ENHANCING CULTURAL INTELLIGENCE: THE ROLES OF IMPLICIT CULTURE BELIEFS AND ADJUSTMENT

MELODY MANCHI CHAO
Hong Kong University of Science & Technology

RIKI TAKEUCHI
Hong Kong University of Science & Technology

JIING-LIH FARH
Hong Kong University of Science & Technology

Although international experience has been proposed as an important factor contributing to the development of cultural intelligence (CQ), its effect on CQ has often been assumed. Through a contact hypothesis framework, this study advances our understanding of CQ. It examines the process through which CQ changes occur against the backdrop of international exchanges. University students who were enrolled in an international exchange program with partners worldwide participated in this study. Using a 3-wave time-lagged design, we found that implicit culture beliefs (the beliefs about fixedness or malleability of cultural attributes) influenced intercultural rejection sensitivity, which impacted the cross-cultural adjustment of sojourning students and their subsequent CQ. Specifically, we found that cross-cultural adjustment experiences, particularly in the social domain, play an important role in influencing CQ. Findings from this study raise novel research questions and underscore the need for more empirical work in this area. Theoretical and practical implications are discussed.

Globalization has created opportunities for people from different cultures to interact and collaborate. As international trade flourishes, the demand for cross-cultural managerial talent has increased tremendously (Dragoni, Tesluk, Russell, & Oh, 2009). Cultural intelligence (CQ)— the ability to adapt and function effectively in different cultural settings (Earley & Peterson, 2004)—is recognized as "an important quality for

managers" working in a multinational organizations and in a culturally diverse workforce (Lévy-Leboyer, 2007, p. 243). Consistent with this assertion, CQ has been shown to influence important organizational outcomes in intercultural contexts, such as expatriate effectiveness, teamwork, negotiation success, and sales performance (e.g., Chen, Kirkman, Kim, Farh, & Tangirala, 2010; Chen, Liu, & Portnoy, 2012; Imai & Gelfand, 2010). Scholars have recognized CQ as an attribute that is learnable. Therefore, they have repeatedly called for studies to examine factors that enhance CQ in the last decades (Chen et al., 2012; Earley & Mosakowski, 2004; Imai & Gelfand, 2010); however, CQ research has focused primarily on its consequences thus far.

International experience has long been proposed as an important factor contributing to CQ development (e.g., Arthur & Bennett, 1995; Takeuchi, Tesluk, & Marinova, 2006). A report by Organization for Economic Cooperation and Development (OECD, 2011, p. 318) stated that, "As national economies become more interconnected, . . . [o]ne way for students to expand their knowledge of other societies and languages, and thus improve their prospects in globalized sectors of the labor market, such as multi-national corporations or research, is to study in tertiary education institutions in countries other than their own." Thus, understanding the processes through which international experience influences CQ is critical because business organizations and educational institutes have relied heavily on the assumed effectiveness of international experiences to derive personnel training and development programs (see Chen et al., 2010); yet, the question of how international experience affects CQ development has remained unanswered (Takeuchi et al., 2006; also see Bhaskar-Shrinivas, Harrison, Shaffer, & Luk, 2005).

A major goal of this study is to address this unanswered question; it advances our understanding of the process through which CQ changes occur against the backdrop of international exchanges. Drawing from the contact hypothesis (see Allport, 1954; Kenworthy, Turner, Hewstone, & Voci, 2008; Pettigrew, 1998), we argue that the quality of international experiences plays a critical role in shaping subsequent CQ. Whereas positive intercultural contact experiences increase individuals' sense of efficacy in cross-cultural environments and reinforce their interest in future intercultural interactions, leading to better CQ, negative intercultural contact experiences dampen interest and undermine CQ. Furthermore, the positivity or negativity of intercultural contact experiences can arise from fundamental beliefs individuals hold about culture, known as implicit culture beliefs. Implicit culture beliefs refer to people's assumption about the malleability of cultural attributes, such as value endorsement (e.g., Hofstede, Hofstede, & Minkov, 2010), personality traits (e.g., Schmitt et al., 2007), or other deep-seated underlying characteristics (see

Gelman, 2003; Medin & Ortony, 1989). These implicit beliefs are important because they are the lenses through which the sojourners interpret their contact experiences (see Heider, 1958) and shape how they respond and adjust to their environment (see Gelman, 2003). Understanding the process through which implicit culture beliefs influence changes in CQ during international experiences is critical because the finding can shed light on *how* implicit beliefs and intercultural contacts matter. By understanding the *how,* through a contact hypothesis framework, it paves the way for future studies to derive interventions that help enhance CQ.

This research has important theoretical, empirical, and practical contributions. First, we provide new theoretical insights by introducing a contact hypothesis framework to the study of CQ. We conceptualize CQ development as a dynamic process whereby sojourners' implicit culture beliefs shape their experiences in intercultural encounters, which, in turn, affect their cross-cultural adjustment and subsequent CQ change. Second, most studies on international adjustment have relied on cross-sectional design (see Gong & Fan, 2006; Ren, Shaffer, Harrison, Fu, & Fodchuk, 2014; Takeuchi, Wang, Marinova, & Yao, 2009, for exceptions), although intercultural contact experience is temporal in nature (Pettigrew, 1998). As such, we offer both theoretical and empirical contributions by hypothesizing and examining the process through which international experience unfolds and leads to CQ development through a time-lagged design. Third, implicit beliefs can be shaped through training and intervention (e.g., Blackwell, Trzesniewski, & Dweck, 2007; Kray & Haselhuhn, 2007). By understanding how implicit culture beliefs influence intercultural experiences and CQ, this study opens doors for future research on intervention and training programs that can help enhance CQ.

Theoretical Framework and Hypotheses

CQ and Its Significance

CQ refers to the ability to adapt and function effectively in intercultural settings and is a multidimensional construct (Ang et al., 2007). It consists of metacognitive, cognitive, motivational, and behavioral facets. Metacognitive CQ refers to the higher order cognitive processes involved in acquiring cultural knowledge, monitoring and controlling individuals' thought processes. Cognitive CQ is the knowledge about practices and norms (e.g., values, preferences, legal and social systems) in different cultures. Motivational CQ refers to the intrinsic interest to acquire knowledge about other cultures and the sense of enjoyment, whereas behavioral CQ is the extent to which individuals are able to adapt their verbal and nonverbal behavioral practices (e.g., use of words or expressions) in intercultural

settings. These facets can be aggregated into a single construct to capture overall CQ.

CQ is found to affect work performance outcomes. For instance, in the medical field, self-rated intercultural effectiveness of physicians is associated with patients' report of increased physician responsiveness to patients' concerns (Fernandez et al., 2004). Among mental health service providers, being culturally intelligent enhances their accuracy in diagnosis because cultural factors can influence the expression of clinical symptoms (Koh, Chang, Fung, & Kee, 2007). In business settings, CQ of international employees is positively associated with their decision-making quality and their task performance (Ang et al., 2007). Furthermore, CQ among managers is associated with more idea sharing and more effective intercultural collaboration (Chua, Morris, & Mor, 2012). It also enhances intercultural negotiation outcomes (Imai & Gelfand, 2010), expatriate effectiveness (Chen et al., 2010), and cultural sales performance (Chen et al., 2012). Although CQ has mostly been examined as an individual difference in these studies, scholars have recognized that it is a personal attribute that can be developed through experiences and encouraged studies to examine the antecedents that enhance CQ (Earley & Mosakowski, 2004; Erez et al., 2013; Imai & Gelfand, 2010; Li, Mobley, & Kelly, 2013).

Experiential learning is seen as an important factor contributing to CQ development (Erez et al., 2013; MacNab, 2012). International exchange program provides the platform for experiential learning through intercultural contact and is commonly assumed to be a key factor in enhancing CQ (Takeuchi et al., 2006). Such an optimistic view is founded on the idea that contact between people from different cultures opens minds to alternative perspectives (Tadmor, Hong, Chao, Wiruchnipawan, & Wang, 2012), facilitating cultural knowledge acquisition and cultural understanding (Amir, 1969; Caligiuri & Tarique, 2009); however, intercultural contact might backfire, resulting in cultural avoidance (Kenworthy et al., 2008) and other withdrawal behaviors (Shaffer & Harrison, 1998). Drawing from the contact hypothesis framework (Allport, 1954), we argue that sojourners' implicit culture beliefs shape their intercultural contact experiences, which in turn influence their CQ development. In the following, we will first present a brief overview of the contact hypothesis. We will then introduce the implicit culture beliefs construct and elaborate on how the contact hypothesis helps understand the effect of implicit culture beliefs on CQ development in international exchange context.

The Contact Hypothesis

The contact hypothesis was originally formulated to understand the effects of interpersonal contact on intergroup dynamics, such as
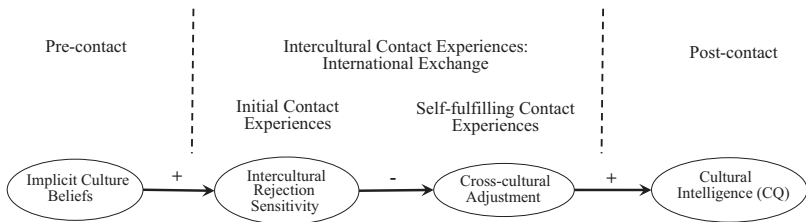
Figure 1: **An Intercultural Contact Framework of CQ Development.**

prejudice reduction and social integration (Allport, 1954). The contact hypothesis presents a process model, suggesting that optimal contact experiences evolve gradually and that initial contact plays an important role in shaping subsequent experiences and intergroup outcomes (Pettigrew, 1998). Thus, the basic premise of the contact hypothesis is that, although contact could promote intergroup understanding and knowledge exchanges, negative contact experiences could backfire (Pettigrew & Tropp, 2008). In this regard, beliefs in immutable group essence can color intergroup perceptions (see Dar-Nimrod & Heine, 2011), setting the stage up for negative intergroup exchanges. Allport (1954, p. 264), in fact, cautioned that negative intergroup dynamics stemming from adverse initial contact experiences can result in a self-fulfilling prophecy that "[leaves] matters worse than before."

Given that international exchange programs provide sojourners with the opportunity to have close contact with individuals from foreign cultures (Amir, 1969), the contact hypothesis can help understand the processes involved in shaping CQ (see Caligiuri & Tarique, 2009). This research goes beyond the traditional contact hypothesis framework, which mainly focuses on understanding intergroup dynamics, to examine the impact of intercultural contact experiences on intrapersonal processes that influence CQ change among sojourners. Specifically, we posit that the beliefs in immutable cultural essence play a critical role in shaping how sojourners interpret and respond to intercultural contact situations. These implicit beliefs lead them to be particularly sensitive to rejection, scrutinizing subtle signs of potential rejection by the others due to their statuses as foreigners. Heightened rejection sensitivity can adversely impact their cross-cultural adjustment experiences. Such experiences become the knowledge base that shapes their future responses in multicultural settings, influencing their CQ. We will elaborate on each of the constructs and processes involved next (see Figure 1).

