

# Identifying and Training Adaptive Cross-Cultural Management Skills: The Crucial Role of Cultural Metacognition

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*For managers, intercultural effectiveness requires forging close working relationships with people from different cultural backgrounds (Black, Mendenhall, & Oddou, 1991). Recent research with executives has found that higher cultural metacognition is associated with affective closeness and creative collaboration in intercultural relationships (Chua, Morris, & Mor, & 2012). However, little is known about the social cognitive mechanisms that facilitate the performance of individuals who score high on cultural metacognition. We propose that one important question for cross-cultural research and training is identifying which metacognitive strategies enable successful intercultural collaborations. We suggest that one such strategy is “cultural perspective taking”—considering how another’s cultural background shapes their behavior in a given context. We hypothesized that cultural perspective taking facilitates intercultural coordination and cooperation, and that a manipulation that boosts cultural perspective taking would be especially beneficial for individuals who score low in dispositional cultural metacognition. We found support for the above hypotheses in five studies using both quasi-field and experimental approaches. We discuss the implications of these findings for literatures on expatriate managers, cross-cultural training, cultural intelligence, and intercultural negotiations.*

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“For him to have understood me would have meant reorganizing his thinking . . . giving

up his intellectual ballast, and few people are willing to risk such a radical move.”

—Edward T. Hall

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We thank Adam Galinsky and Modupe Akinola for their help with data collection for Study 3A. We are grateful to Daniel Ames, E. Tory Higgins, Shirley Kopelman, Roy Chua, Krishna Savani, and Aaron Wallen for providing their comments on earlier drafts of this manuscript.

The globalization of business presses managers to communicate, negotiate, and collaborate across cultures (Adler & Gundersen, 2008; Boyacigiller & Adler, 1991). Firms depend on informal coordination between managers located in different parts

of the organization (Barnard, 1968). In global firms, this requires intercultural collaboration. While expatriate assignments can facilitate the transfer of knowledge across borders, expatriates often face difficulties in adjusting to the foreign culture (Caruso, Epley, & Bazerman, 2006), which can result in early termination of assignments (Graham, 1985). Other mechanisms for coordination in global organizations are multinational teams and international alliances (Adler & Gundersen, 2008; Byrne, 1993; Manz & Sims, 1987). Yet such structures often run aground on the failure of managers from different cultures and countries to work effectively with one another (Earley & Gibson, 2002; Hagel & Brown, 2005).

Firms have long sought employees with cross-cultural capabilities but have not known how best to select for them or develop them. Recently, management researchers integrated disparate insights about relevant characteristics and capabilities under the rubric of cultural intelligence (CQ; Earley & Ang, 2003; Earley & Peterson, 2004; Ng, Van Dyne, & Ang, 2009). Earley and Ang (2003) define *cultural intelligence* as the capability of an individual to function effectively in culturally diverse settings. We suggest that cultural intelligence is an individual difference that can inform the field's renewed interest in cross-cultural research and training programs (Black & Mendenhall, 1990; Mendenhall, Stahl, Ehnert, Oddou, Osland, & Kuhlmann, 2004; Rehg, Gundlach, & Grigorian, 2012). More specifically, the present research aims to bridge research and practice by identifying specific social cognitive strategies associated with cultural intelligence, strategies that might be targeted by intercultural training programs. We first highlight the contribution of our approach to cross-cultural training and past and ongoing research.

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#### **NOVEL APPROACH TO CROSS-CULTURAL TRAINING AND RESEARCH**

Our research offers a novel approach to cross-cultural research and training by examining an individual difference measure associated with in-

tercultural success and its associated social cognitive mechanisms. We propose that this approach can contribute to researchers and practitioners' understanding of cross-cultural competency and training in a number of ways. First, we look for trainable strategies through a descriptive approach of identifying thought patterns associated with an individual difference dimension that is known to correlate with intercultural effectiveness. Second, we examine social cognitive mechanisms associated with intercultural performance. Third, we examine intercultural performance in the context of working in the home country, not just in overseas assignments. Notably, in contrast to prior training programs focused on teaching managers culture-specific knowledge (Fowler & Blohm, 2004; Mendenhall et al., 2004), we focus on general strategies for dealing with cultural differences, not on training specific to particular cultures. We introduce our approach and hypotheses by first reviewing the literature on cultural intelligence and the specific role of cultural metacognition in promoting intercultural performance.

#### **CULTURAL METACOGNITION**

Ang and Van Dyne (2008) have proposed four central dimensions that foster cultural intelligence: metacognitive, cognitive, motivational, and behavioral. Our focus is on the first of these dimensions—cultural metacognition. *Metacognition* is defined as thinking about thinking, comprising the processes of monitoring and adjusting one's thoughts and strategies as one learns new skills (Triandis, 1995). *Cultural metacognition* refers to an individual's level of conscious cultural awareness and executive processing during cross-cultural interactions (Ang & Van Dyne, 2008). Thomas et al. (2008) propose that this dimension is the core of cultural intelligence.

Past researchers have found that intercultural success is correlated with mindfulness and self-awareness about cultural assumptions (Johnson, Cullen, Sakano, & Takenouchi, 1996; LaBahn & Harich, 1997). Those with high metacognitive cultural intelligence (CQ) are consciously aware of others' cultural preferences before and during interactions. They also question cultural assumptions and adjust their mental models during and after interactions (Brislin, Worthley, & MacNab, 2006; Triandis, 2006). Other theorists of intercultural competence have proposed similar inferences as the signature of cultural metacognition

(Klafehn, Banerjee, & Chiu, 2008; Thomas, 2006). Evidence suggests that cultural metacognition develops through reflection during intercultural experiences (Ng et al., 2009), consistent with evidence that reflection helps people fine-tune their assumptions after experiences (Kolb & Kolb, 2005).

Although the construct of metacognition is new in management research, it follows a tradition emphasizing the importance of self-awareness and sensitivity toward others when adjusting to new environments (Mendenhall & Oddou, 1985). Cognitive psychologists characterize metacognition as monitoring and adjusting one's thoughts and strategies as one learns new skills (Flavell, 1979). Expanding this line of theorizing, Ang et al. (2007) defined cultural metacognition as mental processes directed at acquiring, comprehending, and calibrating cultural knowledge. Researchers (Klafehn, Banerjee, & Chiu, 2008) suggest that metacognition in cultural domains increases intercultural effectiveness by promoting (1) contextualized thinking (i.e., heightened sensitivity to the fact that individuals' motivations and behaviors are invariably shaped by the cultural contexts in which they are embedded), and (2) cognitive flexibility (i.e., discriminative use of mental schemas and behavioral scripts when interacting across cultures). The ability to think contextually and flexibly about issues from a foreign counterpart's perspective has been termed cultural perspective taking in the social psychology and negotiations literature (Lee, Adair, & Seo, 2011). Thus, cultural perspective taking may play a central role in the inferences that enable individuals high in cultural metacognition to interact effectively across cultures.

### IDENTIFYING AND TRAINING A METACOGNITIVE STRATEGY

Recent research examining the role of cultural metacognition in cross-cultural performance has found that cultural metacognition is associated with greater success in collaborating in intercultural (but not intracultural) relationships (Chua et al., 2012). However, past research has yet to identify which metacognitive strategies may facilitate intercultural coordination. We propose that one metacognitive strategy facilitating intercultural coordination is considering how another person's cultural background may affect their response to a situation—"cultural perspective taking" (Lee et al., 2011). This thought process, while not foolproof,

generally heightens the accuracy of people's expectations about a foreign counterpart's intentions and behaviors. Of course, it could be ineffective when a counterpart's actual intentions are opposite to those typical of his group, but this is by definition atypical. We argue that examining cognitive processes that facilitate interpersonal accuracy among American managers is important to investigate, as past research reveals that people from individualistic cultures, compared to those from collectivistic cultures, are less accurate in assessing their counterparts' interests (Gelfand & Christakopoulou, 1999).

We explore whether inducing cultural perspective taking can improve effectiveness in working with individuals from different cultures, critical to organizational success. We expected that this intervention would be particularly helpful for managers who are low in cultural metacognition, either by disposition or habit. We propose that cultural perspective taking works like other forms of perspective taking, in that imagining the world from another's person's perspective (under specific conditions) has been found to reduce some problematic patterns in social cognition, such as confirmation bias and stereotyping (Galinsky, 2002; Galinsky & Moskowitz, 2000). Perspective taking brings one's self-experience closer to one's representation of the other person (Davis, Conklin, Smith, & Luce, 1996). Hence, perspective takers are more likely to see themselves as similar to the other person (Galinsky, Ku, & Wang, 2005; Todd & Burgmer, 2013). Related to this, perspective taking can lead to mimicking the other person's observed or expected behavior (Bargh, Chen, & Burrows, 1996). In this way, perspective taking can help in meshing or coordinating with another person (Galinsky et al., 2005) and offers a unique advantage in interpersonal coordination in comparison with affective-based mechanisms such as empathy (Galinsky, Maddux, Gilin, & White, 2008).

