Bringing Worlds Together: Cultural Brokerage in Multicultural Teams

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Bringing Worlds Together:

Cultural Brokerage in Multicultural Teams

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Abstract

This dissertation introduces and illuminates the phenomenon of cultural brokerage— the act of managing cross-cultural interactions in multicultural teams. Across four studies, I develop and test a theoretical model of cultural brokerage, using both qualitative and quantitative methods. I find that members of multicultural teams who have relatively more cross-cultural experience actively engage in cultural brokerage, even without being appointed to do so. Specifically, cultural insiders (those who have deep knowledge of the culture of the other members on the team) and cultural outsiders (those who have deep knowledge of multiple cultures other than the ones represented in the rest of the team) both engage in cultural brokerage, albeit in different ways. Insiders are more likely than outsiders to broker by directly *resolving* cultural issues; outsiders are more likely to broker by *facilitating* interactions. Both types of brokerage enhance team effectiveness. A key insight of this dissertation is that while cultural outsiders are generally perceived as being far less valuable than cultural insiders, they are actually equally effective in improving team performance, and even outperform insiders when it comes to enhancing certain aspects of team viability. This work contributes to the literatures on global teams, multicultural individuals, and creativity. In addition, it provides practical implications for effectively composing and managing multicultural teams.

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CHAPTER 1.

INTRODUCTION

A growing reliance on multicultural teams in today's globalizing work environment creates a theoretical imperative to understand the factors that enable such teams to be effective. Although much has been written about culturally diverse teams and performance (e.g., Cheng et al 2012; Hinds et al., 2011; Mannix & Neale, 2005; Williams & O'Reilly, 1998) our understanding of what members of these teams do to collaborate effectively in spite of deep-seated cultural differences remains limited. This dissertation introduces and illuminates a novel construct that influences multicultural team performance: *cultural brokerage*, the act of facilitating cross-cultural collaboration.

Following other researchers, I define multicultural teams as clearly bounded work units whose members are collectively responsible for producing goods or providing services (Cohen & Bailey, 1997; Hackman, 2002), and in which two or more national cultures are represented among the team's members (Adler, 1997). (Unless otherwise specified, "culture" always refers to *national* culture in this dissertation[1].) As organizations become increasingly globalized, multicultural work teams are becoming more and more prevalent and crucial for organizational success (Behfar, Kern, & Brett, 2006; Early & Gibson, 2002). In particular, multicultural teams are often brought together to work on tasks that require them to draw on the different cultural knowledge and expertise of the members.

However, culturally diverse teams often face challenges that keep them from

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[1] While the theory and findings on cultural brokerage may be generalizable beyond national

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reaching their full potential (van Knippenberg, De Dreu, & Homan, 2004; Williams & O'Reilly, 1998). Compared to culturally homogenous teams, they are more likely to suffer from conflicting assumptions and a lack of common understanding (Earley & Gibson, 2002), differences in norms and tolerance for certain behaviors (Gelfand et al., 2011), as well as asymmetries in language proficiency (Neeley et al., 2009). Such differences can divide members of a team, prohibiting effective collaboration (Cramton & Hinds, 2004; Lau & Murnighan, 1998) and often taking a psychological toll on individual members (Molinsky, 2007). Buchan and colleagues (2011) describe entering into a cross-cultural interaction as being similar to "heading out as the captain of the Titanic"—one may easily see the most evident parts of culture (such as language, food, and dress), but these are just "tips of the icebergs." Indeed, much of culture is implicit, and its constituents develop assumptions and patterns of behavior that are deeply internalized and specific to each culture (Hall, 1976; Harris, 1968; Triandis, 1994). These internalized differences in norms, values, and assumptions are what make cross-cultural interactions particularly challenging.

Yet there is ample evidence that multicultural teams have the *potential* to outperform monocultural teams. Culturally diverse teams can benefit from enhanced performance due to a wider set of perspectives, information, and networks to draw from (Blau, 1977; Cox, 1994; Cox & Blake, 1991; Govindarajan & Gupta, 2001). In particular, multicultural teams have the potential to excel on tasks that require creativity: each member, based on his or her own cultural experiences, can provide access to relevant categories of ideas that other members can build on, ultimately enhancing team creativity (Paulus & Brown, 2003; Paulus, Larey, & Dzindolet, 2000; Tadmor et al., 2012).

In short, cultural diversity is a double-edged sword: multicultural teams have the potential to outperform their culturally homogenous counterparts, but also face serious challenges that can prevent them from doing so. This presents an interesting theoretical puzzle: why do some multicultural teams achieve high levels of performance, while others fail to do so? Previous studies have addressed this question by identifying key moderators and mediators for the relationship between cultural diversity and performance (cf. Stahl et al., 2009). For example, some have examined individual-level factors such as the characteristics of team members (e.g., Cheng et al., 2012; Homan et al., 2008); others have identified team-level moderators such as interpersonal congruence (Polzer et al., 2002) or diversity perspectives (Ely & Thomas, 2001).

What is missing in the current literature, however, is an in-depth investigation of the *dynamics* within multicultural teams (Crotty & Brett, 2012), and the role that team members may play in facilitating cross-cultural collaboration. Recently, scholars have made the case that having members who understand multiple cultures can enhance team outcomes (e.g., Brannen & Thomas, 2010; DiMarco et al., 2010; Haas, 2006; Hong, 2010; Fitzsimmons, 2013); however, most of these studies have focused primarily on examining the characteristics of multicultural individuals that allow them to bridge cultures, rather than the team-level dynamics that lead to better performance. Moreover, the existing literature almost exclusively focuses on bicultural individuals whose cultural backgrounds match the cultural composition of the group (Brannen & Thomas, 2010; DiMarco et al., 2010), with the assumption that one must have knowledge of or connections to the specific cultures involved in an interaction to play a brokering role. Such an assumption rules out the possibility of other individuals contributing to the

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facilitation of cross-cultural interactions, yielding an incomplete understanding of the dynamics of multicultural teams.

This dissertation builds on and advances past research by shedding light on a construct that influences the performance of the multicultural teams and its members: *cultural brokerage*, which I define as the act of facilitating cross-cultural collaboration. Understanding the process and consequences of cultural brokerage is an important step in advancing our knowledge of multicultural teams and their effectiveness. Despite the theoretical and practical importance of this role, however, surprisingly little attention has been given to how members of multicultural teams go about trying to bridge cultural differences[2]. In this dissertation, I examine this issue through four studies: a grounded, inductive study of cultural brokerage in multicultural teams (Study 1), a survey study that uncovers the intuitions we commonly hold about the kind of member that is valuable in multicultural teams (Study 2), and two experimental studies of the antecedents and consequences of cultural brokerage (Studies 3,4). The aim of this investigation is to yield timely and novel insights into the dynamics and performance of multicultural teams.

In doing so, I depart from previous research in a number of meaningful ways. First, rather than focusing only on how the characteristics of multicultural teams influence team effectiveness, I also investigate the interactive dynamics within multicultural teams. Second, I depart from the tradition of focusing on the role of those in

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[2] One notable exception is a study by DiMarco and colleagues (2010), in which the authors discuss the dynamics of boundary spanning within multicultural teams. However, the sample of this study is limited to two project teams, and the focus is on how a multicultural individual (who is a cultural insider) emerges as the boundary spanner in one of the teams.

positions of formal authority in shaping the effectiveness of culturally diverse teams (e.g., Cox & Blake, 1991; Maznevski & DiStefano, 2000; Schneider & Barsoux, 2003). There is much to be gained by understanding how, and under what conditions, members of teams fulfill key functions that enable the team to perform effectively (Hackman, 2002). Following the functional view of leadership proposed by Hackman and colleagues (Hackman, 2005; Hackman & Walton, 1986; McGrath, 1962), I take a similar approach to studying brokerage within multicultural team, and assert that anyone who engages in a relatively high level of cultural brokerage is, by definition, a cultural broker. In doing so, I assume that any member of a multicultural team, regardless of his or her cultural background or formal position, has the potential to engage in cultural brokerage. Finally, I highlight the important role that a cultural *outsider* (someone who has deep knowledge of cultures other than those of other team members) can play as a cultural broker. Specifically, I show that cultural outsiders broker by *facilitating* interactions between other members, whereas cultural insiders are more likely to broker by *resolving* issues on behalf of other members. This challenges the assumptions of previous research and the common belief that knowledge of the specific cultures involved is necessary to bridge cultural divides (e.g., Brannen & Thomas, 2010; DiMarco et al., 2010; Hong, 2010).

ORGANIZATION OF STUDIES

Across four studies, I develop and test theory on cultural brokerage. Following Edmonson and McManus (2007), I start with an inductive, qualitative study to learn about this relatively unexplored phenomenon and develop a set of hypotheses about cultural brokerage (Study 1). Next, I deductively test the hypotheses through a series of surveys (Study 2) and group experiments (Studies 3, 4). Specifically, I demonstrate how

both cultural insiders and outsiders increase the performance of their teams by engaging in different types of brokerage (Study 3). I also find that cultural outsiders are often unrecognized and underappreciated (Studies 2, 3), despite the fact that they are just as effective as cultural insiders in increasing team performance (Study 3), and perhaps even more effective at increasing team viability (Study 4). Together, the studies in this dissertation illuminate the phenomenon of cultural brokerage, producing novel theoretical and practical implications.

CHAPTER 2.

STUDY 1: DEVELOPING A MODEL OF CULTURAL BROKERAGE

I began my research with the broad aim of learning about how members of multicultural teams deal with cultural differences. I started with an inductive, qualitative study to learn about the micro-dynamics within multicultural teams: what kinds of challenges the members faced, how they made sense of them, and what (if anything) they did in response. What emerged from these interviews were rich descriptions of what I came to call cultural brokerage: the act of mediating cross-cultural interactions.

METHOD

I conducted interviews with 65 company executives and managers who were involved in cross-cultural collaborations in various organizations around the world. The interviews were semi-structured, allowing for free-flowing discussion and diversions from the script, which enabled previously unidentified but relevant topics to emerge (Weiss, 1994). Upon permission from the interviewees, the interviews were recorded and transcribed.

The interviewees were primarily recruited through a number of executive education programs at Harvard Business School. All of the interviewees had experience working across cultures, and volunteered to be interviewed about the topic of cross-cultural collaboration. Other than this commonality, their cultural and professional backgrounds varied widely—together, they represented 32 countries and 41 organizations across various industries, ranging from aerospace to financial services. This sample

enabled me to gain insight into what individuals did and experienced as members of multicultural teams, across different industries and organizational contexts.

During the first handful of interviews, I found that individuals frequently spoke of their experience of bridging or brokering between different cultures. In the rest of the interviews, I focused on eliciting descriptions of such brokerage incidents: who was involved, what the task was, how the interviewee perceived the situation, and what, if anything, he or she did to facilitate cross-cultural interactions. Because the interviewees had first-hand experience with the phenomenon of interest, they were able to provide detailed accounts of the process of brokerage, as well as their internal experience of engaging in (or being the target of) such brokerage acts.

In analyzing the interviews, I iterated between the data, emerging concepts from the data, and existing theory to develop a model of cultural brokerage (Corbin & Strauss, 2008). Specifically, I began by identifying some overall themes associated with cultural brokerage, such as "brokerage behaviors" and "motivation for brokerage". After identifying a set of broad themes, I iterated between the interview data, previous research, and my emerging themes to further develop and find evidence for these conceptual categories. Once the categories were more clearly developed, I reviewed the transcripts again, looking for further evidence of each category. A research assistant coded a random selection of 30 interviews to verify the codes that I developed (Yin, 2003); there was minimal disagreement on the codes. Throughout this process, I also consulted a variety of related literatures to find theoretical precedents that could help explain what I was finding. The end result was an articulation of the concept of cultural brokerage as experienced by members of multicultural teams, along with a set of testable hypotheses

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about how cultural brokerage influences individual and team creativity, as well as team viability.

FINDINGS AND HYPOTHESIS DEVELOPMENT

Multicultural Experience and Cultural Brokerage

In most cases, cultural brokerage emerged in multicultural teams without formal appointment. Most interviewees reported that no one in the team was formally asked to take on such a role[3]. Many people stated that their previous multicultural experiences– experiences living in a foreign country or engaging with people from different cultures (Leung et al., 2008)— motivated and enabled them to engage in brokerage (57 out of the 65 interviewees had extensive multicultural experience or identified with more than one culture). For example, one interviewee from Trinidad and Tobago, who had extensive experience in cross-cultural settings, said he "inevitably became the middle ground" in a multicultural team, and was often "like the bridge" between different cultures. Notably, monocultural individuals in a multicultural team were hardly called upon (nor did they actively set out) to engage in cultural brokerage. In fact, such monocultural individuals were often the targets or beneficiaries of brokerage acts. A multicultural interviewee of Italian origin described his experience of recognizing when his monocultural colleagues were struggling in cross-cultural settings: "I became sufficiently adroit in recognizing when things were not going well. I could definitely name many cases, especially with the

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[3] Although it was rare for cultural brokers to be formally appointed, there were some cases in which the interviewees stated that they were formally assigned, or, interestingly, when the interviewees said that they asked to be formally and publicly assigned as a cultural broker of sorts. I examine the effect of formal appointment on cultural brokerage in the experimental study.

people with a monocultural background having a little bit more of a difficulty […], the communication not going smoothly." As such, acts of cultural brokerage were often enabled and motivated by one's previous multicultural experience, and targeted at helping monocultural individuals navigate cross-cultural interactions.

In line with these findings, previous research has shown that experiences living in and engaging with different cultures can lead to enhanced competence in cross-cultural communication, increased willingness to learn from and work with people from other cultures, and greater appreciation for the value of cultural diversity (e.g., Leung et al., 2008; Tadmor & Tetlock, 2006). Hence, multicultural experiences should increase one's ability and willingness to engage in cultural brokerage in a multicultural team. In light of the interview findings and existing literature, I hypothesize:

> H1. In the absence of an assigned cultural broker, individuals with multicultural experience engage in more cultural brokerage than those with little or no multicultural experience.

Two Types of Cultural Brokerage: Resolving and Facilitating

The terms that interviewees used to describe brokerage behavior varied: some spoke of "bridging"; others called it "facilitating" or "mediating". Despite the specific terms they used to describe acts of cultural brokerage, there was great consensus in the types of behaviors that they described, and the purpose of those behaviors. Further, the interview data suggest that cultural brokerage acts fall into two types: *resolving* and *facilitating*. Resolving involves taking care of cultural issues on behalf of other members, such that the rest of the team can work *around* cultural differences; facilitating is

characterized by engaging other members and helping the team work *through* cultural differences. Interestingly, parallels to these constructs were found in related literatures.

The resolving broker manages cultural issues on behalf of other team members, such that they do not have to deal with these issues themselves. This is similar to Burt's (2000) description of a "tertius gaudens" (or "third who benefits") approach to brokerage, whereby the broker maintains a separation (in this case, a cultural one) among parties. However, the conceptual overlap ends there: while Burt's "tertius gaudens" broker seeks to enhance personal benefits from maintaining their position as a structural hole (Burt, 1992; 2000), the resolving cultural broker aims to enhance the collective performance of the multicultural team by taking care of culture-related issues on behalf of other members. Another parallel can be found in Schein's (1978; 1990) description of "model one" consultation, in which a consultant, manager, or parent helps a group (or individual) by providing expert information. However, Schein's consultant is external to the group, whereas the cultural broker is a member of the group.

