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The Cultural Boundaries of Perspective-taking:  
When and Why Perspective-taking Reduces Stereotyping

Cynthia S. Wang

*Oklahoma State University*

Margaret Lee

Gillian Ku

*London Business School*

Angela K.-y. Leung

*Singapore Management University*

Author Note

Cynthia S. Wang, Department of Management, Spears School of Business, Oklahoma State University; Margaret Lee, Organisational Behaviour Subject Area, London Business School; Gillian Ku, Organisational Behaviour Subject Area, London Business School; Angela K.-y. Leung, School of Social Sciences, Singapore Management University.

Correspondence concerning this article should be addressed to Cynthia S. Wang,  
Department of Management, Spears School of Business, Oklahoma State University, Stillwater,  
Oklahoma, 74078. E-mail: [Cynthia.wang@okstate.edu](mailto:Cynthia.wang@okstate.edu)

**Abstract**

Research conducted in Western cultures indicates that perspective-taking is an effective social strategy for reducing stereotyping. The current paper explores whether and why the effects of perspective-taking on stereotyping differ across cultures. Studies 1 and 2 established that perspective-taking reduces stereotyping in Western but not East Asian cultures. Using a socioecological framework, Studies 2 and 3 found that relational mobility, i.e., the extent to which individuals' social environments provide them opportunities to choose new relationships and terminate old ones, explained our effect: perspective-taking was negatively associated with stereotyping in relationally-mobile (Western) but not in relationally-stable (East Asian) environments. Finally, Study 4 examined the proximal psychological mechanism underlying the socioecological effect: individuals in relationally-mobile environments are more motivated to develop new relationships than those in relationally-stable environments. Subsequently, when this motivation is high, perspective-taking increases self-target group overlap, which then decreases stereotyping.

***Keywords:*** perspective-taking, stereotyping, cultural differences, relational mobility

**Word count (Abstract included): 9763**

*“First of all,” he said, “if you can learn a simple trick, Scout, you’ll get along a lot better with all kinds of folks. You never really understand a person until you consider things from his point of view ... until you climb into his skin and walk around in it.”*

In Harper Lee’s classic novel, *To Kill a Mockingbird*, Atticus Finch explains to his daughter, Scout, the importance of taking others’ perspectives to combat racial injustice (Lee, 1960/1990, p. 39). Atticus’ maxim has received scientific support, with studies demonstrating that perspective-taking, or the “active cognitive process of imagining the world from another’s vantage point” (Ku, Wang, & Galinsky, 2015, p. 48), reduces stereotyping of social groups characterized by negative stereotypes (Aberson & Haag, 2007; Galinsky & Moskowitz, 2000; Ku, Wang, & Galinsky, 2010; Skorinko, Sinclair, & Conklin, 2012; Todd, Galinsky, & Bodenhausen, 2012; Wang, Ku, Tai, & Galinsky, 2014; Weyant, 2007). However, just as Atticus’ advice is set in the United States, the research on perspective-taking and stereotyping has nearly all been examined in the West. As such, examining the effects of perspective-taking on stereotyping in other cultures is theoretically and practically important.

This paper explores whether and why the effects of perspective-taking on stereotyping differ between Western (e.g., United States) and East Asian (e.g., Singapore) cultures. Because perspective-taking has been described as a social strategy for creating and strengthening social bonds (Galinsky, Ku, & Wang, 2005), one might expect that East Asian perspective-takers will exhibit reduced stereotyping. However, because relational goals differ across cultures, a strategy that reduces stereotyping in one culture may not do so in another. By considering cross-cultural differences in *relational mobility*, i.e., the extent to which individuals’ social environment provides them opportunities to choose new relationships and terminate old ones according to personal preferences (Oishi, Schug, Yuki, & Axt, 2015), we posit that perspective-taking in East Asian cultures may *not* reduce stereotyping.

Specifically, the current research investigates how cross-cultural differences in relational mobility moderate perspective-taking's effect on negative stereotyping (see Figure 1a) and further explores the proximal psychological mechanism underlying this effect (see Figure 1b). Prior socioecological research suggests that individuals in relationally-mobile environments are more motivated to develop and strengthen new relationships than those in relationally-stable environments (Schug, Yuki, & Maddux, 2010; Oishi et al., 2015; Takemura & Suzuki, 2017). Separately, perspective-taking research has found that stereotype reduction results from perspective-taking's cognitive mechanism of increased self-other overlap (Galinsky & Moskowitz, 2000). Bringing together these research streams, we propose that, for those in relationally-mobile cultures who are more motivated to form new relationships, perspective-taking increases self-target group overlap and thereby decreases stereotyping. However, for those in relationally-stable cultures who are less motivated to form new relationships, perspective-taking does not affect self-target group overlap and stereotyping.

### **Perspective-taking and Stereotyping**

Perspective-taking has long been touted as a social strategy that aids social functioning because it facilitates cognitive development (Piaget, 1932) and social competence (Davis, 1983). Importantly, perspective-taking is distinct from similar constructs such as empathy (see Ku et al., 2015, for a review; Davis, Conklin, Smith, & Luce, 1996). Whereas perspective-taking is a cognitive process involving observing another's experiences, empathy is more emotional (Smith, 1759; Spencer, 1870). Additionally, compared to empathy, perspective-taking better predicts reduced stereotyping (Wang, Ku, et al., 2014), behavioral mimicry (Chartrand & Bargh, 1999) and improved negotiation outcomes (Gilin, Maddux, Carpenter, & Galinsky, 2013).

Research has robustly demonstrated that perspective-taking reduces stereotyping (Batson,

Early, & Salvarani, 1997; Galinsky & Ku, 2004; Galinsky & Moskowitz, 2000; Ku et al., 2010; Wang, Ku, et al., 2014). These findings have been replicated with a number of stereotyped groups (Aberson & Haag, 2007; Galinsky & Moskowitz, 2000; Ku et al., 2010; Skorinko et al., 2012; Todd, Bodenhausen, & Galinsky, 2012; Todd, Galinsky, et al., 2012) and with stereotype reduction extending beyond the target to the target group. For instance, adopting the perspective of an elderly person reduces stereotyping of that particular elderly person and of elderly people in general (Galinsky & Moskowitz, 2000).

Perspective-taking's effects on stereotype reduction stem from its cognitive mechanism of overlap of self and other representations. During perspective-taking, individuals' mental simulation of the target's life results in greater overlap between the self and the target and target group. People generally have a positive self-view and positive self-descriptors are applied to the target and target group, resulting in decreased stereotyping (Galinsky & Moskowitz, 2000; Galinsky et al., 2015).

The consistency and robustness of perspective-taking's effect on stereotype reduction is tempered by most of the research having been conducted in Western cultures. We know of only two exceptions. First, Ku et al. (2010) demonstrated that Singaporeans who took the perspective of an elderly target were less likely to judge a woman of unknown age acting ambiguously dependent as dependent (stereotypical of the elderly). Yet because participants judged an ambiguously dependent target, not one specified as elderly, it remains unclear whether perspective-taking reduces stereotyping of the elderly in East Asian cultures. Second, Wang, Ku, et al. (2014) found that Singaporeans who took the perspective of a laborer judged laborers as more analytical, smart, and thoughtful (traits counter-stereotypical of laborers). However, similarities between the perspective-taker and the target (e.g., information that the target was also

Singaporean) were highlighted in the perspective-taking manipulation, which may have influenced the results. Hence, both findings fail to provide clear evidence of whether perspective-taking reduces stereotyping in East Asian cultures.

To remedy these shortcomings, this research examines the effects of perspective-taking on stereotyping of a target group (rather than an ambiguous or potentially similar target group). This methodology is consistent with prior studies examining perspective-taking's effects on stereotyping (Galinsky & Moskowitz, 2000; Ku et al., 2010), and therefore allows for a comparable test of the consequence of perspective-taking on stereotyping in different cultures.

One possibility is that perspective-taking reduces stereotyping in Western and East Asian cultures. This hypothesis is consistent with the theoretical view that perspective-taking is a strategy geared toward building social bonds (Galinsky et al., 2005). According to that view, perspective-taking should have similar effects in Western and East Asian cultures because all individuals—irrespective of their culture—are motivated to form social bonds (Baumeister & Leary, 1995; Maslow, 1968).

Another possibility is that there are boundary conditions to the benefits of perspective-taking. Indeed, perspective-taking is not always geared toward social bonding, with the relationship context serving as a crucial moderator (Ku et al., 2015). For example, with cooperative targets, perspective-taking reduces egocentrism and increases ethical behavior; conversely, with competitive targets, perspective-taking increases egocentrism and unethical behavior (Drolet, Larrick, & Morris, 1998; Epley, Caruso, & Bazerman, 2006; Pierce, Kilduff, Galinsky, & Sivanathan, 2013). Similarly, when individuals who are highly committed to their in-group take the out-group's perspective, their judgments of that out-group become less favorable (Tarrant, Calitri, & Weston, 2012). These results suggest that relational goals are



important in determining perspective-taking's effects on judgment and behavior. If so, when *relational mobility* differs across cultures, perspective-taking may be differentially effective in reducing stereotyping.

### **Culture, Relational Mobility, and Perspective-taking**

Socioecological psychology delineates the reciprocal shaping between individuals (i.e., their minds and behavior) and their socioecological habitats, which include physical, societal, and interpersonal environments (for detailed reviews, see Cohen, 2001; Oishi & Graham, 2010). An individual's level of mobility has received considerable attention in this field, including research on residential mobility (the extent to which people can change residences; Oishi, 2010; De, Gelfand, Nau, & Roos, 2015), job mobility (the extent to which people can change jobs and professions; Whitson, Wang, Kim, Cao, & Scrimshire, 2014), and relational mobility (Schug, Yuki, Horikawa, & Takemura, 2009; Schug et al., 2010; Yuki & Schug, 2012)—the last of which is the focus of our paper. Relational mobility refers to the extent to which individuals can choose new relationships and terminate old ones based on personal preferences in a given environment.

