 3. Creative Performance by Team Composition, Study 1



Note. Error bars represent standard errors.

Participants

Two hundred forty-nine individuals (83 teams) participated in the study. I recruited eligible participants based on their responses to a preliminary survey, in which they listed all the countries they had lived in, as well as the culture(s) they possessed significant knowledge of. Participants were categorized as monocultural if they had only lived in one country and indicated significant knowledge of no other cultures. Following previous studies (e.g., Hong et al. 2000, Benet-Martinez et al. 2002), participants were categorized as multicultural if they reported having lived in two countries for at least five years each, as well as possessing a high level of knowledge (at least 5 on a scale of 1 to 7) of the corresponding cultures.

I recruited monocultural individuals from two specific cultures: India and the United States. Cultural insiders, then, were individuals who had lived in and indicated having significant knowledge of both Indian and American cultures; cultural outsiders were those who had lived in and indicated having significant knowledge of two cultures other than the United States and India. To match the English proficiency of the multicultural member as well as the approximate cultural distance between the multicultural's cultures of affiliation across conditions, the selected cultural outsiders were individuals who had lived in one English-speaking Western country (e.g., Canada) and one Asian country (e.g., South Korea).

Two primary sources were used for recruiting. Monoculturals were recruited through Amazon's Mechanical Turk (MTurk). Because multiculturals were rare in the MTurk pool, I recruited these individuals by posting study announcements on online groups and electronic mailing lists, such as community groups and student organizations. Although two different pools were used for recruiting, the composition of the two recruitment sources does not differ across the conditions (i.e., two members from MTurk and one from an alternative source per team). Approximately 200 teams were scheduled for study sessions; of these, 102 teams successfully started the study with all three members present. Among these teams, 19 experienced technical difficulties (e.g., loss of Internet connection) that prevented them from completing the study, leaving a total of 83 teams included in the final analysis.

Apparatus

The study was conducted using an online platform developed by the Center for Collective Intelligence (Woolley et al. 2010). While this platform has been primarily used with participants working in the same physical space, the current study brought together participants from different parts of the world to virtually collaborate on a set of tasks. Information regarding the online platform, as well as instructions on how to navigate the online workspace, was communicated via two

video tutorials created by the researcher. All interactions on the platform were recorded for subsequent coding and analysis.

Experimental Task

The study featured a creative team task that required participants to draw upon the cultures represented within the team. Specifically, teams were asked to take on the role of a multicultural event planning agency and to propose ideas for a multicultural wedding between clients from the United States and India. They were told that the clients had two criteria: that the ideas incorporate elements of both American and Indian cultures and that the ideas be creative. They were informed that a panel of judges familiar with both cultures would evaluate their ideas and that the team with the most creative ideas would be given a bonus, a Kindle for each member. The task was divided into three parts, and teams were asked to generate ideas for (1) a special ritual, (2) a musical performance, and (3) a food dish for the wedding. They were given 8 minutes for each part (24 minutes total), during which they engaged in discussions with their team members using the chat function and entered their final idea in the provided text box.

Procedure

Pretask Surveys. Prior to participating in the online study, each team member completed two pretask surveys. The purpose of the initial survey was to identify potential participants who qualified for the study without giving them an incentive to falsely report their demographic information to be eligible. The survey, advertised as a study of individual creativity, started with a one-minute creativity task in which participants were asked to come up with as many uses for a brick as possible. The survey also contained questions about participants' current country of residence; which other countries, if any, they had lived in and for how long; and their familiarity with different cultures. At the end of the survey, participants were given information about an upcoming "creative group study" and asked to provide their email address if they were interested in participating. Among those who expressed interest, those who were eligible based on their cultural background (i.e., monocultural American, monocultural Indian, or multicultural) were contacted via email with a second pretask survey. This second survey contained a list of possible study session times and a one-minute tutorial video about the online platform. Based on their responses to this survey, participants were randomly matched with teammates within the constraints of their indicated availability and the necessary team composition (two monoculturals from different countries and one multicultural). Teams were scheduled to time slots between 9:00 A.M. and 12:00 P.M. or between

8:00 P.M. and 11:00 P.M. eastern standard time to accommodate time differences between the various locations.

Logging in. Participants were informed via email about the time of their session in their respective time zones and given a unique ID to log in to the platform at that time. To minimize attrition, participants were sent email reminders one day before the session, one hour before the session, and 10 minutes before the session. If all three team members signed in at the scheduled time, the session began automatically and teams were taken through the tasks in the online workspace. If one or more members did not sign in, the session did not begin, and those who had signed in were given the opportunity to participate at a different time.

Team Exercise. The team exercise started with a one-minute tutorial video on how to use the various functions of the online platform. Next, members were given three minutes to introduce themselves and identify one another's cultural backgrounds. They were then given instructions about the team task (the multicultural wedding planning exercise) and given time to work on the task.

Measures

Cultural Brokerage. Cultural brokerage was measured by coding the chat dialogue for evidence of eliciting and integrating by all three team members. The 83 study sessions yielded 14,908 lines of chat dialogue, and the full dialogue for each team was coded for instances of eliciting and integrating by all team members. Table 5 provides examples of eliciting and integrating for each subtask.