The Contact Process: From Implicit Culture Beliefs to CQ Development

Implicit culture beliefs.   As noted earlier, the contact hypothesis suggests that, although contact could potentially promote intergroup understanding, beliefs in immutable group essence might color intergroup perceptions and contribute to negative contact experiences (Allport, 1954). Generally speaking, our implicit beliefs are powerful unspoken assumptions that shape responses and reactions in social situations (Dweck, 2000). They contain "not just an organized representation of stimuli, but also assumptions about cause and effect" (Detert & Edmondson, 2011, p. 463). Individuals formulate different implicit beliefs to make sense of their environments (Heider, 1958). In general, implicit beliefs refer to the extent to which certain human attributes (e.g., personality, ability) are seen as immutable essences or malleable characteristics that can be changed. Implicit beliefs about the fixedness and malleability of human attributes are on the opposite ends of a continuum, such that stronger beliefs in fixedness reflect weaker beliefs in malleability (Levy, Stroessner, & Dweck, 1998).

The management literature has long recognized the significance of different implicit beliefs in shaping organizational behaviors across various domains such as task performance (Geller & Bamberger, 2012), performance appraisal (Heslin, Latham, & VandeWalle, 2005), justice perception (Heslin & VandeWalle, 2011), and negotiation performance (Kray & Haselhuhn, 2007). For example, in the context of employee coaching, those managers who hold the implicit person beliefs that conceive personal attributes (e.g., personality and ability) as fixed are less inclined to invest in coaching to help employees develop their skills, compared with those who believe that the attributes are malleable (Heslin, Vandewalle, & Latham, 2006). In a negotiation context, negotiators who endorse the implicit negotiation beliefs that their negotiation ability is malleable tend to outperform those who believe that their ability is fixed (Kray & Haselhuhn, 2007). People formulate domain-specific implicit beliefs to guide their judgments.

In intergroup context, the beliefs in immutable group attributes have powerful influence on intergroup dynamics by shaping their contact experiences (Allport, 1954). Given that individuals are often posed with the challenge of negotiating between their own and foreign cultures when they sojourn, we argue that their implicit beliefs about fixedness and malleability of cultural attributes are of particular relevance. We coin the term "implicit culture beliefs" to refer to individuals' assumptions about whether characteristics of cultural groups (such as being collectivistic vs. being individualistic, or being quiet and submissive vs. being assertive and outspoken) are fixed essences or malleable attributes.

Implicit culture beliefs are critical in understanding sojourner experiences because they help sojourners structure their social environment and provide an interpretive framework through which sojourners make sense of their intercultural contact experiences (see Hirschfeld, 2001). Whereas people who endorse *entity beliefs* of culture perceive cultural characteristics as fixed, those who embrace *incremental beliefs* see the attributes as malleable. The attributes can be cultural values, such as individualism or power distance (e.g., Hofstede et al., 2010), or cultural traits, such as assertiveness, submissiveness, or quietness and soft-spokenness (e.g., No et al., 2008; Schmitt et al., 2007). They can also be some deep-seated underlying characteristics[1] that are believed to be possessed by different groups, such as genes (see Gelman, 2003; Medin & Ortony, 1989). Entity and incremental beliefs stand on the opposite ends of a continuum, such that higher endorsement of entity beliefs reflects a lower endorsement of incremental beliefs. By perceiving cultural attributes as fixed, entity culture beliefs lead sojourners to see rigid boundaries between social categories, making the sense of "we versus they" salient (see Chao, Chen, Roisman, & Hong, 2007). Such sense of "we versus they" colors expectations and interpretations of their initial intercultural encounters and eventually creates self-fulfilling contact experiences.

Initial contact experience.   The contact hypothesis suggests that optimal intercultural contact experience develops gradually; however, initial contact plays a critical role in shaping how subsequent experience evolves (Pettigrew, 1998). In order to facilitate initial contact, decategorization is critical (Brewer & Miller, 1984). Decategorization involves breaking down the boundaries across different cultural categories and seeing people from different cultural groups as unique individuals. It downplays the salience of "we versus they" and helps reduce anxiety and discomfort stemming from contacts with the "foreign others" (Stephan & Stephan, 1985). However, individuals holding entity culture beliefs consider the attributes of different cultural groups as immutable; from this standpoint, people from a given group with fixed cultural characteristics (e.g., being individualistic or being assertive and outspoken) cannot simultaneously acquire the characteristics of other cultural group (e.g., being collectivistic or being quiet and submissive). Rather than decategorizing to breakdown group boundaries, those with entity culture beliefs perceive that whatever differences they have with people from other cultural groups, the

---

[1]The notion of deep-seated underlying characteristics is also known as "essence placeholder." The term "essence placeholder" was suggested by Medin and Ortony (1989). It refers to the idea that individuals can believe that a social category possesses some underlying essences without knowing or understanding *what* the essences are exactly (Gelman, 2003).

differences are there to stay. Their beliefs increase the salience of cultural categories in the face of foreign cultures (Chao et al., 2007). For example, entity culture beliefs can lead Chinese sojourners to perceive an American as more dominant, more assertive, and more outspoken than how that person actually is. Conceiving these attributes as unchangeable can hinder them from engaging in meaningful interactions with people from another cultural group. As a result, they prefer a relatively homogenous social network and show less interest in interacting with people from different cultural categories (Williams & Eberhardt, 2008) because they experience more discomfort in relating to and interacting with those who embrace different values and practices (Stephan & Stephan, 1985).

For individuals who live within their own culture, connecting with people from other cultural groups might not be a critical concern as they belong to a mainstream culture that defines the social standard (see Devos & Banaji, 2005). However, for individuals sojourning in a foreign cultural environment, intercultural contact is inevitable for their everyday functioning (e.g., shopping groceries, ordering food at restaurants, or working on projects). The entity culture mindset fails to decategorize and can be counterproductive to initial intercultural contact (see Kenworthy et al., 2008) because the desire to stay away from culturally dissimilar others is at odds with their needs, as sojourners, to connect with the mainstream culture (Chao et al., 2007). In other words, entity culture beliefs present sojourners with a dilemma. On the one hand, these beliefs hinder decategorization, increasing their perceived difficulties and concerns, as well as reluctance, in relating to people from the host culture. On the other hand, as sojourners, despite their reluctance, interacting with host nationals is inevitable. The conflicting desire to avoid culturally different others and the need to relate to them would induce rejection anxiety, whereby sojourners with entity culture beliefs anxiously expect and readily infer rejection by others due to their foreign cultural group membership. The anticipation of rejection and the anxious concern over the experience of rejection due to one's own cultural group membership is known as *intercultural rejection sensitivity* (see Romero-Canyas, Anderson, Reddy, & Downey, 2009).

The construct of rejection sensitivity has been established to understand individual's need to seek acceptance and to avoid rejection in interpersonal and intergroup contact situations (Chan & Mendoza-Denton, 2008; Mendoza-Denton, Downey, Purdie, Davis, & Pietrzak, 2002). It consists of two components: perceived likelihood of rejection and anxious concern over rejection. These two components constitute rejection sensitivity in a multiplicative fashion, such that the presence or absence of one component would amplify or diminish the effect of the other (Chan & Mendoza-Denton, 2008; Mendoza-Denton et al., 2002). In an

international exchange context, intercultural rejection sensitivity reflects the sense of threat that results from the conflicting desire to avoid and the need to connect with culturally different others. By perceiving differences between cultural groups as immutable, we argue that entity culture beliefs lead sojourners to have higher intercultural rejection sensitivity at initial contact, such that they do not only expect higher likelihood of rejection but are also more anxious about being rejected by others due to their foreign group membership.

> *Hypothesis 1*: Entity culture beliefs (the beliefs that cultural attributes are fixed) are positively associated with intercultural rejection sensitivity.

Self-fulfilling contact experience. The heightened intercultural rejection sensitivity during initial contact can spark actual negative experiences (e.g., Islam & Hewstone, 1993; Wilder, 1993). It narrows individuals' attention to evidence that confirms their expectations (Stephan & Stephan, 1985), resulting in confirmation biases (Darley & Gross, 1983)—that is, intercultural rejection sensitivity can lead individuals to overreact (see Horney, 1937). They become hypervigilant in detecting subtle signs of negativity and react intensely toward anticipated threats (Romero-Canyas et al., 2009). The intense reactions can result in internalizing problems, such as depression and social withdrawal (Chan & Mendoza-Denton, 2008), as well as externalizing problems, such as directing anger and hostility (Ayduk, Downey, Testa, Yen, & Shoda, 1999), and even aggression toward the others (Ayduk, Gyurak, & Luerssen, 2008) in an attempt to prevent or alleviate the negative feeling. Ironically, these reactions often spiral into a self-fulfilling vicious cycle that elicit the exact negativity that highly rejection-sensitive individuals struggle to avoid (Romero-Canyas et al., 2009). Thus, sojourners with higher intercultural rejection sensitivity tend to have more negative self-fulfilling intercultural contact experiences. They encounter more personal and interpersonal difficulties, narrowing their focus of attention to self-confirming information, further hindering the development of meaningful relationships that can facilitate their cross-cultural adjustment.

Cross-cultural adjustment refers to individuals' degree of felt comfort and ease of living in a new cultural environment (Black & Stephens, 1989). It is a multifaceted construct, consisting of general, interaction, and work adjustment (Black & Stephens, 1989). General adjustment is the extent to which individuals adapt to the general living conditions of the host country, such as food and housing conditions. Interaction adjustment refers to the level of comfort in socializing with the host nationals. Work adjustment indicates their adjustment to the performance standard and job expectations. For sojourners with educational purposes, such as exchange

students, the facets of cross-cultural adjustment can be slightly different. For instance, Gong and Fan (2006) examined cross-cultural adjustment of international undergraduate students in terms of their adjustment to the academic and social domains in their host country. Social adjustment is defined as the comfort level in initiating and maintaining social ties in the host country. Academic adjustment refers to adaptations to the academic standards and classroom interaction styles of the host country. Based on these definitions, social adjustment is similar to interaction adjustment; academic adjustment is akin to work adjustment in that students are expected to study whereas expatriates are expected to work. The three cross-cultural adjustment facets are highly correlated.

The construct of cross-cultural adjustment captures the day-to-day experiences of sojourners when they are living in a given foreign country. It is the degree of comfort the sojourners feel toward their immediate surroundings. Given that entity culture beliefs lead sojourners to have higher intercultural rejection sensitivity at initial contact, their hyper vigilance in detecting subtle signs of rejection can then create self-fulfilling negative cross-cultural adjustment experiences.

Hypothesis 2: Intercultural rejection sensitivity is negatively associated with cross-cultural adjustment.

Hypothesis 3: Entity culture beliefs are related to lower level of cross-cultural adjustment through heightened intercultural rejection sensitivity.