Individuals in relationally-mobile environments have more opportunities to meet new acquaintances and greater freedom to establish beneficial relationships and exit unsatisfying ones as they desire. Because individuals in relationally-mobile environments have choice in selecting relationships, they are “on the lookout for new relationships and social exchange opportunities” (Oishi et al., 2015, p. 228). Members of relationally-mobile cultures exhibit a promotional relational mindset that encourages an open approach to prospective relationships (Li, Hamamura, & Adams, 2015) through increased emotional intimacy (Yamagishi, Jin, & Miller, 1998) and self-disclosure (Falk, Heine, Yuki, & Takemura, 2009; Macy & Sato, 2002; Schug et al., 2010).

Western cultures (e.g., United States) exhibit greater relational mobility, with individuals possessing a greater number of acquaintances, choosing who to engage with, and belonging to social groups with fluid boundaries (Schug et al., 2009).

In contrast, individuals in relationally-stable cultures such as Singapore and Taiwan (Wang & Leung, 2010; Wang, Leung, See, & Gao, 2011) have fewer opportunities to meet new people and less freedom to make or break relational ties at will. They tend to be firmly embedded in their social networks, which are less malleable and do not allow leeway to form alternative relationships (Schug et al., 2009). As a result, individuals in relationally-stable environments are vigilant regarding prospective relationships (Adams, 2005; Adams & Plaut, 2003; Gable & Impett, 2012), engage in less active self-disclosure (Schug et al., 2010), and are cautious in displaying intimacy (Li, Adams, Kurtiş, & Hamamura, 2015). They also tend to exhibit interpersonal distrust (Li, Hamamura, et al., 2015), including being more punitive toward strangers (Wang & Leung, 2010; Wang et al., 2011). Overall, because individuals in relationally-stable cultures have less freedom to choose their relationships, it is less relevant for them to actively seek and establish new relationships.

We argue that differences in this motivation to develop new relationships will influence when perspective-taking's effects on stereotyping will emerge cross-culturally. Perspective-taking decreases stereotyping in Western—that is, relationally-mobile—cultures, a finding consistent with theorizing from a socioecological perspective. Perspective-taking facilitates the cultivation of new connections for relationally-mobile individuals who are motivated to develop and strengthen new relationships. During perspective-taking, individuals in relationally-mobile environments generate greater overlap in self-other representations, thereby reducing stereotyping (Galinsky et al., 2005; Galinsky & Moskowitz, 2000). Conversely, individuals in

East Asian—that is, relationally-stable—cultures do not have the opportunity and are therefore less motivated to form new relationships (Schug et al., 2010; Oishi et al., 2015; Takemura & Suzuki, 2017). As such, even when individuals in relationally-stable environments engage in perspective-taking, increased self-other overlap and stereotype reduction may not occur because these effects do not align with their relational goals.

In sum, our work supports a socioecological perspective that the behaviors individuals engage in to bond with those around them are socially adaptive for their environment. Because individuals in relationally-mobile environments are more driven to establish relationships with unfamiliar others than are those in relationally-stable environments, it follows that perspective-taking may have differential effects on stereotyping across cultures. We therefore hypothesize that the reduction in stereotyping after perspective-taking in Western cultures will not be observed in East Asian cultures. We further posit the psychological mechanisms that underlie the moderating effect of relational mobility: for those more motivated to develop new relationships (i.e., people in relationally-mobile environments such as Western cultures), perspective-taking will increase self-target group overlap and decrease subsequent stereotyping, but for those less motivated to develop new relationships (i.e., people in relationally-stable environments such as East Asian cultures), the effects of perspective-taking on self-target group overlap and stereotyping will not emerge.

### **Alternative Explanations**

The current research also empirically tests two alternative explanations: differences in the degree of perspective-taking and independent (vs. interdependent) self-construal.<sup>1</sup>

**Degree of perspective-taking.** Our theorizing assumes that Western and East Asian individuals take the perspective of others to a similar extent. However, an alternative explanation

is that individuals from relationally-stable cultures stereotype less because they take the perspective of others to a lesser extent. Studies 1 and 2 examine this possibility.

**Self-construal.** An individual's self-construal may influence perspective-taking's effects on stereotyping. In Western cultures, people construe themselves as independent: they focus on understanding the self and the unique inner attributes that set each individual apart (Markus & Kitayama, 1991). For instance, North Americans see themselves and others as free agents, with their actions arising from their dispositional qualities (Morris, Menon, & Ames, 2001). As such, stereotypes used to categorize individuals into groups may be less acceptable. Conversely in East Asian cultures, agency arises from collectives (i.e., families, groups, and organizations; Morris et al., 2001; Menon, Morris, Chiu, & Hong, 1999), where individuals tend to construe themselves as interdependent and view themselves as part of social collectives (Markus & Kitayama, 1991). As such, heuristics that characterize and distinguish between groups, such as stereotyping, may be more acceptable. Thus, perspective-taking may reduce stereotyping for people who have more of an independent self-construal because perspective-taking highlights the expectation to see others as unique whereas perspective-taking may fail to decrease stereotyping among people who have more of an interdependent self-construal because stereotyping is normatively acceptable. Study 3 examines this possibility.

### **Research Overview**

Four studies examined whether and why perspective-taking's effects on stereotyping differ across cultures.<sup>2</sup> Studies 1 and 2 tested whether perspective-taking reduces stereotyping by Americans but not by Singaporeans, and Study 2 tested whether the predicted cultural difference is explained by relational mobility (see Figure 1). To further establish the role of relational mobility, Study 3 manipulated relational mobility. Whereas Studies 2 and 3 focused on a

socioecological explanation, Study 4 tested the proximal psychological mechanisms involved (see Figure 2): since individuals in relationally-mobile environments are more motivated to develop new relationships, perspective-taking will result in greater self-target group overlap and subsequent stereotype reduction; this will not occur in relationally-stable environments, where people are less motivated to develop new relationships. Utilizing a power of .80 to achieve a medium effect size (Cohen's  $f=.25$ ; Cohen, 2013), we determined an acceptable sample size of 32 participants per condition for each study (see VanVoorhis & Morgan, 2007)<sup>3</sup>.

### Study 1

Study 1 sought to demonstrate that perspective-taking reduces stereotyping by Americans but not by Singaporeans. Following prior work on perspective-taking and stereotyping (Galinsky & Moskowitz, 2000; Ku et al., 2010), participants saw a photograph of an elderly man and wrote a short narrative essay about him using perspective-taking or control instructions. Subsequently, participants rated elderly people on traits pre-tested to be stereotypic of the elderly.

#### Method

**Elderly stereotype pre-test.** To pre-test stereotypic traits, 39 students, 18 Singaporeans and 21 Americans (comparable samples to the main study), rated whether traits were typical of the elderly from 1 (“*extremely unlike*”) to 7 (“*extremely like*”). We selected traits as stereotypical if they were rated significantly above the scale’s midpoint. In line with previous research (Galinsky & Moskowitz, 2000; Galinsky, Wang, & Ku, 2008), the elderly were seen as stereotypically weak, slow, worried, forgetful, dependent, lonely, and traditional by Singaporeans ( $t(17)$ 's > 2.12,  $p$ 's < .05) and Americans ( $t(20)$ 's > 2.19,  $p$ 's < .05). These traits were similar in magnitude for Singaporeans and Americans ( $t(37)$ 's < 1.19,  $p$ 's > .24). For example, Americans ( $M=6.14$ ,  $SD=1.15$ ) and Singaporeans ( $M=6.00$ ,  $SD=1.19$ ) viewed the elderly as

equally forgetful,  $t(37)=0.38$ ,  $p=.706$ .

**Participants and design.** Participants were 192 undergraduates, 113 Singaporean (79 women;  $M_{\text{age}}=21.19$ ,  $SD=1.76$ ) and 79 American (54 women;  $M_{\text{age}}=20.37$ ,  $SD=0.87$ ).

Participants were run individually and participated for course credit.<sup>4</sup> The experiment had a 2(Culture: *Singaporean vs. American*) $\times$ 2(Perspective-taking: *Perspective-taking vs. Control*) between-participants design.

**Procedure.** Singaporean and American participants followed the same procedure and saw the same materials presented on computers. Participants were shown a black-and-white photograph of an elderly man sitting on a bench by a newspaper stand and were asked to write a brief passage describing a typical day in his life (Galinsky & Moskowitz, 2000). Half were in the *Perspective-taking condition* and asked to “take the perspective of the individual in the photograph and imagine a day in the life of this individual as if you were that person, looking at the world through his eyes and walking through the world in his shoes”; the other half were in the *Control condition* and given no special instructions on how to write their narrative essays. Participants were asked to write for 3-5 minutes. Next, they used the same 7-point scale as in the pre-test to rate the elderly on the seven stereotypical traits. Finally, participants filled out a demographic questionnaire and were debriefed.

## Results

**Manipulation check.** As a perspective-taking manipulation check, we coded the number of first-person pronouns (i.e., “I,” “me,” “my”) in participants’ essays (Galinsky & Ku, 2004). We conducted a Culture $\times$ Perspective-taking between-participants ANOVA. The use of first-person pronouns was greater in the perspective-taking ( $M=3.24$ ,  $SD=4.99$ ) than in the control ( $M=0.19$ ,  $SD=1.08$ ) condition,  $F(1,188)=30.37$ ,  $p<.001$ ,  $d=0.84$ , confirming that our perspective-

taking manipulation was successful.