Essentially, resolving allows other members to work together, without requiring them to adjust to or learn about different cultures. Thus, by engaging in resolving, the broker allows the group to *work around* cultural differences. The following quotes provide examples of resolving brokerage:

> For example, the engineer from Germany, his English was very bad. So when we were going into details, and they were arguing, "How can we solve this problem?" […], the engineer was going "uh.. uh.. uh.." And then he said "Oh, Lukas. Can we speak?" [I said,] "OK, tell me in German." So I translated. […] So he could talk to me in German, and I would say, "Listen, guys, I'm going to quickly translate", and I would translate and take his insecure words, and put them into secure English. (Interviewee #12, from Switzerland)

It's a pretty interesting dynamic, because typically, […] you'll have colleagues from Europe chime in and give various feedback, and the American counterparts [will do so as well]. And then for the Asian [side], I speak up quite a bit because otherwise, there's just absolute silence from the Asian team. Which is quite strange, because it's not a language issue. […] It's just, in a big group environment like this, they tend not to speak up as much. (Interviewee #51, from China)

Yeah, I think my boss asked me to be the point person to deal with them because he was like, "Yeah, I don't really get along with these guys on a style basis. They're too Western. But I really want this deal to happen, so I think you should give it a shot". (Interviewee #56, from the Philippines)

On the other hand, facilitating involves *engaging others* in the process of managing cultural issues. Unlike the Burt's (2000) *tertius gaudens* ("third who benefits") approach, this is more akin to a *tertius iungens* ("third who connects") orientation (Obstfeld, 2005), whereby the broker brings together previously unconnected parties "to facilitate coordination, collaboration, and the pursuit of common goals" (Lingo & O'Mahony, 2010). In the case of multicultural teams, the "connecting" that the facilitating broker does involves breaking down the cultural barriers between team members, rather than introducing parties who were previously unaware of one another. This is also akin to Schein's (1978; 1990) "model three" consultation, in which the consultant involves the client in diagnosing the problem and generating a solution, offering "process expertise".

At its essence, facilitating involves engaging and inviting other members of the group to take part in the process of dealing with whatever cultural issues the group faces. In short, the facilitating broker helps a multicultural team *work through* cultural differences, by engaging other members. The following examples are illustrative:

Or in the meeting, […] you can ask, "Hey, Giorgio, what do you think?" And he suddenly finds his way. You know, he pulls the pieces of the puzzle together, and you don't need to do it. (Interviewee #29, from Turkey)

Sometimes people from our Texas headquarters would land in China and […] they would use words that are colloquial and that our Chinese colleagues cannot understand. So then I would jump in and say, "Hey, can you explain to people like me that are not American?" […] (Interviewee #55, from Italy)

While cultural brokerage often involves mediating *interactions* between those of differing cultural backgrounds, in some cases, brokerage also requires synthesis or integration of *ideas* across parties (Lingo & O'Mahony, 2010): in this case, those from different cultures. When the team task requires combining elements of multiple cultures, or creating an output that caters to multiple cultures (I will refer to this type of task as a "multicultural task"), cultural brokerage takes on specific manifestations of the broader forms described above. Resolving takes the form of combining or synthesizing the cultures on behalf of the group. As one interviewee noted, "It's like a puzzle. You need to put the pieces together." By contrast, facilitating takes the form of eliciting relevant cultural information and ideas from the group. For example, another interviewee described, "I would ask [questions] as a way to get out information, and that would facilitate the communication." As in the broader definition, resolving here involves taking care of a cultural issue (in this case, the cultural element of the task) on behalf of the group; facilitating involves inviting other members to contribute to the synthesis of different cultures. In Studies 3 and 4, I focus on teams in this context: those working on "multicultural tasks", or tasks that require a synthesis of different cultures.

Cultural Insiders versus Cultural Outsiders

Many interviewees claimed that it was helpful, or even necessary, to have knowledge of the specific cultures represented in a team to effectively engage in brokerage. Previous research (e.g., DiMarco et al., 2010, Hong, 2010) and anecdotal evidence of common practices in organizations support this view. For example, many of the interviewees explained that it was valuable for them to "know both sides" or "have connections to each culture", and that such culture-specific knowledge and connections enabled them to engage in brokerage:

> You have to know these two cultures. It's like being a translator. If you understand Russian language and Czech language, you can work as a Russian-Czech translator. But if you don't know at least one language, you cannot be a translator. So you definitely have to understand both cultures and both mentalities. […] Because otherwise, how can you build a bridge? (Interviewee #21, from Russia)

> It would be a cultural disaster because you don't know [the cultures]. You have to have an origin to start, to gain advantage. […] My advantage is I have this 70% of my culture based in China and then I have 30% exposure to Western [culture], so it helps me understand. (Interviewee #18, from China)

However, a surprising finding from the interviews was that a number of interviewees spoke of being able to broker as a *cultural outsider*, someone who is not deeply familiar with the other members' cultures. Some even alluded to having an advantage as a cultural outsider, since they were perceived as a neutral third party (see quotes from Interviewees #5 and #29, below). Others spoke of the "burden" of being a cultural insider, having to balance conflicting expectations and norms between multiple cultures of which they were a part (see quote from Interviewee #58, below):

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When managing multiple cultures, I become the central point of contact. The fact that I'm not from [either culture] makes me neutral. It helps to be culturally agnostic when you interact with a lot of people. (Interviewee #5, from Venezuela)

It was easier to a certain extent, because I didn't take it personally, because I was from neither of the sides. They [also] didn't take it personally. And they were tolerant toward me as well. (Interviewee #29, from Turkey)

If you're related so much [to a culture], there's pressure to conform to that culture and it's hard to be positioned as a mediator. [If you're a cultural outsider,] there's less expectation of behaving in a certain way. That's the benefit of being an outsider. (Interviewee #58, from Japan)

This presents an intriguing puzzle. On the one hand, some interviewees claim that specific cultural knowledge is valuable for brokerage; on the other hand, others say it is unnecessary, or even a hindrance, to cultural brokerage. A possible solution to the puzzle can be found in the different types of expertise and advantages that cultural insiders and outsiders have. That is, based on their different expertise, cultural insiders and outsiders may enact the brokerage role in different ways, both ultimately providing benefits to their teams.

Perceptions of Insiders and Outsiders

Although both cultural insiders and outsiders may be helpful to multicultural teams, whether they are perceived as such is a different question. In the interviews, more individuals spoke about the benefits of being a cultural insider, or expressed the importance of having an insider on the team who could bridge both sides. Anecdotal evidence from global organizations and multicultural teams also suggests a preference for someone with content expertise (Schein, 1978; 1990) in the cultures represented in the team. Hence, when faced with challenges that stem from cultural differences, individuals

are likely to look to those who have specific knowledge and expertise in the cultures of the other team members. I therefore predict:

H2. Cultural insiders will be seen as being more helpful to a multicultural team than cultural outsiders.

How Insiders and Outsiders Broker

Although insiders are likely to be valued more than outsiders, I predict that both types of brokers actually engage in brokerage, albeit in different ways. Multicultural individuals have two types of competence: specific cultural knowledge and general cross-cultural abilities (Hong, 2010). Resolving involves managing cultural issues on behalf of others; hence, it requires a high level of specific cultural knowledge. Cultural insiders, by definition, have a deep understanding of the specific cultures involved. Thus, they should be able to draw on their specific knowledge to take care of cultural issues on behalf of the group to a greater extent than cultural outsiders, who do not have deep knowledge of other members' cultures. Thus, I predict:

H3a. Cultural insiders engage in a higher level of resolving than do cultural outsiders.

Meanwhile, facilitating does not require a high level of specific cultural knowledge, given that it involves engaging the other members in addressing cultural issues, rather than providing the solution directly. However, it does require general cross-cultural abilities, which can be gained through multicultural experience (Hong, 2010). Recent research on cultural metacognition suggests that there is an aspect of cross-cultural competence that is not tied to knowledge of specific cultures (Ang, Van Dyne, &

Tan, 2011; Earley & Ang, 2003). Hence, even though cultural outsiders do not have deep knowledge of the cultures involved, they are likely to be aware that cultural differences exist, and have the necessary cross-cultural abilities to address those differences by facilitating. Furthermore, whereas cultural insiders have pre-existing knowledge of the cultures involved, cultural outsiders have a greater need to draw on other members' cultural knowledge and perspectives to broker across cultures in a multicultural task. I therefore predict:

> H3b. Cultural outsiders engage in a higher level of facilitating than do cultural insiders.

Although cultural brokerage often emerged without formal appointment, there were some instances when the interviewees said they benefited from being formally appointed as a broker, or when they said they asked to be publicly appointed to play such a role. For example, an Italian interviewee, who was a cultural outsider in a multicultural team, asked his manager to announce to the rest of the team that he was appointed to facilitate between cultures. He claimed that this public appointment helped him engage in cultural brokerage, especially since he was a cultural outsider and thus not an obvious candidate as a broker. The literature on biculturals and multicultural teams (e.g., Hong, 2010) and anecdotal evidence also suggest that outsiders are less obvious candidates as potential brokers, and less likely to engage in brokerage. Meanwhile, given their expertise in the specific cultures, cultural insiders are natural candidates for bridging and integrating different cultures (Brannen & Thomas, 2010; DiMarco, 2010). Thus, I hypothesize that formal appointment will increase cultural outsiders' level of brokerage more than that of cultural insiders.

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Furthermore, formal appointment may differentially affect the cultural outsider's level of resolving and facilitating. Whereas resolving does not require the other members to change, facilitating involves engaging the other members in the process of managing whatever cultural issue the team faces. Thus, facilitating can be said to be more demanding on the other members than resolving. Formal appointment as a broker, then, should especially increase cultural outsiders' engagement in facilitating, as long as the other members are aware of the appointment. In short, formal appointment as a cultural broker should increase the brokerage activities of cultural outsiders, because their lack of specific cultural expertise otherwise makes them less salient candidates as brokers. In particular, formal appointment should increase outsiders' level of facilitating, because it requires more active cooperation from other members than resolving.

H3c. Formal appointment as a broker increases cultural outsiders' level of facilitating.

Outcome of Cultural Brokerage: Two Paths to Creativity

To foster collective creativity, brokers must be able to elicit and synthesize the ideas of others (Lingo & O'Mahony, 2010). Research has shown that those who are at the intersection of different networks gain exposure to multiple viewpoints, obtaining a "vision advantage" (Burt, 2004: 359) that enables them to be more creative (Brass, 1985; Burt, 2004). That is, individuals with contacts in multiple networks are more likely to see bridges between otherwise disconnected ideas, enhancing their ability to contribute to creative outcomes (Hargadon and Sutton, 1997; Perry-Smith and Shalley, 2003; Perry-Smith, 2006).

When it comes to cultural networks, a recent surge of research has demonstrated that multicultural experience can enhance individual-level creativity both in the lab and in the real world (e.g., Leung & Chiu, 2010; Leung, Maddux, Galinsky, & Chiu, 2008; Maddux & Galinsky, 2009; Tadmor et al., 2012). This is because multicultural experiences broaden one's conceptual horizon, enabling one to generate creative ideas based on novel combinations of elements of different cultures (Leung, Maddux, Galinsky, & Chiu, 2008; Tadmor et al., 2012). In particular, several studies have found that multiculturalism can lead to enhanced creativity (Cheng, Sanchez-Burks, & Lee, 2008; Tadmor, Galinsky, & Maddux, 2012). Hence, the more a multicultural member engages in resolving (i.e., taking care of idea generation on behalf of the team), the more creative the team outcome should be.

H4a. Higher levels of resolving by a multicultural member leads to higher levels of team creativity.

A team could also reach a high level of creativity by following a different, more interactive process. While resolving involves coming up with ideas on behalf of the group, facilitating involves eliciting ideas from other members, and should therefore trigger a more collaborative creative process. In the process of sharing their cultural perspectives and ideas, members become exposed to new viewpoints, and have a chance to build on one another's ideas (Hargadon & Bechky, 2006). In short, facilitating involves eliciting multiple viewpoints from the team, triggering novel combinations of ideas that would not have been accessible to any one member. Hence, following a different path from resolving, facilitating should also enhance team creativity.

H4b. Higher levels of facilitating by a multicultural member leads to higher levels of team creativity.

Cultural Brokerage and Team Viability

Another important aspect of team effectiveness is team viability, a team's capacity to perform well over time (Hackman, 2002; 2010). While resolving may lead to short-term performance gains, the team is likely to become dependent on the broker to take care of cross-cultural issues over time. Facilitating, on the other hand, should enable the team to work across cultures on its own, such that members learn how to collaborate directly with one another. In studies of leadership, "empowering" leadership, which involves encouraging subordinates to express their opinions and ideas, was found to enhance team efficacy and commitment (Cohen, Chang, & Ledford, 1997; Lorinkova, Pearsall, & Sims, 2013; Zaccaro, Rittman, & Marks, 2001). By the same token, facilitating should lead to increased team viability, even in the absence of the cultural broker. The interview data also suggests that facilitating may have a positive longer-term effect on team viability. For example, an American interviewee who frequently engaged in facilitating explained, "I would say it's like building up the relationships between them. The end goal would be to extract yourself from it. As they spend more time together, and they build up their own relationship, you become not necessary in that." In light of such evidence from the interviews and existing literature, I hypothesize that facilitating, but not resolving, will have a positive effect on team viability, when the cultural broker is no longer part of the group.

H5. Facilitating by a multicultural member increases team viability (i.e., team

performance on future tasks in the absence of a cultural broker).

In short, I predict that among those with a high level of multicultural experience (H1), cultural outsiders will engage in less resolving (H2a), and more facilitating (H2b) than cultural insiders. In addition, formally appointing a multicultural individual to engage in brokerage should increase cultural outsiders' level of facilitating (H2c). Both types of brokerage should enhance team creativity (H3a, H3b), while facilitating alone is expected to increase team viability (H4). Figure 2.1 shows the core theoretical model suggested by Hypotheses 1 to 5, with the exception of H2.
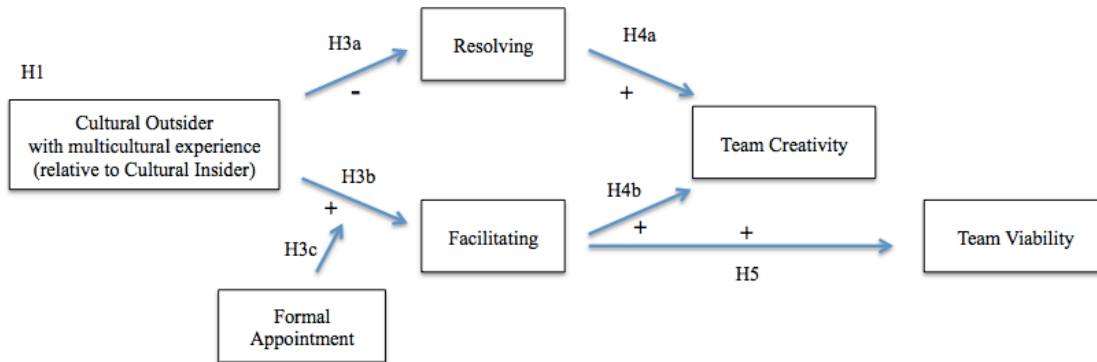
Figure 2.1. Theoretical Model of Cultural Brokerage

*Note: "Cultural outsider" is a dichotomous dummy-coded variable
(0=cultural insider = 0; 1= cultural outsider)

Cultural Brokerage and Individual Creativity

While the prior hypotheses focus on how cultural brokerage influences team creativity and viability, the final hypothesis concerns the effect of *engaging* in cultural

brokerage on the creativity of the cultural broker him or herself. That is, beyond helping the multicultural team achieve better outcomes, does cultural brokerage influence the individual-level creativity of the person engaging in brokerage? A number of my interviewees spoke about the process of engaging in brokerage as one that is full of "learning" and "enlightenment", suggesting that the act of engaging in brokerage may lead to creative benefits. Recent research has explored the link between culture and creativity, finding that exposure to different cultures, particularly in the form of living abroad, increases individual creativity (Leung et al., 2008; Maddux & Galinsky, 2009). For those who had previously lived abroad, mentally accessing the experience of living abroad also temporarily enhanced their creativity (Maddux & Galinsky, 2009).

