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Angela K.-Y. LEUNG

Singapore Management University, angelaleung@smu.edu.sg

Sau-Lai LEE

Hong Kong Baptist University

Chi-Yue CHIU

Nanyang Technological University

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Meta-Knowledge of Culture Promotes Cultural Competence

Angela K.-y. Leung¹, Sau-lai Lee², and Chi-yue Chiu³

Abstract

A behavioral signature of cross-cultural competence is discriminative use of culturally appropriate behavioral strategies in different cultural contexts. Given the central role communication plays in cross-cultural adjustment and adaptation, the present investigation examines how meta-knowledge of culture—defined as knowledge of what members of a certain culture know—affects culturally competent cross-cultural communication. We reported two studies that examined display of discriminative, culturally sensitive use of cross-cultural communication strategies by bicultural Hong Kong Chinese (Study 1), Chinese students in the United States and European Americans (Study 2). Results showed that individuals formulating a communicative message for a member of a certain culture would discriminatively apply meta-knowledge of the culture. These results suggest that unsuccessful cross-cultural communications may arise not only from the lack of motivation to take the perspective of individuals in a foreign culture, but also from inaccurate meta-knowledge of the foreign culture.

Keywords

communication, social cognition

There is consensus among psychologists that cross-cultural competence is important in the practice of psychology. In the 1999 National Multicultural Conference and Summit hosted by Divisions 17 (Counseling Psychology), 35 (Society for the Psychology of Women), and 45 (Society for the Psychological Study of Ethnic Minority Issues) of the American Psychological Association (APA), the participants unanimously endorsed resolutions aimed at implementing cross-cultural competence in all psychological endeavors, and urged APA to take the lead in seeing that cross-cultural competence becomes a defining feature of psychological practice, education and training, and research (Sue, Bingham, Porche-Burke, & Vasquez, 1999). Despite the strong agreement on its importance, experts in the field have different opinions on what constitute cross-cultural competence (Cunningham, Foster, & Henggeler, 2002).

Cross-cultural competence is a polysemous term, with different meanings to different groups of researchers. Nevertheless, most researchers believe that it involves discriminative use of

¹Singapore Management University, Singapore

²Hong Kong Baptist University, Hong Kong

³Institute on Asian Consumer Insight, Nanyang Technological University and the Chinese Academy of Social Sciences, Singapore

Corresponding Author:

Chi-yue Chiu, Nanyang Business School, Nanyang Technological University, S3-01C-81, 50 Nanyang Avenue
Singapore, 639798.

Email: CYChiu@ntu.edu.sg

culturally appropriate behavioral strategies in different cultural contexts (e.g., Ang et al., 2007; Chiu & Hong, 2005; Hansen, Pepitone-Arreola-Rockwell, & Greene, 2000; Offermann & Phan, 2002). That is, culturally competent individuals are those who navigate cultural currents smoothly by strategically and flexibly displaying culturally appropriate behaviors to pursue valued goals in different cultural contexts.

In the current investigation, we focus our analysis on the domain of cross-cultural communication because of the central role of communication in cross-cultural adjustment and adaptation (Chen & Starosta, 1996; Kim, 1988). Although there is agreement that success in cross-cultural communication requires motivation and possession of pertinent knowledge and skills (Chen & Starosta, 1996; Hammer, Nishida, & Wiseman, 1996; Spitzberg, 1997; Spitzberg & Cupach, 1989; Wiseman, Hammer, & Nishida, 1989), little is known about which type of knowledge is required. Some authors have highlighted the importance of knowing the normative practices of other cultures in intercultural interactions (see Spitzberg & Cupach, 1989). However, a recent review concludes that overemphasizing “knowing the different ‘Others’ may promote a false sense of competence, and even fuel intergroup hostility and reactance” (Chao, Okazaki, & Hong, 2011, p. 263).

The current research addresses the role of *meta-knowledge of culture* in discriminative use of culturally appropriate communication behaviors across cultural contexts. Drawing on the literature on the common ground theory of communication (see Krauss & Chiu, 1998), we propose that meta-knowledge of culture, defined as knowledge of what members of a certain culture know, can significantly influence how individuals formulate communication strategies when interacting with members of this culture. Accordingly, what sets competent and incompetent communications apart is the accuracy of the underlying meta-knowledge. This view leads to the idea that cross-cultural communication often fails not necessarily because individuals do not adapt their behaviors to the “expectations” of people in other cultures, but because of their inaccurate metacognitive knowledge of other cultures. To flesh out our idea, in the following sections, we will first define what meta-knowledge of culture is. Next, we will elaborate on the role of meta-knowledge in intercultural communication and cross-cultural competence, and present two studies that tested the role of meta-knowledge in cross-cultural communication.