In line with past research and the propositions we put forth above, we propose the following:

*Hypothesis 1a: Cultural metacognition will be positively associated with intercultural cooperation.*

*Hypothesis 1b: The relationship between cultural metacognition and intercultural cooperation will be mediated by cultural perspective taking.*

How would cultural perspective taking change a manager's negotiation strategy? Consider the case of an American facing a counterpart from a col-

lectivistic culture. Cross-cultural research finds that collectivists favor cooperative, relationship-preserving tactics, whereas individualists favor competitive tactics and emphasize their own needs (Markus & Kitayama, 1991). Culture influences normative beliefs about what is appropriate, what others will do, and what others expect (Gelfand & Dyer, 2000; Lytle, Brett, Barsness, Tinsley, & Janssens, 1995). When Americans reflect on a collectivistic counterpart's beliefs and practices, they should become more likely to adopt relational goals and cooperative tactics themselves. Similarly, prior research on perspective taking has found that when taking the perspective of an out-group member, individuals subsequently act more consistently with the other group's norms (Ku, Wang & Galinsky, 2010). Thus, we propose the following predictions:

*Hypothesis 2a: An intervention inducing cultural perspective taking will promote intercultural cooperation with collectivistic counterparts.*

*Hypothesis 2b: The relationship between cultural perspective taking and intercultural cooperation will be mediated by one's relational goals toward collectivistic counterparts.*

*Hypothesis 2c: The relationship between cultural perspective taking and intercultural cooperation will be mediated by expectations about the relational goals of collectivistic counterparts.*

Extending past theory on cultural intelligence and cultural metacognition, we further propose that a cultural perspective-taking intervention would have a larger positive impact on intercultural cooperation decisions of individuals low on cultural metacognitive tendencies.

*Hypothesis 2d: Inducing cultural perspective taking would promote intercultural cooperation more for individuals with low habitual cultural metacognition than those with high habitual cultural metacognition.*

### The Present Research

Although past research has examined perspective taking broadly, few studies have experimentally examined the role of cultural perspective taking in promoting cross-cultural management skills, such as facilitating intercultural collaboration and co-

operation in international teams, cross-cultural negotiations, or mixed-motive tasks. In extending past research on cultural intelligence and cross-cultural training, we contend that one important cognitive tendency that managers with high levels of metacognitive tendencies (high meta-CQ) engage in is cultural perspective taking *prior to and during* an intercultural interaction. More important, we suggest that cultural perspective taking tendencies can be temporarily heightened, and thus, can be especially beneficial for managers chronically low on cultural metacognitive tendencies.

### Methodological Approach

The methodological approach we employ to test our hypotheses is adopted from social psychology research and involves experimental inductions to manipulate social cognitive processes, such as cultural perspective taking. To examine the causal relationships between our variables of interest, we use an experimental design with samples of MBA students and crowdsourcing participants by way of Mechanical Turk. We chose to use Mechanical Turk participants for our experimental designs rather than undergraduate student samples to test our hypotheses for a number of reasons. First, recent research reveals that Mechanical Turk participants are significantly more diverse than typical American college samples (Buhrmester, Kwang, & Gosling, 2011). Moreover, compared with a traditional university participant pool, crowdsourcing respondents have more work experience, are often older, and are more ethnically diverse (Behrend, Sharek, Meade, & Wiebe, 2011). Thus, by examining our hypotheses using both individuals with professional experience and MBA students' samples, we believe that the social cognitive mechanisms examined are shared among lay people as well as managers, and thus, can be used to train individuals in a diverse array of professional settings.

### OVERVIEW OF STUDIES

We examined our hypotheses in five studies, which span from quasi-field settings to controlled laboratory experiments. In the first, we examine whether cultural metacognition among American MBA students was associated with greater levels of intercultural cooperation with different-culture peers working together in international teams and

whether this effect is explained by cultural perspective-taking habits (Hyp 1a and Hyp 1b). In our pilot study, we tested a cultural perspective-taking (CPT) intervention—thinking about a Chinese counterpart's cultural values and beliefs—prior to making a business decision to cooperate in a mixed-motive business scenario. We examined whether this intervention heightened individuals' intercultural cooperation due to heightening intentions to adopt a relational orientation (associated with Chinese cultural values; Hyp 2a and Hyp 2b). In Study 2, we investigate whether a cultural perspective-taking intervention promoted American MBA students' intercultural cooperation in the same business scenario as the pilot study, but we further examined whether this effect could also be explained by expectations about the counterpart's relational goals (Hyp 2c). In Study 3A, we examine whether inducing CPT in American MBAs prior to engaging in intercultural negotiation with a Japanese counterpart heightened MBA students' expectations that their Japanese counterpart would be cooperative in an upcoming negotiation. We further examined whether this intervention was more beneficial for MBAs low on cultural metacognition than high on cultural metacognition (Hyp 2d). In Study 3B we provide a comprehensive test of Hypotheses 2c-2d in a unified design.

## STUDY 1: CULTURAL METACOGNITION AND INTERCULTURAL COOPERATION

The goal of Study 1 is to examine Hypotheses H1a and H1b using a sample of American MBA students studying in an American business school where 50% of the student population is composed of international students. In this MBA program, intercultural cooperation is needed to complete study-related tasks, such as papers and class assignments. To examine our predictions, we surveyed entering students about their cultural metacognitive tendencies. Two months subsequent to evaluating students' cultural metacognition tendencies, we evaluated students' cultural perspective-taking and cooperation levels using ratings made by their international peers who had been working with them in multinational student teams for 2 months. We hypothesized that MBA students' cultural metacognition would be positively associated with different-culture peers' evaluation of their cooperative tendencies and that this effect would be explained by heightened cultural perspective-taking tendencies.

## Method

### Participants and Procedure

Two hundred American MBA students (Males = 58.5%; Mean Age = 27; 61.3% had managed at least one employee in their previous jobs) were recruited to fill out an on-line survey as a voluntary part of their pre-MBA assignments (73% of incoming students completed the survey). Students were provided a link to an on-line survey that asked about their past work experiences abroad and their experiences working in multicultural work environments—an environment where foreign national students are equally represented as American ones. The cultural intelligence measure was collected as part of this survey. Upon arrival, students were assigned to multinational learning teams of 5–6 students. Teams were created to maximize their cultural diversity and typically comprised of three American students, one European student, and two students from other world regions such as Africa, South America, the Middle East, and East Asia or South Asia. These teams assemble in MBA student orientation and students spend the majority of orientation activities and their first year of classes working in teams. After 2 months in their international teams, 305 international student peers (from non-U.S. nationalities), representing 45 nationalities evaluated target American students on a host of leadership-related measures as part of a 360 leadership assessment. Each student was evaluated by between 1 and 4 different-culture peers with whom they worked. Student peers were asked to *anonymously* appraise their team members' levels of cooperation and perspective-taking tendencies when working in these teams as part of their class assignment. Let us now describe the measures in the study in more detail.

## Measures

### Cultural Metacognition

Incoming MBA students reported their cultural metacognition tendencies using a 6-item scale developed by Van Dyne, Ang, Ng, Rockstuhl, Tan, and Koh (2012). The items tap (1) cultural awareness (e.g., "I am aware of how to use my cultural knowledge when interacting with people from different cultures"); (2) adjustment during intercultural interactions ("I adjust my cultural knowledge while interacting with people from a new or an unfamiliar culture"); and (3) planning before intercultural interactions (e.g., "I develop action plans for interact-

ing with people from a different culture"; Scale reliability:  $\alpha = .82$ ). We averaged students' self-reports on the six items to create a cultural metacognition score for each student.

### Cultural Perspective Taking

After working 2 months in their international teams, participants were evaluated by classmates from other cultures with regard to their perspective-taking habits. The items were the following: "S/he is able to empathize and understand someone else's perspective"; "S/he misjudges people's personality and character" [Reversed]; "S/he fails to realize the impact of what s/he says and does on others" [Reversed]; "S/he is good at assessing other people's strengths and weaknesses"; "S/he is good at sensing what other people are thinking and feeling" (Scale reliability:  $\alpha = .83$ ). We averaged each rater's evaluation of each target student on these five items to create each rater's cultural perspective-taking score for the target student.