As with team-level creativity, I posit that there are two paths to individual-level creativity, which map on to resolving and facilitating. When a broker engages in resolving, he or she needs to contemplate and combine elements of multiple cultures. Previous research has identified the process of actively conceiving multiple opposites simultaneously (i.e., the "Janusian" process) as one that enhances individual creativity (Rothenberg, 1996). Meanwhile, facilitating involves engaging other members in the process of managing differences, eliciting different cultural perspectives and ideas from them. In this process, the broker becomes exposed to new perspectives, information, and ideas from other members, and is given the opportunity to build on them (Hargadon & Bechky, 2006; Osborn, 1957; Paulus & Brown, 2003; Paulus, Larey, & Dzindolet, 2000). Hence, both resolving and facilitating should, through different paths, enhance the individual creativity of the broker. I therefore hypothesize:

H6. Engaging in cultural brokerage increases the broker's individual creativity.

`   To provide an empirical test of this emergent theory of cultural brokerage, I examine the hypotheses developed in this chapter in a series of surveys (Study 2) and experiments (Studies 3 and 4). Table 2.1 outlines the hypotheses and the studies that test them.

Table 2.1 List of Hypotheses

#	Hypothesis	Study
H1	In the absence of an assigned cultural broker, individuals with multicultural experience engage in more cultural brokerage than those with little or no multicultural experience	Study 3
H2	Cultural insiders will be seen as more valuable to multicultural teams than cultural outsiders.	Study 2 Study 3
H3a	Cultural insiders engage in a higher level of resolving than do cultural outsiders in a multicultural task	Study 3
H3b	Cultural outsiders engage in a higher level of facilitating than do cultural insiders in a multicultural task	Study 3
H3c	Formal appointment as a broker increases cultural outsiders' level of facilitating	Study 3
H4a	Resolving increases team creativity on a multicultural task	Study 3
H4b	Facilitating increases team creativity on a multicultural task	Study 3
H5	Facilitating increases team viability (i.e., team creativity on future multicultural tasks in the absence of a cultural broker)	Study 3 Study 4
H6	Engaging in cultural brokerage increases the broker's individual creativity	Study 3

CHAPTER 3.

STUDY 2: COMMON INTUITIONS ABOUT CULTURAL BROKERAGE

One of the unexpected findings from the interview study was the important role that a cultural *outsider* could play in the multicultural team. Anecdotally, it is much more common to see cultural *insiders* engaging in brokerage, or to come across a cultural *insider* who is appointed to play some sort of a bridging role. In this study, I explore commonly held intuitions and beliefs about what kind of member, and what type of expertise, is beneficial to a multicultural team. As a result of Study 1, I hypothesized that cultural insiders would be seen as being more valuable to the team than cultural outsiders (H6). In this chapter I test this hypothesis across three surveys, and find that cultural insiders are indeed thought to provide more value to a multicultural team than outsiders, and that people overwhelmingly prefer cultural insiders to cultural outsiders as cultural brokers.

GENERAL METHOD

Each study drew on five vignettes that featured short scenarios of a multicultural team having trouble because of cultural differences. The scenarios all depicted a team with members from two different countries (Scenario 1: US and Japan; Scenario 2: Germany and Italy; Scenario 3: Brazil and China; Scenario 4: US and Turkey; Scenario 5: US and Vietnam) and gave participants an option to add a new member to the team. Three of the five scenarios asked participants to recommend a new member for a fictional multicultural team; two scenarios asked participants to choose a new member for a fictional team that they were part of. Each participant was randomly given one of the five

scenarios. (See Appendix B for the full scenarios). All three studies were conducted on Amazon's Mechanical Turk (www.mturk.com), with non-overlapping participants. Participants were paid $0.20. Most participants were from the US; for Scenarios 4 and 5, which assumed that the respondent was from the US, all participants were based in the US.

In Study 2a, participants responded to an open-ended question about what kind of member they would add to the team and why. In Study 2b, another set of participants responded to a multiple choice question in which they were asked to choose the member that they thought would be most helpful among a number of different options. In Study 2c, another group of participants were given a list of different types of members, and asked to rate how helpful each one would be to the team. Across the three studies (and five vignettes), cultural insiders were consistently seen as more valuable than cultural outsiders, and preferred over any other type of member.

STUDY 2A. WHAT TYPE OF MEMBER WOULD YOU ADD?

Method

Study 2a was designed as an initial, exploratory test of the hypothesis. Each participant (N=184) was randomly given one of five scenarios depicting a multicultural team that was having some trouble. They were first asked if they thought it would be helpful to add a multicultural member to the team. If they responded "yes", they were asked to briefly describe the type of member they would recommend adding to the team (for Scenarios 1-3) or what kind of member they would like to add to their own team (Scenario 4-5). The qualitative responses were coded into the following mutually

exclusive categories: "cultural insider", "cultural outsider", "general multicultural",

"other cultural", "non-cultural", and "non-answer". See Table 3.1 for a list of the

categories and definitions, and corresponding examples.

Table 3.1 Study 2a Categories and Definitions

	Definition	**Example**
Cultural Insider	Someone who knows both cultures well	"The ideal member would have ties to both cultures. Maybe an american or japanese person that have lived and/or worked in both countries."
Cultural Outsider	Someone who knows neither culture well	"I think another member of a non American or Japanese perspective, to give a 3rd perspective."
General Multicultural	Someone who knows many (unspecified) cultures well	"Some one who comes from a couple of cultural back grounds or at least someone who has had extensive experience with multiple cultures."
Other Cultural	Other responses that mentioned culture but don't fall into above categories (or unclear)	"Someone that can translate"
Non-Cultural	Responses that are non-cultural	"I would like the person who is an extravert..person who is outspoken...and actively participating in the team activities."
Non-Answer	Responses that are not answering the question	"It would be easier to communicate, get along, and relate to each other"

Results

All but four of the participants (i.e., 180 out of 184) said "yes" to the first question, indicating that they would add a multicultural member to the team. A chi-square test of variance for each scenario showed that cultural insiders were preferred over cultural outsiders in 4 out of 5 scenarios (Scenario 1: χ^2 *(1, N=26)=22.15, p<.001*; Scenario 2*: χ^2 (1, N=17) =.53, p=.47*; Scenario 3: χ^2 *(1, N=22)=11.64, p<.001*; Scenario 4: χ^2 not calculated because 0 people chose cultural outsider; Scenario 5: χ^2 *(1, N=21)=17.19, p<.001*). Cultural insiders were also preferred more than general multiculturals in 4 out of 5 scenarios (Scenario 1: χ^2 *(1, N=28)=17.29, p<.001*; Scenario 2: χ^2 *(1, N=15)=1.67, p=.20*; Scenario 3: χ^2 *(1, N=27)=4.48, p=.03*; Scenario 4: χ^2 *(1, N=20)=1.62, p<.001*; Scenario 5: χ^2 *(1, N=24)=10.67, p=.001*). Finally, cultural insiders were mentioned more than all "other" responses that mentioned culture in 3 out of 5 scenarios[4] (Scenario 1: χ^2 *(1, N=26)=22.15, p=<.001;* Scenario 2: χ^2 *(1, N=15)=1.67, p=.20*; Scenario 3: χ^2 *(1, N=24)=8.17, p=.004*; Scenario 4: χ^2 *(1, N=35)=.26, p=.61*; Scenario 5: χ^2 *(1, N=29)=4.17, p=.04*).

Taking the five scenarios together, I find that the "cultural insider" category (93 responses) is cited more often than the "cultural outsider" (12 responses), χ^2 *(1, N=105)=62.49, p<.001*, the "general multicultural" (21 responses), χ^2 *(1, N=114)=45.47, p<.001*, and the "other" (36 responses), χ^2 *(1, N=129)=25.19, p<.001*,

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[4] This comparison is not as clean-cut as the others, since some of the "other" responses mentioned two categories. For example, a few of the responses described someone who is a cultural insider, and/or a cultural outsider. These responses were put in the "other" category, rather than being counted twice, under the "insider" and "outsider" categories.

categories. Hence, the results of this study provide support for Hypothesis 2. Figure 3.1 shows the distribution of categories pooled across the five scenarios.
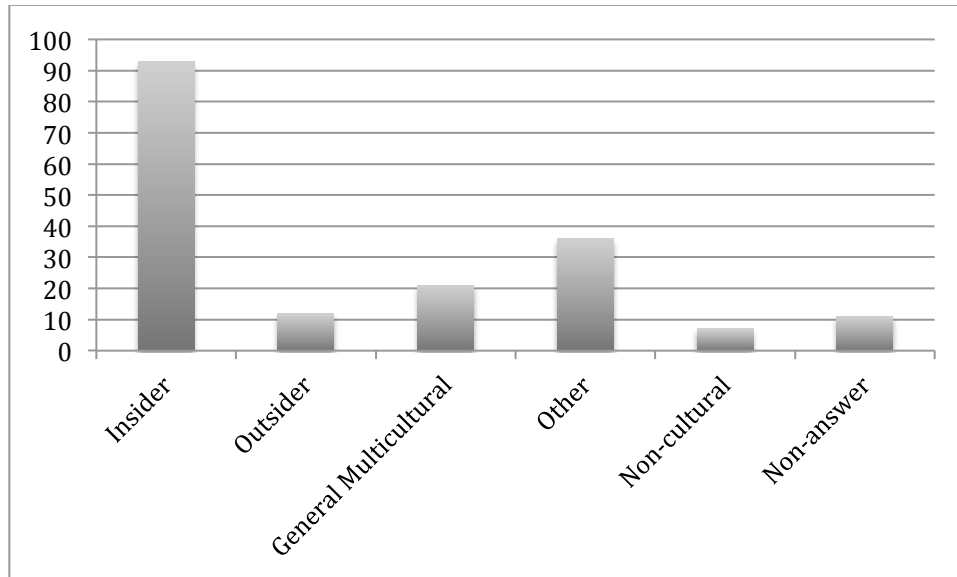
Figure 3.1 Study 2a (Open-Ended Responses) Frequency of Categories

STUDY 2B. WHICH CANDIDATE WOULD YOU CHOOSE?

Method

Study 2b employed the same scenarios and asked a different set of participants (N=175) to choose one new member among a list of candidates with different cultural backgrounds. Again, each participant was randomly given one scenario. The answer choices were generated based on the most common responses from Study 2a, and each scenario gave participants an option to choose among a) a cultural insider, b) a cultural outsider, c) a multicultural member who had knowledge of one of the cultures but not the other (I will henceforth refer to this candidate as the "half insider"), and d) other. The order of the options was randomized for each participant. After selecting a member, the

participants were asked to provide a brief reason for why they thought this candidate would be helpful to the team.

Results

Across all five scenarios, participants preferred the cultural insider to any other candidate. Cultural insiders were preferred over cultural outsiders (Scenario 1: χ^2 *(1, N=36)=32.11, p<.001*; Scenario 2*: χ^2 (1, N=36)=16, p<.001*; Scenarios 3 and 4: none of the participants chose the outsider; Scenario 5: χ^2 *(1, N=28)=20.57, p<.001*) and over half insiders (Scenario 1: χ^2 *(1, N=40)=22.5, p<.001*; Scenario 2: χ^2 *(1, N=32)=24.5, p<.001*; Scenarios 3: χ^2 *(1, N=36)=13.44, p<.001*; Scenario 4: none of the participants chose the half insider; Scenario 5: χ^2 *(1, N=28)=20.57, p<.001*). Across all of the scenarios, there was no significant difference between the cultural outsider and the half insider. Interestingly, across all five scenarios, no one chose the "other" option.

Combining all five scenarios, I find that cultural insiders (chosen by 150 individuals) are preferred over the cultural outsider (chosen by 9 individuals), χ^2 *(1, N=159)=125.04, p<.001*, and the half insider (chosen by 16 individuals), χ^2 *(1, N=166)=108.17, p<.001*. Thus, Hypothesis 2 was supported in this study as well. There was no difference between the outsider and half insider candidates, χ^2 *(1, N=25)=1.96, p=.16*. Figure 3.2 illustrates the distribution of votes across the categories.
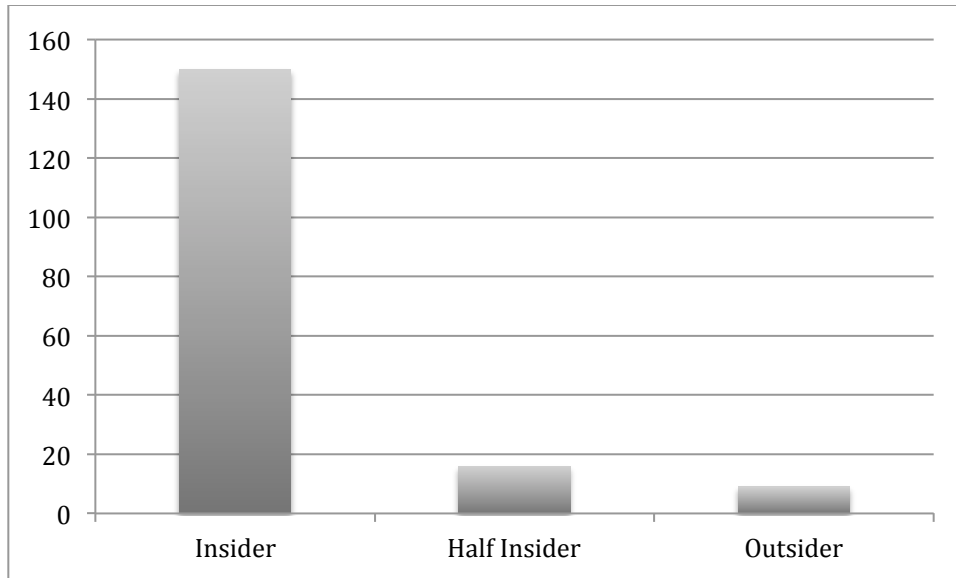
Figure 3.2. Study 2b (Multiple Choice Responses) Frequency of Categories

STUDY 2C. HOW HELPFUL IS EACH CANDIDATE?

Method

The previous two studies asked participants to make a choice about what kind of member they would want. However, it is possible that while participants would prefer a cultural insider when pressed to make a choice, they still think other types of members are valuable (conversely, they may think none of the candidates will be of much help). In this final study, I examine this possibility by collecting independent ratings of different types of members, rather than having participants choose one member. The same five scenarios were used, and a new group of participants (N=134) randomly saw one of the five scenarios each (Scenario 1: N=38, Scenario 2: N=21, Scenario 3: N=24, Scenario 4: N=27, Scenario 5: N=24). The list of candidates was the same as in Study 2b (cultural insider, cultural outsider, half insider) and presented in a randomized order for each

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participant. Participants rated each candidate on how helpful they thought the candidate would be to the team, on a 5-point scale ranging from "not at all helpful" to "extremely helpful"). The independent ratings allowed them to express the magnitude of the discrepancy (or lack thereof) between the perceived value of various candidates.

Results

Participants rated the cultural insider ($M=4.75, SD=.78$) more highly than the cultural outsider ($M=2.50, SD=1.28$) across all five scenarios (Scenario 1: $t(37)=9.34, p<.001$; Scenario 2: $t(19)=3.03, p=.003$; Scenario 3: $t(23)=8.75, p<.001$; Scenario 4: $t(26)=13.32, p<.001$; Scenario 5: $t(23)=8.33, p<.001$). Cultural insiders were also rated more highly than the half insider ($M=3.40, SD: 1.20$) across the five scenarios (Scenario 1: $t(37)=6.05, p<.001$; Scenario 2: $t(20)=2.18, p=.04$; Scenario 3: $t(23)=9.35, p<.001$; Scenario 4: $t(26)=6.21, p<.001$; Scenario 5: $t(23)=5.29, p<.001$). Moreover, cultural outsiders had the lowest ratings, and were also seen as significantly less helpful than the half insider in all but one of the scenarios (Scenario 1: $t(37)=6.17, p<.001$; Scenario 2: $t(19)=.91, n.s.$; Scenario 3: $t(23)=2.89, p=.008$; Scenario 4: $t(26)=4.52, p<.001$; Scenario 5: $t(23)=4.55, p<.001$).