Meta-Knowledge of Culture

In the emerging field of social metacognition (Briñol & DeMarree, 2012), there is a distinction between primary (cognitive) and secondary (metacognitive) thoughts. Primary thoughts refer to knowledge about the self and others, including knowledge of the goals, behavioral intentions, expectancies, beliefs, and values of the self and others. Secondary thoughts refer to thoughts on the contents of one’s own or others’ primary thoughts (Chiu & Bendapudi, 2012). This distinction also applies to cultural knowledge: A distinction can be made between primary knowledge of culture and secondary, metacognitive knowledge of culture. Primary knowledge of a certain culture (Culture X) refers to knowledge of what the culture is (e.g., Culture X is individualist; Ang et al., 2007). Meta-knowledge of a certain culture refers to knowledge of what people from that culture know or prefer. In other words, meta-knowledge is knowledge of people’s knowledge in a certain culture rather than general knowledge about the culture itself. Meta-knowledge includes objective knowledge (knowledge of the percentage of members of Culture X who know A, B, and C, etc.), and subjective knowledge (the extent to which members of Culture X prefer A, B, and C, etc.).

Primary knowledge and meta-knowledge of culture are measured differently. For example, in the current research, we measured meta-knowledge by assessing participants’ accuracy in estimating the *proportional distribution of knowledge in a certain culture* (What percent of people in Culture X would know A, B, and C, etc.?). In contrast, primary knowledge of culture is usually

measured by self-reports (e.g., agreement with items like “I know the legal and economic systems of other cultures,” and “I know the marriage systems of other cultures”; Ang et al., 2007) and performance measures (e.g., the culture assimilator; Brislin, 2009; with items like “What cultural differences or set of cultural differences may help someone respond to a critical cross-cultural incident successfully?”) of how knowledgeable an individual is about different cultures.

Meta-Knowledge and Intercultural Communication

Research on social metacognition has focused primarily on thoughts on one’s own thoughts, because it is often assumed that “metacognitive processes that lead to changes in the impact of a primary thought (e.g., relying more or less on that thought) are more likely to occur if the primary thought is in one’s own head” (Briñol & DeMarree, 2012, p. 3). This argument is valid only under the restrictive assumption that people do not communicate their thoughts (Chiu & Bendapudi, 2012). There is clear evidence that in interpersonal communication, people spontaneously consider meta-knowledge of their addressee’s culture when they formulate a message for the latter (Fussell & Krauss, 1992).

The common ground theory (Clark, Schreuder, & Buttrick, 1983; Clark & Wilkes-Gibbs, 1986; Isaacs & Clark, 1987) provides a framework for understanding the role of meta-knowledge of culture in cross-cultural communication. According to the theory, communication is a collaborative process, whereby communicators collaborate to achieve shared meanings. Communicators access what is and what is not in the common ground between them and the addressee, and use this assessment to guide message formulation, including in the messages only those elements that can be understood with reference to the mutual knowledge, mutual beliefs, and mutual assumptions shared with the addressee (Clark et al., 1983; Clark & Marshall, 1981; Clark & Murphy, 1982; Isaacs & Clark, 1987). Thus, regardless of whether participants are formulating communicative messages or answering the investigator’s questions, they would consider what the addressee knows or prefers. If communicative actions are filtered through the lens of the communicator’s meta-knowledge, meta-knowledge would also mediate cultural differences in sense-making and other forms of actions. Furthermore, individuals with more accurate meta-knowledge are more culturally competent because they tend to act in a culturally appropriate manner across different cultural situations.

Consistent with the common ground theory, research has shown that people have nuanced knowledge of what factual information other people in their community possess (Fussell & Krauss, 1992; Lau, Chiu, & Lee, 2001). When asked to estimate the proportions of people in their community who know certain public figures or landmarks, their estimations corresponded closely to the actual proportions of people in their community who know these figures or landmarks. Furthermore, people spontaneously use their knowledge of the addressee when they formulate messages for the addressee. In a referential communication study (Fussell & Krauss, 1992; see also Lau et al., 2001), one group of participants estimated the proportions of co-participants who knew the names of some public figures, while another group described the same figures so that other students could identify from the descriptions the public figure referred to in each description. The results showed that participants in the second group formulated shorter descriptions for a public figure when the first group of participants estimated it to be widely known in the community. The process of adjusting one’s communications toward the knowledge of the audience to ensure mutual understanding is referred to as *audience design*. Audience design is made possible by the communicator assessing what is and what is not present in the common ground between him/herself and the addressee, and subsequently tailoring the messages to include only those elements that are mutually known. Although there is evidence for the role of meta-knowledge of the addressee or its community in interpersonal

communication within a culture, no known research has directly examined the role of meta-knowledge of cultures in cross-cultural communication.

We contend that audience design also plays an important part in cross-cultural communication. When individuals communicate with a foreigner or someone from another culture, they would consider what the foreigners know and do not know. Thus, meta-knowledge of cultures should affect the message properties (e.g., message length, contents) in cross-cultural communication. This view is consistent with Clark's (1996) proposal regarding the effect of the cultural background of the audience on message formulation. Based on the community membership of the audience, the communicators estimate the proportional distribution of the topic-relevant knowledge in the audience's community and formulate their messages according to the meta-knowledge of such knowledge in the audience's community.