### Intercultural Cooperation

Peers also evaluated target students on three items that assessed American MBA students' ability to work effectively in their international teams. The items were the following: "She/he is able to build effective working relationships with others who have different opinions or interests" and "She/he is able to build coalitions to get things done" (Scale reliability:  $\alpha = .65$ ). We averaged each rater's evaluation of each target student on these two items to create each rater's intercultural cooperation score for the target student.

We conducted confirmatory factor analyses (CFA) using structural equation modeling (LISREL 8.80) to ensure that the mediator and outcome variable (cultural perspective taking and intercultural cooperation) are distinct factors. Results indicate that a 2-factor model where cultural perspective taking and intercultural cooperation items load into respective separate factors has a better fit to the data ( $\chi^2 = 35.15$ ,  $df = 13$ ,  $RMSEA = 0.08$ ) than a 1-factor model ( $\chi^2 = 35.16$ ,  $df = 14$ ,  $RMSEA = 0.09$ ).

### Control Variables

Dimensions of cultural intelligence other than cultural metacognition, namely cognitive, motivational, and behavioral CQ, have been found to predict intercultural cooperation tendencies (Imai & Gelfand, 2010). As a result, we included these

scales' control variables: cognitive CQ ( $\alpha = .84$ ), motivational CQ ( $\alpha = .86$ ), and behavioral CQ ( $\alpha = .86$ ).

Additionally, since student peer ratings of target students' cooperation levels may be influenced by their levels of acquaintance with target students outside of class assignments, we included raters' familiarity with the target student as an additional control variable ("how well do you know this person?", 1 = *Not at all* to 4 = *extremely well*).

## Results and Discussion

Hypothesis 1a predicted that cultural metacognition would be positively associated with intercultural cooperation. To test this hypothesis, we used a hierarchical linear model (HLM) software to carry out our analyses (Raudenbush, 2004). We ran a linear HLM treating different-culture student peers as nested within target American students, with student-peer ratings as the dependent variable (at Level 1) and cultural metacognition and the control variables as Level 2 predictors. Table 1 reports the results from the hierarchical linear model analyses. Model 1 contains the control variables; whereas Model 2 adds the predictor of cultural metacognition. Analyses revealed that cultural

**TABLE 1**  
Hierarchical Linear Model Regression on Student Peers' Ratings of Intercultural Cooperation (Study 1)

	Intercultural cooperation		
	Model 1	Model 2	Model 3
<b>Key predictors</b>			
Cultural metacognition	—	0.20*	0.06
Cultural perspective taking (mediator)		(-0.09)	(-0.07)
			0.67**
			(-0.04)
<b>Control variables</b>			
Cognitive CQ	0.05	-0.01	0.01
	(-0.07)	(-0.08)	(-0.06)
Motivational CQ	0.14+	0.09	0.12+
	(-0.08)	(-0.09)	(-0.07)
Behavioral CQ	-0.04	-0.07	-0.08
	(-0.07)	(-0.07)	(-0.05)
Student peers familiarity	0.23**	0.26**	0.07
	(0.10)	(0.10)	(0.08)
Intercept	4.23**	3.91**	1.10**
	(0.46)	(0.48)	(0.41)

Note. CQ = cultural intelligence. Numbers in parenthesis are standard errors. + $p < .10$ , \*\* $p < .01$ , \* $p < .05$ .

metacognition was positively associated with peers' evaluation of target students' levels of cooperation in international teams,  $\beta = .20$ ,  $SE = .09$ ,  $t(195) = 2.22$ ,  $p < .05$ . Thus, the results supported Hypothesis 1a.

Next, we examined whether cultural perspective-taking tendencies mediated the relationship between cultural metacognition and intercultural cooperation. To conduct mediational analyses (in this study and follow-up studies), we followed Baron and Kenny's (1986) procedures as well as carried out a bootstrapping test with 20,000 resamples using percentile bootstraps (Hayes, 2009).

Analyses revealed that cultural metacognition (Level 2 predictor) was positively associated with student peers' evaluation of target students' cultural perspective-taking tendencies (Level 1 dependent variable),  $\beta = .20$ ,  $SE = .09$ ,  $t(195) = 2.26$ ,  $p < .05$ . Second, when cultural metacognition and cultural perspective taking (mediator) were both entered into the HLM model as Level 2 predictors (see Model 3), the effect of cultural metacognition turned statistically nonsignificant,  $\beta = .06$ ,  $SE = .07$ ,  $t = .90$ ,  $p = .37$ ; whereas the effect of cultural perspective taking on intercultural cooperation remained statistically significant,  $\beta = .67$ ,  $SE = .04$ ,  $t = 15.01$ ,  $p < .001$ , suggesting mediation (see Figure 1 for the full mediation model). A bootstrapping test confirmed a positive indirect effect of cultural metacognition on intercultural cooperation by way of cultural perspective taking (95% CI [.02, .25]). These results provide support for Hypothesis 1b.

In summary, the results from Study 1 provide evidence supporting our hypotheses that chroni-

cally high cultural perspective-taking tendencies among American MBA students explain the relationship between metacognitive habits and successful intercultural collaboration with different-culture counterparts.

## STUDY 2: CULTURAL PERSPECTIVE-TAKING INTERVENTION

Although Study 1 provides the first empirical evidence that the relationship between cultural metacognition and intercultural cooperation is explained by cultural perspective-taking tendencies, in Study 2, we examined one intervention for promoting cultural perspective taking—reflecting how the cultural background of one's counterparts may affect their approach to a mixed-motive conflict. This cognitively oriented intervention is distinct from affectively oriented interventions in past work on intercultural collaboration (Chua et al., 2012). We tested whether this cultural perspective-taking intervention would shift participants' decisions, in this case, toward a relational, harmonious approach congruent with Chinese norms (Hyp 2b) in a Prisoners' Dilemma scenario that was adapted into a decision-making task in a business setting.

## PILOT STUDY

### Method

#### Participants and Procedures

For an initial test of the cultural perspective-taking intervention, we recruited 107 American adults (81.3% = White/Caucasian; 7.5% = Asian; 6.5% =

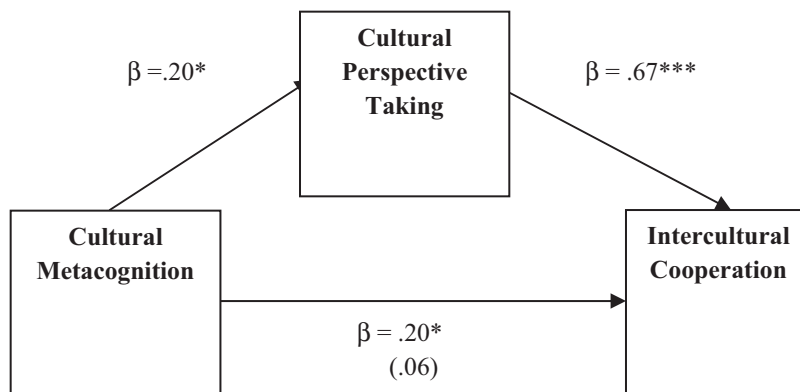


FIGURE 1

Mediation Model Showing Cultural Perspective Taking Mediates the Relationship Between Cultural Metacognition and Intercultural Cooperation (Evaluated by Different-Culture Peers; Study 1).

Note. Regression results are reported in unstandardized betas. \* =  $p < .05$ , \*\*\* =  $p < .001$ .

African American; 3.7% = Hispanic; 9% = Native American; Female = 51%; Mean Age = 34, 28.1% college students, 70.1% currently working) via Mechanical Turk for a study on problem solving. Participants were randomly assigned to a cultural perspective-taking condition or control condition.

### Materials

**Mixed Motive Conflict.** Participants were asked to read a scenario, a Prisoners' Dilemma task presented as a conflict on an advertising campaign between an American product manager and a Chinese product manager, adapted from past research (Greenhalgh & Bazerman, 2004; Ku et al., 2010). Participants were first presented with the following prompt about their role and objectives as American managers:

You are Mr./Ms. Graham, the head of a product management group in a consumer products firm based in the U.S., handling the marketing of a new liquid dishwasher detergent. As a manager, you are faced with a recurring decision as to whether you should put on an advertising campaign during the next sales period. This campaign would provide consumers with comparative information about your Chinese competitor's product: Li Hong. The comparative advertising campaign will describe the destructive impact of your competitor's product on a dishwasher's motor, spots left on the dishes, and/or its high cost.