The use of first-person pronouns was also greater for Singaporeans ( $M=2.24$ ,  $SD=4.35$ ) than for Americans ( $M=1.05$ ,  $SD=3.17$ ),  $F(1, 188)=5.29$ ,  $p=.02$ ,  $d=0.31$ . Finally, a Culture×Perspective-taking interaction emerged ( $F(1, 188)=3.77$ ,  $p=.05$ ). Singaporeans ( $M=0.27$ ,  $SD=1.38$ ) and Americans ( $M=0.08$ ,  $SD=0.27$ ) did not differ in their use of first-person pronouns in the control condition ( $t(188)=0.25$ ,  $p=.80$ , 95% CI[-1.29, 1.67]), but Singaporean perspective-takers used more first-person pronouns ( $M=4.18$ ,  $SD=5.32$ ) than did American perspective-takers ( $M=1.95$ ,  $SD=4.22$ ),  $t(188)=3.04$ ,  $p=.003$ , 95% CI[0.78, 3.67],  $d=0.46$ . Moreover, the use of first-person pronouns was greater in the perspective-taking than in the control condition for both Singaporeans,  $t(188)=5.81$ ,  $p<.001$ , 95% CI[2.58, 5.23],  $d=1.00$ , and Americans,  $t(188)=2.33$ ,  $p=.021$ , 95% CI[0.28, 3.46],  $d=0.61$ .

**Stereotyping.** The Culture×Perspective-taking between-participants ANOVA revealed a significant interaction,  $F(1,188)=4.51$ ,  $p=.04$ ,  $\eta^2=0.02$  (see Figure 3). Simple effect analyses showed that, for Americans, perspective-takers ( $M=4.18$ ,  $SD=1.03$ ) stereotyped the elderly less than did control participants ( $M=4.66$ ,  $SD=1.05$ ),  $t(188)=-2.05$ ,  $p=.04$ , 95% CI[-0.95, -0.02],  $d=0.46$ . For Singaporeans, however, no differences emerged in stereotyping by perspective-takers ( $M=4.49$ ,  $SD=1.14$ ) versus control participants ( $M=4.32$ ,  $SD=0.96$ ),  $t(188)=0.86$ ,  $p=.39$ , 95% CI[-0.22, 0.56],  $d=0.16$ .

Study 1 provides preliminary evidence consistent with our hypothesizing, that perspective-taking reduces stereotyping in the U.S. but not in Singapore. Study 1 also provides evidence that differences in degree of perspective-taking do not explain our findings.

## Study 2

Study 2 first sought to extend Study 1's findings by using a Black<sup>5</sup> target to test the

robustness of our effect. Second, Study 2 participants rated the target group on traits pre-tested to be stereotype-relevant and stereotype-irrelevant. Including stereotype-irrelevant traits allowed us to demonstrate that perspective-taking affects stereotypical traits and not traits that are seen as unrelated to the target group (Galinsky et al., 2005; Galinsky & Moskowitz, 2000; Galinsky et al., 2008). Finally, Study 2 examined the role of relational mobility in explaining our cross-cultural effect. We theorize a mediated moderation model (Preacher, Rucker, & Hayes, 2007): Americans experience more relational mobility in their environment than do Singaporeans (Schug et al., 2009), which moderates the effect of perspective-taking on stereotyping (Figure 1a).

## Method

**Black stereotype pre-test.** To pre-test stereotypic traits, 31 students (14 Singaporeans and 17 Americans; comparable samples to the main study) rated whether certain traits were typical of Black people (1 (“*extremely unlike*”) to 7 (“*extremely like*”).

Using Study 1’s criterion, we determined that Black people were seen as stereotypically aggressive, hostile, and criminal by Singaporeans ( $t(13)'s > 3.98, p's < .002$ ) and Americans ( $t(17)'s > 3.14, p's < .006$ ), consistent with past findings (Devine & Elliot, 1995; Galinsky & Moskowitz, 2007). The magnitude to which these traits were seen as stereotypical was also consistent between Singaporeans and Americans ( $t(29)'s < 1.42, p's > .17$ ). We selected traits as being unrelated to the stereotype of Black people if they were not different from the midpoint, suggesting that these traits were neither stereotypical nor counter-stereotypical (Wang, Ku, et al., 2014). These traits were slovenly and physically dirty (Singaporeans:  $t(13)'s < 1.19, p's > .25$ ; Americans:  $t(16)'s < 0.42, p's > .42$ ). Again, the magnitude of these unrelated traits was consistent between Singaporeans and Americans ( $t(29)'s < 0.94, p's > .36$ ).



**Participants and design.** Participants were 170 undergraduates, 80 Singaporean (48 women;  $M_{\text{age}}=21.28$ ,  $SD=1.58$ ) and 90 American (60 women;  $M_{\text{age}}=23.39$ ,  $SD=5.09$ ). Participants were run individually and participated for course credit. The experiment had a  $2(\text{Culture: Singaporean vs. American}) \times 2(\text{Perspective-taking: Perspective-taking vs. Control}) \times 2(\text{Trait rating: Stereotype-relevant trait vs. Stereotype-irrelevant trait})$  mixed-model design with repeated measures on the third factor.

**Procedure.** Singaporean and American participants followed the same procedure and saw the same materials, which were presented on computers. Participants were shown a black-and-white close-up of a young Black man with a neutral facial expression and underwent Study 1's perspective-taking manipulation. Next, participants used the same scale as in the pre-test to rate how typical the five traits were of Black people in general. Ratings for “aggressive,” “hostile,” and “criminal” were averaged to form a measure of stereotype-relevant traits, while the ratings for “slovenly” and “physically dirty” were averaged to form a measure of stereotype-irrelevant traits.

After a filler task, participants completed a relational mobility measure (Yuki et al., 2007) on which they indicated—from 1 (“*strongly disagree*”) to 7 (“*strongly agree*”)—the extent to which each of 12 statements described people in their immediate social environment such as their school, workplace, and neighborhood. Sample items included: “They can choose whom they interact with” and “There are few opportunities for these people to form new friendships” (reverse-coded). These items were averaged ( $\alpha_{\text{Singaporean}}=0.84$ ;  $\alpha_{\text{American}}=0.81$ ), where higher numbers reflect greater relational mobility. Finally, participants completed a demographic questionnaire and were debriefed.

## Results

**Manipulation checks.** We conducted a Culture×Perspective-taking between-participants ANOVA on the number of first-person pronouns in participants' essays. The use of first-person pronouns was greater in the perspective-taking ( $M=3.67$ ,  $SD=5.83$ ) than in the control ( $M=0.54$ ,  $SD=1.27$ ) condition,  $F(1, 166)=22.31$ ,  $p<.001$ , 95% CI[1.82, 4.45],  $d=0.73$ , confirming that our perspective-taking manipulation was successful. No main effect for culture ( $M_{\text{Singaporean}}=2.18$ ,  $SD=4.09$ ;  $M_{\text{American}}=2.14$ ,  $SD=4.96$ ),  $F(1,166)=0.02$ ,  $p=.898$ , 95% CI[-1.40, 1.23],  $d=0.01$ , and no interaction,  $F(1,166)=0.004$ ,  $p=.948$ , emerged.

Because the perspective-taking manipulation preceded the relational mobility measure, the manipulation may have influenced perceived relational mobility. This was not the case,  $t(168)=0.25$ ,  $p=.803$ , 95% CI[-0.21, 0.28],  $d=0.04$ .

**Stereotyping.** We anticipated that (i) American perspective-takers would rate stereotype-relevant traits (but not stereotype-irrelevant traits) as being less descriptive of Black people than would American control participants and (ii) no rating differences would emerge between Singaporean perspective-taking and control participants regardless of the stereotypicality of the traits. A Culture×Perspective-taking×Trait rating mixed-model ANOVA, with repeated measures on the third factor, revealed a three-way interaction,  $F(1, 166)=7.69$ ,  $p=.006$ ,  $\eta^2=0.04$  (see Figure 4). For stereotype-relevant traits, American perspective-takers ( $M=3.58$ ,  $SD=1.30$ ) stereotyped Black people less than did control participants ( $M=4.07$ ,  $SD=1.28$ ),  $t(166)=-1.99$ ,  $p=.049$ , 95% CI[-0.99, -0.003],  $d=0.39$ , but no difference emerged between perspective-taking ( $M=2.61$ ,  $SD=1.22$ ) and control participants ( $M=2.62$ ,  $SD=1.08$ ) for the stereotype-irrelevant traits,  $t(166)=-0.05$ ,  $p=.96$ , 95% CI[-0.47, 0.49],  $d=0.01$ . These results replicate previous findings (Galinsky & Moskowitz, 2000). In Singapore, perspective-taking and control participants exhibited no differences in their ratings of stereotype-relevant (perspective-taking:

$M=4.06$ ,  $SD=1.23$ ; control:  $M=3.88$ ,  $SD=0.84$ ) and stereotype-irrelevant (perspective-taking:  $M=3.24$ ,  $SD=1.18$ ; control:  $M=3.45$ ,  $SD=1.13$ ; both  $t$ 's < 0.78,  $p$ 's > .43) traits.

**Relational mobility.** As expected, we found that Singaporean participants ( $M=4.61$ ,  $SD=0.77$ ) reported lower relational mobility in their environment than did American participants ( $M=5.09$ ,  $SD=0.79$ ),  $t(168)=4.00$ ,  $p=.001$ ,  $d=0.61$ .

**Path analysis.** We tested our hypothesized model in Figure 1 that Americans experience more relational mobility in their environment than do Singaporeans, which then moderates the effect of perspective-taking on stereotyping. Because perspective-taking did not influence stereotype-irrelevant trait ratings in either culture, we examined whether relational mobility accounted for the moderating role of culture (0=U.S., 1=Singapore) on perspective-taking's (0=control, 1=perspective-taking) effect on the stereotype-relevant trait ratings.