This contention has received some preliminary support. In a recent study (Zou et al., 2009), Hong Kong Chinese, who are insiders to Chinese culture and Anglo-American culture as a result of growing up in a British colony (Hong, Morris, Chiu, & Benet-Martinez, 2000; Lau-Gesk, 2003), responded to a measure of causal attribution. They rated the extent to which a causally ambiguous event can be explained in terms of the internal qualities of the actor—a causal explanation that is more popular in the United States than in China (Morris & Peng, 1994). Prior to answering the causal attribution question, half of the participants learned that the investigator was a Chinese from a local university, while the remaining ones learned that the investigator was an Anglo-American from Boston University. The participants endorsed an internal explanation of the ambiguous event more strongly when they learned that the investigator was an Anglo-American as opposed to a Chinese. Furthermore, this effect is mediated by the meta-knowledge that dispositional causation is more popular among Americans than the Chinese (Zou et al., 2009).

Broader Implications for Understanding Cross-Cultural Competence

The ability to design and customize behaviors for different cultural audiences is a signature behavior of cross-cultural competence. Research has shown that individuals enmeshed in a second culture can navigate situations in the second culture like an expert; they interpret and express messages in situations in the ways that natives do (Fu, Chiu, Morris, & Young, 2007). More important, these bicultural experts can apply their expertise in the two cultures discriminatively and automatically to guide interpretations and actions in a particular setting (Fu et al., 2007; Gardner, Gabriel, & Lee, 1999; Hong et al., 2000; Lau-Gesk, 2003; Ross, Xun, & Wilson, 2002; Sui, Zhu, & Chiu, 2007; see also Leung & Chiu, 2010).

Meta-knowledge of culture supports cross-cultural competence because it provides cognitive support to discriminative application of cultural expertise by correcting the biases ensued from overgeneralized primary knowledge of culture. In keeping with this view, Keesing (1974) holds that not every individual in the culture shares precisely the same cultural theories. Thus, statements such as "Culture X is individualist" and "Culture Y is collectivist" are often overgeneralizations. Holding essentialist assumptions about cultural differences could promote a false sense of competence, and even fuel intergroup hostility and reactance (Chao, Chen, Roisman, & Hong, 2007; No et al., 2008). Instead, as Keesing (1974) posits, a culturally competent individual is someone who can act on the "theory of what his fellows know, believe, and mean, his theory of the code being followed, the game being played, in the society into which he was born" (p. 89). Recently, some organizational theorists (Huber & Lewis, 2010) have put forward the construct of cross-understanding, which refers to knowledge of group members' mental representations

(including knowledge and beliefs) of the group. They argue that cross-understanding as a form of meta-knowledge is responsible for many positive outcomes in group interactions.

Several sources of evidence attest to the central role of meta-knowledge in cross-cultural competence. First, recent research showed that meta-knowledge of cultures rather than actual beliefs or values of the participants mediate many cross-cultural differences in social cognition and behaviors (Shteynberg, Gelfand, & Kim, 2009; Zou et al., 2009). For example, Americans are more likely to make internal attributions than are the Chinese, not because Americans (vs. the Chinese) believe more strongly in dispositional causation, but because they believe that dispositional causation is more widely accepted by other Americans (Zou et al., 2009).

Second, some studies showed that to be able to interact competently with a person from a second culture, one also needs to possess meta-knowledge about the second culture. For example, in one study, Mainland Chinese students studying in Hong Kong differ among themselves in how much they know the relative popularity of different values in Hong Kong society. Those who possess more accurate meta-knowledge have more competent social interactions with Hong Kong students (Li & Hong, 2001).

In the current investigation, we are interested in the discriminative application of bicultural expertise in the domain of cross-cultural communication. To extend the generality of our results to different kinds of interpersonal communication, we examined referential communication in Study 1 and persuasive communication in Study 2. Referential communication aims at helping the addressee determine which item in an array of objects is the topic of conversation (Krauss & Chiu, 1998), whereas persuasive communication aims at influencing the behavior of the addressee.

Study 1: Referential Communication

In referential communication, individuals would formulate different messages depending on the identity of the addressee. For example, a person talking with a stranger will avoid idiosyncratic expressions that are unlikely to be part of their common ground (Fussell & Krauss, 1989a, 1989b). Someone referring to city landmarks is more likely to call them by name when talking to people who are familiar with the city than to those who are not (Isaacs & Clark, 1987). Nonetheless, how bicultural individuals apply their expertise in two cultures discriminatively to guide their communicative actions across cultural contexts has not been systematically investigated. It is also unclear what the psychological processes that support discriminative use of communication strategies across cultural contexts are. Study 1 is designed to fill these gaps.

In the current study, we examined whether people would apply culture-appropriate meta-knowledge in cross-cultural referential communication. In the study, Hong Kong participants described landmarks in Hong Kong and New York to either a Hong Kong audience or a New York audience. We expected that when the participants formulated messages for an audience, they would take the audience's knowledge of the landmarks into account, generating shorter messages for New Yorkers when describing landmarks that were more widely known among New Yorkers. They would also formulate shorter messages for Hong Kongers when describing landmarks that were more widely known among Hong Kongers.

Method

Forty Chinese undergraduates (30% males, 70% females) from a public university in Hong Kong participated in this study. They received U.S. \$8 for their participation.