Your objective is to maximize your profit. This is also the objective of your Chinese competitor, Li Hong. Profitability will also be used as a way of measuring your success as a manager. The profitability of your product depends not only on your decision but also on the decision of Li Hong. Specifically, if neither you nor Li put on a derogatory advertising campaign, each company will make \$1 million for the sales period. If one of you puts on a comparative advertising campaign but the competing company does not, then the company that advertises will have a profit of \$2 million for the sales period and the competitor will lose \$2 million. If both companies advertise the deficiencies of their competitor's product, then total sales of liquid dishwasher detergent will fall and both companies will lose \$1 million for the sales period.

Participants were asked to decide whether to embark on an advertising campaign disparaging a Chinese product manager, Li Hong, who is selling a similar product. Advertising was equivalent to an aggressive, competitive response; whereas not advertising was equivalent to cooperating. Participants' decision not to advertise was used as a measure of intercultural cooperation.

**Manipulation.** Next, participants in the CPT condition were asked to think about their counterpart's culture before making their decision. Below is the prompt they received:

Before you go on to make your decision, we would like you to do the following: Please write down a few sentences describing Li's (Chinese manager's) interests and concerns as a person living and working in China. . . How would Li's cultural values and beliefs guide his behavior and decision in this situation?

**Business Decision.** Next, participants were asked to make their decision in the decision-making scenario (advertise or not advertise).

**Goals.** After making their decision, participants indicated in an open-ended response format what guided their decision-making in the scenario. They were presented with the following prompt:

Please write down a few sentences explaining what guided your decision to advertise or not advertise in the business case.

Two research assistants blind to the hypotheses rated participants' open-ended responses. Raters evaluated participants' decisions on the following items: "The participant was interested in promoting future business relations with Li"; "The participant was interested in cooperating with Li"; "The participant was interested in achieving the business goal of maximizing profit/minimizing profit loss" (Reversed); (1 = *strongly disagree*, 7 = *strongly agree*; ICC = .80). The 3 items were averaged to create a score for each participant ( $\alpha = .89$ ).

**Manipulation Check.** After making their decision, participants indicated whether they thought about Chinese cultural values while evaluating the scenario. They rated their thought process on the following three items: "I tried to think what a Chinese manager would do in this case"; "I thought about Chinese business norms when making my decision"; "I thought about Chinese cultural values



when making my decision." Items averaged to create a score for each participant (1 = *not at all*; 7 = *very much*;  $\alpha = .87$ ).

**Control Variables.** At the end of the study, participants reported their cultural intelligence (cultural metacognition Van Dyne et al., 2012):  $\alpha = .87$ ; Cognitive CQ:  $\alpha = .80$ ; Motivational CQ:  $\alpha = .80$ ; Behavioral CQ:  $\alpha = .87$ . As in Study 1, these four cultural intelligence factors were included as control variables in our analyses.

## Results

To test whether the CPT manipulation induced cultural perspective taking in participants, we ran an ANCOVA (between subjects factor: experimental condition; covariates: 4 CQ factors) on the cultural perspective-taking scores and found that participants reported thinking more about Chinese cultural values and beliefs in the CPT condition ( $M = 4.58$ ) than the control condition ( $M = 3.32$ ),  $F(1,150) = 18.84, p < .001$ .

Hypothesis 2a proposed that cultural perspective taking would promote cooperation with a different-culture colleague. To test this, we regressed participants' choices to cooperate (advertise = compete = 0; not advertise = cooperate = 1) on the experimental condition (0 = Control, 1 = CPT), controlling for the 4 CQ factors. Analyses revealed a main positive effect of the manipulation on choosing a cooperative strategy with a Chinese counterpart,  $\beta = .93, SE = .48, Wald(1) = 3.73, p < .05$ . Thus, the results supported Hypothesis 2a.

To examine whether the effect of the CPT intervention on decisions runs through goals, we followed Baron and Kenny's (1986) steps for testing mediation as well as a bootstrapping test (Hayes, 2009). We first examined the relationship between the experimental condition and goals (controlling for cultural intelligence factors) using multiple regression analysis and found them to be positively associated,  $\beta = .90, SE = .26, t(101) = 3.45, p < .01$ . Then we conducted binary logistic analysis and entered both the experimental condition and students' relational orientation scores as predictors of choice to cooperate, controlling for cultural intelligence factors. Analyses revealed that the effect of the condition turned statistically nonsignificant,  $\beta = -.58, SE = .78, Wald(1) = .55, p = .46$ ; whereas the effect of students' relational scores remained a significant predictor of choice to cooperate with Li,  $\beta = 2.13, SE = .44, Wald(1) = 23.47, p < .001$  suggesting mediation (see Figure 2). A bootstrapping test with 20,000 resamples confirmed a positive indirect effect between CPT on students' choice to cooperate by way of intentions about adopting a relational business orientation (95% CI [.31, 3.27]). Thus, the results above provided support for Hypothesis 2b. In sum, our pilot study revealed that a cultural perspective-taking intervention increased participants' relational orientation toward a Chinese counterpart and explained their decision to cooperate with him. However, the question still remains whether this heightened relational orientation was the result of an increase in other-self overlap associated with collectivistic cultural values.

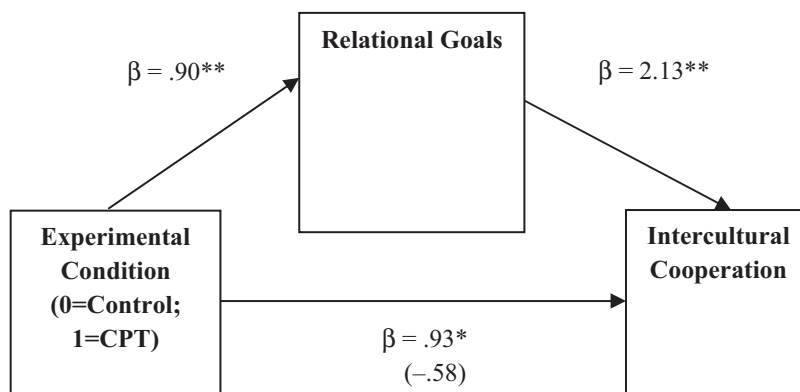


FIGURE 2

**Mediation Model Showing the Positive Casual Effect of Cultural Perspective Taking on Intercultural Cooperation with a Chinese Counterpart Is Mediated by One's Relational Goals (Study 2, Pilot Study).**

Note. Regression results are reported in unstandardized betas. \* =  $p < .05$ , \*\* =  $p < .01$ .

## STUDY 2: CULTURAL PERSPECTIVE-TAKING INTERVENTION WITH MBA STUDENTS

In Study 2 we shifted to test our CPT intervention with MBA students whose demographic characteristics are more closely aligned with those of managers. Moreover, we also explored participants' expectations about their counterpart's decision in the mixed-motive conflict task, since much of past research finds that cooperation in mixed-motive conflicts hinges on expectancies of the counterpart's cooperation (Wong & Hong, 2005). Accordingly, we examined whether the association between cultural perspective taking and cooperation hinges on heightened expectancies of the Chinese counterpart's goal to cooperate (Hyp 2a and Hyp 2b).

### Method

#### Participants and Procedures

Fifty-seven (Non-Chinese) MBAs (61.4% American<sup>1</sup>; Males = 65%; Mean Age = 28) completed the study as part of an in-class exercise. Seventy-two percent of students identified as White/Caucasian, 21.1% Asian (non-Chinese), 3.5% Latin/Hispanic, 1.8% as African-American, and 3.5% as other ethnicities. Students were randomly assigned to a CPT condition or control condition.

### Materials

#### Mixed-Motive Conflict

Students were asked to read a business scenario, which was a Prisoner's Dilemma task presented as an advertising task. The instructions and task were presented in the same manner as in the pilot study.

#### Manipulation

Next, participants in the CPT condition were asked to think about their Chinese counterpart's cultural values before making their decision. The prompt presented to MBA students was the same prompt used in the pilot study.

#### Business Decision

Next, participants were asked to make their decision in the case (to advertise or not advertise).

#### Manipulation Check

After making their decision, participants indicated whether they thought about Chinese cultural values while evaluating the case, which served as a manipulation check using the following three items: "I tried to think what a Chinese manager would do in this case"; "I thought about Chinese business norms when making my decision"; "I thought about Chinese cultural values when making my decision." Items were averaged to create a score for each participant (1 = *not at all*; 7 = *very much*;  $\alpha = .89$ ).

#### Expectancies of Counterpart's Cooperativeness

Next, participants rated their confidence that Li would not advertise (i.e., cooperate) using a 7-point scale (1 = *not at all*; 7 = *very much*; Wong & Hong, 2005).

#### Control Variables

At the end of the study, participants completed a cultural intelligence assessment (Cultural meta-cognition; Van Dyne and colleagues, 2012):  $\alpha = .73$ ; Cognitive CQ:  $\alpha = .90$ ; Motivational CQ:  $\alpha = .79$ ; Behavioral CQ:  $\alpha = .88$ .