We first tested our hypothesized model using a series of regression analyses. As expected, Americans reported higher relational mobility than Singaporeans ( $b=-0.48$ ,  $SE=.12$ ,  $t=-4.00$ ,  $p<.001$ ). Moreover, relational mobility moderated the effect of perspective-taking on stereotyping ( $b=-0.60$ ,  $SE=.22$ ,  $t=-2.74$ ,  $p=.007$ ). When relational mobility was high (+1SD), perspective-takers stereotyped Black people less than did control participants ( $b=-0.67$ ,  $SE=.25$ ,  $t=-2.65$ ,  $p=.009$ ). Yet, when relational mobility was low (-1SD), perspective-taking was not associated with stereotyping ( $b=0.31$ ,  $SE=.25$ ,  $t=1.23$ ,  $p=.219$ ; see Figure 5).

To test the moderated indirect effects within our model, we used Hayes' (2013) path analytic method (Zhao, Lynch Jr, & Chen, 2010). We tested our model in Mplus Version 7 (Muthén & Muthén, 2012), using 5,000 bootstrapped samples and 95% confidence intervals (CI), examining the conditional indirect effects at each level of the moderator (see Table 1). We found that when relational mobility was high (+1SD), the conditional indirect effect was significant

( $b=0.322$ ,  $CI[0.103, 0.633]$ ), suggesting that Americans are from a relationally-mobile environment where perspective-taking reduces stereotyping. The conditional indirect effect was not significant when relational mobility was low ( $-1SD$ ) ( $b=-0.150$ ,  $CI[-0.454, 0.052]$ ), suggesting that Singaporeans are from a relationally-stable environment where perspective-taking does not decrease stereotyping.

Study 2 showed that perspective-taking reduces stereotyping of Black people by Americans but not by Singaporeans, for stereotypically-relevant but not stereotypically-irrelevant traits. Study 2 also provides evidence for the role of relational mobility while finding no evidence that degree of perspective-taking explains our cultural findings.

### Study 3

To establish the causal role of relational mobility, Study 3 manipulated levels of relational mobility within a Western sample. In addition, to see how natural variations in perspective-taking tendencies affected participants' stereotyping (Wang, Tai, Ku, & Galinsky, 2014), Study 3 employed a measure of perspective-taking instead of a manipulation. We hypothesized that for those situationally primed with high relational mobility, greater levels of perspective-taking tendencies would be associated with less stereotyping, but not for those primed with low relational mobility. Finally, Study 3 tested whether this hypothesized effect can be explained by differences in self-construal.

#### Method

**Relational mobility pre-test.** We developed a relational mobility manipulation by adapting Chen, Chiu, and Chan's (2009) job mobility manipulation. We pre-tested the manipulation with 132 American students (79 women;  $M_{age}=21.72$ ,  $SD=4.23$ ) who completed the study online for course credit.

Participants read a scenario asking them to imagine that they were “a citizen of Country X.” Those in the *Low relational mobility condition* read that “Due to this country’s characteristics, its relational mobility is very low. That is, citizens in this country have few opportunities to form new and terminate old relationships at will. According to the research statistics provided by the National Academy of Social Sciences, the majority of relationships formed in Country X last more than 4 years. Additionally, on average, 75% of people’s weekly interactions involve known people.” Two graphs displayed a visual depiction of these statistics. Participants in the *High relational mobility condition* read that “citizens in this country have many opportunities to form new and terminate old relationships at will”, that “the majority of relationships formed in Country X last about 1 to 3 years”, and that “on average, 75% of people’s weekly interactions involve new people.” Participants were asked to write for five minutes about what it would be like to live in such a relationally-stable (or mobile) environment, how they would feel, and how they would approach their relationships.

Participants then completed an adapted version of Study 2’s relational mobility scale ( $\alpha=0.94$ ) (Yuki et al., 2007) which referenced Country X.

We confirmed that relational mobility was successfully manipulated: individuals in the high relational mobility condition ( $M=5.41$ ,  $SD=0.93$ ) reported higher levels than those in the low relational mobility condition ( $M=3.16$ ,  $SD=.82$ ;  $t(130)=14.86$ ,  $p<.001$ ,  $d=2.58$ ).

**Participants and design.** Participants consisted of 203 Americans (85 women;  $M_{\text{age}}=33.82$ ,  $SD=9.71$ ) who participated for \$1 on Amazon’s Mechanical Turk (MTurk), which has been shown to produce reliable, high-quality data (see Buhrmester, Kwang, & Gosling, 2011). The experiment had a between-participants design that manipulated relational mobility (high vs. low); we also measured participants’ perspective-taking tendencies.

**Procedure.** Participants completed our study online and first engaged in the pre-tested relational mobility manipulation, after which they completed the same relational mobility manipulation check as in the pre-test ( $\alpha=0.98$ ).

Participants next saw Study 1's photograph of the Black individual and wrote about him using Study 1's control instructions (so that natural variations in perspective-taking would emerge; cf. Galinsky et al., 2008; Wang, Ku, et al., 2014). After a filler task, participants rated Black people on the three stereotype-relevant traits (aggressive, hostile, criminal).

Participants then rated their agreement with the seven items ( $\alpha=0.90$ ) of the perspective-taking scale (Davis, 1983) on a scale ranging from 0 (“*does not describe me well*”) to 4 (“*describes me very well*”). A sample item included “Before criticizing somebody, I try to imagine how I would feel if I were in their place.” Participants also completed the independent ( $\alpha=0.80$ ) and interdependent ( $\alpha=0.87$ ) self-construal scales (Singelis, 1994) with endpoints ranging from 1 (“*strongly disagree*”) to 7 (“*strongly agree*”). Items included “I enjoy being unique and different from others in many respects” (independent subscale) and “Even when I strongly disagree with group members, I avoid an argument” (interdependent subscale). We created a difference score (independence subscale–interdependence subscale), with higher numbers reflecting more independent (vs. interdependent) self-construal.

## Results

**Manipulation checks.** Those in the high relational mobility condition ( $M=6.06$ ,  $SD=0.80$ ) reported greater mobility than those in the low relational mobility condition ( $M=2.76$ ,  $SD=0.94$ ),  $t(201)=26.90$ ,  $p<.001$ , 95% CI[3.06, 3.55],  $d=3.78$ . We also checked whether the manipulation influenced levels of perspective-taking or self-construal, which it did not (both  $t's<0.80$ , both  $p's>.43$ ).

**Stereotyping.** To test whether manipulated relational mobility moderated the relationship between perspective-taking and stereotyping, we regressed stereotyping on perspective-taking tendencies (mean-centered), a dummy variable for relational mobility (0=low relational mobility, 1=high relational mobility), and the interaction of these two variables. The interaction term was significant ( $b=-0.51$ ,  $SE=.23$ ,  $t=-2.24$ ,  $p=.026$ ; see Figure 5). In the high relational mobility condition, there was a significant negative relationship between perspective-taking tendencies and stereotyping ( $b=-0.43$ ,  $SE=.16$ ,  $t=-2.74$ ,  $p=.007$ ), suggesting that greater perspective-taking tendencies were associated with less stereotyping. In the low relational mobility condition, perspective-taking was not associated with stereotyping ( $b=0.08$ ,  $SE=.16$ ,  $t=0.47$ ,  $p=.639$ ).

**Alternative mechanism.** We tested whether self-construal could explain our finding that perspective-taking reduces stereotyping by Western but not East Asian individuals. First, the Relational mobility×Perspective-taking interaction ( $b=-0.51$ ,  $SE=.23$ ,  $t=-2.23$ ,  $p=.027$ ) and the high relational mobility effect on less stereotyping ( $b=-0.43$ ,  $SE=.16$ ,  $t=-2.69$ ,  $p=.008$ ) remained significant when controlling for self-construal. Second, we tested self-construal as a moderator. We regressed stereotyping on perspective-taking tendencies, self-construal, and their interaction. The interaction was not significant ( $b=.10$ ,  $SE=.09$ ,  $t=1.11$ ,  $p=.270$ ).

Study 3 provided additional evidence for the role of relational mobility in explaining why perspective-taking's effect on stereotyping differs across cultures. Overall, when relational mobility is naturally high (Study 1 and 2's Americans) or situationally primed to be high (Study 3), perspective-taking is negatively associated with stereotyping. However, when relational mobility is naturally low (Study 1 and 2's Singaporeans) or situationally primed to be low (Study 3), perspective-taking is not associated with stereotyping. Study 3 did not find evidence for self-construal as a mechanism for these effects.

### Study 4

Studies 1 and 2 established cross-cultural differences in perspective-taking's effect on reduced stereotyping, and Studies 2 and 3 provided evidence that this effect depends on levels of relational mobility (see Figure 1a). Study 4 sought to empirically examine the proximal psychological mechanisms behind this socioecological explanation. Figure 1b illustrates our proposed model. First, consistent with prior research (Schug et al., 2010; Oishi et al., 2015; Takemura & Suzuki, 2017), we argue that because individuals in relationally-mobile environments have the choice to form and break relationships at will, they are more motivated to seek out and strengthen new relationships than are those in relationally-stable environments. Second, we propose that this motivation to form new relationships will moderate perspective-taking's established effects on self-target group overlap (Galinsky & Moskowitz, 2000; Galinsky et al., 2015). For individuals who are more motivated to form new relationships, perspective-taking will result in an application of positive self-descriptors to the target's group; however, for individuals who are less motivated to form new relationships, perspective-taking will not increase self-target group overlap. Finally, in line with past work, the greater self-target group overlap will be associated with diminished stereotyping of the target's group (Galinsky & Moskowitz, 2000).

Differences in relational mobility can be observed *between* (e.g., U.S. vs. Singapore) as well as *within* cultures (Bahns, Pickett, & Crandall, 2011). To examine differences in relational mobility within one country, Study 4 assessed participants' relational mobility in India to test our proposed model. Moreover, Study 4 manipulated perspective-taking. Instead of using a 'no instructions' control condition (Studies 1 and 2), Study 4 adopted an 'objective' control condition (Myers, Laurent, & Hodges, 2014), in which participants were asked to objectively



imagine and write about the target's life.