Photos of 17 landmarks were shown to the participants. In the pilot study, 38 photos of landmarks were presented to 20 Hong Kong undergraduates from the same university. They were

asked to identify the landmarks and to estimate the percentage of undergraduates in their university and in a university in New York who could identify the landmarks. Out of the 38 landmarks, we selected 14 as our stimuli. Some selected landmarks were rated to be equally familiar to the participants in the two cities (e.g., Statue of Liberty and Great Wall). Some were more familiar to Hong Kongers than to New Yorkers (e.g., The Hong Kong Cultural Center), some were more familiar to New Yorkers than to Hong Kongers (e.g., The Guiggenheim Museum), and some were unfamiliar to Hong Kongers and New Yorkers (e.g., Kowloon City Park and St George's Ukrainian Catholic Church). Some landmarks could be easily identified if the participants mentioned only the type of architecture to which they belonged (e.g., a bridge). To address this problem, we added three other landmarks as distractors. However, participants were not required to describe the distractors.

In the experiment, participants were first asked to identify the landmarks and then estimate the percentage of undergraduates at their own university and the university in New York who could identify the landmarks. Finally, participants were asked to describe the landmarks one by one. Each participant's descriptions were tape recorded and later transcribed. For each description, we measured its length by counting the number of words in it.

Results and Discussion

We used a multilevel hierarchical model to test our hypothesis. The dependent variable was message length. We centered the estimation for Hong Kong students and the estimation for New York students at their respective grand means ($M = 59.26$ and $= 47.74$ for Hong Kong and American students, respectively). At the first (intra-individual) level of the model, we modeled the intercepts (participant's adjusted mean message length) and the slopes relating message length to estimations for Hong Kongers and New Yorkers as random effects. In the second (between-subjects) level, we included audience as the predictor.

The overall adjusted mean message length was 72.29 words. There was a significant interaction between audience and mean estimated identification rates of the landmarks in Hong Kong, $b = -.33$, $t(425) = -3.93$, $p < .001$. The interaction between audience and mean estimated identification rates of the landmarks among New Yorkers was also significant, $b = .19$, $t(425) = -2.49$, $p = .01$. As illustrated in Figure 1, the message intended for a Hong Kong audience was .18 words shorter when the estimated identifiability of the landmark to Hong Kong people increased by 1% ($p < .001$). However, the message intended for a Hong Kong audience was not related to the estimated identifiability of the landmark to New Yorkers ($b = .08$, *ns*). In contrast, when the message was intended for a New Yorker, the message length was .27 words shorter ($p < .01$) with every percent increase in the estimated identifiability of the landmark to New Yorkers. The message intended for a Hong Kong audience was not related to the estimated identifiability of the landmark to New Yorkers ($b = .18$, *ns*).¹

In short, the results show that people spontaneously use their meta-knowledge of the culture of the audience to guide their communicative behaviors. They base their message formulation on knowledge of what in-group members know when they interact with in-group members, and on knowledge of what out-group members know when they interact with out-group members. When they think that their audience is familiar with the object of communication (e.g., a landmark), they formulate a shorter message (e.g., including only the name of the landmark in the description: "the Statue of Liberty"), expecting the audience to be able to correctly identify the landmark from the brief description. In contrast, when they think that their audience is unfamiliar with the object of communication, they formulate a relatively lengthy description of the visible features of the object (e.g., instead of just naming the landmark, they include detailed information on the visual features of the building).