From cross-cultural adjustment to CQ. The literature on sojourner adjustment has often treated cross-cultural adjustment as an end rather than a means to an end. As a result, few studies have examined the consequences of cross-cultural adjustment (cf. Bhaskar-Shrinivas et al., 2005). Recognizing the connection as well as the distinction between adjustment and subsequent CQ development is important because this can help address the question of how prior international experiences shape CQ. In terms of their distinctiveness, cross-cultural adjustment captures the day-to-day experience of ease when sojourners are living in a given foreign country. In contrast, CQ refers to a sense of competence in adapting and functioning effectively in settings that involve intercultural exchanges in general. These two constructs are conceptually distinct but are closely related. Although being exposed to a foreign culture can familiarize individuals with diverse cultural knowledge, ideas, and practices, which could arguably enhance CQ (Ng, Van Dyne, & Ang, 2009), the contact hypothesis notes that the bare fact of contact does not necessarily improve intercultural understanding and enhance cultural knowledge (Kenworthy et al., 2008). Intercultural contact could backfire, resulting in cultural avoidance

and even withdrawal (Shaffer & Harrison, 1998). We posit that sojourners engage in a social learning process during international exchange (see Bandura, 1977); hence, the quality of contact experiences plays a critical role in their cultural learning. Their contact experiences provide the knowledge base that shapes future responses in multicultural settings. Sojourners would pay attention to the information around and then retain and incorporate the information into their cognitive repertoire. Thus, positive adjustment experiences serve as motivators to reinforce their CQ development, increasing their interest in foreign culture (motivation CQ), equipping them with foreign cultural knowledge (cognition CQ), enhancing their ability to monitor their own knowledge (metacognition CQ), and fostering their ability to adapt to other normative practices (behavior CQ). However, negative adjustment experiences can reinforce biases against foreign cultures, dampening interest in foreign culture, closing sojourners' minds to alternatives, and leading to cautious avoidance in future interactions, which, together, reduce CQ. Although CQ consists of four different facets, these facets are highly correlated. Therefore, we expect that, overall, more positive adjustment experience would enhance CQ. Negative adjustment experiences would, however, undermine interest and confidence in future intercultural exchanges, lowering CQ.

> *Hypothesis 4*: Cross-cultural adjustment is positively associated with CQ.

An integrative framework. In sum, drawing from the contact hypothesis framework, we argue that sojourners with entity culture beliefs readily infer and anxiously expect rejection by others in the host culture due to their foreign group membership. Their heightened intercultural rejection sensitivity at initial contact results in self-fulfilling negative adjustment experiences. The negative adjustment experiences bring with it lowered CQ, depriving sojourners of the sense of competence in handling intercultural situations in the future.

> *Hypothesis 5*: Entity culture beliefs exert an overall negative indirect effect on CQ through heightening intercultural rejection sensitivity, which lowers cross-cultural adjustment.

One might argue that, given their intercultural rejection anxiety, individuals holding entity culture beliefs might choose not to expose themselves to foreign cultures through sojourning. With such potential self-selection bias, entity culture beliefs should be less relevant to sojourners' international experiences and the associated changes in CQ. However, given the assumed positive relationship between having international experience and career prospects (OECD, 2011), and given that having international experience is seen as critical in building cross-cultural skills

that are vital for career advancement (Daily, Trevis Certo, & Dalton, 2000), individuals are often being encouraged or being persuaded into participating in international exchange programs or taking up expatriate assignment with career advancement as their ultimate goals, regardless of their beliefs or their willingness to submerge themselves in a foreign culture. Therefore, it is even more important to explicate the assumed benefit of international experience and to examine the processes that contribute to the relationship between international experiences and CQ. The international exchange student program of this study provided an excellent context for such investigation.

Method

Participants and Procedure

We tested the theoretical model using a sample of students who were enrolled in the international exchange program of a major university in Hong Kong. The exchange program with over 120 partners worldwide is an integral element of the undergraduate curriculum. Students typically study abroad in partner universities located in Europe or North America for one semester. This international exchange context provides a desirable setting to test whether and how the promise to increase CQ would be realized over time because it enables us to survey the students before, during, and after their international experiences. It is also a practically important population, because international exchange programs involve a significant amount of time and financial commitments from the institutions and the sojourners.

This study uses a three-wave, time-lagged design. Time 1 data were collected in large survey sessions in Hong Kong, 3 months before the participants departed from Hong Kong for the exchange program. Time 2 data were collected through an online survey after the participants had lived in their respective host countries for approximately 3 months. The participants completed Time 3 survey approximately 3 months after returning to their home university in Hong Kong.

Three hundred and sixty-four students had taken part in the exchange program during the data collection period. The study was introduced to the students through the exchange program office. Participants received HK$200 (roughly US$26) upon completing this longitudinal study. Three hundred and nine participants were recruited for Time 1. Three hundred and five participants completed Time 2, and 270 participants completed Time 3. Across three waves of survey, participants were identified and matched by a unique number. A total of 254 participants were matched in the final sample (55% female). The average age was 20.66 at the time of exchange. There were no significant difference between participants who have completed all three waves of study versus those who had only

completed part of the study in terms of their initial CQ and implicit beliefs at Time 1, $Fs(1, 306) < 2.60$, ns, and their intercultural expectation and adjustment experiences at Time 2, $Fs(1, 302) < 0.5$, ns.

Measures

   Implicit culture beliefs (Time 1 and Time 3).   We modified existing implicit beliefs measures (Dweck, 2000; No et al., 2008) into an eight-item Implicit Culture Beliefs Scale. The measure captures the extent to which individuals believe that cultural attributes are immutable essences or malleable constructions (see the Appendix). Implicit culture beliefs of the participants were assessed at Time 1 and at Time 3.
   This scale was validated with pilot data from three independent student samples. In the first pilot sample ($N = 292$), principal component analysis with varimax rotation showed that the four reverse scored items loaded strongly (loadings ranged from .76 to .85) on the first component with an eigenvalue of 3.84, accounting for 48.02% of the variance. The remaining four items loaded strongly (loadings ranged from .74 to .84) on a second component with an eigenvalue of 1.61, accounting for 20.12% of the variance. Reverse scored items often loaded on a separate factor due to difference in wording rather than due to the structural property of the construct (see Carmines & Zeller, 1979). The two components were significantly and negatively correlated, $r(292) = -.40$, $p < .001$. As in previous work on implicit beliefs (e.g., No et al., 2008), to test whether the correlation between the two components was substantial enough to justify the use of a single factor, we conducted confirmatory factor analysis (CFA) on two other pilot samples ($Ns = 73$ and 272). We compared a model that allowed the two components to correlate ($\chi^2(19, N = 345) = 56.374$, $p < .001$, Comparative Fit Index (CFI) = .98, Root Mean Square Error of Approximation (RMSEA) = .08) with a two-independent factor model that constrained the factor correlation to zero $\chi^2(20, N = 345) = 101.44$, $p < .001$, CFI = .95, RMSEA = .11). The chi-square difference test was significant between two models ($\Delta\chi^2(1, N = 345) = 44.70$, $p < .05$), suggesting that a one-factor approach would be more appropriate. Therefore, we reverse coded the items and calculated a single score such that a higher score reflected a stronger endorsement of entity culture beliefs, seeing cultural attributes as fixed.
   The scale had high internal reliability in all three pilot samples, αs >.82. In the main study sample, the scale reliability of the measure was also high at both Time 1 and Time 3, αs = .88. The test–retest reliability of the measure was also good, $r(254) = .33$, $p < .001$. In terms of convergent validity, across all three pilot samples, it was significantly related to other beliefs in fixed personal and social attributes, such as entity theory of intelligence (Dweck, 2000), average $r = .35$, and entity theory of

personality (Dweck, 2000; Heslin et al., 2005), average $r = .48$. The correlations with goal orientations (VandeWalle, 1997), the Big Five personality traits (Gosling, Rentfrow, & Swann, 2003), and self-esteem (Rosenberg, 1965) provided evidence for the measure's discriminant validity. Specifically, it was related to, but still distinct from, learning goal orientation, average $r = -.19$; avoid performance goal orientation, average $r = .21$; openness to experience, average $r = -.20$; and self-esteem, average $r = -.16$. The relationships with prove performance goal orientation, extraversion, agreeableness, conscientiousness, and neuroticism were weaker, rs $< |.14|$.

Intercultural rejection sensitivity (Time 2).   To assess intercultural rejection sensitivity in the sojourner context, we adapted the Status-Based Rejection Sensitivity Questionnaire, developed to assess negative expectations in interracial interactions (Chan & Mendoza-Denton, 2008; Mendoza-Denton et al., 2002). In the original measure, respondents were presented with hypothetical interracial scenarios in which the respondents might experience anxiety and apprehension about being rejected by the others due to their racial minority status. In this study, two focus group interviews, with seven exchange students in each group, were conducted to ensure that the scenarios adopted are appropriate for the study context. We adopted 10 common daily situations in which exchange students might experience rejection apprehension due to their foreigner status (see the Appendix). An intercultural rejection sensitivity score was computed across all 10 situations. As in previous studies (Chan & Mendoza-Denton, 2008; Mendoza-Denton et al., 2002), the intercultural rejection sensitivity score reflects anxious concern over the occurrence of the negative outcomes *and* the perceived likelihood of the occurrence. The presence of both components is necessary to capture the sense of negativity (see Romero-Canyas et al., 2009). A higher score indicated more rejection sensitivity. The reliability of the measure was .82.

Cross-cultural adjustment (Time 2).   We adopted the adjustment measures developed by Black and Stephens (1989) and Gong and Fan (2006) to assess the cross-cultural adjustment of the exchange students. Self-rated cross-cultural adjustment is one of the most commonly used assessment methods (see Hechanova, Beehr, & Christiansen, 2003). It is highly correlated with other-rated adjustment (Gong & Fan, 2006; Shaffer & Harrison, 1998; Shaffer, Harrison, Gregersen, Black, & Ferzandi, 2006; Takeuchi, Yun, & Russell, 2002) and has been shown to have predictive validity (Bhaskar-Shrinivas et al., 2005). Thus, we have adopted self-ratings of cross-cultural adjustment to assess adjustment in three domains: general adjustment, interactional/social adjustment, and academic adjustment (see the Appendix). Given that our hypotheses focus on their overall adjustment experience, an overall adjustment score was used in the main analyses. A

higher score denoted better overall adjustment. In the supplementary analyses, we examined the effects of the three adjustment facets separately. The Cronbach's alpha of the overall adjustment scale was .92, and those of the general, social, and academic adjustment measures were .82, .88, and .93, respectively.

CQ (Time 1 and Time 3). We measured CQ using the 20-item Cultural Intelligence Scale (Ang et al., 2007) both at Time 1 and Time 3 so that we can examine their level of CQ after having international experiences, controlling for their initial CQ level. Four items assessed the metacognitive facet. A sample item was, "I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds." Six items assessed cognitive CQ. A sample item was, "I know the legal and economic systems of other cultures." Two sets of five items assessed the motivational and behavioral domains. Sample items were, "I enjoy interacting with people from different cultures," and "I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it," respectively. Participants indicated how much they agree with each statement on a seven-point scale (1 = *strongly disagree*, 7 = *strongly agree*). Self-rated CQ is a commonly used assessment method and is highly correlated with other-rated assessment (Kim, Kirkman, & Chen, 2008; Ng, Van Dyne, & Ang, 2012; Van Dyne, Ang, & Koh, 2008). Furthermore, self-reported CQ has been shown to have predictive validity (Chen et al., 2010, 2012; Imai & Gelfand, 2010). Thus, we used the self-report method to assess CQ in this study. The scale reliability of the overall scale and subscales was acceptable at both Time 1 and Time 3, all αs > .74. The test–retest reliability of the measures was also good, all rs > .32, ps < .01.

Analytic Procedure

In this study, we test our hypotheses using a latent variable model in which parcels were used as indicators of latent variables. Use of parcels has been recommended because parcels generally provide higher reliability than single item indicators (Kishton & Widaman, 1994); it also results in more precise parameter estimates and better overall model fit (Bandalos, 2002). Coffman and MacCallum (2005) suggest using a latent variable model with parcels as indicators "whenever possible." We adopt the item parceling procedures used in Mathieu (1991) and Takeuchi, Yun, and Tesluk (2002) in our main and supplementary analyses.