Combining the scenarios, insiders ($M=4.75, SD=.78$) received higher scores than outsiders ($M=2.50, SD=1.28$), $t(132)=17.22, p<.001$, and half insiders ($M=3.40, SD:1.20$), $t(133)=11.40, p<.001$, providing additional support for Hypothesis 2. In addition, half insiders received higher ratings than outsiders $t(132)=7.52, p<.001$. Figure 3.3 shows the average score for each answer choice.
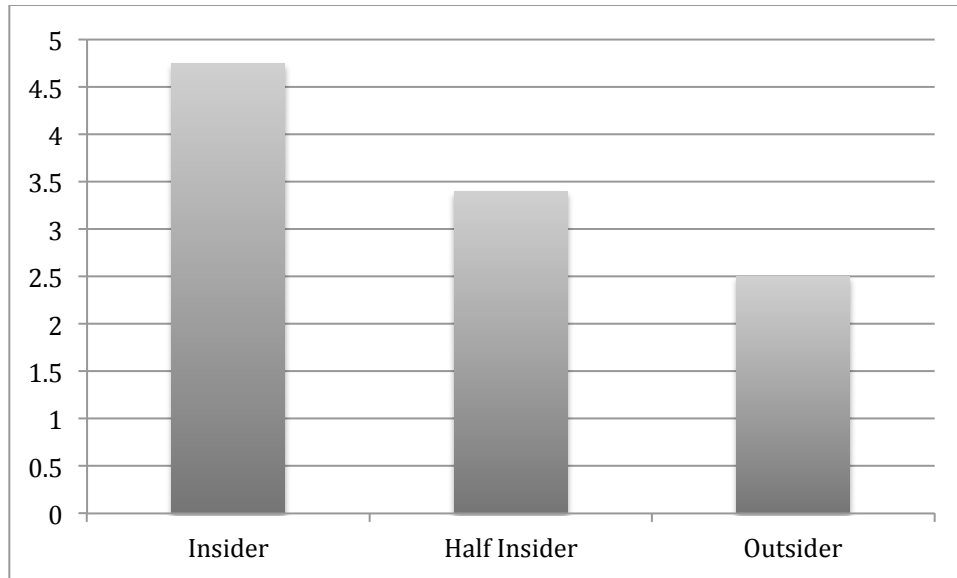
Figure 3.3. Study 2c (Independent Ratings) Rating of Candidates

SUMMARY AND DISCUSSION

Across the three studies, people consistently preferred cultural insiders to other types of members, and perceived them as being more valuable to multicultural teams. In fact, cultural outsiders were not only preferred and valued less than cultural insiders (Studies 2a, 2b, 2c) but also less than multicultural members who were described as being familiar with only one of the cultures (Study 2c). This reflects the degree to which people believe that having content expertise (Schein 1978; 1990) is necessary to provide value to a team. In fact, the findings from Study 2c show that people prefer having individuals with partial or asymmetrical content expertise (i.e., half insiders) to those with none (i.e., outsiders). It appears that process expertise is either overlooked or not attributed to cultural outsiders. Together, the results confirm the hypothesis that cultural insiders are valued over outsiders. Such findings also mirror what we often see in global teams and organizations.

While the overall pattern revealed a strong preference for insiders, there was one exception. In the first study, Scenario 2 was the only one in which cultural insiders were not cited more frequently than other types of members (Study 2a). This may have something to do with the fact that this is the scenario in which the cultural distance between the countries (i.e., Germany and Italy) was the smallest (all of the other scenarios featured two countries located in different continents). Although I do not explore this issue in detail here, cultural distance is likely to be an important factor that influences brokerage dynamics, and one that merits further investigation in future studies.

Another interesting area for further consideration is the distinction between insiders and outsiders. The open-ended questions in Study 2a allowed for responses that did not fall into either category, and a handful of the responses were quite creative. Some distinguished between linguistic and cultural knowledge (e.g., "Someone who can speak both languages so he/she can help with the communication. Ideally someone who is not from the United States and not from Japan."). Others made a distinction between cultural background and cultural knowledge (e.g., "Someone who understands both cultures. His own culture could be anything honestly."); one such participant wrote that she would like someone who is both a cultural insider *and* outsider ("I think you should have someone from a third culture who understands both cultures"). These more nuanced responses point to interesting solutions, and serve as a reminder that the insider/outsider distinction is not always straightforward, but one that can be multifaceted and open to interpretation.

In sum, the series of survey studies in this chapter point to the conclusion that, as predicted, cultural insiders are valued and preferred over cultural outsiders. Whether these intuitions are accurate, however, is another question. In the remaining two studies

of this dissertation, I test the validity of such beliefs, and find that contrary to common

intuition, cultural outsiders are equally (if not more) effective compared to cultural

insiders at enhancing team effectiveness.

CHAPTER 4.

STUDY 3: CULTURAL BROKERAGE AND TEAM EFFECTIVENESS

In this experimental study of multicultural teams, I test all of the hypotheses developed in Study 1. First, I test the prediction that multicultural team members will engage in more cultural brokerage than other members, even when no one is appointed to do so (H1). I then examine how cultural insiders and outsiders are perceived by other members of their team (H2). To compare perceptions with actual behaviors, I test whether and how cultural insiders and cultural outsiders differ in how they engage in brokerage (H3a, H3b), and whether formal appointment changes this pattern (H3c). Finally, I test the effects of resolving and facilitating on team creativity (H4a, H4b), team viability (H5), and the creativity of the broker (H6).

METHOD

Design and Participants

I tested the hypotheses in an online group experiment using a 2 (cultural background of bicultural member: cultural insider vs. cultural outsider) x 2 (formal assignment of cultural broker: yes vs. no) between-groups design. Using a novel methodological paradigm, I brought together 83 multicultural teams (249 individuals) to collaborate on a multicultural, creative task. Teams of three members each were randomly assigned to conditions. At the team level, the attrition rate was about 50%. Approximately 200 teams were scheduled for study sessions; of these, 102 teams successfully started the study. Nineteen of these teams experienced technical difficulties

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(e.g., loss of internet connection) that prevented them from completing the study, leaving a total of 83 teams that were included in the final analysis.

I recruited eligible participants based on their responses to a preliminary survey asking them to list all the countries they have lived in, as well as which culture(s) they have deep knowledge of. Monocultural participants in the online group study were those who had only lived in one country (India or the US) and indicated significant knowledge of no other cultures. Following previous studies (e.g., Benet-Martinez et al., 2002; Hong et al., 2000), participants were categorized as "multicultural" if they had lived in two countries for at least 5 years each, and indicated a high level of knowledge of both cultures.

Experimental Manipulations

Cultural background of multicultural member. All of the groups had one member from the United States and one member from India. These two members had not spent any time outside of their country of origin. In addition, roughly half of the groups had a third member who had lived in both the U.S. and India for at least 5 years each and reported having deep knowledge of the two cultures ("cultural insider" condition); the rest of the groups had a third member who had lived in two countries other than the U.S. and India for at least 5 years each (e.g., China and Australia) and reported having deep knowledge of the cultures of those countries ("cultural outsider" condition)[5]. Based on the operationalization of cultural experiences in this study, I refer to the team member

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[5] To match the English proficiency of the multicultural member, the cultural outsiders were always from an English-speaking Western country (primarily the UK and Australia).

with extensive multicultural experience as the "multicultural" member, and the other two members (American and Indian) as the "monocultural" members.

Formal assignment of cultural broker. I also manipulated whether or not the bicultural individual (the cultural insider or cultural outsider) was formally appointed to be a cultural broker. In half of the teams, the bicultural was formally asked to play the role of a "cultural facilitator", helping the team members integrate the two cultures. In the other half, no one in the team was asked to play this role, nor was there any mention of such a role.

I used two primary sources for recruiting: I recruited the monocultural individuals (those from the US and India) through Amazon's Mechanical Turk (Mturk). I recruited the multicultural individuals by posting the study announcement to online groups and listservs, such as community groups (e.g., "Indians in Boston") and academic groups (e.g., "Singaporean Students Association of the University of South Wales"); some multicultural individuals came from the Mturk pool. Monocultural participants were paid $10 for their participation; multicultural participants were paid $20[6]. 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 alternate source). Table 4.1 shows the age and gender distributions for each type of member.

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[6] The rates differed because $10 appeared to be an attractive amount for Mturk participants, whereas additional payment was needed to entice non-Mturk participants to take part in an online study. Participants were not aware of this discrepancy, and the payment amount was not discussed in any of the teams.

Table 4.1. Age and Gender Composition by Member Background

	Average Age (Std dev)	% Male
American (N=83)	32.32 (10.52)	53.01
Indian (N=83)	31.06 (10.06)	68.35
Cultural Insider (N=45)	27.9 (9.34)	55.26
Cultural Outsider (N=38)	25.95 (7.25)	57.5

Experimental Task

The task required team members to draw upon the cultures represented in the group to produce a creative outcome. Specifically, teams were told to take on the role of a multicultural event planning agency, and brainstorm ideas for a multicultural wedding between clients from the US and India. They were told that the clients had two criteria: a) that the wedding should incorporate elements of both American and Indian cultures, and b) that the wedding should be creative. They were informed that a panel of judges who were familiar with both cultures would evaluate their ideas, and that the team with the most creative ideas would be given a bonus of a Kindle for each member.

The team task was divided into three parts. Together, the three members generated ideas for a food dish, a musical performance, and a special ritual for the wedding. They were given 8 minutes for each task (24 minutes total), during which they engaged in discussions with their team members (via chat) and entered their final idea in the provided text box. Following this primary group task, the two monocultural individuals were given a secondary task to work on without the multicultural member.

(Meanwhile, the multicultural member started working on the post-task survey independently.) The task was to come up with an event for the parents of the bride and groom to engage in after the wedding. Again, teams were told to cater to both cultures, and to be creative.

Apparatus

The group study was conducted using an online platform developed by the Center for Collective Intelligence at MIT in collaboration with Carnegie Mellon (Woolley et al., 2010), which allows the participants to chat and virtually collaborate on tasks. Each participant was instructed to log in to the study website at an agreed-upon time using a unique user ID, and interacted with the other two teammates from his or her own computer. All interactions that took place on the platform were recorded for further analysis. (See Appendix C1 for a screenshot of the online platform).

Procedure

Pre-task Survey 1. Participants filled out the first survey several days before taking part in the team task. This survey contained questions about participants' current country of residence, which other countries (if any) they had lived in and for how long, as well as their familiarity with different cultures. It also included an individual-level creativity task, in which participants were instructed to generate as many different uses of a brick as they could come up with in one minute. At the end of the survey, participants were given information about the team study, and instructed to write down their email address if they were interested. They were informed that they would be contacted with further instructions via email if they were eligible, based on their responses.

Pre-task Survey 2.This survey contained a list of possible study session times, and a 1-minute tutorial video about the online platform (See Appendix C2). Based on their responses on this survey, participants were matched with teammates and scheduled to timeslots. They were then informed via email about the time of their session and given a unique ID to sign in to the platform.

Team Study. To minimize attrition, the team members were sent reminders 1 day before the session, and 1 hour before the session. If all three team members signed in at the scheduled time, the session began automatically and teams were taken through the task via a pre-programmed script. If one or more members did not show up, participants were given the opportunity to sign up for another session.

The team study started with another 1-minute tutorial video (See Appendix C2) on how to use the various functions of the online platform. Then, members were given three minutes to introduce themselves, and identify one another's cultural backgrounds using the chat window. Following this, they were given instructions about the team task: the multicultural wedding planning exercise. They were given eight minutes each to discuss and decide on a food dish, a musical performance, and a special ritual. Following this 24-minute team exercise, the multicultural member was instructed to leave the online platform and begin the post-task survey independently. Meanwhile, the other two members were instructed to stay on the platform and work on one final task together: coming up with an activity for the parents of the bride and groom to engage in following the wedding. They were given 5 minutes for this task. After completing this final task, the monocultural members each received a post-task survey to complete on their own.

Post-task Survey. Following the team study, each member completed a post-task survey. For the multicultural member, this started with an individual-level creativity task, in which they were asked to come up with as many uses of a paper clip as they could in 1 minute. They were then asked to indicate to what extent they had engaged in facilitating and resolving throughout the team task, as well as their own assessment of how well they thought the team had done. The post-task survey for the monoculturals started by asking them to evaluate the extent to which the multicultural member engaged in facilitating and resolving. They were also asked to rate the multicultural member on a number of dimensions such as warmth, creativity, and trustworthiness. Finally, the survey asked for their evaluation of the team's performance.

Measures

Team Creativity. Each group produced one set of ideas for the multicultural wedding, leading to a total of 83 sets of ideas (food, music, ritual). Six raters who were deeply familiar with both Indian and American cultures[7] 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 (food, music, ritual) were aggregated to form an overall rating of the creativity of the whole event. Because the creativity score for each rater was significantly different ($F(5,488)=85.56$, $p<.001$), the ratings were standardized for each rater. Inter-rater reliability for the

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[7] The raters were individuals who had lived in both India and the US for at least 5 years each, and had deep knowledge of both cultures.

standardized creativity ratings among the six raters was surpassed the widely-used criterion level of .70 (ICC(1,6)=.74); hence the standardized ratings from the six raters were averaged to form the final measure of each team's creative performance[8].

Team Viability. The same raters also evaluated the creativity of the idea produced by the two monoculturals (i.e., an activity for the parents). After accounting for the groups that ran out of time or did not follow the instructions correctly (e.g., the multicultural member not exiting the online platform as instructed, or one of the monocultural members exiting the platform too early), there were 73 ideas to be rated. Inter-rater reliability of the standardized creativity ratings for this task was sufficiently high (ICC=.70), and the six raters' scores were averaged to form the measure of team viability.

Individual Creativity. A different set of two judges independently rated all of the ideas generated from the two individual-level creative tasks. Ratings were based on the overall novelty of the entire set of ideas for each person. Inter-rater reliability was sufficiently high for the pre-group study task (average α=.79) and the post-group study task (α=.83), and the two raters' scores were averaged to form measures of individual-level creativity before and after the group study.

Cultural Brokerage. Cultural brokerage was measured by coding the chat dialogue for evidence of facilitating and resolving. The 83 study sessions yielded nearly 13,000 lines of chat dialogue, and the full dialogue for each group was coded for

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[8] For the unstandardized ratings, the Cronbach's alpha value is .73; the ICC value is .31. The low ICC reflects the fact that the raters used the scale differently.

evidence of facilitating or resolving. In this context, facilitating took the form of eliciting culture-related information or perspectives from other members and inviting them to share culturally-relevant information or ideas (e.g., "Tell me about popular music these days in India"). Meanwhile, resolving took the form of proposing an idea that includes elements of both cultures (e.g., "How about American wedding songs like Here Comes the Bride with traditional Indian instruments?") hence completing the task of combining the different cultures on behalf of the group. The dialogue was coded at the sentence-level, yielding a count of how many times each member had engaged in resolving and facilitating during the team exercise. The brokerage activity of all three team members was examined. A research assistant coded a random subset (25%) of the groups using the same protocol; reliability was sufficiently high for both constructs (Resolving: α = .75; Facilitating: α = .73).