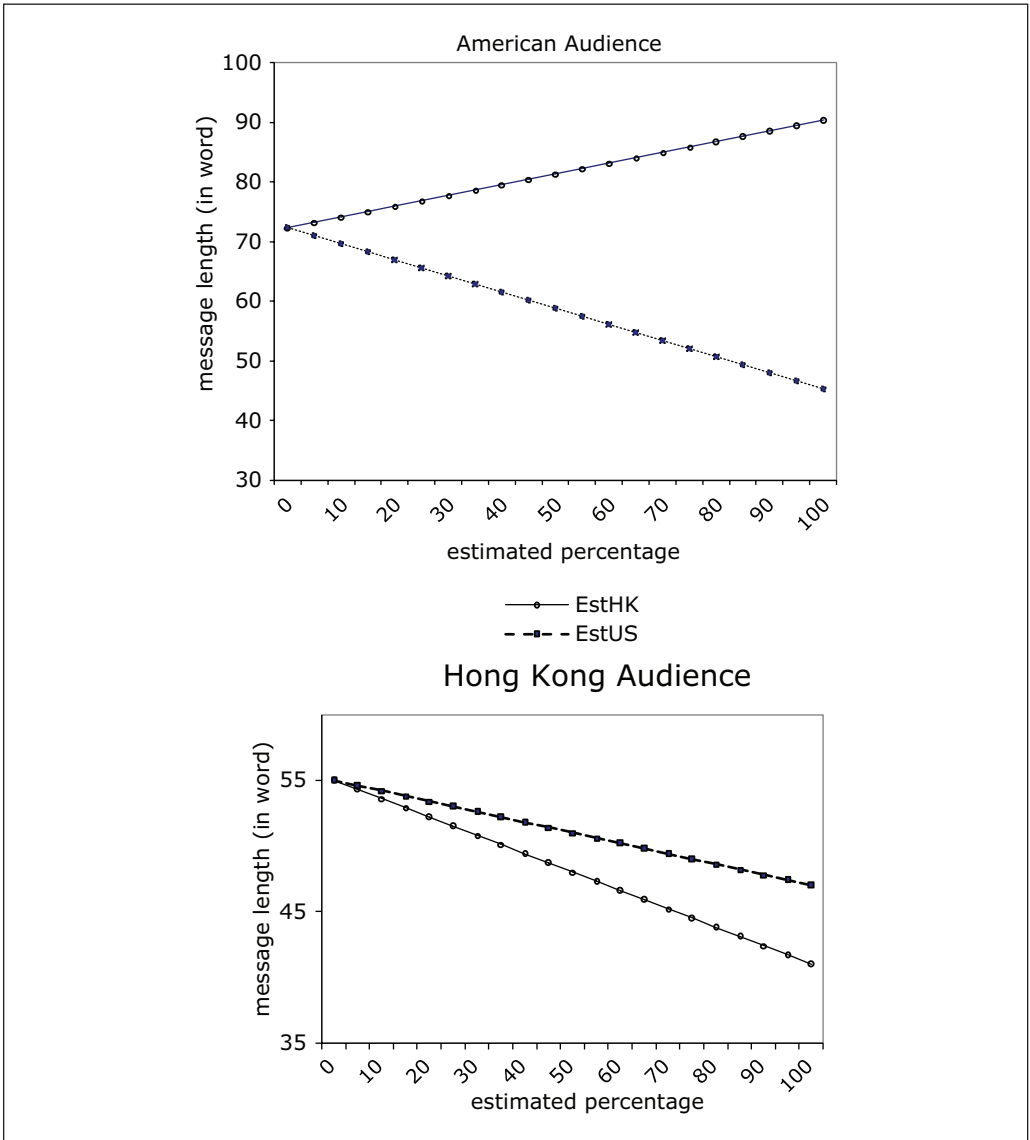


Figure 1. Relationship between mean estimated identifiability for Hong Kongers (EstHK) and New Yorkers (EstNY) and length of the descriptions for Hong Kong and New York audiences.

Study 2

The objective of the current study is to extend the generality of Study 1’s results. First, we replaced the referential communication task with a persuasive communication task to extend our results across different types of intercultural interactions. Second, instead of assessing meta-knowledge of objective knowledge, we assessed that of subjective knowledge (e.g., knowledge of the distribution of psychological characteristics in a culture).

We chose regulatory focus as our target psychological characteristic because it has been found to mediate important American–Chinese differences in social cognition and behaviors (Lalwani, Shrum, & Chiu, 2009; Zou et al., 2009). According to the regulatory focus theory,

there are two distinct foci in self-regulation: A promotion focus is primarily concerned with maximizing positive outcomes and a prevention focus is primarily concerned with minimizing negative outcomes (Higgins, 1997). People who are promotion-focused eagerly pursue gains or successes. Promotion-oriented individuals are motivated by their hopes and aspirations, and they scrutinize their social world for information that bears on the pursuit of success (Lockwood, Jordan, & Kunda, 2002). In contrast, people with a prevention focus strive to avoid negative outcomes. Driven by the need to feel secure and to meet their obligations, these individuals are primarily concerned with preventing failures or losses, and their information processing and interpersonal tactics are geared toward avoiding undesirable outcomes (Higgins, Roney, Crowe, & Hymes, 1994).

The study was conducted in a U.S. campus in the American Midwest, where the majority of students are European Americans. Our participants were European American and Chinese students studying in this university. Given the minority status of the Chinese students, they have more frequent exposure to European American culture than European American students have to Chinese culture. The asymmetrical exposure of the two student groups to each other's culture allows us to examine cross-cultural behavioral flexibility in persuasive communication as a function of the amount of intercultural exposure that takes place within the same environment.

To minimize the impact of demand characteristics and to assess accuracy in the meta-knowledge of promotion and prevention focus in American and Chinese cultures, we obtained information of the actual and perceived popularity of the two regulatory foci in separate samples of Chinese and European American undergraduates. In a third independent sample of Chinese and American undergraduates, we measured the inclination to use promotion-focused arguments in persuasive communication as a function of the cultural membership of the audience.

Method

Actual popularity of regulatory focus. We obtained data on the actual popularity of promotion and prevention focus from Zou and colleagues (2009, Study 3). In this study, 120 European American undergraduates from the same university where we conducted the main study (45% men) and 85 Chinese undergraduates (29% men) in Beijing completed the Regulatory Focus Questionnaire (RFQ, Higgins et al., 2001). The RFQ measures promotion and prevention focus. Some items in the questionnaire are phrased in the form of a statement. For these items, a participant rates his or her agreement with the statements each on a 5-point Likert-type scale ranging from 1 (*certainly false*) to 5 (*certainly true*). The remaining items are phrased in the form of a question. For these items, a participant indicates how often he or she acts or thinks in that particular way each on a 5-point Likert-type scale ranging from 1 (*never or seldom*) to 5 (*very often*). This measure displayed acceptable reliability (for the Chinese: $\alpha_{\text{prevention}} = .80$, $\alpha_{\text{promotion}} = .63$; for Americans: $\alpha_{\text{prevention}} = .76$, $\alpha_{\text{promotion}} = .68$). American participants' promotion focus ($M_{\text{American}} = 3.81$, $SD = 0.70$) was significantly higher than that of Chinese participants ($M_{\text{Chinese}} = 3.42$, $SD = 0.63$), $p < .001$, $F(1, 203) = 3.38$, $\eta_p^2 = .06$. The prevention focus does not differ across the two cultures ($M_{\text{American}} = 3.43$, $SD = 0.48$; $M_{\text{Chinese}} = 3.42$, $SD = 0.62$).