A research assistant coded the dialogue at the sentence level, yielding a count of how many times each

member engaged in *eliciting* and *integrating* during the team exercise. In line with suggestions by Krippendorff (2004) and Hayes and Krippendorff (2007) and following other researchers (e.g., Ely 1995, Homan et al. 2007), I coded the dialogue of a random subset of 20 teams (24% of the total sample) using the same protocol to check reliability of the coding. Interrater reliability was acceptably high (Krippendorff's $\alpha = 0.74$). The full coding by the research assistant was used as the final measure of *eliciting* and *integrating*.

Team Creative Performance. Each team produced one set of ideas for the multicultural wedding, resulting in a total of 83 sets of ideas. Five raters with expertise in both Indian and American cultures independently rated the ideas in accordance with the Consensual Assessment Technique (Amabile 1983, 1996). The raters were blind to the study questions and hypotheses, and each rated the set of ideas in a different random order. Ratings for the three aspects of the wedding (ritual, music, food) were averaged to form an overall rating of the creativity of the whole event. Because the average creativity score provided by each rater was significantly different ($F(4,406) = 92.00, p < 0.001$), the ratings were standardized for each rater. Interrater reliability for the standardized creativity ratings among the five raters indicated excellent agreement ($ICC(2,5) = 0.75$; Cicchetti 1994), and the standardized ratings from the five raters were averaged to form the final measure of each team's *creative performance*.

Results

I tested the hypotheses using two-tailed *t*-tests and OLS regressions with dummy-coded variables to reflect the teams' assignment to the experimental conditions. Table 6 shows the descriptive statistics and

Table 5. Examples of Integrating and Eliciting in Study 2

	Examples of <i>integrating</i>	Examples of <i>eliciting</i>
Ritual	"how about we incorporate the vows in the pheras?" "what about one wedding with an indian priest and an american priest simultaneously"	"what rituals do you have from America?" "hey so tell me about indian and american weddings."
Music	"we could have here comes the bride played on indian instruments?" "Maybe a western wedding song remixed bollywood style."	"what is a famous wedding song to be playing at an american wedding?" "Are there any special musical performances in India that are considered to be traditional for weddings?"
Food	"I've always liked chocolate fountains . . . maybe this with an indian twist? A lassi fountain?" "Maybe a traditional American style tiered cake with Indian decoration and color?"	"Teresa—come up with some staple meals from the US" "Murugan, what food is traditionally served at an Indian wedding? I am not very familiar with Indian food, other than curry"

Note. Errors of spelling, capitalization, and grammar are left uncorrected.

Table 6. Means, Standard Deviations, and Correlations of Key Variables in Study 2 ($N = 83$ Teams)

	Mean	SD	Min	Max	1	2	3	4	5	6	7	8	9
1. Insider (0) vs. Outsider (1)	0.46	0.51	0	1	—								
2. Not assigned (0) vs. Assigned (1)	0.49	0.50	0	1	-0.09	—							
3. Integrating by multicultural	4.61	3.22	0	14	-0.07	-0.11	—						
4. Integrating by American	2.86	2.47	0	13	0.27**	0.07	-0.17	—					
5. Integrating by Indian	1.61	2.02	0	10	-0.15	-0.12	-0.06	-0.15	—				
6. Eliciting by multicultural	4.93	4.49	0	22	0.45***	0.01	0.15	0.16	-0.15	—			
7. Eliciting by American	3.12	3.15	0	19	0.14	0.09	-0.20	0.26**	-0.20	-0.02	—		
8. Eliciting by Indian	1.46	1.94	0	9	-0.08	0.07	-0.18	-0.19	0.35***	-0.06	-0.23*	—	
9. Team creative performance ^a	0	0.70	-1.77	1.93	-0.07	-0.10	0.48***	-0.05	0.10	0.28**	-0.21	-0.16	—

^aStandardized scores.* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

pairwise correlations for all variables; Table 7 shows the means and standard deviations of the key variables per condition.

I predicted that in the absence of formal role assignment, multicultural teams with a cultural insider would outperform teams with a cultural outsider, and that this difference would disappear if the multicultural member was given a formal role to facilitate across cultures (H2C). However, I found that even without formal role assignment, teams with cultural insiders and outsiders did not differ in their creative performance ($t(41) = -1.04, p = 0.31$). There was also no difference in performance when multiculturals were formally assigned a facilitating role ($t(40) = -0.20, p = 0.84$). Thus, H2C was not supported.