Cultural brokerage was also measured via a set of items in the post-task survey for the participants. However, the inter-member agreement was low (α =.15 for resolving; α =.13 for facilitating); thus this measure was not used in the final analysis. Interestingly, the bicultural member's self-report of his or her own brokerage activities was significantly correlated with the brokerage measured by coding the chat dialogue (Resolving: r=.52, p<.001; Facilitating: r=.82, p<.001), whereas the monocultural members' report of the multicultural member's brokerage activities were not.

Team Member Perceptions. At the end of the study, all team members were independently asked to predict how well their team had done on the task. The three items for predicted performance were: "Our team was as creative as we could be"; "Our team's performance is as strong as it could be"; "Our team has a very high chance of winning the

bonus". The Cronbach's alpha for the three items was at least .90 for each of the three members. In addition, the monocultural members were each asked to rate the bicultural member on five dimensions: competence, warmth, trustworthiness, helpfulness, and how willing they would be to work with this person again in the future.

RESULTS

I tested the hypotheses using t-tests and ordinary least squares regressions with dummy-coded variables to reflect the teams' assignment to the experimental conditions (0=cultural insider, 1=cultural outsider; 0=no broker assignment, 1=broker assignment) and standardized ratings of team creativity and viability.

The effect of multicultural experience on brokerage. Based on the count of brokerage acts by each member throughout the experimental task, the multicultural member (M=9.00, SD=5.38) engaged in more brokerage than both the monocultural American (M=2.93, SD=2.03), $t(82)$=9.83, p<.001, and the monocultural Indian member (M=1.02, SD=1.32), $t(82)$=12.43, p<.001. This pattern was the same when no one was appointed to engage in brokerage, with the multicultural member (M=8.29, SD=4.87) engaging in more brokerage than both the American member (M=2.81, SD=1.94), $t(41)$=6.84, p<.001, and the Indian member (M=1.02, SD=1.33), $t(41)$=8.37, p<.001. Hence, Hypothesis 1 was supported.

When looking at resolving and facilitating separately (in the absence of an assigned broker), the multicultural member (M=3.79, SD=2.39) engaged in more resolving than the American member (M=1.05, SD=.94) , $t(41)$=6.63, p=<.001 and the Indian member (M=.40, SD=.73), $t(41)$=8.67, p<.001; the multicultural member (M=4.50,

SD=3.68) also engaged in more facilitating than the American member (*M*=1.76,

SD=1.46), *t*(41)=4.75, *p*<.001, and the Indian member (*M*=.62, *SD*=1.06), *t*(41)=6.01,

p<.001. Based on these findings, I henceforth refer to the multicultural individuals as the
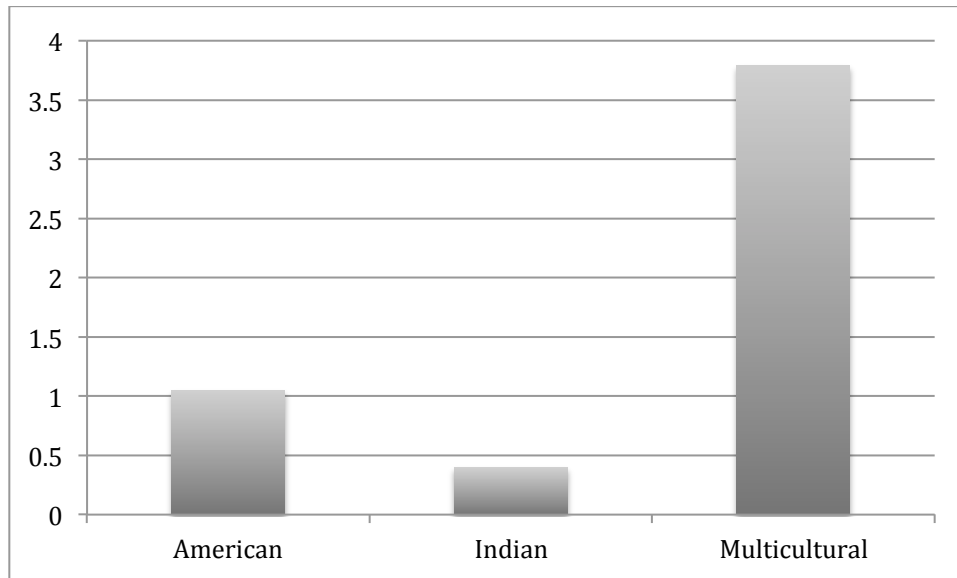
cultural brokers in this study.

Figure 4.1. Resolving by Member Background (in the Absence of Assigned Broker)
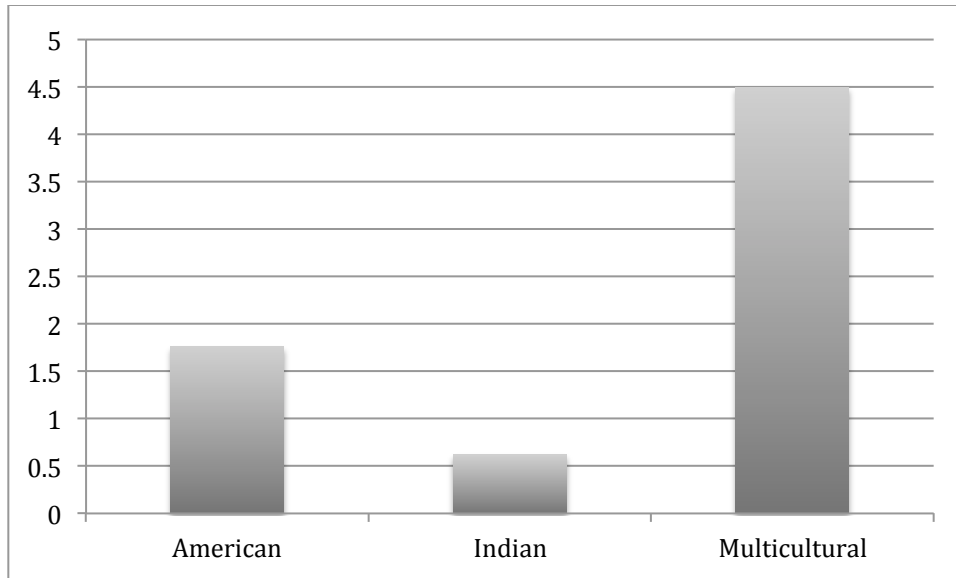
Figure 4.2. Facilitating by Member Background (in the Absence of Assigned Broker)

Team member perceptions. Teams with cultural insiders had higher predictions of their own performance (*M*=4.02, *SD*=.72) compared to teams with outsiders (*M*=3.54, *SD*=.77), *t*(82)=-2.92, *p*=.005. This pattern was the same for perceptions by both multiculturals, *t*(82)=-2.81, *p*=.006, and monoculturals, *t*(82)=-2.04, *p*=.05, suggesting that team members thought cultural insiders were more helpful to team performance than cultural outsiders. This is consistent with the findings from Study 2, and provides additional support for Hypothesis 2.

In addition, the type of brokerage the multicultural member engaged in influenced team members' perceptions of the multicultural member, as well as team members' perceptions of how well the team performed. The broker's level of resolving, but not facilitating, had a positive effect on other members' perceptions of the broker's competence (American member: *β*=.40, *p*<.001; Indian member: *β*=.27, *p*=.02), warmth (American member: *β*=.25, *p*=.02; Indian member: *β*=.27, *p*=.001), trustworthiness

(American member: β=.34, p=.002; Indian member: β=.26, p=.02), and helpfulness

(American member: β=.34, p=.002, Indian member: β=.28, p=.01). Furthermore, the

more the broker engaged in resolving (but not facilitating), the more willing the other

members were to work with the broker again in the future (American member: β=.35,

p=.001; Indian member: β=.19, p=.10). Finally, the more the broker engaged in resolving,

the higher the team's predicted performance was (β =.22, p=.04). Conversely, the more

the broker facilitated, the *lower* the team's predicted performance was (β=-.21, p=.05).

The effect of cultural insiders vs. cultural outsiders on the type of brokerage. As

predicted, cultural insiders (*M*=4.6, *SD*=2.54) engaged in more resolving than cultural

outsiders (*M*=3.53, *SD*=2.26), $t(82)$=-2.02, p=.047, while cultural outsiders (*M*=7.32,

SD=4.85) engaged in more facilitating than cultural insiders (*M*=2.84, *SD*=2.68),

$t(82)$=5.30, p<.001 (See Figure 4.3). Thus, Hypotheses 3a and 3b were supported.

Furthermore, there was a significant interaction between formal assignment and the

broker's cultural background on facilitating, $t(82)$=2.59, p=.01, such that formal

assignment increased outsiders', but not insiders' engagement in facilitating. There was

no interaction effect for resolving, $t(82)$=-.05, *n.s.* (See Figure 4.4). In other words,

outsiders (but not insiders) engaged in facilitating to a greater extent when they were

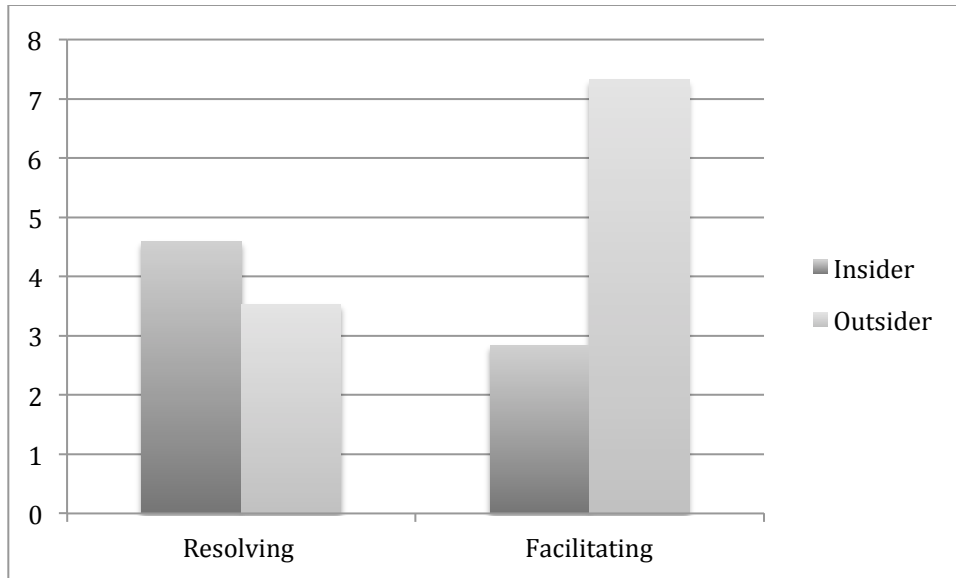formally appointed to facilitate between cultures, providing support for Hypothesis 3c.

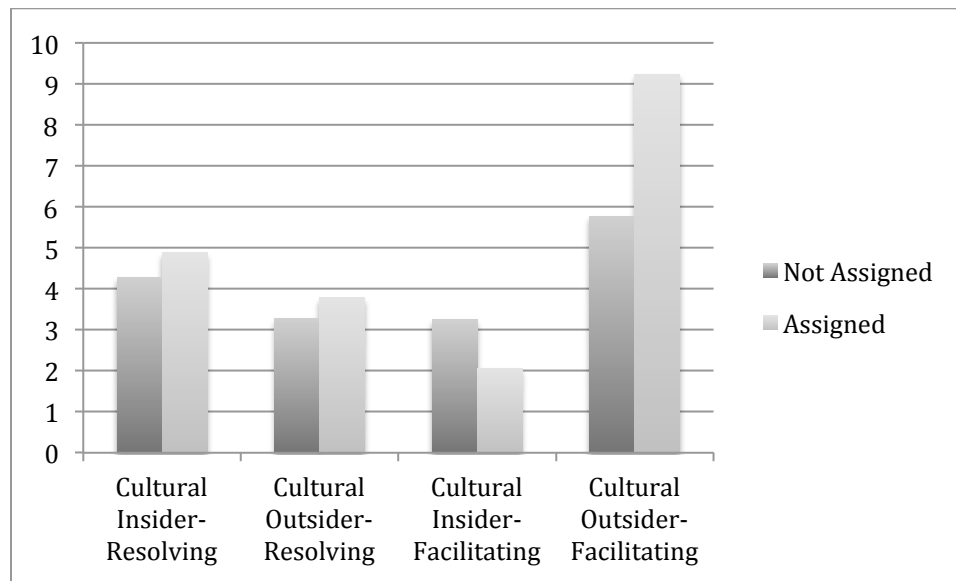Figure 4.3. Resolving and Facilitating by Broker Type

Figure 4.4. Resolving and Facilitating by Condition

The effect of facilitating and resolving on team performance. As predicted,

results of an OLS regression revealed that both facilitating, $\beta = .21$, $p=.04$, and resolving,

$\beta = .41$, $p<.001$, by the multicultural member increased team creativity. Together,

resolving and facilitating accounted for approximately 22% of team creativity (Adjusted

$R^2=21.66$, $F(2,89)=12.34$, $p<.001$). Hence, Hypotheses 4a and 4b were supported. It is

worth noting that facilitating and resolving at the team level (calculated as the sum of all

three members' facilitating and resolving activities) also predict team creativity

(Facilitating: $\beta = .20$, $p=.04$; Resolving: $\beta = .41$, $p<.001$); however, this effect is entirely

driven by the bicultural member's brokerage activities. Monocultural members'

engagement in resolving and facilitating had no effect on team creativity (Facilitating: β

$= .04$, *n.s.*; Resolving: $\beta = -.01$, *n.s.*).

Although not hypothesized, there was another interesting pattern in the data: there

was an interaction between facilitating and resolving on team creativity, $\beta = -.45$, $p=.07$,

such that facilitating had a more positive effect on creativity when the level of resolving

was low, and vice versa. This suggests that teams may benefit from one predominant

form of brokerage, rather than a high level of both types.

The effect of facilitating and resolving on team viability. Facilitating did not

have the hypothesized main effect on team viability, $\beta = .02$, *n.s.* Thus, Hypothesis 5 was

not supported.

The effect of engaging in cultural brokerage on the creativity of the broker.

Resolving, $\beta = .25$, $p=.02$, and facilitating, $\beta = .33$, $p=.003$, were both found to increase

the creativity of the broker in a follow-up individual creativity task, controlling for the

broker's pre-task individual creativity. Hence, Hypothesis 6 was supported. Specifically, for cultural insiders, engaging in resolving led to enhanced individual creativity, $\beta = .34$, $p = .04$; conversely, for cultural outsiders, engaging in facilitating led to increased individual creativity, $\beta = .33$, $p = .05$.

Post-hoc analysis of team member creativity as a moderator. Post-hoc analyses revealed that the average individual-level creativity of the two monocultural members moderated the effects of both resolving and facilitating on team creativity. Specifically, the lower the members' average individual creativity, the greater the positive effect of resolving was on team creativity, $\beta = -1.49$, $p = .001$. Conversely, the higher the team members' average creativity, the more positive the effect of facilitating was on team creativity, $\beta = 1.22$, $p = .04$.

SUMMARY

This study illustrates that more culturally experienced members of multicultural teams engage in cultural brokerage, even without being appointed to do so (H1 supported). Team members predicted that their team did better when there was a cultural insider, rather than an outsider, on the team (Hypothesis H2 supported). However, both insiders and outsiders proved to boost team performance, by engaging in different types of brokerage. Cultural insiders were more likely to broker by resolving (H3a supported), whereas cultural outsiders tended to broker by facilitating (H3b supported). Both types of brokerage led to enhanced team creativity (H4a and H4b supported), suggesting that there is more than one way that a multicultural member can be helpful to a multicultural team, and, contrary to team members' beliefs, that one need not have content expertise in the

given cultures to be of value. In addition, the findings hint that there are different conditions in which the two types of brokerage may be differentially effective. Post-hoc analyses of the experimental data revealed that the creativity of team members is one such moderator. Resolving was more effective when the creativity of team members was low; facilitating was more effective when the creativity of team members was high. Other possible moderators, such as relative status of the broker, cultural distance between the team members, and task type, should be examined in future research.