Main analyses. Following the guidelines by Landis, Beal, and Tesluk (2000), the single-factor method was used to parcel measures with a single-factor structure. This parceling procedure involved assigning items with high factor loadings and items with low factor loadings into

the same parcel to create three empirically balanced indicators for a latent variable. This procedure was used for implicit culture beliefs and intercultural rejection sensitivity, as CFAs indicated that they are unidimensional constructs. For adjustment and CQ, the content method was used to parcel the measures based on their established dimensionality. Demographic variables that might be relevant to adjustment and CQ were included as controls: participant's age, gender, academic performance (pre-exchange grade point average; GPA), and length of stay in the host country. Analyses with and without the demographic controls have yielded similar patterns of results. The effects of these demographic variables were not significant in the models. Following recommended practices (Aguinis & Vandenberg, 2014; Becker, 2005; Spector & Brannick, 2011), models without these controls are presented and discussed.

Supplementary analyses. We explore the effects of adjustment and CQ facets in supplementary analyses. Again, the single-factor method was used to parcel the implicit beliefs and intercultural rejection sensitivity measures as they both had a single-factor structure. Items are used as indicators for the three facets of cross-cultural adjustment and the four facets of CQ. We included the same set of demographic controls as the main analyses; however, as in the main analyses, supplementary analyses with and without these controls have yielded similar patterns of results. Therefore, models without demographic controls are presented.

Results

Descriptive Statistics

Table 1 presents the descriptive statistics of the variables in our study. Paired *t*-tests showed that there was a significant difference in overall CQ and all four dimensions of CQ between Time 1 and Time 3, indicating that CQ was significantly higher after (vs. before) having international experiences (all ts > 6.03, $p < .001$). The difference in implicit culture beliefs between Time 1 and Time 3 was not significant, indicating that it was a relatively stable measure, $t = 0.68$, *ns*. Intercultural rejection sensitivity at Time 2 correlated with implicit culture beliefs at Time 1 ($r(254) = .18$, $p < .01$), but not at Time 3 ($r(254) = .09$, *ns*), ruling out potential reverse causal explanation. Intercultural rejection sensitivity correlated negatively with overall cross-cultural adjustment and the three adjustment facets, indicating that higher intercultural rejection sensitivity was associated with poorer adjustment (rs = −.21 to −.28, all ps < .01). Overall cross-cultural adjustment and the three adjustment facets at Time 2 were positively correlated with overall CQ and the four CQ facets at Time 3 (rs = .21 to .38, all ps < .01). These bivariate correlational findings provided initial support for Hypotheses 1, 2, and 4.

TABLE 1
Descriptives and Correlations of Variables

	M	SD	1	2	3	4	5	5a	5b	5c	5d	6	7	7a	7b	7c	8	9	10	10a	10b	10c
Time 1																						
1. Gender	0.45	0.50																				
2. Age	20.66	0.76	.02																			
3. GPA	3.16	0.43	−.01	−.16																		
4. Implicit culture beliefs [a]	3.66	0.76	−.05	−.05	.09																	
5. Cultural intelligence	4.78	0.68	−.11	−.01	.05	−.05																
5a. Metacognitive	5.09	0.78	−.09	.05	−.03	−.13	.82															
5b. Cognitive	4.18	0.85	−.15	−.10	.16	.04	.78	.46														
5c. Motivational	5.14	0.84	−.08	.00	−.08	−.03	.83	.64	.47													
5d. Behavioral	4.89	0.85	−.08	.03	.05	−.10	.84	.69	.47	.62												
Time 2																						
6. Intercultural rejection sensitivity	10.13	4.47	−.09	.09	.03	.18	−.19	−.17	−.14	−.21	−.12											
7. Adjustment	4.97	0.89	−.10	−.08	.16	−.09	.28	.22	.25	.23	.21	−.28										
7a. General	4.94	1.05	−.04	−.10	.12	−.07	.23	.18	.20	.18	.18	−.22	.79									
7b. Social	4.85	1.04	−.12	−.07	.12	−.07	.26	.20	.23	.20	.19	−.27	.89	.60								
7c. Academic	5.11	1.05	−.08	−.05	.16	−.10	.23	.17	.21	.19	.16	−.21	.86	.50	.65							
8. Months in host country	3.06	1.03	−.06	−.04	.07	.00	−.01	.05	−.03	−.04	.00	.03	.04	−.01	.01	.09						
Time 3																						
9. Implicit culture beliefs [a]	3.70	0.82	.09	.10	.10	.33	.00	.01	.01	−.03	−.01	.09	−.09	−.06	−.07	−.10	.00					
10. Cultural intelligence	5.18	0.66	−.10	−.05	.08	−.07	.38	.30	.37	.27	.28	−.12	.38	.33	.37	.29	−.07	−.05				
10a. Metacognitive	5.42	0.79	−.11	−.05	.08	−.11	.33	.38	.25	.26	.21	−.10	.28	.25	.24	.24	.08	−.06	.83			
10b. Cognitive	4.75	0.88	−.07	−.03	.10	.02	.28	.14	.44	.15	.10	−.05	.28	.24	.24	.24	−.06	.01	.79	.51		
10c. Motivational	5.51	0.75	−.09	−.10	.03	−.07	.28	.19	.21	.32	.19	−.16	.35	.27	.37	.25	−.17	−.11	.81	.64	.48	
10d. Behavioral	5.20	0.84	−.09	.01	.05	−.09	.35	.31	.24	.17	.41	−.10	.33	.29	.35	.21	−.04	−.04	.82	.68	.44	.57

Note. $N = 254$; $r > |.11|$, Gender: 0 = female; 1 = male.
[a] implicit culture beliefs: higher score = more entity beliefs.
$p < .05$; $r > |.17|$, $p < .01$.

TABLE 2
Confirmatory Factor Analysis Results for Measurement Model Testing

	χ^2	df	CFI	RMSEA	$\Delta\chi^2$	Δdf
Hypothesized four-factor model [a]	95.19	59	.98	.05		
Alternative three-factor model 1 [b]	271.47	62	.89	.12	176.28	3
Alternative three-factor model 2 [c]	307.78	62	.87	.13	212.59	3
Alternative three-factor model 3 [d]	381.29	62	.83	.14	286.10	3
Alternative three-factor model 4 [e]	677.95	62	.66	.19	582.76	3
Alternative three-factor model 5 [f]	672.33	62	.67	.19	577.14	3
Alternative three-factor model 6 [g]	387.84	62	.82	.15	292.65	3
Alternative single-factor model [h]	1114.42	65	.43	.25	1019.20	6

Note. $N = 254$. CFI = comparative fit index.
$\Delta\chi^2$ and Δdf are obtained by comparing the alternative models with the hypothesized model.
[a]Four-factor model: items load onto four separate factors (implicit culture beliefs, intercultural rejection sensitivity, overall cross-cultural adjustment, and overall CQ).
[b]Alternative three-factor model 1: items of cross-cultural adjustment and CQ load on the same factor.
[c]Alternative three-factor model 2: items of intercultural rejection sensitivity and cross-cultural adjustment load on the same factor.
[d]Alternative three-factor model 3: items of implicit culture beliefs and intercultural rejection sensitivity load on the same factor.
[e]Alternative three-factor model 4: items of implicit culture beliefs and CQ load on the same factor.
[f]Alternative three-factor model 5: items of implicit culture beliefs and cross-cultural adjustment load on the same factor.
[g]Alternative three-factor model 6: items of intercultural rejection sensitivity and CQ load on the same factor.
[h]All loaded onto a single factor.

Measurement Model Testing

We first conducted a CFA on the measurement model, using LIS-REL 8.5 (Jöreskog & Sörbom, 1993). As recommended by Williams, Vandenberg, and Edwards (2009), CFI and RMSEA are reported (see Table 2). We fitted a four-factor overall model for the main analysis. It involved implicit culture beliefs, intercultural rejection sensitivity, overall adjustment, and overall CQ. The results showed that the model fit was good ($\chi^2(59, N = 254) = 95.19$, $p < .005$, CFI = .98, RMSEA = .05). It also had significantly better model fit than all three-factor models that combined any two of the variables ($\Delta\chi^2(3, N = 254) > 176.28$, $ps < .01$), as well as a single-factor model that combined all variables into one factor ($\Delta\chi^2(6, N = 254) = 1019.23$, $p < .01$). The CFA results demonstrated that the constructs are not only theoretically distinct but are also empirically distinct from each other.
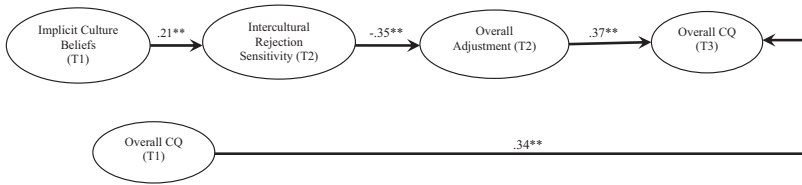
Figure 2: **Structural Equation Modeling Results of the Hypothesized Model. Path Coefficients Are Standardized.**

Note. (*$p < .05$, **$p < .01$).

Structural Model Testing

To provide a rigorous demonstration of the hypothesized effects of international experience on CQ, we included CQ at Time 1 as controls. We will first present the result of the main analyses and then present the supplementary analyses that examined adjustment and CQ on facet level.

Main analyses. Estimation of the hypothesized model resulted in acceptable fit ($\chi^2(114, N = 254) = 332.63, p < .001$, CFI = .92, RMSEA = .08). The overall explained variance (R^2) in CQ was .12, $p < .05$. The path coefficient results are presented in Figure 2. The path from implicit culture beliefs at Time 1 to intercultural rejection sensitivity at Time 2 was positive and significant ($\beta = .21, p < .01$), and the path from intercultural rejection sensitivity to overall adjustment was negative and significant ($\beta = -.35, p < .01$), providing support for Hypotheses 1 and 2. Importantly, the indirect effect of implicit culture beliefs on adjustment through intercultural rejection sensitivity was also significant ($\beta = -.07, p < .05$). This suggested that the beliefs in fixed cultural attributes adversely impact cross-cultural adjustment through heightening intercultural rejection sensitivity, providing support for Hypothesis 3. The path from overall adjustment to overall CQ was positive and significant ($\beta = .37, p < .01$), providing support for Hypothesis 4. To examine Hypothesis 5, we investigated the indirect effects of implicit culture beliefs on CQ through intercultural rejection sensitivity and overall cross-cultural adjustment. The indirect effects of implicit culture beliefs on CQ was significant ($\beta = -.03, p < .05$). This suggests that beliefs about immutable cultural attributes hindered sojourners' CQ through heightening their intercultural rejection sensitivity and then lowering their cross-cultural adjustment. This pattern of results remained consistent when CQ at Time 1 was not included as control. It also held even when the effect of CQ at Time 1 on cross-cultural adjustment was controlled, suggesting that the findings are robust.