Perceived popularity of regulatory focus. To assess the perceived popularity of the two regulatory foci, we recruited a sample of European American students ($N = 48$, 59.1% male) and Chinese students ($N = 54$, 42.1% male) from the same campus where the main study was conducted. With one exception, all American students were born in the United States. All Chinese students were born in Mainland China, Hong Kong, or Taiwan. The Chinese students had lived in the United States for an average of 3.33 years.

The participants answered minimally altered versions of the RFQ that tap perceived popularity of the two regulatory foci among Americans and the Chinese. They rated the extent to which

the RFQ statements were widely endorsed and the actions widely practiced among Americans and the Chinese, for example: “Growing up, would most Americans/Chinese ever ‘cross the line’ by doing what their parents would not tolerate?”; “Did most Americans/Chinese get on their parents’ nerves often when they were growing up?” Each participant answered questions (in a counterbalanced order) pertaining to the perceived popularity of promotion and prevention regulatory focus among Americans and the Chinese.

To ensure that American and Chinese participants understood the meaning of the two regulatory foci, after they had completed the perceived popularity measures, they were presented with brief descriptions of four individuals and asked to predict how each of these individuals would respond to the RFQ. The four profiles described an American or a Chinese who was motivated by aspirations and hopes, and an American or a Chinese who was motivated by the needs to feel secure and to meet their obligations. If the participants understood the meanings of the regulatory focus, regardless of their own cultural membership and the cultural membership of the target, they should expect the promotion-oriented targets to score higher on promotion focus than on prevention focus, and vice versa for the prevention-oriented targets. The reliabilities of the 12 sets of ratings (perceived promotion and prevention of Americans, the Chinese, and the four specific targets) ranged from .61 to .80.

Choice of persuasive arguments. Another sample of European American students ($N = 43$, 53.5% male) and Chinese students ($N = 44$, 37.2% male) in the same campus participated in the “persuasion study.” With three exceptions, all American participants were born in the United States. With one exception, all Chinese participants were born in Mainland China, Hong Kong, or Taiwan. The Chinese participants had lived in the United States for an average of 22.5 months.

We measured the choice of persuasive arguments by asking participants to recall a past incident in which they persuaded their American (or Chinese, between-subjects factor) friend to do something and wrote down the arguments they used to persuade their friend. All participants recalled at least two arguments. Coders who were blind to the participants’ experimental condition counted the number of gain-oriented arguments (0 to 2) in the first two recalled arguments to form a measure of the tendency to use gain-oriented arguments.

After completing this task, the participants responded to a demographic survey. In this survey, we asked the participants to report the languages they could speak, write, and read, and rate on an 11-point scale (from 0 to 10) their level of liking for American and Chinese cultures. The participants were also instructed to list five favorite musicians, and for each musician, indicate his or her nationality. For each participant, we counted the number of musicians on the list who were foreign musicians (non-Americans for the Americans and non-Chinese for the Chinese).

Results and Discussion

Intercultural exposure. Consistent with our assumption, all Chinese participants, compared with 62.8% of Americans, could speak two or more languages, $\chi^2(df = 1, N = 87) = 26.28, p < .001$. Americans, liked American culture ($M = 8.48$) more than the Chinese did ($M = 5.25$), $t(84) = 7.58, p < .001$. In contrast, the Chinese liked Chinese culture ($M = 8.07$) more than Americans did ($M = 2.47$), $t(76) = 12.31, p < .001$. More important, the Chinese like American culture more than Americans liked Chinese culture, as reflected in the significant interaction of participant culture and culture of liking, $F(1, 76) = 133.69, p < .001$.

The Chinese ($M = 1.68$) also favored more foreign music than did the Americans ($M = 0.70$), $t(85) = 3.59, p < .005$. Furthermore, for Americans, having more favorite foreign musicians was positively correlated with liking for Chinese culture ($r = .55, p < .01$) and negatively correlated with liking for American culture ($r = -.30, p < .05$). For the Chinese, having more favorite foreign musicians was negatively correlated with liking for Chinese culture ($r = -.29, p < .05$) and

not related to liking for American culture ($r = .15, ns$). This result shows that having more favorite foreign musicians is related to cultural preferences. This is particularly the case for Americans, who can choose to interact with the minority.