## Method

**Black stereotype pre-test.** To pre-test traits that are stereotypic of Black people among Indians, 16 Indian participants from MTurk rated whether traits were typical of Black people from 1 (“*extremely unlike*”) to 7 (“*extremely like*”). Slightly different from Study 2's pretest results among Singaporeans and Americans, Indian participants rated Black people as stereotypically aggressive and hostile ( $t(15)'s > 2.18$ ,  $p's < .046$ ), but not stereotypically criminal ( $t(15) = 1.23$ ,  $p = .237$ ). As such, Study 4 used aggressive and hostile as traits stereotypic of Black people.

**Participants and design.** Participants were 183 Indians (65 women;  $M_{age} = 31.91$ ,  $SD = 9.89$ ) who participated for \$1.50 on MTurk. The experiment had a between-participants design that manipulated perspective-taking (perspective-taking vs. objective); we also measured participants' relational mobility.

**Procedure.** Participants first answered Study 2's relational mobility scale ( $\alpha = 0.76$ ) and then rated their agreement with three items ( $\alpha = 0.76$ ) regarding their motivation to form new relationships (adapted from de Jong-Gierveld, 1987) on a scale from 1 (“*strongly disagree*”) to 7 (“*strongly agree*”). A sample item is, “It is important for me to broaden my interpersonal relationships.”

Participants then saw Study 1's photograph of the Black man and wrote their essay using *perspective-taking* or *objective* instructions. In the objective condition, participants were asked to “try to be as objective as possible when imagining what is happening to this person and what his day is like” and to “try not to let yourself get caught up in imagining what this person has been through or how he feels.”

Next, to measure self-target group overlap, participants were presented with seven pairs of circles with varying degrees of overlap, from having no to significant overlap (adapted from Tropp & Wright, 2001; Figure 6). One circle was labelled as “Self” and the other as “Black people.” Participants were asked to select the pair of circles that best represented their identification with Black people.

Participants then rated Black people on the stereotype-relevant traits (aggressive and hostile).

## Results

**Manipulation check.** Participants in the perspective-taking condition ( $M=3.12$ ,  $SD=4.33$ ) used significantly more first-person pronouns than those in the objective condition ( $M=0.44$ ,  $SD=0.99$ );  $t(181)=5.85$ ,  $p<.001$ ,  $d=0.86$ ), suggesting that perspective-taking was successfully manipulated.

**Stereotyping**<sup>6</sup>. The focus of our analyses was on whether the motivation to form new relationships arising from differential levels of relational mobility moderated the mediated relationship between perspective-taking and reduced stereotyping via self-target group overlap (Figure 1b). We first used a series of regression analyses to test these relationships. Consistent with our hypotheses, we found that relational mobility was positively associated with a motivation to form new relationships ( $b=0.342$ ,  $SE=.09$ ,  $t=3.71$ ,  $p<.001$ ). Moreover, motivation to form new relationships moderated the effect of perspective-taking on self-target group overlap ( $b=0.80$ ,  $SE=.26$ ,  $t=3.12$ ,  $p=.002$ ). The results of a simple slopes analysis (Aiken, West, & Reno, 1991) revealed that the slope of perspective-taking on self-target group overlap was positive and significant ( $b=0.95$ ,  $SE=.35$ ,  $t=2.74$ ,  $p=.007$ ) when the motivation to form new relationships was high (+1SD), while the slope was not significant ( $b=-0.49$ ,  $SE=.34$ ,  $t=-1.43$ ,  $p=.154$ ) when the

motivation to form new relationships was low ( $-1SD$ ) (see Figure 7). Finally, self-target group overlap was associated with decreased stereotyping of Black people ( $b=-0.17$ ,  $SE=.06$ ,  $t=-2.84$ ,  $p=.005$ ).<sup>7</sup>

Next, using Study 2's path analytic method, we tested the model described in Figure 1b using 5,000 bootstrapped samples and 95% confidence intervals (CI). We hypothesized that the indirect effect of perspective-taking on reduced stereotyping via increased self-target group overlap would only emerge when the motivation to form new relationships associated with relational mobility was high, but not when the motivation was low. We examined the conditional indirect effects (see Table 2) and found that when the motivation to form new relationships was high ( $+1SD$ ), the conditional indirect effect was significant ( $b=-0.053$ , CI  $[-.155, -.010]$ ). However, the conditional indirect effect was not significant when the motivation to form new relationships was low ( $-1SD$ ) ( $b=0.032$ , CI  $[.000, 0.102]$ ).

Overall, Study 4 provided a psychological explanation for why relational mobility, a socioecological construct, moderates perspective-taking's effects on stereotype reduction. When individuals experience high relational mobility in their environment, they are motivated to form new relationships. As a result, when taking the perspective of a Black target, these individuals decreased stereotyping because of increased self-target group overlap. In contrast, individuals experiencing low relational mobility were less motivated to form new relationships; for these individuals, perspective-taking did not increase self-target group overlap and did not decrease stereotyping.

### General Discussion

Across four studies, we measured and manipulated perspective-taking and relational mobility and used two stereotyped groups to examine whether and why the effects of

perspective-taking on stereotyping differ in Western and East Asian cultures. We found that perspective-taking reduced stereotyping by our Western samples (in line with prior research) but not by our East Asian samples (Studies 1 and 2). In addition, we found evidence for our proposed socioecological mechanism: relational mobility (Studies 2 and 3). In Study 4, consistent with our socioecological explanation, we found that relational mobility was associated with motivation to form new relationships. For relationally-mobile individuals who were more interested in forming new relationships, perspective-taking reduced stereotyping via self-target group overlap. For relationally-stable individuals who were less interested in forming new relationships, this mediation did not occur. Finally, we ruled out two alternative mechanisms: degree of perspective-taking (Studies 1 and 2) and self-construal (Study 3).

Overall, our work contributes to the perspective-taking literature by systematically examining, for the first time, the effects of perspective-taking on stereotyping across different cultures. Thus, our results clarify and explain an important boundary condition for perspective-taking's effects on stereotyping: whereas previous research has robustly demonstrated perspective-taking's beneficial effect of reducing stereotyping, we find that—in cultures characterized by low relational mobility where the motivation to form new relationships is low—perspective-taking does not reduce stereotyping.

As such, we contribute to the growing literature demonstrating that perspective-taking does not always lead to positive social effects (Ku et al., 2015). Recent theorizing and empirical research suggests that perspective-taking is a social strategy that allows individuals to effectively navigate a world of mixed-motive interactions: perspective-taking's positive effects emerge in *cooperative* contexts; in *competitive* contexts however, perspective-takers act in ways to protect the self (e.g., claim more resources for themselves, Epley et al., 2006). Our findings contribute

to this mixed-motive lens by showing that perspective-taking only reduces stereotyping in environments in which cultivating new relationships is important: perspective-taking effectively reduces stereotyping in the U.S. because doing so helps to build new relationships. In contrast, perspective-taking is not effective at reducing stereotyping in Singapore because doing so does not align with the social goals of relationally-stable individuals.

Beyond demonstrating a cross-cultural difference on the effectiveness of perspective-taking on stereotype reduction, we also explained why this difference occurs. As such, our research also adds to the burgeoning literature that addresses the importance of examining culture from a socioecological perspective (Cohen, 2001; Oishi & Graham, 2010; Yamagishi, Hashimoto, & Schug, 2008). By focusing on relational mobility, we provided a socioecological level explanation to understand why perspective-taking has differential effects on stereotyping across cultures. Importantly, by ruling out the alternative mechanism of self-construal, we clarify the unique theoretical value of the socioecological perspective and relational mobility. It is noteworthy that we enhance our socioecological explanation with an examination of more proximal psychological mechanisms. Specifically, we found that relational mobility affects individuals' motivation to form new relationships. In turn, this motivation moderated perspective-taking's effect on its cognitive mechanism of self-other overlap (Galinsky & Moskowitz, 2000), thereby impacting stereotype reduction.

Finally, our findings suggest that stereotype reduction does not occur because individuals in relationally-stable environments are unable or unwilling to take the perspective of others. In fact, participants in both relationally-mobile and stable cultures passed the perspective-taking manipulation checks in Studies 1 and 2. Instead, it seems that although East Asians are able to cognitively take the perspective of diverse others (at times better than Americans as suggested by

Study 1 and consistent with findings by Wu and Keysar (2007), this does not translate into reduced stereotyping given their relational motivations.

### **Future Directions**

Whereas past work has found that perspective-taking by individuals with greater in-group identification leads to negative trait attributions to out-group members (Tarrant et al., 2012), our research has found that perspective-taking by individuals with lower relational mobility fails to reduce negative stereotyping. At first blush, these findings seem highly related and the two constructs – relational mobility and in-group identification – seem to have substantial overlap. For instance, it may seem as though people who cannot easily move in and out of relationships will be more strongly committed to their relationships (i.e., their in-group) than those who possess more fluid relationships. However, it is equally plausible that precisely because relationships are established and other alternatives are not available, in-group identification is *lower* for those in relationally-stable than for those in relationally-mobile cultures. Past research provides some support for this latter possibility. For example, individuals in relationally-mobile environments, with greater social freedoms, cultivate relationships with close others by disclosing personal information (Schug et al., 2010). Additionally, friends in relationally-mobile environments are more similar to each other than friends in relationally-stable environments (Schug et al., 2009). Therefore, individuals in relationally-mobile environments may feel more strongly tied to their more-effortful relationships than those in relationally-stable environments for whom relationships are “given”. Thus, future work should examine how relational mobility and in-group identification are related and how they similarly or differentially affect perspective-taking and stereotyping. Examining these constructs together could pave the way for a more integrated and thorough understanding of culture, perspective-taking, and intergroup bias.