Theoretically, we argued that implicit culture beliefs set up intercultural rejection sensitivity at initial contact, which resulted in self-fulfilling experiences that lowered cross-cultural adjustment, and hampered CQ. Given that intercultural rejection sensitivity and cross-cultural adjustment were measured at the same time, there might be a potential reverse effect of cross-cultural adjustment on intercultural rejection sensitivity, which then led to lowered CQ, we fitted an alternative model in which the paths went from implicit culture beliefs to CQ through cross-cultural adjustment first, followed by intercultural rejection sensitivity. The fit indices for this model were $\chi^2(114, N = 254) = 361.67$, $p < .001$, CFI = .91, RMSEA = .09. The path from implicit culture beliefs to cross-cultural adjustment was not significant ($\beta = -.13$, ns), neither was the path from intercultural rejection sensitivity to CQ significant ($\beta = -.09$, ns), ruling out potential reverse effect along the causal paths.

In addition, to rule out potential reverse effects of CQ at Time 1 on implicit culture beliefs at Time 3, we also fitted an alternative model by adding paths from CQ at Time 1 to intercultural rejection sensitivity at Time 2 to the main model. Paths from overall adjustment at Time 2 to implicit culture beliefs at Time 3 were also added. The fit indices for this model were $\chi^2(162, N = 254) = 367.83$, $p < .001$, CFI = .94, RMSEA = .07. The path from CQ at Time 1 to intercultural rejection sensitivity at Time 2 was significant ($\beta s < -.21$, $p < .01$). However, the paths from overall adjustment at Time 2 to implicit culture beliefs at Time 3 were not significant ($\beta s = -.05$, ns). Other parameter estimates of this alternative model were similar to those found in the main model.

To further investigate the robustness of the findings, we also created a latent change score for CQ to test the hypothesized model (see Ferrer & McArdle, 2010; McArdle, 2009). The latent change score analysis revealed similar patterns of results. Estimation of the model resulted in acceptable fit ($\chi^2(111, N = 254) = 334.99$, $p < .001$, CFI = .90, RMSEA = .09). The path from overall adjustment to the CQ change score was positive and significant ($B = .34$, $p < .01$). Other parameter estimates of this model were similar to those found in the main model. Importantly, the indirect effects of implicit culture beliefs on CQ change score through intercultural rejection sensitivity and cultural adjustment were also significant ($B = -.02$, 95% bias-corrected CI [−.06, −.01]). These results indicated that implicit culture beliefs influenced CQ through shaping individuals' intercultural rejection sensitivity and adjustment experiences in the host country, even after controlling for the effects of initial CQ.

Supplementary analyses. Estimation of the facet model resulted in acceptable fit ($\chi^2(1444, N = 254) = 2383.09$, $p < .001$, CFI = .95, RMSEA = .05). The results are presented in Figure 3. The path from implicit culture beliefs at Time 1 to intercultural rejection sensitivity
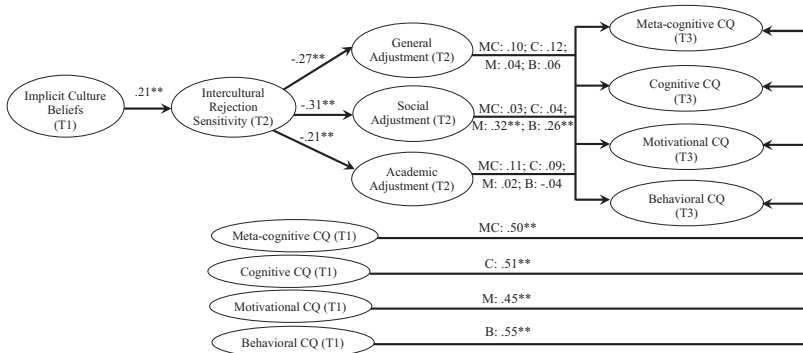
Figure 3: **Structural Equation Modeling Results of the Facet Model. Path Coefficients Are Standardized.**

Note. MC = Meta-cognitive CQ; C = Cognitive CQ; M = Motivational CQ; B = Behavioral CQ (*p < .05, **p < .01)

at Time 2 was positive and significant ($\beta = .21$, $p < .01$), and the paths from intercultural rejection sensitivity to general, social, and academic adjustment were all negative and significant ($\beta s = -.21$ to $-.31$, $p s < .01$). Importantly, the indirect effects of implicit culture beliefs on the three aspects of adjustment through intercultural expectation were all significant: general adjustment ($\beta = -.06$, $p < .05$), social adjustment ($\beta = -.06$, $p < .05$), and academic adjustment ($\beta = -.04$, $p < .05$). This suggested that the beliefs in immutable cultural attributes adversely impact cross-cultural adjustment through increasing intercultural rejection sensitivity, providing additional support for Hypotheses 1 to 3. The paths from social adjustment to motivational CQ and behavioral CQ were significantly positive ($\beta s > .26$, $p s < .01$), but not to metacognitive CQ and cognitive CQ ($\beta s < .04$, *ns*). Paths from general and academic adjustment to the four facets of CQ were not significant ($\beta s < .12$, *ns*). These results pinpointed the hypothesized effect of cultural adjustment on CQ stated in Hypothesis 4. Specifically, social adjustment but not the other two adjustment facets contributed to the development of motivational and behavioral CQ significantly. To test Hypothesis 5, we investigated the indirect effects of implicit culture beliefs on each CQ facet through intercultural rejection sensitivity and cross-cultural adjustment. The indirect effects of implicit culture beliefs on motivational and behavioral CQs were significant ($\beta s = -.02$, $p s < .05$). Thus, implicit culture beliefs negatively impacted changes in motivational and behavioral CQ through heightening their intercultural rejection sensitivity and lowering their cross-cultural adjustment, social adjustment in particular.

Discussion

Although international experience has been proposed as an important factor contributing to CQ development (e.g., Arthur & Bennett, 1995; Takeuchi et al., 2006), its effect has often been assumed rather than tested (cf. Takeuchi et al., 2006). This study addresses this important yet untested assumption in the literature and answers the calls to examine the process through which CQ develops against the backdrop of international exchanges (Chen et al., 2012; Imai & Gelfand, 2010). Using a three-wave time-lagged design, we found that, although educational institutes aspire to develop intercultural skills of our future workforce through the provision of international experiences, the extent to which individuals benefit from their international experiences varies. The results showed that entity culture beliefs led to heightened intercultural rejection sensitivity, which adversely impacted cross-cultural adjustment of sojourners and, in turn, hindered CQ.

Theoretical Implications

This is the first study that examines how intercultural contacts influence CQ development using a three-wave time-lagged design. Understanding factors that contribute to CQ development, particularly motivational CQ and behavioral CQ, is important because motivational CQ has been shown to influence a wide range of organizational behaviors—from job performances in intercultural contexts (Ang et al., 2007; Chen et al., 2012), intercultural negotiation, and intercultural collaboration (Chua et al., 2012; Imai & Gelfand, 2010) to expatriate effectiveness (Chen et al., 2010), and change in behavioral CQ could serve as a precursor of attitude change (see Pettigrew, 1998). This study represents an initial step taken to examine factors that contribute to CQ change and provides an important guiding framework for future investigations.

Cross-cultural adjustment and CQ change.   Our study recognizes and tests the important connection between cross-cultural adjustment and subsequent CQ change. Although Black and Mendenhall (1991) and Bhaskar-Shrinivas et al. (2005) have emphasized the importance of examining the relationship between previous international experiences and subsequent cross-cultural functioning in the last decades, the literature has often treated adjustment as an end in itself rather than a means to an end because of the implicit assumption that "adjustment has *consequences* which are both ubiquitous and potentially critical" (Harrison, Shaffer, & Bhaskar-Shrinivas, 2004, p. 229). As a result, few studies have examined the consequences of adjustment. This study bridges this gap in the literature. It is important to note that, although all three cross-cultural

adjustment domains showed somewhat positive associations with CQ development, only social adjustment was significantly related to motivational and behavioral CQ facets. General and academic adjustment did not show significant effects on CQ. This result provided support for our contact hypothesis framework by highlighting the importance of contact during international experiences. It suggested that international experiences consist of an inherently social process that can influence subsequent cross-cultural functioning (Farh, Bartol, Shapiro, & Shin, 2010). Having positive adjustment experience in the social domain serves as an important source of reinforcement (Bandura, 1977) to foster intrinsic interest and curiosity in learning about other foreign cultures (motivation CQ) and to express the learned cultural practices behaviorally (behavioral CQ). The contact hypothesis suggested that positive intercultural experiences through interpersonal contact are pivotal in facilitating subsequent cross-cultural functioning. We encourage future studies to investigate the generalizability of the relationship between cross-cultural adjustment and subsequent intercultural functioning among different sojourning populations, such as expatriates, missionaries, Peace Corp volunteers, and military personnel, and we identify the conditions under which the effects of international adjustment experiences on CQ would be exaggerated, eliminated, or even reversed.

Implicit culture beliefs, CQ change, and beyond. The impact of implicit beliefs on organizational outcomes has drawn increasing attention recently (e.g., Heslin et al., 2006; Kray & Haselhuhn, 2007). Implicit beliefs are the lenses through which the person connects with the environment (Heider, 1958). They help people make sense of their social world and are formulated at an early age (Gelman, 2003; Hirschfeld, 2001). Thus, implicit beliefs are fundamental factors that influence a wide range of behavioral outcomes (Blackwell et al., 2007; Dweck, 2006). This study investigates how implicit culture beliefs shape CQ in the context of international experiences among exchange students, who spent a relatively short period of time in foreign countries. Their negative contact experiences might hold them back from pursuing an international career and lead them to withdraw from future intercultural contacts. Their failure to adjust in a foreign environment might not pose an immediate threat to them. However, for expatriates who travel overseas for business purposes in hope of career advancement, negative contact experiences can put their career at stake, which can potentially intensify the self-fulfilling vicious cycle. By identifying the impacts of implicit culture beliefs on intercultural contact experiences and CQ development, this research paves the way for new directions in expatriation research (see Takeuchi et al., 2006). Future studies can examine whether and to what extent negative contact experiences influence expatriate successes. Furthermore, future studies can also identify

organizational and institutional factors (e.g., organizational support, training, and policy) that might help promote optimal contact experiences that are conducive to CQ development (Stephan & Stephan, 2008).

Given that implicit culture beliefs set up negative intercultural contact experiences, these beliefs could also have important implications for the study of diversity in organizational contexts. For example, research on work group diversity usually examines diversity based on objective criteria, such as differences in demographic characteristics (Chattopadhyay, Tluchowska, & George, 2004) or professional dissimilarity (Chattopadhyay, Finn, & Ashkanasy, 2010). The subjective experience of diversity shaped by implicit culture beliefs might interplay with objective dissimilarities to exert unique influence on organizational outcome. In a culturally diverse work environment, endorsing entity beliefs about cultural attributes can lead individuals to perceive a salient cultural divide (e.g., "we" are different from "them"), creating a self-fulfilling vicious cycle for their potential intercultural collaborations. This can lead them to actively avoid intercultural collaborations when avoidance is possible. However, when such avoidance is impossible, they might react intensely toward those colleagues who are seen as holding inherently different values and practices, lowering team identification, and hindering team effectiveness. Future studies could investigate how implicit cultural beliefs might interact with within-team dissimilarity to influence organization outcomes.