Perceived popularity of regulatory focus. To ensure that American and Chinese participants understood the meanings of promotion and prevention focus, we performed a 2 (Participant Culture) \times 2 (Target Regulatory Focus) \times 2 (Target Culture) \times 2 (Measure: Promotion or Prevention Focus) mixed design analysis of variance (ANOVA) on the estimated regulatory focus of the four targets, with the last three factors as within-subjects factors. None of the effects associated with participant culture and target culture were significant ($F_s < 1$). The Target Regulatory Focus \times Measure interaction was significant, $F(1, 101) = 445.72, p < .0001$. The promotion-oriented target was estimated to have higher promotion score ($M_{\text{American}} = 3.84; M_{\text{Chinese}} = 3.84$) than prevention score ($M_{\text{American}} = 2.79; M_{\text{Chinese}} = 2.70$), $t(47) = 14.15$ for Americans and 13.89 for the Chinese, respectively, $ps < .001$. The prevention-oriented target was estimated to have higher prevention score ($M_{\text{American}} = 3.70; M_{\text{Chinese}} = 3.63$) than promotion score ($M_{\text{American}} = 2.79; M_{\text{Chinese}} = 2.70$), $t(47) = 12.22$ for Americans and 12.63 for the Chinese, respectively, $ps < .001$. These results helped to establish cross-cultural equivalence in the understanding of the constructs of promotion and prevention focus.

Next, we examined group differences in the estimated endorsements of promotion and prevention focus among Americans and the Chinese. We performed a 2 (Participant Culture) \times 2 (Target Culture) \times 2 (Measure) mixed design analysis of variance (ANOVA) on the estimated regulatory focus of Americans and the Chinese, with the last two factors as within-subjects factors. The three-way interaction was significant, $F(1, 100) = 6.18, p = .01$. We interpreted other lower-order significant effects in light of this significant three-way interaction. American participants expected the Chinese ($M = 3.60$) to be more promotion-focused than Americans ($M = 3.48$), $t(47) = 2.04, p < .05$. This perception was inaccurate given that the actual promotion scores of the Americans were higher than those of the Chinese. In contrast, the Chinese accurately perceived Americans to have higher promotion scores ($M = 3.52$) than the Chinese ($M = 3.22$), $t(53) = 3.37, p = .001$. This result is consistent with our argument that the Chinese have more exposure to Americans than Americans to the Chinese, and such exposure could have produced more accurate meta-knowledge among the Chinese of the cultural differences in the endorsements of promotion focus. The Chinese and the Americans, however, incorrectly expected the Chinese to have higher prevention scores than did Americans (for American participants: $M_{\text{Chinese}} = 3.67, M_{\text{American}} = 2.96$; for the Chinese participants: $M_{\text{Chinese}} = 3.45, M_{\text{American}} = 2.73$), $ts > 6.56, ps < .001$.

Choice of persuasive arguments. Results of a Participant Culture \times Target Culture ANOVA performed on the number of gain-oriented arguments used in persuasive communication revealed a significant two-way interaction, $F(1, 83) = 4.02, p < .05, \eta^2 = .044$. When the friend was an American, the Chinese participants used more gain-oriented arguments ($M = 0.52$) than did American participants ($M = 0.09$), $t(43) = 2.40, p = .01$. The Chinese also used more gain-oriented arguments when they tried to persuade their American friend than they did their Chinese friend ($M = 0.24$), whereas Americans used more gain-oriented arguments when they tried to persuade their Chinese friend ($M = 0.29$) than they did their American friend. Although both differences were not significant ($ps = .16$), the overall pattern was consistent with the finding that Americans expected the Chinese to be more promotion-focused than Americans, and the Chinese expected Americans to be more promotion-focused than the Chinese.

As a robust test, we controlled for the participants' liking of American and Chinese cultures before we evaluated the effects of participant culture and target culture. The effect of liking for American culture was nonsignificant ($b = -0.06, t = -1.75, p = .08$), and so was the effect of liking for Chinese culture ($b = -0.02, t = -0.45, p = .65$). The interaction of participant culture and

target culture remained significant after controlling for the effects of liking for American and Chinese cultures, $F(1, 72) = 4.34, p = .04$.

General Discussion

The results of the two studies reported here provided general support for the role of meta-knowledge in the use of discriminative and culturally sensitive strategies in cross-cultural communication. Display of discriminativeness and cultural sensitivity when interacting with people from different cultures is a signature behavior of cross-cultural competence (Ang et al., 2007; Chiu & Hong, 2005). Given the central role of cross-cultural communication in cross-cultural adaptation (Kim, 1988), our results underscore the importance of meta-knowledge in cross-cultural competence.

To elaborate, our results show that in referential and persuasive communication, communicators spontaneously appropriate pertinent meta-knowledge to guide message formulation for different cultural audiences. In referential communication, communicators produce more concise referential messages when they expect knowledge of the referent to be more widely shared in the culture of the audience (Study 1). In persuasive communication, communicators produce more gain-oriented arguments when they expect promotion focus to be a relatively popular self-regulatory preference in the culture of the audience (Study 2). This pattern of communicative behaviors is consistent with the principle of audience design in the common ground theory (Clark et al., 1983; Clark & Wilkes-Gibbs, 1986; Isaacs & Clark, 1987).