Investigations on whether culture and relational mobility moderate the effect of perspective-taking on other outcome variables could also be theoretically fruitful. Given the goal of enhancing social interactions, one such outcome is prejudice. The cross-cultural effects of perspective-taking on prejudice are, however, unclear.<sup>8</sup> On one hand, previous research in Western cultures has shown similar benefits of perspective-taking on stereotyping and prejudice (Batson, Chang, Orr, & Rowland, 2002; Batson, Polycarpou, et al., 1997; Dovidio et al., 2004; Galinsky & Ku, 2004; Galinsky & Moskowitz, 2000; Shih, Wang, Bucher, & Stotzer, 2009; Todd, Bodenhausen, et al., 2012). On the other hand, stereotyping and prejudice are fundamentally different constructs. Stereotypes have been defined as “the perceiver’s beliefs about the group’s attributes” (Smith, 1993, p. 298) and prejudice as a negative ‘attitude’ (Dovidio & Gaertner, 1986) or “social emotion” (Smith, 1993) toward a group. Because social desirability concerns and the acceptability of stereotyping and prejudice may differ across cultures, future cross-cultural research could also consider how perspective-taking affects implicit measures of stereotyping and prejudice (Olson & Zabel, 2009) as well as behaviors such as helping, approach, and behavioral coordination cross-culturally. In each of these instances, a careful consideration of perspective-taking’s mechanism (e.g., application of self to target or inclusion of target in self) will be necessary to generate viable hypotheses. Doing so could provide a more complete understanding of perspective-taking itself as well as when and why perspective-taking’s effects emerge in cross-cultural contexts.

### **Conclusion**

In *To Kill a Mockingbird*, Atticus Finch’s suggestion—to “climb” into another’s skin—is intuitively good and empirically sound advice to reduce stereotyping. However, our research indicates that this approach may prove more successful in relationally-mobile (e.g., Western)

than relationally-stable (e.g., East Asian) cultures.



**Table 1***Study 2 Path Analysis Results for Mediated Moderation Model*

| Equation                                       | <i>Unstandardized<br/>Coefficient</i> | <i>t-value</i>                 | <i>p-value</i>                 |
|--|---------------------------------------|--------------------------------|--------------------------------|
| Moderator variable model (relational mobility) |                                       |                                |                                |
| Intercept                                      | 0.226                                 | 2.700                          | .007                           |
| Culture (0 = US, 1 = Singapore)                | -0.481                                | -4.012                         | <.001                          |
| Dependent variable model (stereotyping)        |                                       |                                |                                |
| Intercept                                      | 3.986                                 | 33.218                         | <.001                          |
| Perspective-taking (PT)                        | -0.179                                | -1.008                         | .313                           |
| Relational Mobility (RM)                       | 0.108                                 | 0.804                          | .421                           |
| PT × RM  | -0.602                                | -3.117                         | .002                           |
| Conditional indirect effect of RM              |                                       |                                |                                |
|  | <i>Effect</i>                         | <i>Boot<br/>LLCI<br/>95%CI</i> | <i>Boot<br/>ULCI<br/>95%CI</i> |
| Low RM (-1SD)                                  | -0.150                                | -.443                          | 0.030                          |
| High RM (+1SD)                                 | 0.322                                 | 0.107                          | 0.646                          |

**Table 2***Study 4 Path Analysis Results for Moderated Mediation Model*

| Equation   | <i>Unstandardized<br/>Coefficient</i> | <i>t-value</i>                 | <i>p-value</i>                 |
|--|---------------------------------------|--------------------------------|--------------------------------|
| Moderator variable model (Motivation to form new relationships (MFNR)) |                                       |                                |                                |
| Intercept  | 0.000                                 | 0.000                          | 1.000                          |
| Relational mobility  | 0.342                                 | 3.809                          | <.001                          |
| Mediator variable model (Self-target group overlap)                    |                                       |                                |                                |
| Intercept  | -0.108                                | -0.586                         | .558                           |
| Perspective-taking (PT)  | 0.179                                 | 0.736                          | .462                           |
| MFNR   | 0.093                                 | 0.441                          | .660                           |
| PT × MFNR  | 0.801                                 | 3.058                          | .002                           |
| Dependent variable model (Stereotyping)                                |                                       |                                |                                |
| Intercept  | 3.944                                 | 25.118                         | <.001                          |
| Perspective-taking   | -0.254                                | -1.182                         | .237                           |
| Self-target group overlap  | -0.168                                | -2.550                         | .011                           |
| Conditional indirect effect  |                                       |                                |                                |
|  | <i>Effect</i>                         | <i>Boot<br/>LLCI<br/>95%CI</i> | <i>Boot<br/>ULCI<br/>95%CI</i> |
| Low MFNR (-1SD)  | 0.032                                 | 0.000                          | 0.102                          |
| High MFNR (+1SD)   | -0.053                                | -0.155                         | -0.010                         |

**FIGURES**

*Figure 1a.* Proposed socioecological model

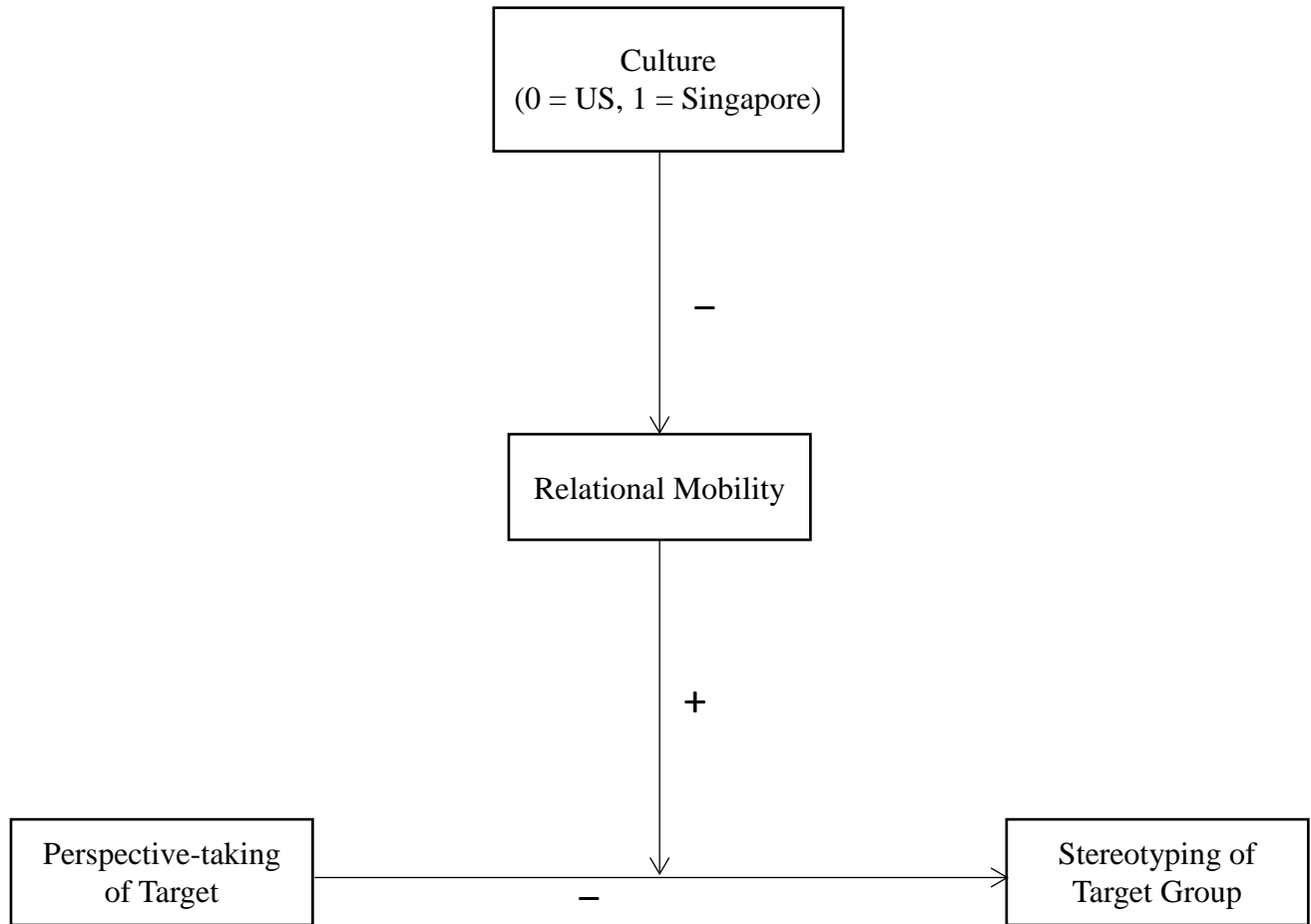
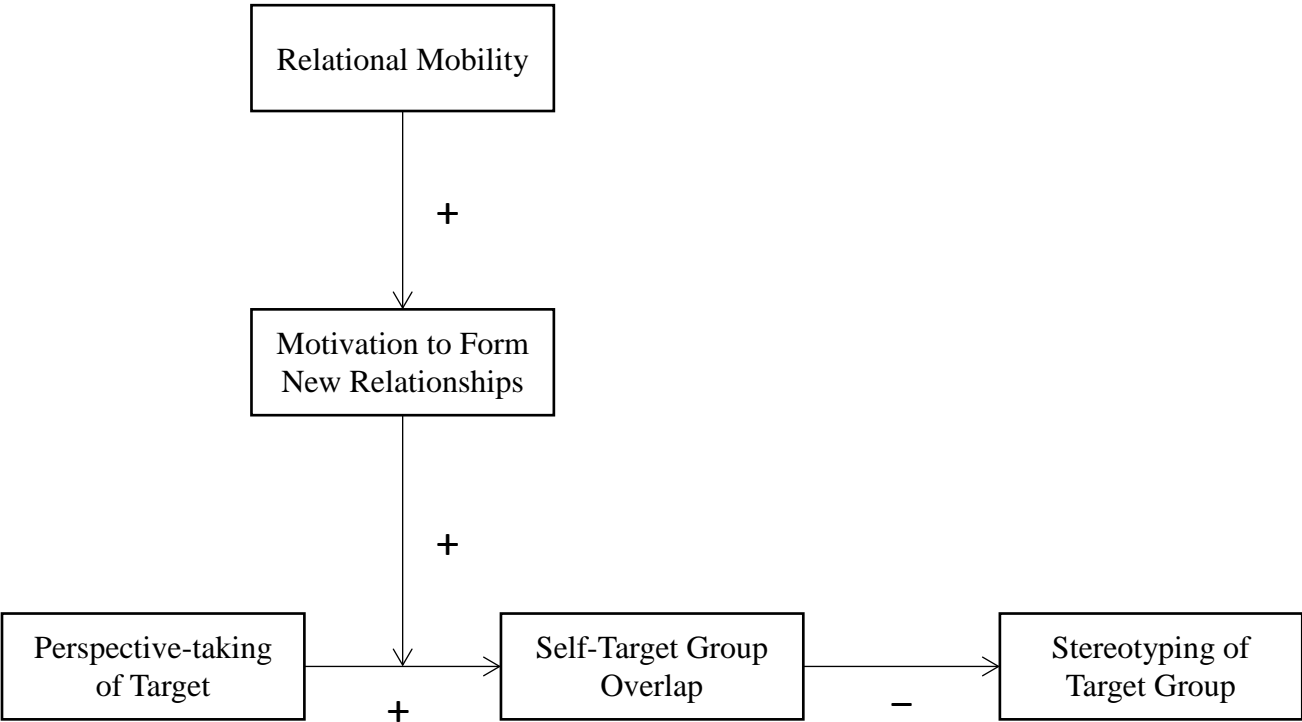
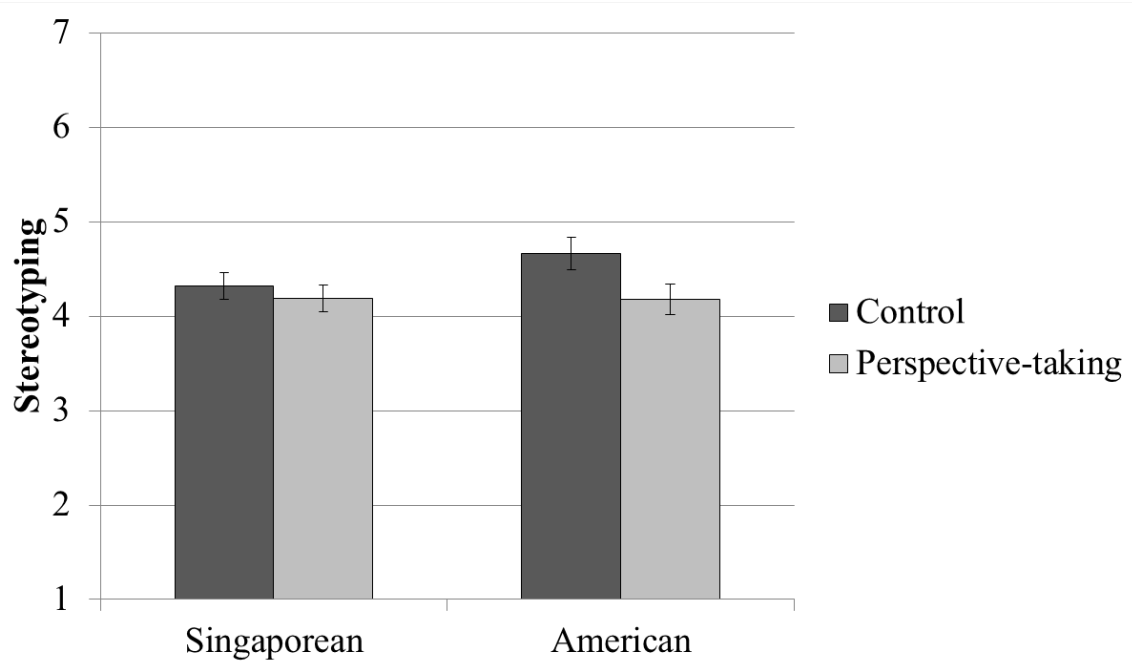