Practical Implications

Our study has important practical implications. First, the effectiveness of international experience on CQ development has often been assumed (Takeuchi et al., 2006). Business and educational institutes have relied on this assumption to derive programs that promise career advancement (OECD, 2011). Guided by the contact hypothesis, our study demonstrated that the quality of international contact experience matters for CQ development. In particular, adjustment in the social domain was shown to play a critical role in fostering motivational and behavioral CQs. This suggests that the provision of support that enhances social adjustment could enable sojourners to garner more CQ benefit from their international experience. Furthermore, given the importance of intercultural contact experiences in improving CQ, international exchange program that send students to the same program as a group under the supervision of faculty members from their home institution may not be effective in developing students' CQ because the students mostly interact among themselves, even though they are in a foreign country. Thus, educational institutions that aim to increase CQ by offering this kind of international exchange program might consider ways to foster more intercultural interactions to facilitate CQ development.

Second, for individuals holding entity culture beliefs, despite their unwillingness to submerge themselves in a foreign culture, they might be motivated to go abroad because of the perceived instrumental value of international exchange or expatriation experience. Ironically, their implicit culture beliefs result in intercultural rejection sensitivity that is at odds with their need to submerge themselves in the host culture to acquire intercultural skills that facilitate career advancement. Therefore, when selecting participants for overseas programs, educators or managers should remain mindful of the potential drawback of international experience for individuals holding entity culture beliefs. Individuals are often selected for international exchange or expatriation based on their performance and technical competence. Being mindful of the impact of implicit culture beliefs would enable educators and managers to consider how to provide support (e.g., training, social network) that helps reduce intercultural anxiety and its associated negative self-fulfilling contact experiences in order to empower the students and expatriates and promote more positive contact experiences.

Third, although cross-cultural training programs can equip sojourners with different cultural knowledge by highlighting differences in cultural practices and values, overemphasizing cultural differences may inadvertently reinforce the entity cultural beliefs that each cultural group possesses immutable characteristics (see Chao, Okazaki, & Hong, 2011). Consistent with this argument, scholars have criticized cross-cultural training in representing different cultural groups as discrete categories with inherent essences (Brown, 2009). If people are repeatedly exposed to information that reinforces entity beliefs about culture (such as through training programs, courses, books, or news media that emphasize the unique essence of different cultures), this could have long-term implications for CQ development. Therefore, besides discussing how cultures differ, cross-cultural training programs can benefit sojourners by fostering the awareness of how their implicit beliefs might fall into a self-fulfilling cycle that influences their ability to function in cross-cultural contexts.

Intervention studies have shown that implicit beliefs can be altered through training and education (e.g., Blackwell et al., 2007; Dweck, 2006; Heslin et al., 2005).[2] Thus, in developing training programs that aim to enhance intercultural competence, it would be advisable for trainers to be, at least, cognizant of the impacts of implicit beliefs on cultural adjustment

---

[2]In fact, results from a pilot experiment conducted among 68 international students studying in North America have shown that mere exposure to information that emphasized culture attributes as malleable (vs. fixed) would be sufficient to lower entity culture beliefs $(t(66) = 2.58, p < .05)$, and lead to less intercultural rejection sensitivity $(t(66) = 2.12, p < .05)$.

and CQ; better yet, the training program is likely to be more effective if trainers can intervene by addressing the impact of such beliefs.

Limitations

Although this study has important theoretical and practical contributions, the findings should be viewed in light of its limitations. The three-wave survey design with repeated measures of implicit culture beliefs and CQ enables us to rule out reverse causality. One might argue that the adjustment and CQ measures are all self-reported and raise concerns about common method biases. These concerns are somewhat alleviated by having temporal separations among the various measures (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). More important, as discussed earlier, previous studies on cultural adjustment and CQ have demonstrated the predictive validity of self-reported ratings, suggesting that individuals' subjective sense of adjustment and CQ is indispensable in the study of organizational behavior (e.g., Gong & Fan, 2006; Shaffer et al., 2006; Van Dyne et al., 2008). This is particularly true for motivational CQ, which can only be self-reported but might not be easily observed by the others (e.g., Chua et al., 2012; Imai & Gelfand, 2010). Nonetheless, future studies could obtain measures from multiple sources to examine whether third-party ratings would provide additional insights into the study of CQ.

Future studies should also test the generalizability of the effects among other populations, such as expatriates, missionaries, Peace Corp volunteers, and military personnel, sojourning to countries with different cultural distance. The exchange students in this study went to culturally dissimilar countries. Future studies should investigate how such boundary conditions as objective cultural distance (e.g., USA vs. Canada or USA vs. China) moderate the impact of implicit culture beliefs on international experiences and CQ development. On the one hand, one could argue that the effects of implicit culture beliefs should be eliminated when cultural distance is small (e.g., USA vs. Canada), because sojourners are more familiar with that foreign culture and should feel less anxious about potential rejection and have more positive intercultural contact adjustment experiences. On the other hand, one could also argue that the effects of implicit culture beliefs would remain even when objective cultural distance is small, because implicit culture beliefs influence sojourners' subjective interpretation of their initial contact experiences and could arguably override the effects of objective cultural distance. Therefore, it would be important to examine whether and how cultural distance interplays with implicit culture beliefs across different sojourning contexts to further our understanding of CQ development in future studies.

These limitations aside, this study offers important theoretical and practical implications. As stated above, it highlights the importance of implicit culture beliefs in influencing intercultural experiences and CQ through a contact hypothesis framework. It opens the door for future research to examine CQ development by introducing a novel perspective to the literature. In addition, it also has implications for the development of cross-cultural training programs that aim at enhancing sojourners' adjustment outcomes in order to enable them to gain the most out of their international experiences.

REFERENCES

Aguinis H, Vandenberg RJ. (2014). An ounce of prevention is worth a pound of cure: Improving research quality before data collection. *Annual Review of Organizational Psychology and Organizational Behavior*, *1*, 569–595. doi:10.1146/annurev-orgpsych-031413-091231

Allport GW. (1954). *The nature of prejudice*. Reading, MA: Addison-Wesley.

Amir Y. (1969). Contact hypothesis in ethnic relations. *Psychological Bulletin*, *71*, 319–342. doi:10.1037/h0027352

Ang S, Van Dyne L, Koh C, Ng KY, Templer KJ, Tay C, Chandrasekar NA. (2007). Cultural intelligence: Its measurement and effects on cultural judgment and decision making, cultural adaptation and task performance. *Management and Organization Review*, *3*, 335–371. doi:10.1111/j.1740-8784.2007.00082.x

Arthur W, Bennett W. (1995). The international assignee: The relative importance of factors perceived to contribute to success. PERSONNEL PSYCHOLOGY, *48*, 99–114. doi:10.1111/j.1744-6570.1995.tb01748.x

Ayduk O, Downey G, Testa A, Yen Y, Shoda Y. (1999). Does rejection elicit hostility in rejection-sensitive women? *Social Cognition*, *17*, 245–271. doi:10.1521/soco.1999.17.2.245

Ayduk O, Gyurak A, Luerssen A. (2008). Individual differences in the rejection-aggression link in the hot sauce paradigm: The case of rejection sensitivity. *Journal of Experimental Social Psychology*, *44*, 775–782. doi:10.1016/j.jesp.2007.07.004

Bandalos DL. (2002). The effects of item parceling on goodness-of-fit and parameter estimate bias in structural equation modeling. *Structural Equation Modeling*, *9*, 78–102.

Bandura A. (1977). *Social learning theory*. New York, NY: General Learning Press. doi:10.1207/S15328007SEM0901_5

Becker TE. (2005). Potential problems in the statistical control of variables in organizational research: A qualitative analysis with recommendations. *Organizational Research Methods*, *8*, 274–289. http://dx.doi.org/10.1177/1094428105278021

Bhaskar-Shrinivas P, Harrison DA, Shaffer MA, Luk DM. (2005). Input-based and time-based models of international adjustment: Meta-analytic evidence and theoretical extensions. *Academy of Management Journal*, *48*, 257–281. doi:10.2307/20159655

Black JS, Mendenhall ME. (1991). The U-curve adjustment hypothesis revisited: A review and theoretical framework. *Journal of International Business Studies*, *22*, 225-247.

Black JS, Stephens GK. (1989). The influence of the spouse on American expatriate adjustment and intent to stay in Pacific Rim overseas assignments. *Journal of Management*, *15*, 529–544. doi:10.1177/014920638901500403

Blackwell LS, Trzesniewski KH, Dweck CS. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child Development*, *78*, 246–263. doi:10.1111/j.1467-8624.2007.00995.x

Brewer MB, Miller N. (1984). Beyond the contact hypothesis: Theoretical perspectives on segregation. In N Miller, MB Brewer (Eds.). *Groups in contact: The psychology of desegregation* (pp. 281–300). Orlando, FL: Academic Press.

Brown LS. (2009). Cultural competence: A new way of thinking about integration in therapy. *Journal of Psychotherapy Integration*, *19*, 340–353. doi:10.1037/a0017967

Caligiuri P, Tarique I. (2009). Predicting effectiveness in global leadership activities. *Journal of World Business*, *44*, 336–346. doi:10.1016/j.jwb.2008.11.005

Carmines EG, Zeller RA. (1979). *Reliability and validity assessment*. Thousand Oaks, CA: Sage.

Chan W, Mendoza-Denton R. (2008). Status-based rejection sensitivity among Asian Americans: Implications for psychological distress. *Journal of Personality*, *76*, 1317–1346. doi:10.1111/j.1467-6494.2008.00522.x

Chao MM, Chen J, Roisman GI, Hong Y. (2007). Essentializing race: Implications for bicultural individuals' cognition and physiological reactivity. *Psychological Science*, *18*, 341–348. http://dx.doi.org/10.1111/j.1467-9280.2007.01901.x

Chao MM, Okazaki S, Hong Y. (2011). The quest for multicultural competence: Challenges and lessons learned from clinical and organizational research. *Social and Personality Psychology Compass*, *5*, 263–274. doi:10.1111/j.1751/9004.2011.00350.x

Chattopadhyay P, Finn C, Ashkanasy NM. (2010). Affective responses to professional dissimilarity: A matter of status. *Academy of Management Journal*, *53*, 808–826. doi:10.5465/AMJ.2010.52814603

Chattopadhyay P, Tluchowska M, George E. (2004). Identifying the ingroup: A closer look at the influence of demographic dissimilarity on employee social identity. *Academy of Management Review*, *29*, 180–202. doi:10.2307/20159028

Chen G, Kirkman BL, Kim K, Farh CI, Tangirala S. (2010). When does cross-cultural motivation enhance expatriate effectiveness? A multilevel investigation of the moderating roles of subsidiary support and cultural distance. *Academy of Management Journal*, *53*, 1110–1130. doi:10.5465/AMJ.2010.54533217

Chen XP, Liu D, Portnoy R. (2012). A multilevel investigation of motivational cultural intelligence, organizational diversity climate, and cultural sales: Evidence from U.S. real estate firms. *Journal of Applied Psychology*, *97*, 93–106. doi:10.1037/a0024697

Chua RYJ, Morris MW, Mor S. (2012). Collaborating across cultures: Cultural metacognition and affect-based trust in creative collaboration. *Organizational Behavior and Human Decision Processes*, *118*, 116–131. doi:10.1016/j.obhdp.2012.03.009

Coffman DL, MacCallum RC. (2005). Using parcels to convert path analysis models into latent variable models. *Multivariate Behavioral Research*, *40*, 235–259. doi:10.1207/s15327906mbr4002_4

Daily CM, Trevis Certo S, Dalton DR. (2000). International experience in the executive suite: The path to prosperity? *Strategic Management Journal*, *21*, 515–523. doi:10.1002/(SICI)1097-0266(200004)21:4<515::AID-SMJ92>3.0.CO;2-1

Dar-Nimrod I, Heine SJ. (2011). Genetic essentialism: On the deceptive determinism of DNA. *Psychological Bulletin*, *137*, 800–818. doi:10.1037/a0021860

Darley JM, Gross PH. (1983). A hypothesis-confirming bias in labeling effects. *Journal of Personality and Social Psychology*, *44*, 20. http://dx.doi.org/10.1037/0022-3514.44.1.20

Detert JR, Edmondson AC. (2011). Implicit voice theories: Taken-for-granted rules of self-censorship at work. *Academy of Management Journal*, *54*, 461–488. doi:10.5465/AMJ.2011.61967925

Devos T, Banaji MR. (2005). American = White? *Journal of Personality and Social Psychology*, *88*, 447–466. doi:10.1037/0022-3514.88.3.447

Dragoni L, Tesluk PE, Russell JEA, Oh IS. (2009). Understanding managerial development: Integrating developmental assignments, learning orientation, and access to

developmental opportunities in predicting managerial competencies. *Academy of Management Journal*, *52*, 731–743. http://dx.doi.org/10.5465/AMJ.2009.43669936

Dweck CS. (2000). *Self-theories: Their role in motivation, personality, and development*. Philadelphia, PA: Psychology Press.