Next, I predicted that cultural insiders would engage in more integrating than eliciting (H3A), while cultural outsiders would engage in more eliciting than integrating (H3B). To test these hypotheses, I conducted t -tests to compare the level of eliciting and integrating for insiders and outsiders, respectively. As predicted,

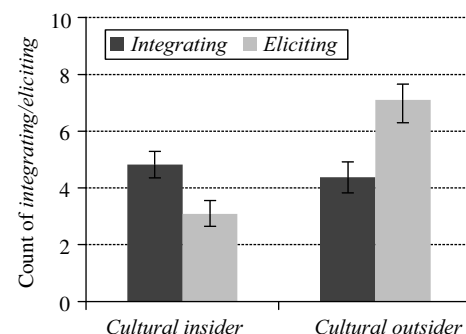
Table 7. Means and Standard Deviations of Key Variables by Condition, Study 2

	Cultural insider	Cultural outsider
(a) Integrating by multicultural		
Multicultural assigned as cultural broker	4.75 (2.98), $N = 24$	3.59 (3.08), $N = 17$
No one assigned as cultural broker	4.91 (3.36), $N = 21$	5.00 (3.52), $N = 21$
(b) Eliciting by multicultural		
Multicultural assigned as cultural broker	2.67 (2.04), $N = 24$	8.18 (5.66), $N = 17$
No one assigned as cultural broker	3.57 (3.75), $N = 21$	6.24 (4.40), $N = 21$
(c) Team creative performance ^a		
Multicultural assigned as cultural broker	-0.05 (0.86), $N = 24$	-0.10 (0.80), $N = 17$
No one assigned as cultural broker	0.16 (0.50), $N = 21$	-0.02 (0.61), $N = 21$

^aStandardized scores.

I found that cultural insiders engaged in more integrating than eliciting ($t(44) = 3.31, p = 0.002$), and outsiders engaged in more eliciting than integrating ($t(37) = -2.96, p = 0.005$; see Figure 4). Thus, Hypotheses 3A and 3B were supported.

Finally, Hypotheses 4A and 4B predicted that integrating and eliciting by a multicultural member would each lead to enhanced team creative performance. Before testing the hypotheses, I started by examining the effect of the experimental manipulations on team creative performance; they were not significant (Table 8, Model 1). I then tested Hypotheses 4A and 4B with OLS regressions at the team level. As predicted, integrating and eliciting both had a positive effect on team creative performance, and jointly accounted for 28% of the variance in team creativity (Table 8, Model 2). Meanwhile, post hoc tests revealed that monocultural members' engagement in integrating had no effect on team creative performance, and their eliciting efforts surprisingly led to a significant decrease in team creative performance (Table 8, Model 3). When entered into the same model, integrating and eliciting by multiculturals continued to have a positive effect on team creative performance, while integrating and eliciting by monoculturals did not (Table 8, Model 4). These findings support Hypotheses 4A and 4B. Figures 5(a) and 5(b) illustrate the

Figure 4. Integrating and Eliciting by Cultural Insiders and Outsiders, Study 2

Note. Error bars represent standard errors.

Table 8. Regression Results, Study 2

DV: Team creative performance ^a				
Variable	Model 1 (N = 83)	Model 2 (N = 83)	Model 3 (N = 83)	Model 4 (N = 83)
Insider/Outsider	−0.08	−0.19	−0.06	−0.19
Assignment/No assignment	−0.11	−0.08	−0.07	−0.06
Integrating by multicultural		0.42***		0.40***
Eliciting by multicultural		0.31**		0.29**
Integrating by monoculturals			0.07	0.13
Eliciting by monoculturals			−0.29**	−0.15
F	0.71	8.79***	2.16	6.69***
R ²	0.02	0.31	0.10	0.35
Adj. R ²	−0.01	0.28	0.05	0.29

Note. Standardized OLS regression coefficients are shown.

^aStandardized scores.

** $p < 0.01$; *** $p < 0.001$.

effects of eliciting and integrating by multiculturals and monoculturals, respectively, on team creative performance.

I conducted post hoc tests to examine whether the effects of integrating and eliciting on team creativity were moderated by the type of multicultural (cultural insider versus outsider). The interaction term was not significant for integrating ($\beta = -0.04, p = 0.86$) or

eliciting ($\beta = -0.25, p = 0.38$), suggesting that the effects of cultural brokerage on team creativity did not depend on the type of multicultural member. I also conducted post hoc mediation analyses, finding that eliciting, but not integrating, indirectly mediated the relationship between the type of multicultural (insider versus outsider) and team creative performance.³

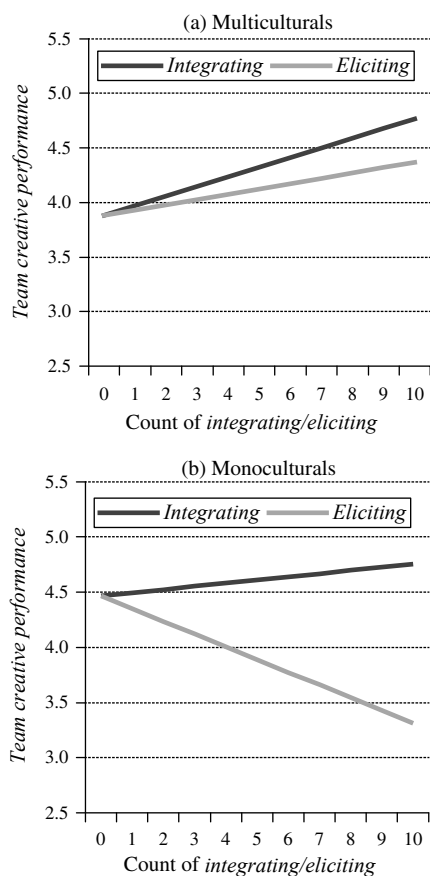
In addition, because the negative effect of monoculturals' eliciting behavior on team creative performance was unexpected, I conducted further analyses to examine whether this effect was driven by the eliciting behavior of American or Indian members; the same pattern was found for both. The effect also did not differ between teams with cultural insiders and cultural outsiders. However, the existence of a multicultural who was formally appointed as a cultural broker made a difference: in teams with no formally appointed broker, the eliciting efforts of monoculturals had no effect on team performance ($\beta = -0.09, p = 0.56$), whereas in teams with a formally appointed broker, eliciting by monocultural members negatively impacted team performance ($\beta = -0.40, p = 0.01$). A preliminary exploration of the chat data suggests that teams with a formally appointed multicultural broker typically developed a norm of the multicultural engaging in integrating and/or eliciting, and the monocultural members contributing information or ideas from their respective cultures. Thus, when a monocultural member engaged in eliciting in this context, the behavior was likely inconsistent with his or her role, disrupting the flow of communication and coordination in the team and therefore negatively impacting team creative performance.