## RESULTS AND DISCUSSION

To test whether the cultural perspective-taking manipulation induced cultural perspective taking in MBA students, we ran an ANCOVA (between subjects factor: experimental condition; covariates: 4 CQ factors) on the cultural perspective-taking scores and found that students reported more thoughts about counterparts' cultural values and beliefs in the cultural perspective-taking condition ( $M = 5.49$ ) than the control condition ( $M = 4.17$ ),  $F(1,57) = 14.27, p < .001$ .

Hypothesis 2a suggested that inducing cultural perspective taking would promote cooperation with a counterpart from a culture known for cooperative relational norms. To test this prediction, we conducted a binary logistic regression regressing students' choice to cooperate (advertise = compete = 0; not advertise = cooperate = 1) on the

<sup>1</sup> Preliminary analysis revealed that students' cultural backgrounds (American vs. non-American students) did not reveal differential effects on their responses to the manipulation and their decision to cooperate in the case, and thus, we retained both American and non-American students in the sample.

experimental condition (0 = Control, 1 = CPT), controlling for cultural intelligence factors. Analyses revealed a positive main effect of CPT on intercultural cooperation,  $\beta = 1.43$ ,  $SE = .63$ ,  $Wald(1) = 5.23$ ,  $p < .05$ . These results supported Hypothesis 2a, replicating the results from the pilot study with MBA students and revealing that cultural perspective taking had a direct positive effect on intercultural cooperation.

Hypothesis 2b further suggested that the relationship between CPT and intercultural cooperation would be mediated by expectations about the counterpart's cooperativeness. To test this prediction, we first examined the relationship between the experimental condition and expectations about the counterpart's cooperativeness (the mediator). Multiple regression analysis revealed that the CPT condition had a positive main effect on expectations that the counterpart would cooperate ( $\beta = 1.37$ ,  $SE = .52$ ,  $t = 2.62$ ,  $p < .05$ ). When both experimental condition and expectations about the counterpart's cooperativeness were entered as predictors of cooperation in a logistic regression model, the relationship between the experimental condition and intercultural cooperation turned statistically nonsignificant ( $\beta = .95$ ,  $SE = .69$ ,  $Wald(1) = 1.86$ ,  $p = .17$ ), while expectations about Li's cooperation remained a significant predictor of intercultural cooperation ( $\beta = .47$ ,  $SE = .18$ ,  $Wald(1) = 7.19$ ,  $p < .01$ ), suggesting mediation (see Figure 3). A bootstrapping test confirmed there was a positive indirect effect between CPT on intercultural cooperation via expectations about Li's cooperativeness (95% CI [.01, 1.84]).

These results reveal that the cultural perspective-taking manipulation increased MBA students' cooperation with a Chinese counterpart, and this effect was explained by their heightened expectations that their counterpart—Li Hong—would cooperate as well. Thus, the results supported Hypotheses H2a and H2b and suggest that one useful intervention for promoting managers' cross-cultural working relations with collectivistic counterparts is asking them to reflect about their counterpart's values and beliefs prior to meeting them. Moreover, we find that CPT also increases expectations that one's counterpart holds relational, cooperative goals when making his or her decision. Overall, it appears that reflection prior to intercultural interaction facilitates overlap between MBA students' and their counterparts' cultural values and goals.

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### STUDY 3A: CULTURAL PERSPECTIVE TAKING AND INTERCULTURAL NEGOTIATIONS

Although Study 2 revealed a causal positive relationship between cultural perspective taking and intercultural cooperation, in Study 3A, we examined this intervention as a preparation for an international negotiation between an American

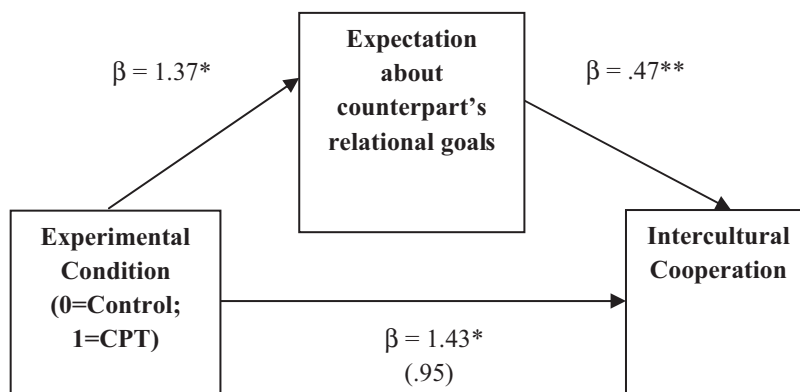


FIGURE 3

**Mediation Model Showing the Positive Effect of Cultural Perspective-Taking Condition on Intercultural Cooperation Is Mediated by Expectations That the Chinese Counterpart Holds Relational Goals (Study 2).**

Note. Regression results are reported in unstandardized betas. \* =  $p < .05$ ; \*\* =  $p < .01$

manager and a Japanese counterpart. In this context, we examined American MBA students' expectations about their counterpart's cooperative versus competitive orientation in an upcoming negotiation. Expectations about the counterpart's orientation should be associated with students' decisions to cooperate, as past research on negotiations has found that expectations greatly influence strategic decisions about concessions to make and information to provide or withhold from one's counterpart (Earley & Mosakowski, 2000). We also further explored whether a cultural perspective intervention produced greater benefits (e.g., increased expectation about counterpart's cooperativeness) for MBA students low on metacognition than those high metacognition individuals. In other words, we expected that culture-specific cues would lead in individuals low on cultural metacognition to modify their expectations about their counterpart's goals, leading to greater levels of intercultural cooperation in this task.

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## Method

### Procedure

Seventy-six American MBA students (Males = 56%; Mean Age = 27) participated in a negotiation exercise in their first semester of school as part of an in-class exercise in a leadership class. Upon beginning their MBA program, the American MBA students reported their cultural metacognition levels in an orientation survey (using the same method as in Study 1). Two months later (as part of an in-class exercise) the students were asked to complete a prenegotiation survey prior to a negotiation with a Japanese counterpart over the manufacturing of "mini" excavators (Patel & Brett, 2007). Participants were not aware of any cultural elements in the exercise or the fact that the prenegotiation survey was intended to assess their proclivity toward working with a different-culture counterpart. Since students later carried out the negotiation in teams, we only examined their ex-

pectations about their counterpart's cooperation prior to the negotiation. Students were randomly assigned to either a cultural perspective-taking manipulation or a control condition.

## Materials

### Cultural Intelligence

Two months prior to the negotiation exercise, students completed the 4-factor cultural intelligence assessment described in the previous studies (cultural metacognition:  $\alpha = .80$ ; Cognitive CQ:  $\alpha = .80$ ; Motivational CQ:  $\alpha = .85$ ; Behavioral CQ:  $\alpha = .86$ ). The four CQ factors were included as control variables in all of the following analyses.

### Negotiation Exercise

Upon arriving to class, students received their negotiation roles and were asked to read the materials prior to completing their prenegotiation surveys. The negotiation case involved a negotiation between two companies, Abhas and Bussan (represented by Sato-san), over the manufacturing of "mini" excavators, and the case materials included five issues. All American students were assigned to the Abhas role. The case contained background information about the Japanese company and Sato-san (the Japanese negotiator).

### Cultural Perspective-Taking Manipulation

Prior to the negotiation, students were provided a link to an on-line survey where they were asked to predict their Japanese counterpart's orientation in the upcoming negotiations. Students in the CPT condition received the following information before making their predictions about their Japanese counterpart (Students in the control received no prompt).

Before you go on to guess Sato-san's (Japanese counterpart from the Bussan company) priorities and goals in the negotiations, we would like you to do the following: Please take a few moments to think about the perspective of Sato-san negotiating on behalf of a company operating in Japan. Try to imagine what Sato-san would be thinking and what may be her/his interests and concerns based on the fact that she/he is negotiating on behalf of a company operating in Japan. Try

your best to put yourself in Sato-san's shoes. Please write down a few sentences describing Sato-san's interests and concerns about the five case issues as a Japanese negotiator.

### Expectancy of Counterpart's Cooperativeness

Next, students were asked to predict the orientation of their Japanese counterpart during the upcoming negotiation using the following categories: (1) Cooperative, (2) Competitive, or (3) Don't Know. All other responses (competitive or don't know) were coded as 0.