Neither type of brokerage was shown to increase team viability in this study (H5 not supported). However, the lack of an effect may be due to several factors: one is the lower number of teams that completed the final task (N=73). Another is the shorter time frame given for this task (5 minutes), compared to the 8 minutes given for each of the previous tasks; teams may have gotten entrained (McGrath & Kelly, 1986) to the original time span, and the shorter time could have washed out any lagged effects of brokerage from the previous section. In Study 4, I account for these shortcomings and test the joint and separate effect of the two types of brokerage on team viability.

Other than the positive effects on team performance, engaging in brokerage also led to a creative boost for the broker (H6 supported). Even when controlling for initial levels of creativity, there was a positive relationship between engaging in cultural brokerage and individual creativity measured directly after the team task. This suggests that cultural brokerage is not only beneficial for the team, but that there are personal benefits to engaging in resolving and facilitating. One caveat is that it is unclear whether one needs to directly engage in these brokerage behaviors to experience a boost in creativity. Because the monocultural individuals collaborated on a follow-up task without

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the multicultural member following the group task, I was unable to measure their

individual-level creativity directly after the group task. In the absence of this data, it is

difficult to say whether it is the act of engaging in cultural brokerage or the experience of

being part of a group where brokerage is taking place that enhances individual creativity.

Future research should be conducted to shed light on this issue.

In sum, this study provides an empirical test of the hypotheses presented in Study

1. Most hypotheses (with the exception of H5) were supported, lending support to the

theoretical model. In the next chapter, I re-examine the hypothesis around cultural

brokerage and team viability (H5), addressing the shortcomings of the current study.

CHAPTER 5.

STUDY 4: CULTURAL BROKERAGE AND TEAM VIABILITY

In this study, I tested the relationship between cultural brokerage and team viability. As in Study 3, I predicted that facilitating, but not resolving, would increase team viability. In addition, based on the new insights from Study 3, I predicted that facilitating would increase team viability more when it was carried out in its pure form, without resolving. Whereas facilitating should empower the team by helping them find an effective process, resolving should make the team relatively more dependent on the broker. Hence I predicted that facilitating, but not resolving, would increase team viability (H5a) and that facilitating would increase team viability more when it is not coupled with resolving (H5b).

METHOD

This study used the same overall methodology as Study 3; the online platform, as well as the battery of tasks, remained the same. To manipulate the type and level of brokerage directly, I recruited and trained confederates to enact the role of the multicultural member. The teams were composed of one member from the US, one member from India, and a trained confederate posing as the multicultural member.

Participants. As in Study 3, I recruited eligible participants based on their responses to a preliminary survey asking to list all the countries they have lived in, as well as which culture(s) they have deep knowledge of. Eligible participants were those who had only lived in one country (U.S. or India) and indicated significant knowledge of no other cultures. Participants were paid $10 for completing the study. After excluding

teams in which one or more members did not complete the study, were missing for a significant part of the team interaction (i.e., more than 3 minutes), or had participated in the study before, I was left with 95 teams.

Experimental Manipulations and Confederate Training. I manipulated the type of brokerage the confederate enacted across the four experimental conditions: resolving only, facilitating only, both facilitating and resolving, and no brokerage (control). In the resolving only condition, the confederate said three lines (per task; nine lines total) that combined elements of Indian and American cultures in the form of an idea. In the facilitating only condition, the confederate said three lines per task that elicited culture-related information and ideas from the other members. In the resolving and facilitating condition, the confederate said three resolving lines and three facilitating lines per task (same lines as the facilitating only and resolving only conditions). In the no brokerage condition, the confederate said three lines per task that were neither resolving nor facilitating, but relevant to the task. Across the four conditions, the lines were based on common phrases from Study 3, since this study used the same task and paradigm. (See Appendix D for the instructions and scripts given to the confederates for each condition.)

The confederates were trained using an iterative approach in which they tried out an initial script for each condition, gave feedback to the researcher about what worked well and what didn't, and then tried out a revised script based on their feedback, and so on. Two rounds of pilot sessions were run before the script was finalized. By the time the script was finalized, all of the confederates felt comfortable with the final script and could enact the conditions competently. Six confederates were trained and participated in the pilot sessions; in the end, five confederates completed the full study.

Experimental Task

The task required team members to draw upon the cultures represented in the group to produce a creative outcome. Specifically, teams were told to take on the role of a multicultural event planning agency, and brainstorm ideas for a multicultural wedding between clients from the US and India. They were told that the clients had two criteria: a) that the wedding should incorporate elements of both American and Indian cultures, and b) that the wedding should be creative. They were informed that a panel of judges who were familiar with both cultures would evaluate their ideas, and that the team with the most creative ideas would be given a bonus of a Kindle for each member.

The team task was divided into two parts. Together, the three members generated ideas for a food dish, a musical performance, and a special ritual for the wedding. This time, they were given 5 minutes for each task (15 minutes total), during which they engaged in discussions with their team members (via chat) and entered their final idea in the provided text box. Following this primary group task, the two monocultural individuals were given a follow-up task to work on without the multicultural member. The task was to come up with an event for the parents of the bride and groom to engage in after the wedding. Teams were told to cater to both cultures, and to be creative.

Apparatus

The group study was conducted using an online platform developed by the Center for Collective Intelligence at MIT in collaboration with Carnegie Mellon (Woolley et al., 2010), which allows the participants to chat and virtually collaborate on tasks. Each participant was instructed to log in to the study website at an agreed-upon time using a

unique user ID, and interacted with the other two teammates (one of whom was actually a confederate) from his or her own computer. All interactions that took place on the platform were recorded for further analysis.

Procedure

Pre-task Survey 1. Participants filled out the first survey several days before taking part in the team task. This survey contained questions about participants' current country of residence, which other countries (if any) they had lived in and for how long, as well as their familiarity with different cultures. It also included an individual-level creativity task, in which participants were instructed to generate as many different uses of a brick as they could come up with in one minute. At the end of the survey, participants were given information about the team study, and instructed to write down their email address if they were interested. They were informed that they would be contacted with further instructions via email if they were eligible, based on their responses.

Pre-task Survey 2.This survey contained a list of possible study session times. Based on their responses on this survey, participants were matched with teammates and scheduled to timeslots. They were then informed via email about the time of their session and given a unique ID to sign in to the platform as well as a 1-minute tutorial video about how to use the online platform.

Team Study. To minimize attrition, the team members were sent reminders one day before the session, one hour before the session, and 10 minutes before the session. If both team members and the confederate signed in at the scheduled time, the session

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began automatically and teams were taken through the tasks via a pre-programmed script. If any of the members did not show up, the session did not start.

The team study started with another 1-minute tutorial video on how to use the various functions of the online platform. Then, members were given three minutes to introduce themselves, and identify one another's cultural backgrounds using the chat window. Following this, they were given instructions about the team task: the multicultural wedding planning exercise. They were given five minutes each to discuss and decide on a food dish, a musical performance, and a special ritual. Following this 15-minute team exercise, the confederate left the workspace, leaving the two monoculturals to work on their final task of coming up with an activity for the parents of the bride and groom to engage in following the wedding. They were given 5 minutes for this final task. Following each trial, the confederate noted whether anything atypical had happened (e.g., a member being disconnected, a member being suspicious, a member being uncooperative).

Post-task Survey. Following the team study, the two participants independently completed a post-task survey. The survey started by asking members to evaluate the extent to which the multicultural member (i.e., the confederate) engaged in facilitating and resolving, as a manipulation check. They were also asked to rate the bicultural member on a number of dimensions such as warmth, creativity, and trustworthiness. Finally, the survey asked for the team members' evaluation of the team's performance.

Measures

Cultural Brokerage Manipulation Check. This time, cultural brokerage was directly manipulated. As a manipulation check, participants were asked to rate how much the multicultural member engaged in resolving and facilitating behaviors (3 items each) in the post-task survey. The scale reliability was sufficiently high for both facilitating (α = .87 for American members; α=.82 for Indian members) and resolving (α=.91 for American members; α=.85 for Indian members).

Team Viability: Three Measures. I used three measures of team viability: creativity of the final idea (Viability 1), whether both cultures were incorporated in the final idea (Viability 2), and whether the task was completed (Viability 3). Each measure is described in more detail below.

Team Viability 1: Creativity. Most teams produced an idea for the final task, leading to a total of 87 ideas. Seven raters who were deeply familiar with both Indian and American cultures[9] 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. Since the mean creativity score for each rater was significantly different, $F(6,602)$= 15.57, p<.001, the ratings were standardized for each rater. Inter-rater reliability for the standardized creativity ratings among the seven raters was sufficiently high,

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[9] The raters were individuals who had lived in both India and the US for at least 5 years each, and had deep knowledge of both cultures.

ICC(1,7)=.74; hence the standardized ratings from the seven raters were averaged to form the final measure of each team's creative viability.

Team Viability 2: Incorporating Cultures. A second criterion for the ideas was that they had to cater to both Indian and American cultures. To this end, I obtained ratings from the same set of seven judges on whether each idea contained an element of American culture (yes/no), and Indian culture (yes/no). These ratings were done after the creativity ratings. If the majority of judges thought that an idea incorporated American culture, it was coded as "1"; otherwise, it was coded as "0". If the majority of judges thought that an idea incorporated Indian culture, it was coded as "1"; otherwise, ideas were coded as "0". Based on this, a final variable was created in which the value was "1" if both American and Indian cultures were incorporated (i.e., both "American" and "Indian" values were "1"; N=37) and "0" if one or both cultures were missing in the idea (N=58).

Team Viability 3: Task Completion. Another measure of viability is whether the teams finished the task on time. Although most teams did submit an idea, some failed to do so and ran out of time, leaving the text box blank. Submitted ideas (N=87) were coded as "1" and missing ideas (N=8) were coded as "0".

Team Member Perceptions. At the end of the study, the team members were independently asked to rate the bicultural member on five dimensions: competence, warmth, trustworthiness, helpfulness, and how willing they would be to work with this person again in the future.

Control Variables. Age and gender-related variables (e.g., average age, standard deviation of members' ages) did not differ across the conditions; hence, no control variables were included in the analysis.

RESULTS

I tested the hypothesis using ordinary least squares regressions (Viability 1: creativity) and the Fisher's exact (Viability 2: culture incorporation and Viability 3: task completion) with categorically coded variables to reflect the teams' assignment to the experimental conditions (1=facilitating only, 2=resolving only, 3=both facilitating and resolving, 4=no brokerage control).

Manipulation check. As expected, team members that were assigned to the facilitating only condition reported a higher level of facilitating by the confederate (M=3.93, SD=.59) compared to the control condition (M=3.13, SD=.58), t(46)=-4.72, p<.001, and a marginally higher level of facilitating than the resolving only condition (M=3.58, SD=.72), t(43)=-1.76, p=.09. Team members that were assigned to the resolving only condition reported a higher level of resolving by the multicultural member (M=3.81, SD=.53) compared to the control condition (M=3.34, SD=.64), t(42)=-2.63, p=.01, and the facilitating only condition (M=3.36, SD=.76) t(43)=2.27, p=.03. Team members in the both condition reported higher levels of both facilitating (M=4.05, SD=.78), t(50)=-4.71, p<.001, and resolving (M=4.02, SD=.70), t(50)=-3.60, p=.001, compared to the control condition.

The effect of facilitating and resolving on Creative Viability (Viability 1). OLS

regressions showed that teams in the facilitating only condition (*M*=.21, *SD*=.48)[10] were

more creative than teams in the control condition (*M*=-.11, *SD*=.58) , *t*(46)=-2.10*, p*=.04.

Surprisingly, however, teams in the resolving only condition (*M*=.25, *SD*=.53) were also

more creative than teams in the control condition, *t*(38)=-1.96*, p*=.06, and not

significantly different from teams in the facilitating only condition, *t*(39)=.21, *n.s*.

Hence, Hypothesis 5a was only partially supported. Comparing the facilitating only with

the facilitating and resolving condition, I found that teams that had received only

facilitating were more creative than teams that had received both types of brokerage (*M*=-

.27, *SD*=.74), *t*(47)=-2.70, *p*=.01. Thus, Hypothesis 5b was supported. (See Figure 5.1 for
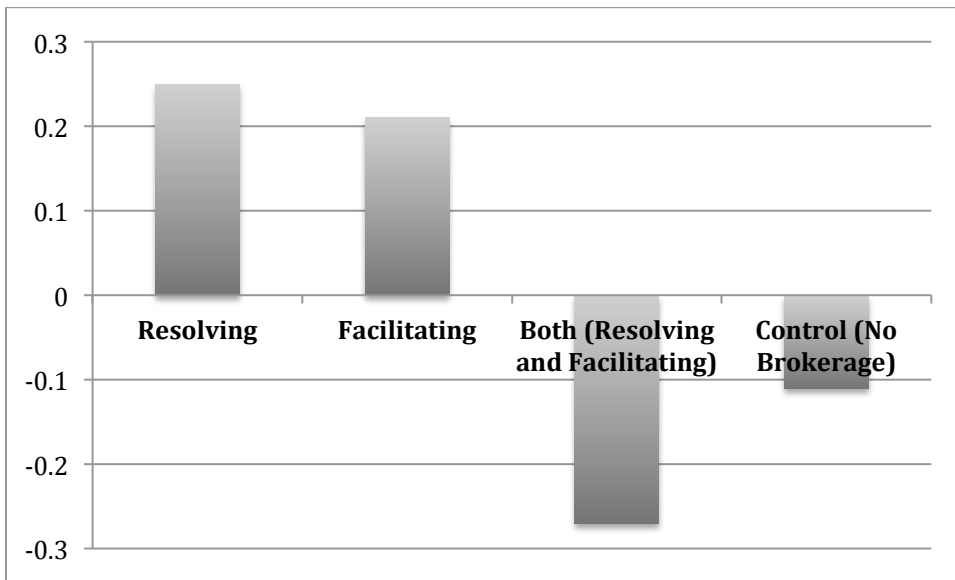
the standardized creativity ratings per condition).

Figure 5.1 Creative Viability (Standardized Values) by Condition

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[10] Means and standard deviations of the standardized ratings are shown.

The effect of facilitating and resolving on Culture Incorporation (Viability 2).

The Fisher's exact test (1-sided) was used in place of the chi-squared test, since the sample size was small (N=95) and some of the cells had an expected frequency of five or less (Ludbrook, 2008). I found that teams in the facilitating only condition were more likely to incorporate both cultures in their final idea (14 out of 24) than teams in the control condition (7 out of 23), $p=.05$. Teams in the resolving only condition (10 out of 20), however, did not incorporate both cultures more than the control, $p=.16.$; the same was true for teams in the both facilitating and resolving condition (6 out of 28), $p=.34$. Hence, Hypothesis 5a was supported. Teams in the facilitating only condition were also more likely to incorporate both cultures than those in the facilitating and resolving condition, $p=.007$, lending support to Hypothesis 5b (See Figure 5.2).