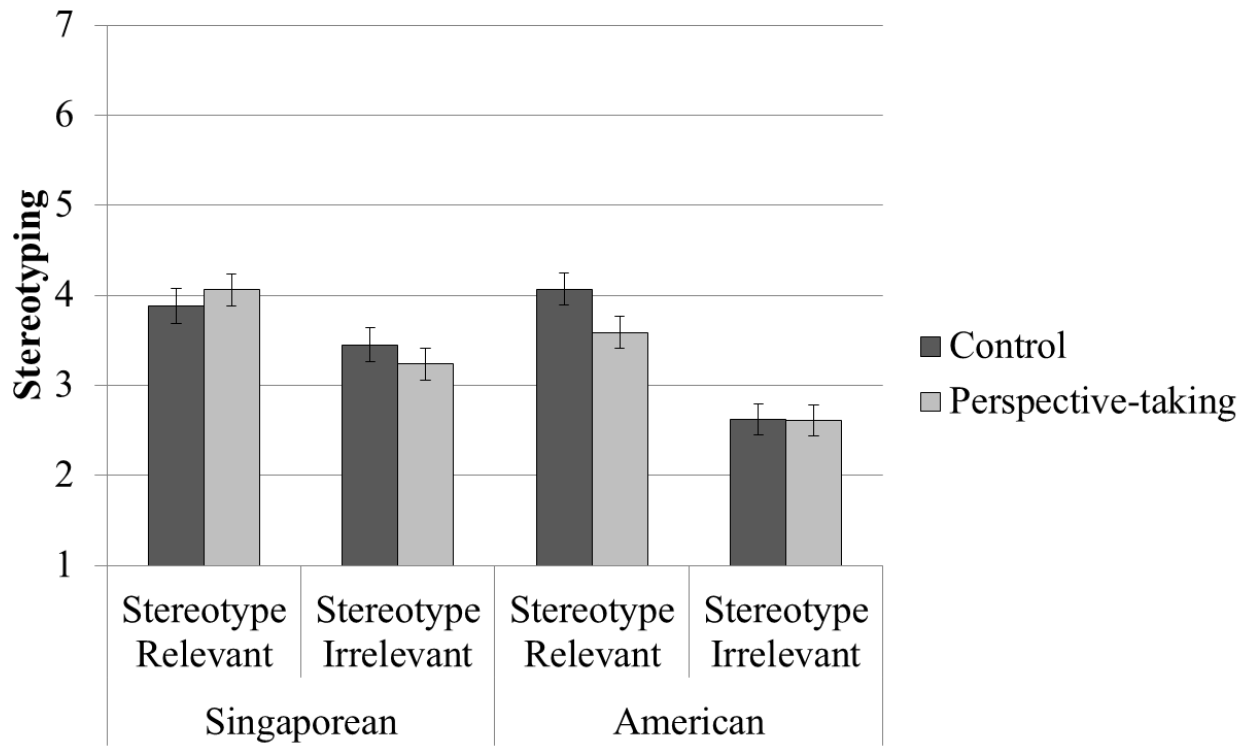
Figure 1b. Proposed psychological model.



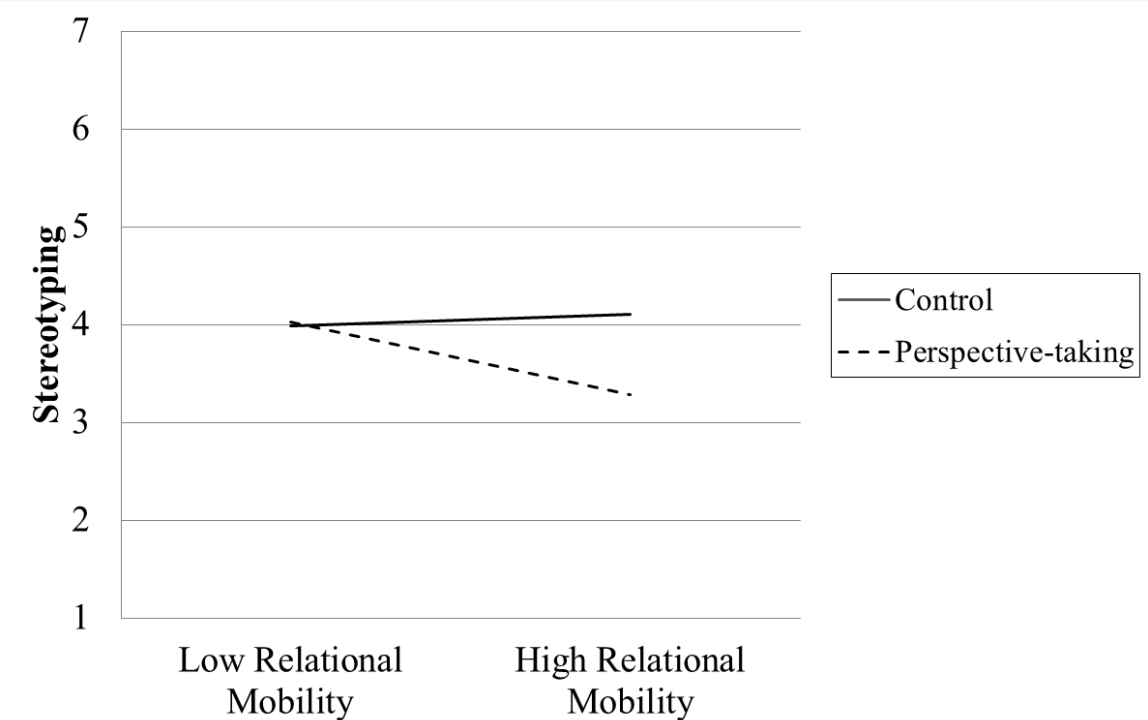
**Figure 2.** Study 1: Effects of culture and perspective-taking on stereotyping of the elderly