## RESULTS AND DISCUSSION

We conducted a logistic regression analysis examining the effects of the experimental condition on MBA students' expectations that their Japanese counterpart would be cooperative in the upcoming negotiation. Analyses revealed no main effect of condition,  $\beta = .27$ ,  $SE = .26$ ,  $Wald(1) = 1.11$ ,  $p = .29$ . Next, we examined whether the intervention had a stronger effect for individuals with a low baseline proclivity toward cultural metacognition. To test this prediction, we used binary logistic regression and tested for an interaction between cultural metacognition and the experimental condition on perceptions of cooperativeness. Analyses revealed a significant 2-way interaction between cultural metacognition and the experimental condition on expectation that Japanese counterpart would cooperate,  $\beta = -0.84$ ,  $SE = .39$ ,  $Wald(1) = 4.71$ ,  $p < .05$ . Simple slope analysis following procedures by Ai-

ken, West, and Reno (1991) revealed that MBAs low on cultural metacognition when asked to reflect on their Japanese counterpart's values and behaviors were more likely to expect their Japanese counterpart would be cooperative (CPT condition) than not (control condition),  $\beta = 1.80$ ,  $SE = .80$ ,  $Wald(1) = 5.10$ ,  $p < .05$  (see Figure 4). At the same time, the CPT for MBAs high on cultural metacognition did not alter their (already moderately high) expectations about their Japanese counterpart's cooperativeness,  $\beta = -0.75$ ,  $SE = .73$ ,  $Wald(1) = 1.07$ ,  $p = .30$  (see Figure 4). The patterns depicted in Figure 4 further suggest that individuals low on cultural metacognition did not simply regress toward the mean in their expectations about their partner, but rather more closely matched the predictions of individuals high on cultural metacognition.

Although the manipulation did not have a main effect on expectancies, there was an interaction effect: Individuals habitually low in cultural metacognition were prompted by the manipulation to think about their Japanese counterpart's cooperativeness more than they did in the control condition; whereas individuals high in cultural metacognition were not pushed to think more than they did in the control condition (already a considerable amount). Hence this is an intervention that works most for individuals not culturally minded in that it helps them take useful cultural information into account. To help students who are already culturally minded make even more finely calibrated decisions, another kind of manipulation may be needed.

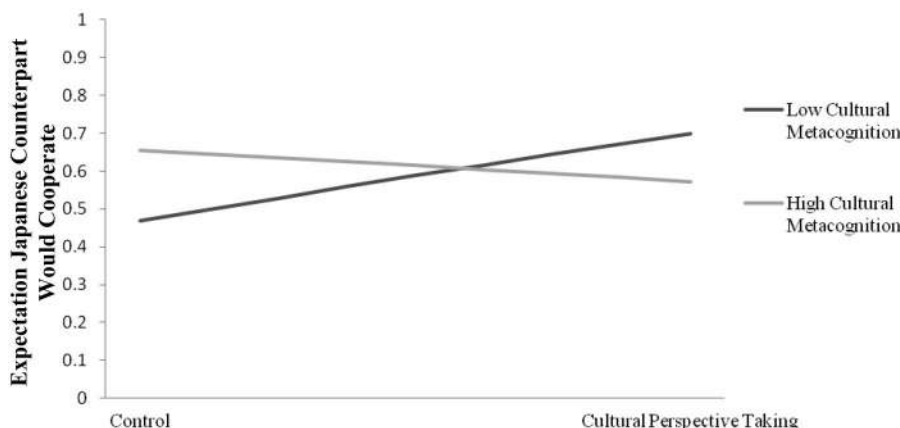


FIGURE 4

Graph Depicting the Interaction Between Experimental Condition and Cultural Metacognition on Expectations That Japanese Counterpart Would Be Cooperative in an Upcoming Negotiation (Study 3A).

## STUDY 3B

Although Study 3A revealed that offering a cultural perspective-taking intervention to individuals low on cultural metacognition enhanced their expectation that their different-culture counterpart would cooperate in an upcoming international negotiation, we did not examine whether this intervention also directly increased intercultural cooperation decisions of MBAs low on cultural metacognition. Thus, the aim of Study 3B was to examine Hypotheses 2b and 2c in a unified study design.

### Method

#### Participants and Procedures

Seventy-six American adults (100% White/Caucasian, Female = 52%; Mean Age = 34, 26% college students, 62% currently working) were recruited by way of Mechanical Turk and were asked to complete a survey on decision making. The procedure was the same design as Study 2. Participants were randomly assigned to a cultural perspective-taking or control condition.

#### Mixed-Motive Conflict

Participants were asked to read a scenario which was a Prisoner's Dilemma task presented as an advertising task. The task presented was the same task presented in Study 2.

#### Manipulation

Next, participants in the cultural perspective-taking condition were asked to think about their Chinese counterpart's cultural values before making their decision in the business scenario (same task as Study 2).

#### Business Decision

Next, participants were asked to make their decision in the case (to advertise/not advertise).

#### Manipulation Check

After making their decision, participants indicated whether they thought about Chinese cultural values while evaluating the case which served as a manipulation check using the following three items (as in Study 2): "I tried to think what a Chinese manager would do in this case"; "I thought

about Chinese business norms when making my decision"; "I thought about Chinese cultural values when making my decision." Items were averaged to create a score for each participant (1 = not at all; 7 = very much;  $\alpha = .83$ ).

#### Expectancies

We also evaluated participants' inferences about their Chinese counterpart's long-term relational goals using the following statements: "I thought Li would care about our long-term relationship"; "I thought Li would be most concerned about making profit" [Reversed]). The two items were averaged to create a score for each participant ( $\alpha = .87$ ).

#### Cultural Intelligence Measure

At the end of the study, participants completed the usual cultural intelligence assessment (cultural metacognition:  $\alpha = .87$ ; Cognitive CQ:  $\alpha = .86$ ; Motivational CQ:  $\alpha = .89$ ; Behavioral CQ:  $\alpha = .91$ ). As in the previous studies, these four cultural intelligence factors were included as control variables in our analyses.

## RESULTS AND DISCUSSION

To test whether the CPT manipulation induced cultural perspective taking, we ran an ANCOVA (between subjects factor: experimental condition; covariates: 4 CQ factors) on the cultural perspective-taking scores and found that participants reported greater levels of cultural perspective taking in the CPT condition ( $M = 4.72$ ) than the control condition ( $M = 3.55$ ),  $F(1,76) = 11.77$ ,  $p < .01$ .

We first tested Hypothesis 2a, which suggested that cultural perspective taking would promote intercultural cooperation. To do so we conducted a binary logistic regression using experimental condition as a predictor variable on participants' decision to cooperate. Consistent with Hypothesis 2a (and results from studies 2A and 2B), the CPT condition had a positive effect on choosing a cooperative strategy with Li,  $\beta = 1.06$ ,  $SE = .51$ ,  $Wald(1) = 4.30$ ,  $p < .05$ .

Next, we conducted a binary logistic regression analysis to examine whether expectations about the Chinese counterpart's strategy explained the relationship between the experimental condition and decision to cooperate. When both experimental condition and expectations about counterpart's cooperation were entered into the binary logistic

regression model, the effect of CPT turned statistically nonsignificant,  $\beta = .74$ ,  $SE = .55$ ,  $Wald(1) = 1.80$ ,  $p = .18$ , while expectations about Li's relational goals remained a significant positive predictor of cooperation, indicating mediation,  $\beta = .66$ ,  $SE = .21$ ,  $Wald(1) = 9.60$ ,  $p < .01$  (see Figure 5). A bootstrapping test confirmed there was a positive indirect effect between CPT on intercultural cooperation by way of expectations about counterpart's relational goals (95% CI [.03, 1.59]). The results above provide additional support for Hypotheses 2a and 2b by revealing that the CPT manipulation increased the likelihood of choosing a cooperative strategy with a Chinese counterpart by heightening expectations that the Chinese counterpart would choose a cooperative strategy as well.

Next, we examined Hypothesis 2d and tested whether inducing CPT had a greater positive effect on decisions to cooperate for individuals low on cultural metacognition. To test this hypothesis, we conducted a binary logistic regression analysis and tested for an interaction between the experimental manipulation and cultural metacognition on decision to cooperate. Analyses revealed a significant interaction,  $\beta = -1.47$ ,  $SE = .63$ ,  $Wald(1) = 5.55$ ,  $p < .05$ . To probe the interaction, we conducted simple slope analysis (Aiken et al., 1991), examining the effect of the experimental condition in individuals low on cultural metacognition versus those high in cultural metacognition. Consistent with our predictions, analysis revealed that individuals low on cultural metacognition were significantly more cooperative in the CPT condition than the control condition,  $\beta = 1.39$ ,  $SE = .48$ ,  $Wald(1) = 8.41$ ,  $p < .01$ . At the same time, the CPT

manipulation did not enhance cooperation levels for individuals high on cultural metacognition,  $\beta = -.08$ ,  $SE = .35$ ,  $Wald(1) = .05$ ,  $p = .82$ .