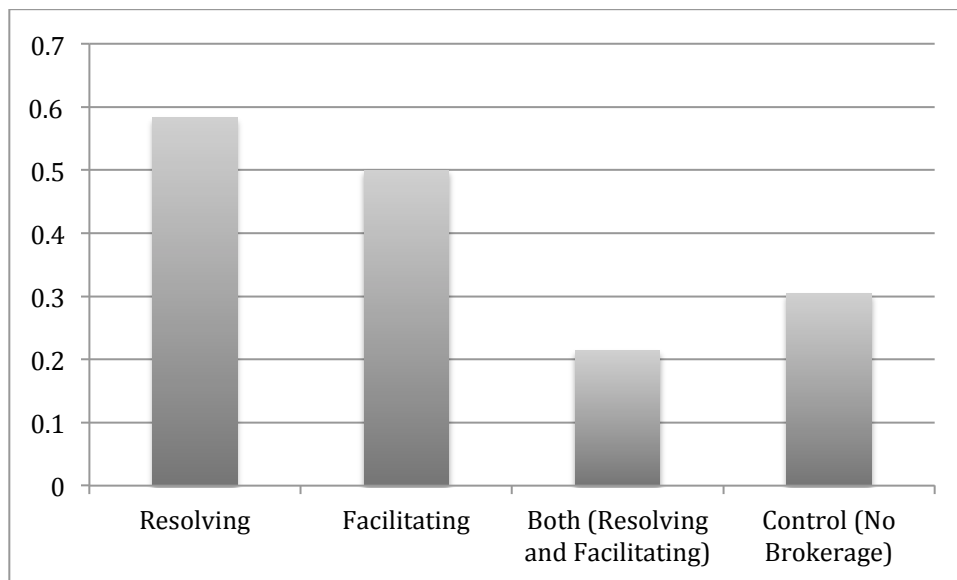Figure 5.2 Percentage of Teams Incorporating Both Cultures by Condition

The effect of facilitating and resolving on Task Completion (Viability 3).

Among the teams in the facilitating only condition (N=24), all of the teams completed the

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task on time. For the teams in the resolving only condition (N=20), four of the teams failed to complete the task on time, and the final idea was missing. Among the teams in the both resolving and facilitating condition (N=28), four failed to complete the task. Finally, among the teams in the control condition (N=23), all of the teams completed the task (See Figure 5.3 for the percentage of teams with missing final ideas per condition).
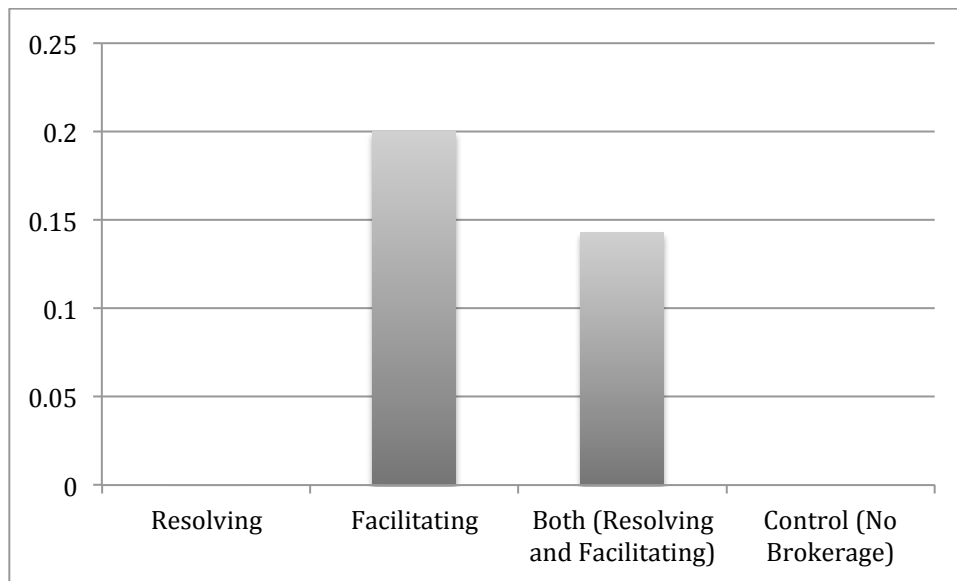
Figure 5.3 Percentage of Teams with Missing Ideas by Condition

The Fisher's exact test revealed that the number of teams that did not finish the task were significantly different across the conditions, $p=.02$. Specifically, teams in the resolving condition were less likely to submit a final idea than the control, $p=.04$, whereas teams in the facilitating only condition were no different from the control (both conditions had no missing ideas). This lends support to Hypothesis 5a. Furthermore, teams in the facilitating only condition were more likely to finish the task than teams in the facilitating and resolving condition, $p=.08$, supporting Hypothesis 5b. Interestingly, all of the teams that did not complete the task were in the resolving only or the resolving

and facilitating conditions, suggesting a negative main effect of resolving on subsequent task completion. A closer look at the chat dialogue revealed that these teams were not experiencing technical difficulties; they simply ran out of time and did not submit an answer.

Perceptions of the multicultural member. As was the case in Study 3, the type of brokerage the confederates engaged in influenced how they were perceived by their team members. The confederate was seen as more *competent* if they engaged in resolving (M=4.13, SD=.48), $t(42)$=-3.24, p=.002, or both resolving and facilitating (M=4.23, SD=.52), $t(50)$=-4.16, p<.001, compared to the control condition (M=3.57, SD=.63). However, engaging in facilitating (M=3.73, SD=.75) led to no boost in perceptions of competence compared to the control, $t(46)$=-.81, *n.s.* Confederates were also seen as more *helpful* when they engaged in resolving (M=4.28, SD=.53), $t(42)$=-2.64, p=.01, or both resolving and facilitating (M=4.50, SD=.54), $t(50)$=-4.30, p<.001, than the control (M=3.85, SD=.53). Yet engaging in facilitating (M=3.94, SD=.80) did not increase perceptions of helpfulness compared to the control condition, $t(46)$=-.45, *n.s.* Finally, the other members were more *willing to work with* the multicultural member again when they engaged in resolving (M=4.33, SD=.65), $t(42)$=-2.77, p<.001, or both resolving and facilitating (M=4.50, SD=.69), $t(50)$=-3.82, p<.001, than when they didn't engage in brokerage (M=3.72, SD=.77). Engaging in facilitating (M=3.90, SD=.92) did not increase the willingness to work with this member, $t(46)$=-.72, *n.s.* Perceptions of warmth and trustworthiness were not different across the conditions.

SUMMARY

Two out of the three tests of viability support the hypothesis that facilitating (but not resolving) leads to increased viability. Regarding team creativity, teams in both the resolving only and facilitating only conditions scored higher than the control, and higher than the resolving and facilitating condition. Although the high creative viability of the resolving only condition goes against the prediction, this is an interesting pattern of results, and one that mirrors the unhypothesized interaction effects in Study 3. It suggests that teams benefit from primarily one or the other form of brokerage, but not both. I plan to explore this possibility in greater detail in future studies. Regarding the other two measures of viability, teams in the facilitating condition were more likely to finish the task and more likely to incorporate both cultures than teams in the control condition, whereas teams in the resolving condition did not differ from the control.

The findings around team member perceptions in this study largely reinforce the findings from Study 3. In both studies, the multicultural member was seen as more competent and helpful when they engaged in more resolving. In both studies, engaging in resolving led members to want to work with the multicultural member again. In Study 4, the findings around resolving leading to greater perceptions of warmth and trustworthiness did not replicate; however, the general pattern across the two studies was that engaging in resolving led to more favorable perceptions, whereas engaging in facilitating had no effect on members' perceptions of the broker.

In sum, this final study shows that facilitating led to better results for two out of the three measures of viability, and no worse than resolving when it came to the team's

creative viability. Given that facilitation is mostly enacted by cultural outsiders, these results reinforce the idea that outsiders can be a valuable asset to the team—in fact, for certain outcomes, they may be more effective than cultural insiders at developing the capability of the team to perform on its own.

CHAPTER 6.

GENERAL DISCUSSION

Multicultural work teams are becoming increasingly prevalent and crucial for organizational success (Behfar, Kern, & Brett, 2006; Early & Gibson, 2002), yet they often face challenges that keep them from reaching their full potential (van Knippenberg, De Dreu, & Homan, 2004; Williams & O'Reilly, 1998). This dissertation introduces the concept of cultural brokerage, and demonstrates how cultural brokerage enacted by certain team members can enhance the creative performance of multicultural teams.

Across the four studies in this dissertation, I inductively develop and deductively test a theoretical model of cultural brokerage. The findings suggest that cultural brokerage, voluntarily enacted by multicultural members, enhances the creative performance of both the multicultural team and the individual engaging in brokerage. Among those with extensive multicultural experience, cultural outsiders were just as effective as cultural insiders at increasing team creativity, although they accomplished this primarily by facilitating, whereas cultural insiders primarily engaged in resolving. While facilitating was hypothesized to increase team viability, the results were more nuanced: resolving led to higher team viability in terms of team creativity, but facilitating led to higher viability in terms of likelihood of finishing the task on time.

Another critical finding was around the value of cultural outsiders, and how underappreciated they are in multicultural teams—both by people considering how to staff a team, and those who are actually in the team. Across the studies, people (including brokers themselves) consistently underestimated the value of cultural outsiders and the

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value of facilitating.

By shedding light on the process and outcomes of cultural brokerage, this paper contributes to three streams of research: the literatures on global teams, multicultural individuals, and creativity. In addition, this research has implications for managerial practice, as well as research methodology regarding multicultural teams.

THEORETICAL CONTRIBUTIONS

Cultural Brokerage as a Critical Role in Multicultural Teams. First and foremost, this dissertation provides empirical evidence for the positive effect of cultural brokerage on the creative performance of multicultural teams. In Study 3, resolving and facilitating accounted for approximately 20% of the variance in multicultural team creativity. Study 4 showed that cultural brokerage can have lasting effects on team viability. This suggests that there is much to be gained in research and in practice by being cognizant of the cultural brokerage processes that take place within multicultural teams. Although some recent work has identified that a bridging role may improve multicultural team outcomes (DiMarco et al., 2010; Haas, 2006; Maloney & Zellmer-Bruhn, 2006), there has been little empirical evidence of how the process of cultural brokerage unfolds. Moreover, previous studies have focused on individuals whose cultural backgrounds match the cultural composition of their teams (e.g., DiMarco et al., 2010). By illuminating the different forms that cultural brokerage can take, as well as demonstrating how both cultural insiders and outsiders engage in brokerage, this paper advances our understanding of this crucial role in multicultural teams.

Not the Usual Suspects: Cultural Outsiders as Effective Brokers. As consistently shown across the studies, cultural outsiders are rarely recognized or called upon to bridge cultural differences. Study 2 showed that the more obvious and preferred candidate is the cultural insider. Across a variety of scenarios and different ways of asking the question, people consistently prefer cultural insiders and overlook cultural outsiders as potential brokers. In Studies 3 and 4, cultural outsiders were also relatively undervalued. Teams with cultural outsiders had lower predictions of their own performance compared to those with cultural insiders. Team members also incorrectly predicted that resolving would enhance team performance, while facilitating would decrease team performance. Furthermore, the monocultural members rated resolving brokers more favorably on a number of dimensions such as competence and helpfulness, and expressed greater willingness to work with the member again. These findings reveal lay assumptions about the type of expertise and behaviors that are seen as valuable in multicultural teams.

However, cultural outsiders play an important role in the team. Specifically, they were much more likely than insiders to broker by facilitating. They were just as instrumental in enhancing team creativity, and even outperformed insiders on improving some dimensions of team viability. Hence, contrary to common intuition, cultural outsiders proved to be valuable assets to the multicultural team.

Taken together, these results suggest that part of the reason we do not see many cultural outsiders engaging in brokerage is that team members, as well as cultural outsiders themselves, do not realize the positive influence they can have on team performance. This is troubling because the data from Studies 3 and 4 indicate that

cultural outsiders are just as effective as cultural insiders in increasing team creativity,

and that the type of brokerage they engage in (i.e., facilitating) may be more effective in

enhancing certain aspects of team viability. Thus, organizations may be missing an

important opportunity by not recognizing the unique and valuable input that cultural

outsiders can provide. In addition, the current literatures on multicultural teams and

individuals have much to gain by further investigating the role of cultural outsiders in

multicultural teams. By providing initial insight into this theme, which has been absent

from the literature, this research expands our understanding of multicultural teams and

the role of bicultural individuals.

Culture and Creativity. Finally, this dissertation presents novel insights on the

relationship between culture and creativity. Previous research has presented mixed

findings on the effect of cultural diversity on creativity and performance (cf. Stahl et al.,

2009). The studies here go beyond investigating input conditions (e.g., the cultural

composition of the team) and advance our understanding of how the *dynamics* within

multicultural teams shape collective and individual creativity. Holding constant many

previously identified moderators, the results of Studies 3 and 4 reveal that the type and

level of cultural brokerage that takes place within the team powerfully influences its

ultimate creativity and creative viability. The findings further suggest that there are

different paths for multicultural teams to achieve creative outcomes: one is for the

cultural broker to resolve the cultural aspect of the task and integrate the cultures on

behalf of other members; the other is for the cultural broker to empower other members

by eliciting ideas and relevant cultural information from them.

Another contribution of Study 3 is in demonstrating how enacting certain

behaviors in a multicultural team can enhance the individuals' creativity. Even after controlling for initial levels of creativity, there was a positive relationship between engaging in cultural brokerage and individual creativity measured directly after the team task. Although previous research has shown that living in a foreign country, or priming experiences of living abroad, can increase individual creativity (Maddux & Galinsky, 2009), what has remained unexplored is how certain dynamics within multicultural teams may influence the team members' individual creativity. By revealing the positive effect of engaging in both facilitating and resolving on individual creativity, this study advances our understanding of the relationship between culture and creativity.

MANAGERIAL IMPLICATIONS

Practically, the positive relationship between cultural brokerage and team performance suggests that it would benefit organizations to think deliberately about cultural brokerage when constructing and managing multicultural teams. In the interviews, I came across one organization that had a policy of appointing individuals to be "cultural ambassadors" (to borrow their term) on cross-cultural projects. However, such a policy was the exception, not the rule. The findings from this research suggest that other organizations would benefit from recognizing and leveraging the significant positive impact of cultural brokerage on team performance.

In addition, the research findings suggest that it would serve organizations well to be aware of the unique role that cultural outsiders can play as brokers in multicultural teams. The results of the experimental study showed that both cultural outsiders and their teammates underestimated the positive impact they can have on multicultural team

performance. Many of my interviewees were also under the impression that one could only broker as a cultural insider. For example, a Russian interviewee asserted that cultural brokerage requires deep knowledge of the cultures involved. "Otherwise, how can you build a bridge?" he asked. "You know this part, but you don't know that part, so it's really hard to build a bridge." Taken together, the findings of this paper suggest that there is currently a missed opportunity in organizations to utilize the contributions of cultural outsiders. Cultural outsiders may be particularly valuable in teams with long time horizons, where team viability is crucial.