Dweck CS. (2006). *Mindset: The new psychology of success*. New York, NY: Random House.

Earley PC, Mosakowski E. (2004). Cultural intelligence. *Harvard Business Review*, *82*, 139–146. Retrieved from https://hbr.org/2004/10/cultural-intelligence#

Earley PC, Peterson RA. (2004). The elusive cultural chameleon: Cultural intelligence as a new approach to intercultural training for the global manager. *Academy of Management Learning and Education*, *3*, 100–115. http://dx.doi.org/10.5465/AMLE.2004.12436826

Erez M, Lisak A, Harush R, Glikson E, Nouri R, Shokef E. (2013). Going global: Developing management students' cultural intelligence and global identity in culturally diverse virtual teams. *Academy of Management Learning and Education*, *12*, 330–355. http://dx.doi.org/10.5465/amle.2012.0200

Farh CIC, Bartol KM, Shapiro DL, Shin J. (2010). Networking abroad: A process model of how expatriates form support ties to facilitate adjustment. *Academy of Management Review*, *35*(3), 434–454.

Fernandez A, Schillinger D, Grumbach K, Rosenthal A, Stewart AL, Wang F, Pérez-Stable EJ. (2004). Physician language ability and cultural competence. *Journal of General Internal Medicine*, *19*, 167–174. doi:10.1111/j.1525-1497.2004.30266.x

Ferrer E, McArdle J. (2010). Longitudinal modeling of developmental changes in psychological research. *Current Directions in Psychological Science*, *19*, 149–154. http://dx.doi.org/10.1177/0963721410370300

Fiske ST, Cuddy AJC, Glick P, Xu J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology*, *82*, 878–902. doi:10.1037/0022-3514.82.6.878

Geller D, Bamberger PA. (2012). The impact of help seeking on individual task performance: The moderating effect of help seekers' logics of action. *Journal of Applied Psychology*, *97*, 487–497. doi:10.1037/a0026014

Gelman SA. (2003). *The essential child: Origins of essentialism in everyday thought*. New York, NY: Oxford University Press.

Gong Y, Fan J. (2006). Longitudinal examination of the role of goal orientation in cross-cultural adjustment. *Journal of Applied Psychology*, *91*, 176–184. doi:10.1037/0021-9010.91.1.176

Gosling SD, Rentfrow PJ, Swann WB, Jr. (2003). A very brief measure of the Big Five personality domains. *Journal of Research in Personality*, *37*, 504–528. doi:10.1016/S0092-6566(03)00046-1

Harrison DA, Shaffer MA, Bhaskar-Shrinivas P. (2004). Going places: Roads more and less traveled in research on expatriate experiences. In JJ Martocchio (Ed.). *Research in personnel and human resources management*, (Vol. 23, pp. 199–247). Greenwich, CT: JAI Press.

Hechanova R, Beehr TA, Christiansen ND. (2003). Antecedents and consequences of employees' adjustment to overseas assignment: A meta–analytic review. *Applied Psychology: An International Review*, *52*, 213–236. doi:10.1111/1464-0597.00132

Heider F. (1958). *The psychology of interpersonal relations*. New York, NY: Psychology Press.

Heslin PA, Latham GP, VandeWalle D. (2005). The effect of implicit person theory on performance appraisals. *Journal of Applied Psychology*, *90*, 842–856. doi:10.1037/0021-9010.90.5.842

Heslin PA, VandeWalle D. (2011). Performance appraisal procedural justice: The role of a manager's implicit person theory. *Journal of Management*, *37*, 1694–1718. doi:10.1177/0149206309342895

Heslin PA, Vandewalle D, Latham GP. (2006). Keen to help? Managers' implicit person theories and their subsequent employee coaching. PERSONNEL PSYCHOLOGY, *59*, 871–902. DOI:10.1111/j.1744-6570.2006.00057.x

Hirschfeld LA. (2001). On a folk theory of society: Children, evolution, and mental representations of social groups. *Personality and Social Psychology Review*, *5*, 107–117. doi:10.1207/S15327957PSPR0502_2

Hofstede G, Hofstede GJ, Minkov M. (2010). *Cultures and organizations: Software of the mind*. New York, NY: McGraw-Hill.

Horney K. (1937). *The neurotic personality of our time*. New York, NY: Norton.

Imai L, Gelfand MJ. (2010). The culturally intelligent negotiator: The impact of cultural intelligence (CQ) on negotiation sequences and outcomes. *Organizational Behavior and Human Decision Processes*, *112*, 83–98. doi:10.1016/j.obhdp.2010.02.001

Islam MR, Hewstone M. (1993). Dimensions of contact as predictors of intergroup anxiety, perceived out-group variability, and outgroup attitude: An integrative model. *Personality and Social Psychology Bulletin*, *19*, 700–710. doi:10.1177/0146167293196005

Jöreskog KG, Sörbom D. (1993). *LISREL 8: Structural equation modeling with the SIMPLIS command language*. Chicago, IL: Scientific Software International.

Kenworthy J, Turner RN, Hewstone M, Voci A. (2008). Intergroup contact: When does it work, and why. In JF Dovidio, P Glick, LA Rudman (Eds.). *On the nature of prejudice: Fifty years after Allport* (pp. 278–292). Malden, MA: Blackwell.

Kim K, Kirkman BL, Chen G. (2008). Cultural intelligence and international assignment effectiveness. In S Ang, L Van Dyne (Eds.). *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 71–90). Armonk, NY: M.E. Sharpe.

Kishton JM, Widaman KF. (1994). Unidimensional versus domain representative parceling of questionnaire items: An empirical example. *Educational and Psychological Measurement*, *54*, 757–765. doi:10.1177/0013164494054003022

Koh J, Chang W, Fung D, Kee C. (2007). Conceptualization and manifestation of depression in an Asian context: Formal construction and validation of a children's depression scale in Singapore. *Culture, Medicine & Psychiatry*, *31*, 225–249. doi:10.1007/s11013-007-9048-0

Kray LJ, Haselhuhn MP. (2007). Implicit negotiation beliefs and performance: Experimental and longitudinal evidence. *Journal of Personality and Social Psychology*, *93*, 49–64. doi:10.1037/0022-3514.93.1.49

Landis RS, Beal DJ, Tesluk PE. (2000). A comparison of approaches to forming composite measures in structural equation models. *Organizational Research Methods*, *3*, 186–207. doi:10.1177/109442810032003

Lévy-Leboyer C. (2007). CQ: Developing cultural intelligence at work. PERSONNEL PSYCHOLOGY, *60*, 242–245. doi:10.1111/j.1744-6570.2007.00071_4.x

Levy SR, Stroessner SJ, Dweck CS. (1998). Stereotype formation and endorsement: The role of implicit theories. *Journal of Personality and Social Psychology*, *74*, 1421–1436. http://dx.doi.org/10.1037/0022-3514.74.6.1421

Li M, Mobley WH, Kelly A. (2013). When do global leaders learn best to develop cultural intelligence? An investigation of the moderating role of experiential learning style. *Academy of Management Learning and Education*, *12*, 32–50. http://dx.doi.org/10.5465/amle.2011.0014

MacNab BR. (2012). An experiential approach to cultural intelligence education. *Journal of Management Education*, *36*, 66–94. doi:10.1177/1052562911412587

Mathieu JE. (1991). A cross-level nonrecursive model of the antecedents of organizational commitment and satisfaction. *Journal of Applied Psychology*, *76*, 607–618. doi:10.1037/0021-9010.76.5.607

McArdle JJ. (2009). Latent variable modeling of differences and changes with longitudinal data. *Annual Review of Psychology*, *60*, 577–605. doi:10.1146/annurev.psych.60.110707.163612

Medin DL, Ortony A. (1989). Psychological essentialism. In Vosniadou S, Ortony A (Eds.). *Similarity and analogical reasoning*. New York, NY: Cambridge University Press.

Mendoza-Denton R, Downey G, Purdie VJ, Davis A, Pietrzak J. (2002). Sensitivity to status-based rejection: Implications for African American students' college experience. *Journal of Personality and Social Psychology*, *83*, 896–918. doi:10.1037//0022-3514.83.4.896

Ng KY, Van Dyne L, Ang S. (2009). From experience to experiential learning: Cultural intelligence as a learning capability for global leader development. *Academy of Management Learning & Education*, *8*, 511–526. doi:10.5465/AMLE.2009.47785470

Ng KY, Van Dyne L, Ang S. (2012). Cultural intelligence: A review, reflections, and recommendations for future research. In AM Ryan, FTL Leong, FL Oswald (Eds.), *Conducting multinational research: Applying organizational psychology in the workplace*. Washington, DC: American Psychological Association.

No S, Hong Y, Liao H, Lee K, Wood D, Chao MM. (2008). Lay theory of race affects and moderates Asian Americans' responses toward American culture. *Journal of Personality and Social Psychology*, *95*, 991–1004. doi:10.1037/a0012978

Organization for Economic Co-operation and Development. (2011). Who studies abroad and where? In *Education at a glance: OECD indicators* (pp. 318–339). OECD Publishing.

Pettigrew TF. (1998). Intergroup contact theory. *Annual Review of Psychology*, *49*. 65–85. doi:10.1146/annurev.psych.49.1.65

Pettigrew TF, Tropp LR. (2008). Allport's contact hypothesis: Its history and influence. In JF Dovidio, P Glick, LA Rudman (Eds.). *On the nature of prejudice: Fifty years after Allport* (pp. 262–277). Malden, MA: Blackwell.

Podsakoff PM, MacKenzie SB, Lee JY, Podsakoff NP. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*, 879–903. doi:10.1037/0021-9010.88.5.879

Ren H, Shaffer MA, Harrison DA, Fu C, Fodchuk KM. (2014). Reactive adjustment or proactive embedding? Multistudy, multiwave evidence for dual pathways to expatriate retention. Personnel Psychology, *67*, 203–239. doi:10.1111/peps.12034

Romero-Canyas R, Anderson VT, Reddy KS, Downey G. (2009). Rejection sensitivity. In MR Leary, RH Hoyle (Eds.). *Handbook of individual differences in social behavior* (pp. 466–479). New York, NY: Guilford Press.