## DISCUSSION

In five studies we provided a comprehensive test of our hypotheses positing that a metacognitive tendency, namely—cultural perspective taking—can promote intercultural cooperation and be especially useful for promoting intercultural cooperation among American MBA students and working adults low on cultural metacognition. Our research contributes to ongoing research in management education and learning by providing a novel framework utilizing both an individual difference approach and situational priming geared toward identifying and developing individuals and managers' cross-cultural management skills.

### Theoretical Implications

While much of past research on cultural intelligence (CQ) has focused on identifying the link between cultural intelligence and managerial performance measures (for a review see Ang, Van Dyne, & Tan, 2011), our research is the first to identify a cognitive-based mechanism associated with one of the factors of cultural intelligence. Moreover, we provide the first empirical evidence that a cognitive mechanism—cultural perspective taking—has a direct positive effect on behavioral measures associated with managerial performance in culturally diverse settings, spanning intercultural collaboration in international teams,

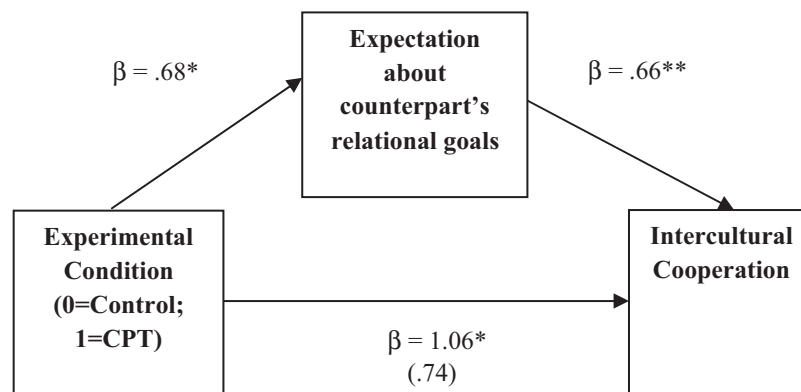


FIGURE 5

Mediation Model Showing the Positive Effect of Cultural Perspective-Taking Condition on Intercultural Cooperation Is Mediated by Expectations That the Chinese Counterpart Holds Relational Goals (Study 3B).

Note. Regression results are reported in unstandardized betas. \* =  $p < .05$ ; \*\* =  $p < .01$ .

decision making in mixed-motive conflicts, and preparation for international negotiations.

Interestingly, while past CQ research and theory has suggested that cultural knowledge (cognitive CQ) should lead individuals to have more accurate understanding of foreign cultures (Ang et al., 2007), the results of Study 1 do not support these assumptions, nor does recent research revealing no association between self-reported cognitive CQ and cross-cultural accuracy (Mor, Ames, & Joh, 2013). The results revealed that only metacognitive CQ, and not cognitive CQ, was associated with cultural perspective taking. These results suggest that the ability to accurately detect culture-specific congruent or incongruent norms may require the development of metacognitive habits in tandem with foreign cultural knowledge.

### **Cultural Intelligence and Intercultural Relationships**

Our findings contribute to the growing body of research on how dimensions of cultural intelligence (CQ) affect people's abilities to manage various forms interdependence with counterparts from different cultures. Recent research by Chua, Morris, and Mor (2012) focused on collaborations within the context of professional networks. They found that executives with a higher proclivity toward cultural metacognition attain more creative collaboration success in their intercultural ties, as they develop more affect-based trust in these ties, relative to those lower in cultural metacognition. In the context of intercultural negotiations, Imai and Gelfand (2010) have found that motivational CQ (the motivation and efficacy to engage culturally different others) predicted integrative behaviors, resulting in higher joint gains and that behavioral CQ (behavioral flexibility during intercultural interactions), but not other dimensions of CQ, predicted sequences of cooperative strategies. Our research adds to this stream of research by (1) identifying strategies for using cultural knowledge that are associated with cultural metacognition, such as cultural perspective taking, and (2) examining whether metacognitive strategies can be induced through an intervention guiding perspective taking. Our research also reveals the discriminate validity of the cultural metacognition factor from the three other CQ factors, a query recently advocated by Van Dyne et al. (2012).

Our findings further extend past research examining intercultural trust and collaboration (Chua et

al., 2012; Takahashi, Yamagishi, Liu, Wang, Lin, & Yu, 2008) by examining the role of cognitive-based tendencies rather than affective mechanisms leading to intercultural trust and collaboration. Past research finds that trust leads to better rapport, which increases willingness to cooperate with others in mixed-motive conflicts (Drolet & Morris, 2000). Trust can arise by way of two distinct psychological processes: a cognitive evaluation of the other party's competence and reliability, or an affective experience of liking and rapport (McAllister, 1995). The former is based on expectations of task-related competence and involves an analytic and utilitarian assessment of the other party; the latter is closely linked to empathy and rapport, and arises from emotional closeness. These two types of trust closely resemble two central dimensions of social perception: warmth and competence (Fiske, Cuddy, & Glick, 2007). Affect-based trust is strongly linked to perceived warmth, cognition-based trust to perceived competence. We argue that cognitive-based mechanisms leading to intercultural trust and cooperation are important to examine for a number of reasons. First, McAllister (1995) notes that some level of cognition-based trust is necessary for affect-based trust to develop. Second, negotiations scholars have found that differences in cognitive schema impede the building of trust in intercultural negotiations (Brett & Okumura, 1998; Jang & Chua, 2011). When negotiating across cultures, negotiation counterparts do not always share the same implicit scripts, norms, and assumptions. We argue that matching the cognitive schemas of counterparts, for example, by engaging in cultural perspective taking, can facilitate bridging across differences in cognitive schema. At the same time, future research should continue to investigate differential effects of cognitive- versus affective-based mechanisms in intercultural exchanges.

Also important, our research makes a contribution to the broader literature on cross-cultural organizational behavior by empirically examining intercultural interactions. While much of the organizational behavior literature discusses cross-cultural interactions, very few studies empirically investigate these interactions (Gelfand, Erez, & Aycan, 2007). Studies that do examine cross-cultural interactions and adaptation tend to take a long-term orientation (Mendenhall & Oddou, 1985), and relatively few examine discreet, individual interactions that cross cultural boundaries (Adair, Okumura, & Brett, 2001; LaBahn & Harich, 1997; Molin-



sky, 2007). By examining an individual's behavior as a function of both their levels of cultural intelligence, as well as the culture of a relevant other, we extend prior work on cross-cultural interactions and provide a framework with which future researchers can further extend the body of knowledge on cross-cultural organizational behavior.

### ***Mindfulness in Management***

Previous research has argued that mindfulness training may ameliorate the potential for emotions, fears, prejudices or biases to "hijack" thought and action (Langer, 2000). A psychological definition of *mindfulness* is bringing one's complete attention to the experiences occurring in the present moment, in a nonjudgmental and accepting manner (Baer, 2003; Brown & Ryan, 2003; Kabat-Zinn, 1982). Differently put, it is the "simple act of drawing novel distinctions" helping us have a "greater sensitivity to context" and overcome, or not form, mind-sets that may limit our thinking (Langer, 2000). It is also suggested that the techniques for cultivating mindfulness all rely upon slowing down the onrush of mental activity and trying to focus attention on the world of sensations in itself rather than "jumping on the first interpretation that comes along" (Claxton, 1997: 183). Along the same vein, our research provides empirical evidence suggesting that being mindful of different-culture counterparts' thoughts and feelings (by engaging in cultural perspective taking examined in Study 1) as well as being aware of different-culture counterparts' values and beliefs (Studies 2 and 3) can facilitate intercultural cooperation associated with cross-cultural managerial performance. Similarly, scholars have noted that a mindful manager—a manager who adopts a positive nonjudgmental and reflective stance—might be more likely to engender enhanced empathy and positive regard that influences task (e.g., financial) and relational (e.g., long-term business relationship) instrumental outcomes, as well as well-being (Davidson et al., 2003; Kopelman, Avi-Yonah, & Varghese, 2011). A recent review of mindfulness and management research suggests that mindfulness practices can enhance task performance (Dane, 2011). Consistent with these claims, our research offers an intervention that is associated with engaging in mindfulness about a counterpart's cultural background and has a direct positive effect on relational organizational outcomes, such as collaboration in international teams (Study 1) and

decision making in mixed-motive conflicts (Studies 2 and 3). Thus, future research should continue developing interventions focused on making managers mindful of cultural cues in organizational contexts and examine their effects on managers' cross-cultural management skills.