Discussion

The findings from Study 2 largely support the theoretical model. As predicted, I found that cultural insiders and outsiders engaged in different types of cultural brokerage: integrating and eliciting, respectively. Both types of cultural brokerage, when carried out by the multicultural member, enhanced team creative performance. Notably, the hypothesis that cultural outsiders are less effective than cultural insiders unless they are formally appointed (H2C) was not supported. Instead, I found that, regardless of formal role assignment, teams with cultural outsiders performed as well as teams with cultural insiders. Although the data did not support this hypothesis, the findings may actually strengthen a core argument of this paper: that cultural outsiders are important contributors to multicultural team creativity.

General Discussion

Despite the growing prevalence and importance of multicultural teams, our understanding of how such teams leverage their diverse knowledge to generate

Figure 5. Effects of Integrating and Eliciting by Multiculturals and Monoculturals on Team Creative Performance, Study 2

creative outcomes has remained limited. This paper advances current theory by illuminating the process of collective creativity in multicultural teams. The data support the theory that culturally diverse teams are more creative when they include a multicultural member, regardless of whether the multicultural is a cultural insider or outsider. Among multiculturals, cultural insiders were found to broker primarily by integrating, whereas cultural outsiders brokered primarily by eliciting. Both integrating and eliciting enhanced team creative performance, but only when enacted by a multicultural member. These findings show how team members' cultural backgrounds interact to shape team dynamics and outcomes, enriching our understanding of collective creativity in multicultural teams.

Theoretical Contributions

This paper makes several important contributions to theory. First, it introduces the concept of cultural brokerage, shedding light on the process through which members of multicultural teams leverage and synthesize their diverse knowledge for creative outcomes. Research on multicultural teams has traditionally focused on identifying moderators that influence the relationship between cultural diversity and team performance (e.g., Hoever et al. 2012, Polzer et al. 2006) or documenting differences in teamwork across cultures (e.g., Gibson and Zellmer-Bruhn 2001). Meanwhile, “[f]ar less attention has been paid to the dynamics of culture in intercultural encounters” (Gelfand et al. 2007, p. 497). This paper addresses this gap by presenting a model of cultural brokerage in multicultural teams. Beyond presenting cultural brokerage as a novel construct, this paper also documents its effect on team creative performance. In the experimental study, integrating and eliciting collectively explained 28% of the variance in team performance. Given the magnitude of this effect, it is likely that studies that simply look at input variables or external conditions without examining internal brokerage dynamics will yield an incomplete understanding of multicultural teams. On a practical note, these findings also suggest that it would behoove global organizations to be aware of and leverage such cultural brokerage dynamics.

Second, the current research bridges the literatures on culturally diverse teams and multicultural individuals by providing a theoretical framework to examine the role of multiculturals within diverse teams. Thus far, theories of team composition have largely assumed that each individual belongs to a single cultural category (for reviews, see Mannix and Neale 2005, van Knippenberg and Schippers 2007). This means that, with few exceptions (e.g., Haas 2006), scholars have conceptualized multicultural teams as being composed of only monocultural individuals. Meanwhile, theories of multicultural individuals have rarely taken into

account the cultural composition of the contexts in which multiculturals operate. In contrast, this paper examines the role of multicultural individuals in culturally diverse teams, with an explicit focus on how the cultural background of a multicultural member interacts with the cultural composition of the team to shape team dynamics and outcomes. In doing so, it presents the idea of *cultural overlap* as a way of conceptualizing multicultural individuals' cultural backgrounds relative to their team, capturing an important yet previously overlooked aspect of team composition. The framework proposed in this paper therefore offers a more nuanced and useful way of thinking about team composition and the role of multiculturals in diverse organizations.