Rosenberg M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Schmitt DP, Allik J, McCrae RR, Benet-Martínez V, Alcalay L, Ault L, Zupanèiè A. (2007). The geographic distribution of big five personality traits: Patterns and profiles of human self-description across 56 nations. *Journal of Cross-Cultural Psychology*, *38*, 173–212. doi:10.1177/0022022106297299

Shaffer MA, Harrison DA. (1998). Expatriates' psychological withdrawal from international assignments: Work, nonwork, and family influences. Personnel Psychology, *51*, 87–118. doi:10.1111/j.1744-6570.1998.tb00717.x

Shaffer MA, Harrison DA, Gregersen H, Black JS, Ferzandi LA. (2006). You can take it with you: Individual differences and expatriate effectiveness. *Journal of Applied Psychology*, *91*, 109–125. doi:10.1037/0021-9010.91.1.109

Spector PE, Brannick MT. (2011). Methodological urban legends: The misuse of statistical control variables. *Organizational Research Methods*, *14*, 287–305. doi:10.1177/1094428110369842

Stephan WG, Stephan CW. (1985). Intergroup anxiety. *Journal of Social Issues*, *41*, 157–175. doi:10.1111/j.1540-4560.1985.tb01134.x

Stephan WG, Stephan CW. (2008). Intergroup relations program evaluation. In JF Dovidio, P Glick, LA Rudman (Eds.). *On the nature of prejudice: Fifty years after Allport* (pp. 431–446). Malden, MA: Blackwell.

Tadmor CT, Hong Y, Chao MM, Wiruchnipawan F, Wang W. (2012). Multicultural experiences reduce intergroup bias through epistemic unfreezing. *Journal of Personality and Social Psychology*, *103*, 750–772. doi:10.1037/a0029719

Takeuchi R, Yun S, Tesluk PE. (2002). An examination of crossover and spillover effects of spousal and expatriate cross-cultural adjustment on expatriate outcomes. *Journal of Applied Psychology*, *87*, 655–666. doi:10.1037//0021-9010.87.4.655

Takeuchi R, Tesluk PE, Marinova SV. (2006). Role of international experiences in the development of cultural intelligence. In Subhendudey, VN Posa (Eds.). *Cultural intelligence: An introduction* (pp. 56–91). Hyderabad, India: ICFAI University Press.

Takeuchi R, Wang M, Marinova SV, Yao X. (2009). Role of domain-specific facets of perceived organizational support during expatriation and implications for performance. *Organization Science*, *20*, 621–634. doi:10.1287/orsc.1080.0403

Takeuchi R, Yun S, Russell JEA. (2002). Antecedents and consequences of the perceived adjustment of Japanese expatriates in the USA. *International Journal of Human Resource Management*, *13*, 1224–1244. doi:10.1080/09585190210149493

VandeWalle D. (1997). Development and validation of a work domain goal orientation instrument. *Educational and Psychological Measurement*, *57*, 995–1015. doi:10.1177/0013164497057006009

Van Dyne L, Ang S, Koh C. (2008). Development and validation of the CQS: The Cultural Intelligence Scale. In S Ang, L Van Dyne (Eds.). *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 16–38). Armonk, NY: M.E. Sharpe.

Wilder DA. (1993). Freezing intergroup evaluations: Anxiety fosters resistance to counter-stereotypic information. In MA Hogg, D Abrams (Eds.). *Group motivation: Social psychological perspectives* (pp. 68–86). London, UK: Harvester Wheatsheaf.

Williams LJ, Vandenberg RJ, Edwards JR. (2009). Structural equation modeling in management research: A guide for improved analysis. *Academy of Management Annals*, *3*, 543–604. doi:10.1080/19416520903065683

Williams MJ, Eberhardt JL. (2008). Biological conceptions of race and the motivation to cross racial boundaries. *Journal of Personality and Social Psychology*, *94*, 1033–1047. doi:10.1037/0022-3514.94.6.1033

APPENDIX

Implicit Culture Belief Measure

Instructions.   Please read the following statements carefully, and rate your extent of agreement with each statement from 1 = *strongly disagree* to 6 = *strongly agree*.

1. The ethnic culture a person is from (e.g., Chinese, American, Japanese), determined the kind of person they would be (e.g., outgoing and sociable or quiet and introverted); not much can be done to change the person.
2. Not much that can be done to change a person's ethnocultural characteristics (e.g., being violent, being assertive, being submissive).[a]
3. Although people can act differently, the core ethnocultural characteristics they hold cannot be changed much.
4. Ethnocultural characteristics are something very basic about a person, they cannot be changed.
5. Everyone, no matter who they are, can significantly change their ethnocultural characteristics (e.g., being violent, being assertive, being submissive).[b]
6. People from different ethnic cultures (e.g., Chinese, Japanese, American) can substantially change the kind of person they are.[b]
7. No matter what a person's ethnocultural characteristic is like, it can always be changed.[b]
8. People can change even the most basic qualities that they have acquired from their own ethnic culture.[b]

Note. [a]Research has suggested that there are differences between cultural groups in terms of their value endorsement (e.g., Hofstede et al., 2010) as well as personality traits (e.g., Schmitt et al., 2007). Although researchers usually examine cultural characteristics along value dimensions (e.g., individualism vs. collectivism), when being asked about observed differences between people from different cultural groups, laypeople often talk about cultural differences in terms of personality traits (e.g., assertiveness vs. submissiveness). For example, a typical American is seen as more outspoken and assertive, whereas a typical Chinese is seen as more conscientious but quiet and soft-spoken (No et al., 2008; also see Fiske, Cuddy, Glick, & Xu, 2002). It is also not uncommon in our everyday conversations to hear comments from students (and sometimes instructors) about how students from a certain culture are more or less quiet in classes and in meetings. Personality trait differences are discussed more than value differences in everyday context; this might be due to the fact that differences in personality are more readily observable than cultural values in daily interactions, which often involve brief interpersonal exchanges. Given that we are interested in understanding sojourners' experience from the point of view of laypeople, and that differences in personality traits are more salient in daily exchanges, we have used personality traits as examples in our scale items so that the respondents can relate to their experiences more readily.
    [b]Reversed items.

Intercultural Rejection Sensitivity Measure

Instructions.   Each of the items below describes a situation that exchange/foreign students might encounter when they are studying in another country. Some people are concerned about these situations and others are not—Please imagine yourself in each situation when you are studying in your host country and select the number (from 1 to 6) that best corresponds to how you would feel.

Situation 1. Imagine that you are in a room with several friends who are native from this country. You just hear a joke from one of them and everyone in the room is laughing.

1. How concerned/anxious would you be that you might not understand the joke because you are a foreigner?

Very unconcerned				Very concerned
1	2	3	4	5
				6

2. I would expect that I might not understand the joke because I am a foreigner.

Very unlikely				Very likely
1	2	3	4	5
				6

Situation 2. Imagine that you are at a fast food restaurant and you are placing the order with the cashier.

1. How concerned/anxious would you be that the cashier might not understand your order because you are a foreigner?

Very unconcerned				Very concerned
1	2	3	4	5
				6

2. I would expect that the cashier might not understand my order because I am a foreigner.

Very unlikely				Very likely
1	2	3	4	5
				6

Situation 3. Imagine that you are going to a student insurance office. The receptionist is trying to explain the student insurance policies to you.

1. How concerned/anxious would you be that the receptionist might talk to you impatiently because you are a foreigner?

Very unconcerned				Very concerned
1	2	3	4	5
				6

2. I would expect that the receptionist might talk to me impatiently because I am a foreigner.

Very unlikely				Very likely
1	2	3	4	5
				6

Situation 4. Imagine that you are in a class one day where the majority of the students are native speakers. The professor asks students to form several groups for class projects.

1. How concerned/anxious would you be that you would be left out because you are a foreigner?

Very unconcerned				Very concerned
1	2	3	4	5
				6

2. I would expect that I would be left out because I am a foreigner.

Very unlikely				Very likely
1	2	3	4	5
				6

Situation 5. Imagine that you are in a class one day where the majority of the students are native speakers? The professor asks a particular question. A few students, including yourself, raise their hands to answer the question.

1. How concerned/anxious would you be that the professor might not choose you because you are a foreigner?

Very unconcerned				Very concerned
1	2	3	4	5
				6

2. I would expect that the professor might not choose me because I am a foreigner.

Very unlikely				Very likely
1	2	3	4	5
				6

(*Continued*)

Situation 6. Imagine that you are going out for coffee with several friends who are native from this country. Your friends are having a conversation on where to go.

1. How concerned/anxious would you be that your friends might ignore your ideas because you are a foreigner?

Very unconcerned					Very concerned
1	2	3	4	5	6

2. I would expect that my friends might ignore my ideas because I am a foreigner.

Very unlikely					Very likely
1	2	3	4	5	6

Situation 7. Imagine that you are dining in a restaurant, trying to get the attention of the waitress to place your order. Other customers are trying to get her attention as well.

1. How concerned/anxious would you be that she might not attend to you right away because you are a foreigner?

Very unconcerned					Very concerned
1	2	3	4	5	6

2. I would expect that she might not attend to me right away because I am a foreigner.

Very unlikely					Very likely
1	2	3	4	5	6

Situation 8. Imagine that a class that you are in is having a large group discussion. Most of the class consists of native speakers.

1. How concerned/anxious would you be that others might not listen to you while you are expressing your opinion because you are a foreigner?

Very unconcerned					Very concerned
1	2	3	4	5	6

2. I would expect that others might not listen to me while I am expressing my opinion because I am a foreigner.

Very unlikely					Very likely
1	2	3	4	5	6

Situation 9. Imagine that students in your dormitory are planning a trip. They would be leaving in two days and have not invited you yet.

1. How concerned/anxious would you be that you might not be invited because you are a foreigner?

Very unconcerned					Very concerned
1	2	3	4	5	6

2. I would expect that I might not be invited because I am a foreigner.

Very unlikely					Very likely
1	2	3	4	5	6

Situation 10. Imagine that you need to call the customer service about some charges on your cellular phone bill.

1. How concerned/anxious would you be that the the customer service representative might be rude to you because you are a foreigner?

Very unconcerned					Very concerned
1	2	3	4	5	6

2. I would expect that the customer service representative might be rude to me because I am a foreigner.

Very unlikely					Very likely
1	2	3	4	5	6

Note: An intercultural rejection sensitivity score was computed by first multiplying the responses to the two items in each situation and then averaging across the 10 situations as in previous studies (Chan & Mendoza-Denton, 2008; Mendoza-Denton et al., 2002).

Cross-Cultural Adjustment Measure

Instruction.   Using the following scale, indicate how unadjusted or adjusted you are to the following aspects during your exchange in this host country (1 = *not at all adjusted* to 7 = *very well adjusted*)?
Indicate your degree of adjustment to

(1) Living conditions in general
(2) Values and beliefs
(3) Customs and practices
(4) Interacting with people in academic activities
(5) Interacting with people in nonacademic activities
(6) Interpersonal relationships
(7) Social gatherings
(8) Your schoolwork
(9) The academic requirements
(10) Your professors' teaching styles
(11) The instructional methods

General adjustment: Items 1–3
Social adjustment: Items 4–7
Academic adjustment: Items 8–11