### **Practical Implications**

#### ***Cross-Cultural Training***

To date, one of the most common formats for conducting cross-cultural training programs includes brief lectures that provide basic information about the history and socioeconomic situation of a target or foreign culture (Bhawuk & Brislin, 2000; Earley, Ang, & Tan, 2006). However, the field has long recognized that this training approach is problematic for a number of reasons. First, such training does not adjust for individual differences in capability across cognitive, metacognitive, motivational, and behavioral skills (Earley & Peterson, 2004). Second, such training fails to consider the nature of the target culture and the work to be performed in terms of intensity, duration, and nature (Earley et al., 2006). Third, the knowledge provided to managers in culture-specific training programs is not transferable across cultural domains (Earley & Peterson, 2004).

Increasingly, managers take on more frequent and shorter offshore assignments. As a result, developing metacognitive tendencies could be more advantageous than previous frameworks for cross-cultural training (Bhawuk & Brislin, 2000). As Earley and Peterson note (2004), career trends have managers working in more countries and spending shorter periods in any single country. Thus, it appears that cross-cultural training should shift to harness managers' metacognitive strategies in tandem with providing in-depth analysis of cultural differences. Developing metacognitive skills are also important even for managers who don't leave their native country but work in internationally diverse teams whose members follow a myriad of country-specific cultural norms (Earley & Mosakowski, 2000). In instances such as these, training managers with country-specific knowledge is less practical than equipping global managers with metacognitive skills. With regard to developing cultural metacognition, Tan and Chua (2003) acknowledged that while CQ may be partially determined by basic intellectual ability, an individual's CQ can still be improved through

training. In fact, recent research finds that cross-cultural management training can enhance cultural intelligence dimensions (Eisenberg et al., 2013; Rehg et al., 2012). In conclusion, the research and training approach examined in this paper is compatible with ongoing structural changes to international assignments, and thus, is more practical and cost effective than training managers with country-specific knowledge.

### ***Training and Developing Cultural Metacognition***

Researchers and practitioners alike may find that training and harnessing metacognitive habits among students and managers could benefit both domestic and expatriate performance. For example, teachers may decide to assign MBA students who score higher on cultural metacognition to negotiate or work on class assignments with students scoring low on cultural metacognition, as prior research reveals that in dyads, it is the individual with the higher metacognitive CQ that drives intercultural success (Chua et al., 2012). Performance feedback is also an important component for developing awareness and planning habits among students. For example, teachers can provide students with feedback from self- and peer-ratings, in order to show them areas where their metacognitive strategies could benefit from development. Last, cultural simulator exercises (Triandis, 1995) as well as research websites providing culture-specific knowledge in business can be integrated into class assignments prior to intercultural negotiations or international teamwork assignments to help students develop habits of planning and awareness associated with higher levels of cultural metacognition.

### ***Working Effectively in Global Teams***

Developing metacognitive habits in managers is of particularly high importance for the success of multinational teams (Earley & Peterson, 2004). Global teams often face the challenge of getting members from different cultures and countries to work effectively with one another (Earley & Gibson, 2002; Hagel & Brown, 2005). Establishing common goals, clear roles, and consensual norms of conduct is made difficult by cultural differences (Earley & Gibson, 2002; Earley & Mosakowski, 2000). As a result, global teams often search for commonalities to create a hybrid culture (Adler & Bartholomew, 1992; Earley & Mosakowski, 2000). One

way in which a hybrid culture can develop is by establishing shared schemas for work tasks. According to Earley and Peterson (2004), metacognition is critical for developing such shared schemas. Thus, future research should examine whether a cultural perspective-taking intervention may enable managers to bridge cultural differences in global teams.

### ***Developing Cross-Cultural Negotiation Skills***

Intercultural negotiations often fail (Brett & Okumura, 1998; Graham, 1985), and thus far management education has developed few tools for improving cross-cultural negotiation skills and outcomes (Adair et al., 2001). A review of negotiation simulations designed to teach cross-cultural negotiations revealed that most either prepare students for particular cultural preferences or particular cultural styles of communication (Adair, 2008). In contrast to these types of interventions, a metacognitive-strategy intervention may instill general skills for facing differences (Brett, 2007). Our proposed intervention for cross-cultural negotiation training is consistent with Adler's (1997) proposition that cultural adaptation in negotiations (such as matching your counterpart's strategy) may increase the chances of positive negotiation outcomes. Moreover, the argument that CPT may promote intercultural negotiation outcomes is also consistent with past research findings that general perspective taking in negotiation—the active consideration of the other party's alternatives and interests prior to negotiation—aids negotiators in both claiming and creating value (Galinsky et al., 2008; Kemp & Smith, 1994; Neale & Bazerman, 1982).

### ***Future Directions***

One question that arises from our findings is how individuals high on cultural perspective taking adapt to situations in which different-culture counterparts disconfirm culture-based expectations. Recent research reveals that individuals high on cultural metacognition are more apt at adjusting their expectations when a different-culture counterpart disconfirms culture-specific behaviors (Mor & Morris, 2013). At the same time, congruent with our findings, individuals high on cultural metacognition are also more likely to apply culture-based assumptions when a counterpart confirms culture-based expectancies, such a Chinese person behav-

ing in a way that confirms a preexisting assumption that she would behave in accordance with collectivistic values. This agility in applying and updating assumptions seems like an important cognitive capability, where globalization forces may be reducing conformity to culture-based values and behaviors among some individuals (Fu, Morris, Lee, Chao, Chiu, & Hong, 2007), and thus, individuals may need to engage in contingent application of culture-based knowledge to arrive at more coordinated and successful interpersonal outcomes.

### Limitations

The present research has several limitations worthy of note. First, the cultural metacognition scale is vulnerable to the limits in people's ability to reflect upon their mental processes (Nisbett & Wilson, 1977). At the same time, past research finds convergent validity between self-reports and observer reports, suggesting that metacognition is rated from overt words and behaviors rather than introspection (Kim & Van Dyne, 2012; Van Dyne, Ang, & Koh, 2008). Another limitation of the study is that we examined a cultural perspective-taking intervention with collectivistic but not individualistic counterparts. Also our samples included mostly Americans. We focused on collectivistic counterparts when testing the CPT intervention because of the greater cultural distance between American culture (individualistic) and Chinese and Japanese cultures (Oyserman, Coon, & Kimmelmeier, 2002). At the same time, it is important to note that past research has found that general perspective taking can enhance a competitive orientation in competitive contexts but less so in cooperative situations (Epley, Caruso, & Bazerman, 2005). These findings suggest that cultural perspective taking may facilitate cooperation and joint gains more with collectivistic than individualistic counterparts. Indeed, recent research finds that East Asian negotiators taking the perspective of North American negotiators were more self-interested (than other oriented) and claimed more value in the negotiations (Lee et al., 2011). Nonetheless, we claim that cultural perspective taking may provide more realistic expectations about counterparts' goals and behavior which may facilitate social coordination. Consistent with this claim, prior research found that people from individualistic cultures display less cooperative be-

havior in a Prisoner's Dilemma task than collectivistic individuals (Cox, Lobel, & McLeod, 1991).

Third, while in our studies we did not collect information about participants' past experiences or knowledge with the *specific* foreign culture of one's counterpart, we did assess participants' foreign cultural knowledge by way of the cultural intelligence assessment and used participants' levels of foreign cultural knowledge (cognitive CQ) as a control variable in all of our analyses. The results revealed that participants self-reported cognitive CQ did not explain or change our effects. At the same time, we do recognize that future studies should examine whether general knowledge of counterpart's culture is associated with cultural perspective-taking tendencies. Another limitation of the present research is that we have tested some of our hypotheses using simulated cases rather than real-life interactions. While recognizing the limitations of Studies 2 and 3B using a simulated scenario, we found that the findings from these studies are consistent with studies examining behavioral tendencies by peers (Study 1) and a negotiation exercise that had taken place with a real counterpart (Study 3A). Along the same vein, much of past research using economic games relies on simulated cases or interactions to infer actual real-world behaviors in real-life interactions and has found convergent validity across these methods with field studies (Fein & Spencer, 1997; Landis, Brislin, & Hulgus, 1985).

### CONCLUSIONS

In this article we have focused on identifying and training a cognitive habit of managers highly effective at intercultural collaboration: high cultural metacognitive habits. Future research should continue examining adaptive cognitive- and affective-based psychological mechanisms utilized by managers who effectively collaborate with different-culture counterparts. Notably, the findings and approach put forth here can provide management and education scholars with novel insights about developing interventions and tools for global managers who need to successfully master intercultural collaborations across a wide range of cultures.

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