Finally, this paper is the first to document the value of cultural outsiders, a theme that has been largely absent from the literature. Recent research has highlighted the important role that multicultural individuals can play in cross-cultural settings; however, the focus of this research has been almost exclusively on cultural insiders (e.g., Brannen and Thomas 2010, Di Marco et al. 2010). Meanwhile, cultural outsiders rarely have been expected to play a meaningful role. This paper demonstrates that, despite being overlooked, cultural outsiders actively engage in cultural brokerage and contribute to enhancing the creative performance of culturally diverse teams. Interestingly, from the multicultural's perspective, being a cultural outsider may provide a unique advantage over being an insider. Krackhardt (1999) argued that having Simmelian ties to multiple groups leads to a high level of constraint, as one must simultaneously satisfy the norms of the various parties. While cultural insiders are subject to expectations and norms that come from ties to one or more cultures within the team, cultural outsiders are free from such constraints. Thus, cultural outsiders may have more discretion to help the team in any way they find useful, with less concern about adhering to the norms of the various cultures present. By providing initial insight into the value of cultural outsiders, a theme previously missing from the literature, this research expands our understanding of the role of multiculturals in cross-cultural collaborations.

Limitations and Future Research

There are a number of limitations of this work that point to opportunities for future research. First, identifying cultural insiders and outsiders was simplified in this paper by relying on countries participants had lived in and those they reported having significant knowledge of. However, such categorization processes are actually likely to be more nuanced, complex, and subjective (Zellmer-Bruhn et al. 2008). For example, one could be perceived as a cultural outsider based on surface-level characteristics, but may consider him or

herself to be a cultural insider based on actual knowledge. Also, while five years was used as a proxy in the experimental study for the time it takes to acquire deep knowledge of a culture, there is likely to be significant variance across individuals and situations. Furthermore, there are various different paths to acquiring significant knowledge of a culture. One could cultivate such knowledge as a result of early immersion in multiple cultures, or by acquiring multicultural experiences later in life (Martin and Shao 2016). In short, cultural membership is likely to be the result of a multifaceted and dynamic process, which should be explored further in future work.

More work is also needed to explore how different factors shape the emergence and effects of cultural brokerage. For example, although this paper did not distinguish between multicultural and culture-neutral tasks, the nature of a team's task could influence the level and type of cultural brokerage that takes place, as well as the impact it has on team performance. In addition, the broader organizational context in which teams function has been found to powerfully shape interpersonal dynamics and outcomes (Hinds and Mortensen 2005, Stevens et al. 2008, Zellmer-Bruhn and Gibson 2006), and factors such as the culture or structure of an organization could significantly shape cultural brokerage dynamics within teams. Furthermore, the nature of the interpersonal relationships between individuals will also likely influence the emergence and impact of cultural brokerage in a given setting (Casciaro and Lobo 2008, Reagans and McEvily 2003).

Finally, it is important to note that the studies in this paper documented cultural brokerage in a particular domain: multicultural teams working on creative tasks over a relatively short period of time. While this was the focus of the current paper, cultural brokerage theoretically could take place in any context in which there are cultural boundaries to be brokered. Thus, the types of cultural brokerage outlined here (i.e., eliciting and integrating) are likely to be manifestations of a more general typology of cultural brokerage. In addition, the effects of cultural brokerage may differ over time. Although both types of cultural brokerage were found to enhance team creative performance in this paper, it may be that they differ in their long-term implications for team performance and viability. More theoretical and empirical work is therefore needed study the nature of cultural brokerage over longer periods of time, and across different contexts.

Conclusion

This paper introduces the concept of cultural brokerage and examines its effect on multicultural team creativity. As predicted, I found that multicultural members of culturally diverse teams actively engage in cultural brokerage, and that such brokerage behaviors

enhance team creative performance. The theory and findings presented in this paper advance our current understanding of how multicultural teams leverage their diverse knowledge and resources for creative outcomes. In addition, they challenge current theory by identifying cultural outsiders as underacknowledged but important members of multicultural teams. By presenting a novel theoretical framework that illuminates the process of collective creativity in diverse teams, this paper offers a rich preliminary understanding of cultural brokerage and provides a foundation for future work in this domain.

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Endnotes

¹ It is worth noting that there are potential issues with using national culture as the unit of analysis. Values, assumptions, and norms can vary within each national culture, and certain national cultures have norms that are more loosely enforced than others (Gelfand et al. 2011). Despite these issues, however, researchers have documented stable differences across national cultures (Hofstede 1980, Schwartz 1994), and using nationality as a proxy for cultural membership is a common practice in research examining cross-cultural collaboration (e.g., Earley and Mosakowski 2000, Gibson and Zellmer-Bruhn 2001).

² This is especially the case for cultural insiders with full cultural overlap, who are connected to every member of the team and therefore have the potential to bridge interactions between any subset of members. Meanwhile, cultural insiders with partial cultural overlap are not connected to all other members; however, because they are connected to some members through their shared cultural background, they are in a position to leverage those connections and shared cultural knowledge. Therefore, I posit that all cultural insiders are in a position to help culturally diverse teams, with those with full cultural overlap being the most extreme case.

³ The Preacher and Hayes (2004) bootstrapping technique produced a 95% confidence interval for the indirect effect of eliciting that excluded zero (0.06 to 0.43), suggesting a significant indirect effect. Meanwhile, using the same technique, the 95% confidence interval for the indirect effect of integrating included zero (−0.32 to 0.21), suggesting that there was no indirect effect.