Implications for Cross-Cultural Competence

Our findings have an interesting implication for understanding the nature of cross-cultural competence. In Study 2, the European American students took the cultural perspective of their audience when formulating a persuasive message for the audience. Nonetheless, because they held erroneous meta-knowledge about self-regulatory preferences, they included more gain-oriented arguments in message intended for the Chinese than the American audience. This result implies that when people possess accurate meta-knowledge, perspective taking would enhance the quality of intercultural interaction. This implication is consistent with the past finding that accuracy in meta-knowledge is associated with better quality of intercultural interactions (Li & Hong, 2001). However, perspective taking does not guarantee production of culturally sensitive messages in cross-cultural communication. Specifically, if the communicators have inaccurate meta-knowledge, perspective taking is likely to promote culturally inappropriate communication strategies. Communicators can produce culturally sensitive communication strategies only if they have accurate meta-knowledge *and* adopt perspective taking. This interactive effect between cultural perspective taking and meta-knowledge on the quality of cross-cultural interaction deserves future investigation.

Implications for Understanding Cultural Differences and Processes

Our results also shed light on the recent findings on the role of intersubjective knowledge in explaining cultural differences in cognition and behaviors (Chiu, Gelfand, Yamagishi, Shteynberg, & Wan, 2010). A growing body of evidence shows that cultural differences in social cognition and behaviors are mediated by perceived distributions of cultural knowledge rather than actual differences in the preferences of the pertinent cultural groups (Shteynberg et al., 2009; Wan, Chiu, Peng, & Tam, 2007; Wan, Chiu, Tam, et al., 2007; Zou et al., 2009). For example, cultural differences in attribution are better explained by cultural differences in the perceived popularity of the belief in dispositional causation than by cultural differences in the actual preferences for

this belief (Zou et al., 2009). Some researchers (Fleming, Darley, Hilton, & Kojetin, 1990; Hilton, 1995) have argued that even seemingly private social cognitions (such as attribution) measured in a research laboratory are actually conversational behaviors directed toward specific audiences. If the research participants consider reporting their attribution to the investigator as a conversational act, they may adjust their message to the meta-knowledge of the investigator. From this perspective, it is not surprising that meta-knowledge would mediate cross-cultural differences in attribution style. This idea is consistent with the past finding that bicultural participants make different causal explanations for an ambiguous event depending on the cultural identity of the investigator, and the finding that meta-knowledge mediated the response shift in attribution (Zou et al., 2009).

Future Research Directions and Conclusion

Given the important role of meta-knowledge of culture in cross-cultural competence, it would be interesting to find out in future research the experiential foundation of meta-knowledge. Nickerson (1999) suggested that people assess what others know through various means. First, they can make direct observation and explicit queries (e.g., “Do you know so and so . . .”). Second, people can base their estimation on the immediate physical context and past experiences that they share with the audience. According to the Multiple-Trace Model (Hintzman, 1988) in the frequency judgment literature, each experience with a stimulus leaves in the memory an independent memory trace. As the number of experiences with the stimulus event increases, the number of traces for that event also increases. Thus, people are able to form judgments of frequency even in the absence of the intention to do so. This model has received consistent empirical support. For example, in one study (Howell, 1973), participants were shown a list of words presented at different frequencies. Half of the participants were told the experiment was about frequency judgment and half of them were told the experiment was about word recall. In both conditions, estimations of the presentation frequencies of the words were in proportion to the actual presentation frequencies. More importantly there was no significant difference in the performance of the two groups. That is, regardless of whether the participants were told to focus intentionally on the presentation frequency of the words or not, their performance was the same. This illustrates that information about the frequency of occurrence of different events can be acquired through an automatic and unintentional process (see also Zacks, Hasher, & Sanft, 1982). We suggest future research to examine how this automatic on-line update of frequency judgment provides the experiential basis of meta-knowledge of meaningful psychological tendencies and behaviors in a given culture.

As another future research direction, it is worth noting that meta-knowledge contains knowledge about the central tendency and the amount of variability in the proportional distribution of knowledge in a culture. Thus, individuals with nuanced meta-knowledge is aware of how widely distributed a certain piece of knowledge or preference is as well as the amount of intracultural variability of the knowledge in a culture. Consistent with this view, some models of cross-cultural competence (e.g., Chiu & Hong, 2005) view awareness of intercultural differences and intracultural variability in social knowledge as equally important contributors to cross-cultural competence. The current investigation has focused on meta-knowledge of central tendencies in the distribution of social knowledge. Future research should explore how meta-knowledge of the amount of variability in the knowledge distribution within a culture affects cross-cultural competence.

In summary, the current research shows that cross-cultural communication is a collaborative process, in which individuals coordinate to construct shared representation of the reality. For this to be possible, each communicator must formulate their messages according to their meta-knowledge of the addressee or the addressee’s cultural community. Accordingly, meta-knowledge

is an important experience-grounded psychological factor that plays a major role in the cultural processes underlying cross-cultural competence.

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Note

1. Audience had no effect on the message length; the main effect of audience was not significant, $b = -17.28$, $t(425) = -1.40$, $p = .16$. There was also a significant main effect of mean estimated identification rates of the landmarks in Hong Kong on the length of the descriptions [$b = 0.18$, $t(37) = 3.06$, $p = .004$]. For every percent increase in the estimated identifiability of the landmarks among Hong Kongers, the message was 0.18 words longer. There was also a negative association between mean estimated identifiability of the landmarks in New York and the length of the descriptions [$b = -0.27$, $t(37) = -5.04$, $p < .0001$]: With every percent increase in the estimated identifiability of the landmarks in New York, the message was 0.27 words shorter. We interpreted these main effects in the context of the significant interactions.

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