Finally, this research suggests that it may be important to provide sufficient resources and support for cultural brokers. Many interviewees spoke of the difficulty of engaging in cultural brokerage, especially when the task demands or time pressure were high. This implies that cultural brokers may need additional organizational support to effectively engage in brokerage. The following quotes are illustrative:

> It's like, you gotta deal with all this *stuff*. You feel overwhelmed. That besides all the work you have to do, the challenges per se of the project, you have to deal with cultural stuff. And then I think, "Man, I don't have time for this." (Interviewee #22, Mexico)

> At some point you want to say, "Hey guys, I don't care if you say it this way or this way.. You're not married, all right? Just get this job done." […] There are these moments. The challenge is, if the time pressure is getting there, and if the task is, you know, you have to finish, your level of tolerance for these cultural differences is getting a little bit lower. (Interviewee #29, Turkey)

A NEW METHOD FOR STUDYING MULTICULTURAL TEAMS

Finally, this dissertation makes a methodological contribution to the study of multicultural teams. Testing the theoretical model from Study 1 required a challenging

research design, as it called for both the control and precision of a laboratory study, but also required participants from different cultural backgrounds (some of whom needed to have very little or no knowledge of American culture), making it impossible to run a traditional lab study. For Studies 3 and 4, recruiting participants from multiple countries and cultural backgrounds and bringing them together on an online workspace enabled me to meet these difficult requirements. Bringing together participants from different countries to temporarily collaborate in an online lab experiment introduces a compelling alternative to traditional methods of studying virtual and global teams. Future studies can utilize this methodology to further explore the dynamics and performance of multicultural teams.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

There are a number of limitations and boundary conditions of this dissertation, which point to opportunities for future research. First, the experimental studies involved teams with a fixed cultural composition; that is, there were always two monocultural members, each from a different culture, and one multicultural member. Future research could consider how different cultural compositions (e.g., teams with no multicultural member, or more than one multicultural member) influence brokerage dynamics and outcomes. In particular, it would be interesting to examine the dynamics and outcomes of *collective* brokerage, when cultural brokerage is enacted by more than one member of the team. In addition, this study focused on the brokerage activities of two specific types of multicultural individuals: cultural insiders (with deep knowledge of *all* of the cultures involved) and cultural outsiders (with little knowledge of *any* of the cultures involved). Other than these two types, it is possible for a person to have extensive multicultural

experience, and have deep knowledge of only a subset of the cultures involved in a given team. Hence, further research is needed to investigate whether and how such individuals engage in cultural brokerage in multicultural teams.

Another factor that limits the immediate generalizability of the research findings is the focus on specific cultures to test the hypotheses. The two experimental studies focused on two specific cultures: American and Indian. However, it is likely that the need for cultural brokerage, as well as the likelihood of members engaging in brokerage, may be different depending on cultural distance (Hofstede, 1980) between the parties involved. For example, findings from Study 2 (in which there were five different scenarios with different combinations of cultures) suggest that cultural distance between team members may influence the type of member that is sought out to help the team.

In addition, the hypotheses were testing using a creative, multicultural task. The process and outcomes of cultural brokerage may look different for teams working on non-creative tasks, or tasks that do not require an understanding of different cultures. Finally, the study was based on virtual teams collaborating on an online platform. Previous research has found that the dynamics of virtual teams can be quite different from those of face-to-face teams (Gibson & Gibbs, 2006; Hinds & Mortensen, 2005). This calls for an investigation of cultural brokerage in various types of teams, such as those operating face-to-face, or using a hybrid approach. Thus, future research can examine the generalizability of the current research findings by investigating brokerage both in the lab and in field settings, across different cultures, in various types of tasks, and using multiple communication channels.

Finally, while the short-term nature of the experimental task provides a more conservative test of the effects of cultural brokerage, it is difficult to generalize the findings to teams with a much longer time horizon. Future studies could investigate the emergence and consequences of cultural brokerage in teams over a longer period. For example, someone who is initially a cultural outsider may learn more about the cultures of the other members over time, influencing the type of brokerage that he or she engages in. In a similar vein, a monocultural individual may come to understand and appreciate multiple cultures during the process of working in a multicultural team, requiring less brokerage over time, or even becoming capable of actively engaging in cultural brokerage. In addition, it would be interesting to examine how the sequencing and timing of certain brokerage activities influence team outcomes.

CONCLUSION

This dissertation begins to explore the critical role of cultural brokerage in multicultural teams. Taken together, the findings of this research provide evidence that cultural brokerage is a key factor in multicultural team effectiveness. This suggests that members of multicultural teams do not deal with cultural differences in isolation; rather, cross-cultural collaboration is an interactive and dynamic process, with more culturally experienced members helping other members through acts of cultural brokerage. The implications of this paper for future research and practice in cross-cultural collaboration may be quite far reaching. The theoretical model provides a conceptual lens and a useful language for thinking about cultural brokerage within multicultural teams. This work also presents some counterintuitive findings, suggesting that organizations may benefit by recognizing the valuable role that cultural outsiders can play in bridging cultural

differences. By shedding light on this phenomenon, this paper provides a rich preliminary

understanding of cultural brokerage, and a foundation for future work in this domain.

DISSERTATION RESEARCH: BRIDGING CULTURES

Sujin Jang (sjang@hbs.edu)
617-306-5363

Hello!

My name is Sujin Jang, and I am a PhD student in Organizational Behavior here at HBS. I am currently working on my dissertation research, which focuses on **how people bridge different cultures** in a professional context. Specifically, I'm looking at the challenges of **working with people from different cultures at the same time**, and acting as an "intermediary" or "mediator" between the cultures. I am very interested in hearing about **your experience bridging or working between different cultures**.

Learning from your experience would be extremely valuable for my dissertation research. If you are interested in spending 20-30 minutes discussing your experiences with me, please contact me at sjang@hbs.edu.

I very much look forward to talking with you!

Thank you for your time.

Sujin Jang

Appendix A2. Interview Protocol

Thank you for offering to share your experiences with me. My research focuses on how people mediate between different cultures in a professional context. Specifically, I would like to know more about the experience of working with people from different cultures at the same time, and acting as an "intermediary" or "mediator" between the cultures. So I'd like to hear specific examples of when you were mediating between different cultures.

1. Give me a general description of your work.
2. Could you tell me about a time when you were acting as a mediator between different cultures in your professional life?
    - Please briefly describe the overall situation.
    - What was the context?
    - What was your relationship to those involved?
    - What happened during the interaction?
    - What did you do during the interaction?
    - How did you feel during the interaction?

    Could you give me another example of a time when you were acting as a mediator between different cultures in your professional life? (sub questions repeated)
3. What do you find challenging about mediating between different cultures?
    What do you find enjoyable about mediating between different cultures?
4. In what countries have you lived or worked?
    What culture or cultures do you identify with? (What cultures do you feel close to?)
5. Is there anything I am missing about working with people from different cultures at once? If so, what?

Appendix B1. Study 2 Survey Scenarios

A team of software developers is composed of 3 American and 3 Japanese members. The team members sometimes have trouble communicating and understanding one another across the cultures.

A product design team of a large multinational firm has 2 members from Germany and 2 members from Italy. The team members often find themselves in conflict because of their different cultural backgrounds.

A team of scientists is made up of 2 members from Brazil and 2 members from China. The team finds that they are not able to work efficiently because of their cultural differences.

Imagine you and a few other colleagues from the US are working with teammates from Turkey. However, you and your fellow American team members are having difficulty communicating with the Turkish team members.

Imagine you and a few other individuals from the US are collaborating with some individuals from Vietnam. However, you and the other American team members find it hard to work with the Vietnamese members because of the cultural differences.

Appendix B2. Questions Format for Study 2a (Open-Ended Question)

A team of software developers is composed of 3 American and 3 Japanese members. The team members sometimes have trouble communicating and understanding one another across the cultures.

The team is considering adding one more member to help them address these issues. Do you think it would be helpful for them to have a member who knows more than one culture?

○ Yes

○ No

If "yes" selected:

You answered "Yes".

What kind of member would you recommend adding to the team, and why?
Please BRIEFLY describe the cultural background of the ideal member, and your reasoning:

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If "no" selected:

You answered "No".

What kind of member would you recommend instead, and why?

(If you would not add any new members, please explain why not.)

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Appendix B3. Questions Format for Study 2b (Multiple Choice)

A team of software developers is composed of 3 American and 3 Japanese members. The team members sometimes have trouble communicating and understanding one another across the cultures.

The team is considering adding one more member to help them address these issues. Which of the following members would you predict would be most helpful?

○ Someone who knows both American and Japanese cultures well

○ Someone who knows one of the cultures (American or Japanese) plus another culture well

○ Someone who knows two other (non-American, non-Japanese) cultures well

○ Other

After making choice:

You chose "someone who knows both American and Japanese cultures well".
Please briefly explain why:

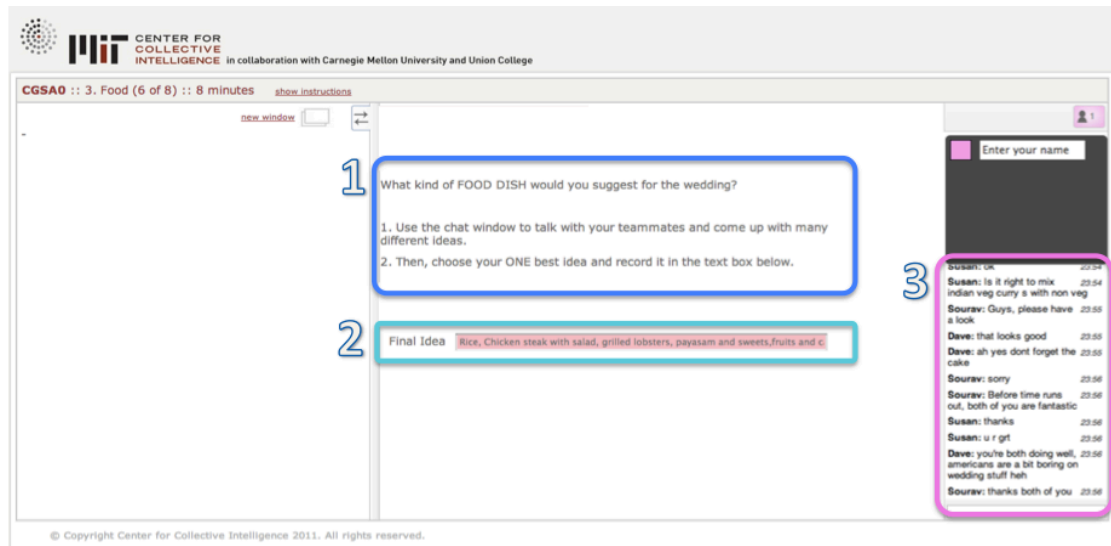**Appendix B4. Questions Format for Study 2c (Independent Ratings)**

A team of software developers is composed of 3 American and 3 Japanese members. The team members sometimes have trouble communicating and understanding one another across the cultures.

The team is considering adding one more member to help them address these issues.

Please rate each of the potential members below on how helpful you think they would be.

	Not at all helpful	Mostly not helpful	Somewhat helpful	Helpful	Extremely helpful
Someone who knows both American and Japanese cultures well	○	○	○	○	○
Someone who knows one of the cultures (American or Japanese) plus another culture well	○	○	○	○	○
Someone who knows two other (non-American, non-Japanese) cultures well	○	○	○	○	○

APPENDIX C1. Online Platform

Box 1. Instructions for the task are given here.

Box 2. Participants enter their final idea in this text box. They can add to and edit one another's ideas.

Box 3. Participants can use this window to discuss ideas and chat with one another.

APPENDIX C2. Tutorial Video Links

Tutorial 1: How to Log In to the Study Platform

https://www.youtube.com/watch?v=rvPkpCbbN-4

Tutorial 2: How to Use the Study Platform

https://www.youtube.com/watch?v=54f78i5cpnQ

APPENDIX D1. Condition 1: Inquiring

INTRO

- Hi!
- Nice to meet you!
- I'm the one who knows multiple cultures

RITUAL

- Tell me about weddings in your countries
- _____, what are some (other) rituals in American weddings?
- _____, what (else) happens in Indian weddings?
- ok guys we have (less than) 1 minute left!

MUSIC

- OK, music this time…
- What do you think, guys?
- Any (other) ideas?
- What else do you think we could do?

FOOD

- Food! This one should be fun
- What foods from your countries could we serve at the wedding?
- _____, what (else) could we mix from the Indian side?
- _____, what (else) could we bring in from the American side?

APPENDIX D2. Condition 2: Integrating

INTRO

- Hi!
- Nice to meet you!
- I'm the one who knows multiple cultures

RITUAL

- How about if the bride and groom dress in each other's traditional clothing
- or we could have the bride wear a Sari over an American wedding dress
- We could also have them exchange vows in both languages
- ok guys we have (less than) 1 minute left!

MUSIC

- OK, music this time…
- What if we have American wedding music played on traditional Indian instruments?
- We could play "here comes the bride" with Indian instruments
- Hey, what about a Bollywood and pop-inspired dance competition?

FOOD

- Food! This one should be fun
- We could serve naan burgers- with American and Indian fillings
- We could also do an American wedding cake served on banana leaves
- Or we could have a multi-tiered cake with both American and Indian ingredients

APPENDIX D3. Condition 3: Inquiring and Integrating

INTRO

- Hi!
- Nice to meet you!
- I'm the one who knows multiple cultures

RITUAL

- Tell me about weddings in your countries
- _____, what are some (other) rituals in American weddings?
- _____, what (else) happens in Indian weddings?
- How about if the bride and groom dress in each other's traditional clothing
- or we could have the bride wear a Sari over an American wedding dress
- We could also have them exchange vows in both languages
- ok guys we have (less than) 1 minute left!

MUSIC

- OK, music this time…
- What do you think, guys?
- Any (other) ideas?
- What else do you think we could do?
- What if we have American wedding music played on traditional Indian instruments?
- We could play "here comes the bride" with Indian instruments
- And then we could have the guests dance to music from both countries

FOOD

- Food! This one should be fun
- What foods from your countries could we serve at the wedding?
- _____, what (else) could we mix from the Indian side?
- _____, what (else) could we incorporate from the American side?
- We could serve naan burgers- with American and Indian fillings
- We could also do an American wedding cake served on banana leaves
- Or we could have a multi-tiered cake with both American and Indian ingredients

APPENDIX D4. Condition 4: Other

INTRO

- Hi!
- Nice to meet you!
- I'm the one who knows multiple cultures

RITUAL

- So they want the wedding to have both Indian and American elements…
- I guess they want us to brainstorm ideas
- It's interesting how the wedding rituals are so different between cultures
- ok guys we have 1 minute left!

MUSIC

- OK, music this time…
- I think it would be cool to combine American and Indian music
- I have no idea what it would sound like though haha
- We could mix different genres of music, could be interesting

FOOD

- Food! This one should be fun
- I think we could do a full course, or focus on just one dish.
- We could do appetizer, main course, dessert…
- Do you think cake counts as a dish?

APPENDIX D5. General Instructions for Confederates

*Use the name "J"

*You can add transitional phrases (such as the following) to make the conversation flow more smoothly:
- Anyway, ...
- Also, ...
- OK guys...
- How about...
- Or...
- Hey, what if...

Toolbox: use as many as needed for each task (try to keep the pace of the conversation)

Cool	Hmm	Lol
Good idea	Let me think	Haha
Sounds good	Not sure	
Yes	I don't know	
Yeah	No	
I agree	Sorry	
OK		
Ah ok		

If someone gets disconnected/doesn't show up
- _____(our third member) seems to be disconnected
- _____ (one person) is missing
- Let's wait for _____ to show up (again)

*Try to avoid talking to the remaining member 1 on 1, and just wait quietly for the third person to show up.

If you get disconnected
- Log back in to ladon.mit.edu with your ID
- Say "Sorry, my connection seems to be bad"

If the members are really quiet for a long time:
- "Guys, are you there?"

Responding to Questions
If asked where you're from:
→ "Oh, I'm from all over. I grew up in several different countries."

If asked where you're currently located or what time it is where you are:
→ Ignore if possible, or tell them honestly if it's too awkward to ignore

If asked if you've been to any weddings:
→ say "No" (in case they start asking you what cultures were represented in these weddings)

If asked what J stands for:
→ alternate between "Jen" and "Jay"

If asked to type the idea in the textbox:
→ "I can't seem to use the textbox"

If any other questions (directly addressed to you) come up:
→ Use your best judgment, and then just make a note of it in the excel file after the session

*If you get stuck in a really tricky situation, you can pull this one out
→ "Sorry, I'm having issues with the connection"

If someone has trouble using the chat/textbox/name function and the other member doesn't correct them:
→ "I think you're supposed to chat here, _____"
→ "I think we're supposed to enter our name next to the colored box"
→ "I think we're supposed to enter our ideas in the textbox"/ "can someone put down what we have so far?" / ("I can't seem to use the textbox")

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