References

Amabile TM (1983) The social psychology of creativity: A componential conceptualization. *J. Personality Soc. Psych.* 45(2):357–376.

- Amabile TM (1996) *Creativity in Context: Update to The Social Psychology of Creativity* (Westview, Boulder, CO).
- Benet-Martinez V, Lee F, Leu J (2006) Biculturalism and cognitive complexity expertise in cultural representations. *J. Cross-Cultural Psych.* 37(4):386–407.
- Benet-Martinez V, Leu J, Lee F, Morris MW (2002) Negotiating biculturalism cultural frame switching in biculturals with oppositional versus compatible cultural identities. *J. Cross-Cultural Psych.* 33(5):492–516.
- Blau PM (1977) *Inequality and Heterogeneity: A Primitive Theory of Social Structure* (Free Press, New York).
- Brannen MY, Thomas DC (2010) Bicultural individuals in organizations implications and opportunity. *Internat. J. Cross Cultural Management* 10(1):5–16.
- Brannen MY, Garcia D, Thomas DC (2009) Biculturals as natural bridges for intercultural communication and collaboration. *Proc. 2009 Internat. Workshop Intercultural Collaboration, February 20–21, Palo Alto, CA* (ACM, New York), 207–210.
- Burt RS (2004) Structural holes and good ideas. *Amer. J. Sociol.* 110(2):349–399.
- Burt RS (2005) *Brokerage and Closure: An Introduction to Social Capital* (Oxford University Press, Oxford, UK).
- Carton AM, Cummings JN (2012) A theory of subgroups in work teams. *Acad. Management Rev.* 37(3):441–470.
- Casciaro T, Lobo MS (2008) When competence is irrelevant: The role of interpersonal affect in task-related ties. *Admin. Sci. Quart.* 53(4):655–684.
- Chatman JA, Polzer JT, Barsade SG, Neale MA (1998) Being different yet feeling similar: The influence of demographic composition and organizational culture on work processes and outcomes. *Admin. Sci. Quart.* 43(4):749–780.
- Cheng CY, Sanchez-Burks J, Lee F (2008) Connecting the dots within: Creative performance and identity integration. *Psych. Sci.* 19(11):1178–1184.
- Chua RY (2013) The costs of ambient cultural disharmony: Indirect intercultural conflicts in social environment undermine creativity. *Acad. Management J.* 56(6):1545–1577.
- Chua RYJ, Morris MW, Mor S (2012) Collaborating across cultures: Cultural metacognition and affect-based trust in creative collaboration. *Organ. Behav. Human Decision Processes* 118(2):116–131.
- Cicchetti DV (1994) Guidelines, criteria, and rules of thumb for evaluating normed and standardized assessment instruments in psychology. *Psych. Assessment* 6(4):284–290.
- Cramton CD, Hinds PJ (2005) Subgroup dynamics in internationally distributed teams: Ethnocentrism or cross-national learning? Staw BM, Kramer RM, eds. *Research in Organizational Behavior. An Annual Series of Analytical Essays and Critical Reviews*, Vol. 26 (JAI Press, Greenwich, CT), 231–263.
- Di Marco MK, Taylor JE, Alin P (2010) Emergence and role of cultural boundary spanners in global engineering project networks. *J. Management Engrg.* 26(3):123–132.
- Earley PC, Gibson CB (2002) *Multinational Work Teams* (Lawrence Erlbaum Associates, Mahwah, NJ).
- Earley PC, Mosakowski E (2000) Creating hybrid team cultures: An empirical test of transnational team functioning. *Acad. Management J.* 43(1):26–49.
- Ely RJ (1995) The power in demography: Women's social constructions of gender identity at work. *Acad. Management J.* 38(3):589–634.
- Fernandez RM, Gould RV (1994) A dilemma of state power: Brokerage and influence in the national health policy domain. *Amer. J. Sociol.* 99(6):1455–1491.
- Fleming L, Mingo S, Chen D (2007) Collaborative brokerage, generative creativity, and creative success. *Admin. Sci. Quart.* 52(3):443–475.
- French JR, Raven B (1959) The bases of social power. Cartwright D, ed. *Studies in Social Power* (Institute for Social Research, Ann Arbor, MI), 311–320.
- Friedman RA, Podolny J (1992) Differentiation of boundary spanning roles: Labor negotiations and implication and role conflict. *Admin. Sci. Quart.* 37(1):28–47.
- Geertz C (1973) *The Interpretation of Cultures: Selected Essays* (Basic Books, New York).
- Gelfand MJ, Erez M, Aycan Z (2007) Cross-cultural organizational behavior. *Annual Rev. Clinical Psych.* 58:479–514.
- Gelfand MJ, Raver JL, Nishii L, Leslie LM, Lun J, Lim BC, Duan L, et al. (2011) Differences between tight and loose cultures: A 33-nation study. *Science* 332(6033):1100–1104.
- Gibson CB, Zellmer-Bruhn ME (2001) Metaphors and meaning: An intercultural analysis of the concept of teamwork. *Admin. Sci. Quart.* 46(2):274–303.
- Gilson L, Shalley CE (2004) A little creativity goes a long way: An examination of teams' engagement in creative processes. *J. Management* 30(4):453–470.
- Gladstein DL (1984) Groups in context: A model of task group effectiveness. *Admin. Sci. Quart.* 29(4):499–517.
- Godart FC, Maddux WW, Shipilov AV, Galinsky AD (2015) Fashion with a foreign flair: Professional experiences abroad facilitate the creative innovations of organizations. *Acad. Management J.* 58(1):195–220.
- Gould RV, Fernandez RM (1989) Structures of mediation: A formal approach to brokerage in transaction networks. *Sociol. Methodology* 19:89–126.
- Haas M (2006) Acquiring and applying knowledge in transnational teams: The roles of cosmopolitans and locals. *Organ. Sci.* 17(3):367–384.
- Hackman JR (2002) *Leading Teams: Setting the Stage for Great Performances* (Harvard Business School Press, Boston).
- Hackman JR, Vidmar N (1970) Effects of size and task type on group performance and member reactions. *Sociometry* 33(1):37–54.
- Hargadon AB, Bechky BA (2006) When collections of creatives become creative collectives: A field study of problem solving at work. *Organ. Sci.* 17(4):484–500.
- Hargadon A, Sutton RI (1997) Technology brokering and innovation in a product development firm. *Admin. Sci. Quart.* 42(4):716–749.
- Hayes AF, Krippendorff K (2007) Answering the call for a standard reliability measure for coding data. *Comm. Methods Measures* 1(1):77–89.
- Hinds PJ, Mortensen M (2005) Understanding conflict in geographically distributed teams: The moderating effects of shared identity, shared context, and spontaneous communication. *Organ. Sci.* 16(3):290–307.
- Hinds PJ, Liu L, Lyon J (2011) Putting the global in global work: An intercultural lens on the practice of cross-national collaboration. *Acad. Management Ann.* 5(1):135–188.
- Hoever IJ, van Knippenberg D, van Ginkel WP, Barkema HG (2012) Fostering team creativity: Perspective taking as key to unlocking diversity's potential. *J. Appl. Psych.* 97(5):982–996.
- Hofstede G (1980) Motivation, leadership, and organization: Do American theories apply abroad? *Organ. Dynam.* 9(1):42–63.
- Hogg MA (2001) A social identity theory of leadership. *Personality Soc. Psych. Rev.* 5(3):184–200.
- Homan AC, van Knippenberg D, van Kleef GA, De Dreu, CKW (2007) Bridging faultlines by valuing diversity: Diversity beliefs, information elaboration, and performance in diverse work groups. *J. Appl. Psych.* 92(5):1189–1199.
- Hong HJ (2010) Bicultural competence and its impact on team effectiveness. *Internat. J. Cross Cultural Management* 10(1):93–120.
- Hong YY, Morris MW, Chiu CY, Benet-Martinez V (2000) Multicultural minds: A dynamic constructivist approach to culture and cognition. *Amer. Psych.* 55(7):709–720.
- Katz D, Kahn RL (1978) *The Social Psychology of Organizations*, Vol. 2 (Wiley, New York).
- Krackhardt D (1999) The ties that torture: Simmelian tie analysis in organizations. Andrews SB, Knocke D, eds. *Research in the Sociology of Organizations*, Vol. 16 (JAI Press, Greenwich, CT), 183–210.
- Krippendorff K (2004) Reliability in content analysis. *Human Comm. Res.* 30(3):411–433.
- Lingo EL, O'Mahony S (2010) Nexus work: Brokerage on creative projects. *Admin. Sci. Quart.* 55(1):47–81.
- Maddux WW, Galinsky AD (2009) Cultural borders and mental barriers: The relationship between living abroad and creativity. *J. Personality Soc. Psych.* 96(5):1047–1061.

- Mannix E, Neale MA (2005) What differences make a difference? The promise and reality of diverse teams in organizations. *Psych. Sci. Public Interest* 6(2):31–55.
- Marsden PV (1982) Restricted access in networks and models of power. *Amer. J. Sociol.* 88(4):686–717.
- Martin L, Shao B (2016) Early immersive culture mixing: The Key to understanding cognitive and identity differences among multiculturalists. *J. Cross-Cultural Psych.* 47(10):1409–1429.
- McGrath JE (1964) *Social Psychology: A Brief Introduction* (Holt, Rinehart, and Winston, New York).
- McGrath JE (1984) *Groups: Interaction and Performance*, Vol. 14 (Prentice-Hall, Inc., Englewood Cliffs, NJ).
- Mead M, Metraux R (1953) *The Study of Culture at a Distance* (Berghahn Books, Oxford, NY).
- Mednick S (1962) The associative basis of the creative process. *Psych. Rev.* 69(3):220–232.
- Montagnon E (2012) International collaboration on BepiColombo. *Acad. Sharing Knowledge Magazine* 46(May):1–56.
- Obstfeld D (2005) Social networks, the tertius iungens orientation, and involvement in innovation. *Admin. Sci. Quart.* 50(1):100–130.
- Orr RJ, Scott WR (2008) Institutional exceptions on global projects: A process model. *J. Internat. Bus. Stud.* 39(4):562–588.
- Paulus PB, Brown VR (2003) Enhancing ideational creativity in groups. Paulus PB, Nijstad BA, eds. *Group Creativity: Innovation Through Collaboration* (Oxford University Press, Oxford, UK), 110–136.
- Polzer JT, Crisp CB, Jarvenpaa SL, Kim JW (2006) Extending the fault-line model to geographically dispersed teams: How colocated subgroups can impair group functioning. *Acad. Management J.* 49(4):679–692.
- Preacher KJ, Hayes AF (2004) SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behav. Res. Methods, Instruments, Comput.* 36(4):717–731, Chicago.
- Reagans R, McEvily B (2003) Network structure and knowledge transfer: The effects of cohesion and range. *Admin. Sci. Quart.* 48(2):240–267.
- Rogers EM, Agarwala-Rogers R (1976) *Communication in Organizations* (Free Press, New York).
- Schwartz SH (1994) Are there universal aspects in the structure and contents of human values? *J. Soc. Issues* 50(4):19–45.
- Shalley CE (1991) Effects of productivity goals, creativity goals, and personal discretion on individual creativity. *J. Appl. Psych.* 76(2):179–185.
- Simmel G (1950) *The Sociology of Georg Simmel*, Wolff KH, trans. (Free Press, Glencoe, IL).
- Solomon C (2016) A diverse Pixar crew grabs an Oscar nomination. *New York Times* (February 8), http://www.nytimes.com/2016/02/14/movies/a-diverse-pixar-crew-grabs-an-oscar-nomination.html?_r=2.
- Stahl GK, Maznevski ML, Voigt A, Jonsen K (2010) Unraveling the effects of cultural diversity in teams: A meta-analysis of research on multicultural work groups. *J. Internat. Bus. Stud.* 41(4):690–709.
- Stevens FG, Plaut VC, Sanchez-Burks J (2008) Unlocking the benefits of diversity: All-inclusive multiculturalism and positive organizational change. *J. Appl. Behav. Sci.* 44(1):116–133.
- Tadmor CT, Tetlock PE (2006) Biculturalism: A model of the effects of second-culture exposure on acculturation and integrative complexity. *J. Cross-Cultural Psych.* 37(2):173–190.
- Tadmor CT, Satterstrom P, Jang S, Polzer JT (2012) Beyond individual creativity: The superadditive benefits of multicultural experience for collective creativity in culturally diverse teams. *J. Cross-Cultural Psych.* 43(3):384–392.
- Tajfel H, Turner JC (1979) An integrative theory of intergroup conflict. Austin W, Worchel S, eds. *The Social Psychology of Intergroup Relations* (Brooks/Cole, Monterey, CA), 33–47.
- Taras V, Caprar D, Rottig D, Sarala R, Zakaria N, Zhao F, Jimenez A, et al. (2013) A global classroom? A multi-method evaluation of effectiveness of international collaboration exercises in international management education. *Acad. Management Learn. Ed.* 12(3):414–435.
- Thomas DC, Brannen MY, Garcia D (2010) Bicultural individuals and intercultural effectiveness. *Eur. J. Cross-Cultural Competence Management* 1(4):315–333.
- Torrance EP (1966) *The Torrance Tests of Creative Thinking-Norms-Technical Manual Research Edition-Verbal Tests, Forms A and B-Figural Tests, Forms A and B* (Personnel Press, Princeton, NJ).
- Tortoriello M, McEvily B, Krackhardt D (2014) Being a catalyst of innovation: The role of knowledge diversity and network closure. *Organ. Sci.* 26(2):423–438.
- Triandis HC, Hall ER, Ewen RB (1965) Member heterogeneity and dyadic creativity. *Human Relations* 18(1):33–35.
- Valacich JS, Dennis AR, Nunamaker JF (1992) Group size and anonymity effects on computer-mediated idea generation. *Small Group Res.* 23(1):49–73.
- van Knippenberg D, Schippers MC (2007) Work group diversity. *Annual Rev. Clinical Psych.* 58:515–541.
- van Knippenberg D, De Dreu CK, Homan AC (2004) Work group diversity and group performance: An integrative model and research agenda. *J. Appl. Psych.* 89(6):1008–1022.
- Williams KY, O'Reilly III CA (1998) Demography and diversity in organizations: A review of 40 years of research. Staw BM, Cummings LL, eds. *Research in Organizational Behavior* (JAI Press, Greenwich, CT), 77–140.
- Woolley AW, Chabris CF, Pentland A, Hashmi N, Malone TW (2010) Evidence for a collective intelligence factor in the performance of human groups. *Science* 330(6004):686–688.
- Zellmer-Bruhn M, Gibson C (2006) Multinational organization context: Implications for team learning and performance. *Acad. Management J.* 49(3):501–518.
- Zellmer-Bruhn ME, Maloney MM, Bhappu AD, Salvador RB (2008) When and how do differences matter? An exploration of perceived similarity in teams. *Organ. Behav. Human Decision Processes* 107(1):41–59.

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