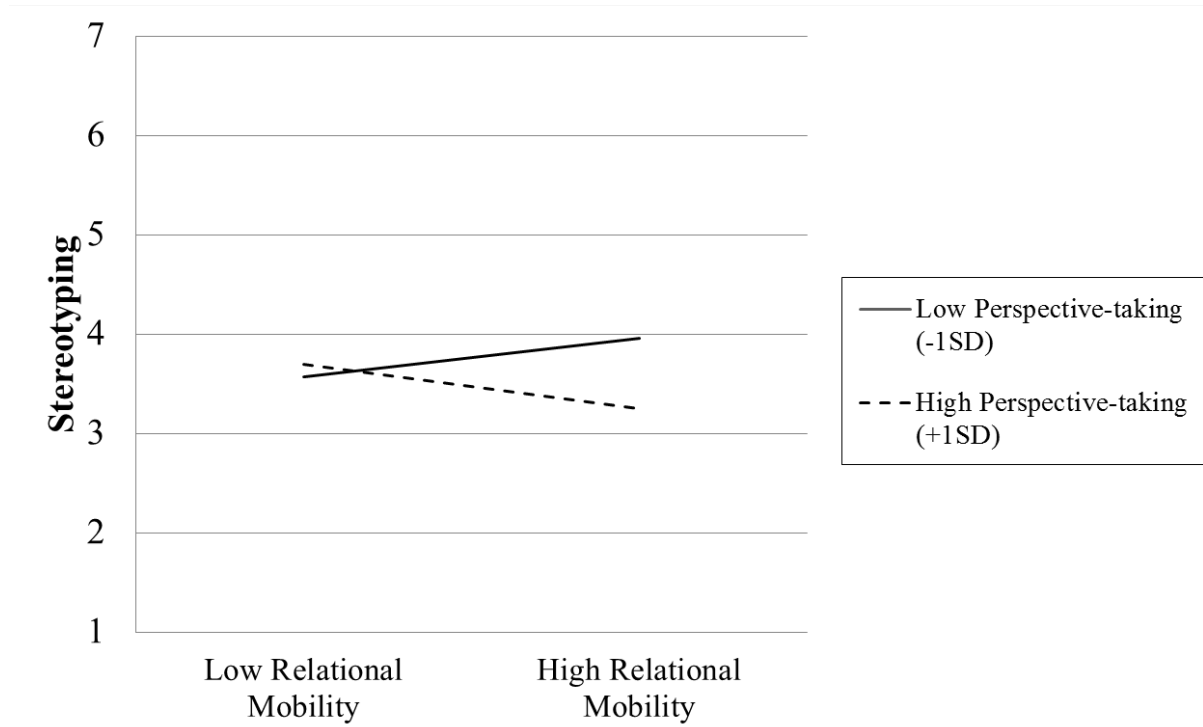
**Figure 3.** Study 2: Effects of culture, perspective-taking, and trait relevance on stereotyping of Black people



**Figure 4.** Study 2: Effects of relational mobility and perspective-taking on stereotyping of Black people



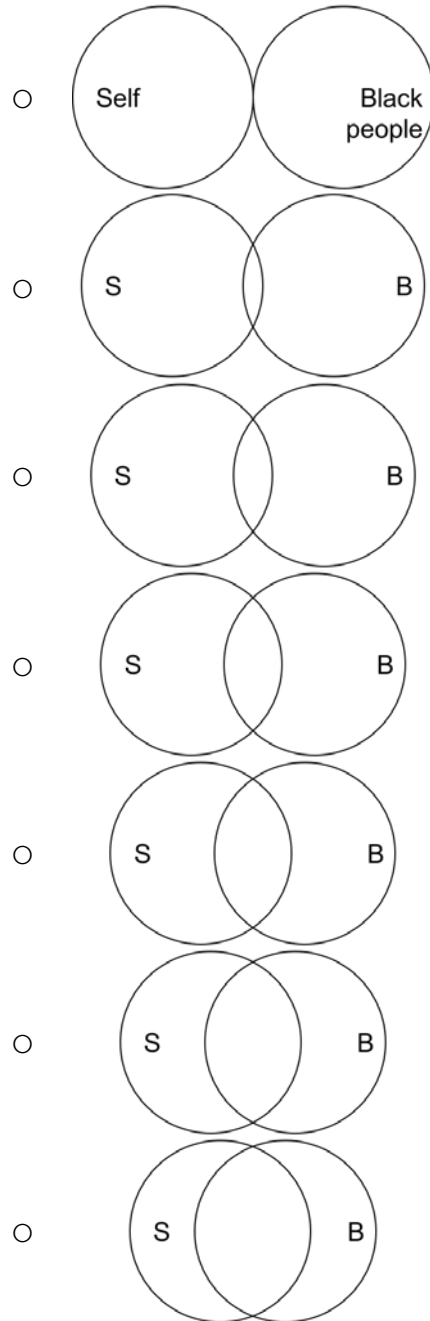
**Figure 5.** Study 3: Effects of relational mobility and perspective-taking on stereotyping of Black people



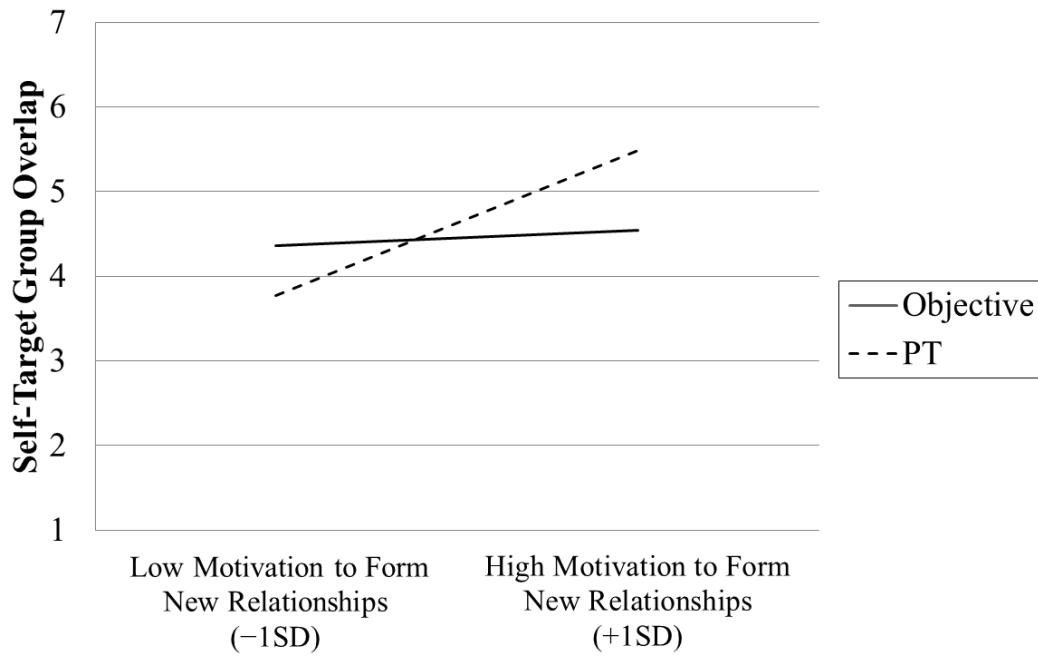


**Figure 6.** Study 4: Self-Target Group Overlap Measure

*“Please select the pair of circles that you feel best represents your own level of identification between yourself and Black people. (S=self; B=Black people)”*



**Figure 7.** Study 4: Effects of culture and perspective-taking on self-target group overlap



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<sup>1</sup> We also present and empirically test self-esteem as an alternative mechanism in the Supplementary Materials.

<sup>2</sup> We only included data from participants who were citizens of the focal countries (i.e., Americans in the U.S.; Singaporeans in Singapore; Indians in India; 901 of 993 participants). We used three additional exclusion criteria: those who (1) were uncomfortable communicating in English, (2) wrote extremely short essays during our perspective-taking manipulation (i.e., word counts  $-1SD$  below the mean), or (3) were members of the stereotyped group examined. These criteria led us to exclude 48 participants in Study 1, 27 in Study 2, 60 in Study 3, and 18 in Study 4.

<sup>3</sup> Stimuli materials for the studies are included in the Supplementary Materials.

<sup>4</sup> In Studies 1-2, the American and Singaporean samples were similar in gender composition. The samples differed by age: In Study 1, the Singaporean sample was older and in Study 2, the American sample was older. When controlling for age, our results remained unchanged.

<sup>5</sup> We employ the term “Black” instead of “African American” to preclude confusion among our Singaporean (Studies 1-2) and Indian (Study 4) participants.

<sup>6</sup> Perspective-taking did not influence stereotyping (perspective-taking:  $M=3.67$ ,  $SD=1.42$ ; objective:  $M=3.96$ ,  $SD=1.49$ ;  $t(181)=1.37$ ,  $p=.174$ , 95% CI $[-0.13, 0.72]$ ,  $d=0.20$ ). We surveyed 123 Indians on MTurk and found that levels of relational mobility reported by Indian participants ( $M=4.34$ ,  $SD=0.66$ ) was more similar to that of Study 2’s Singaporean participants ( $M=4.61$ ,  $SD=0.77$ ;  $t(290)=2.45$ ,  $p=.015$ ,  $d=0.36$ ) than to that of American participants ( $M=5.09$ ,  $SD=0.79$ ;  $t(290)=7.25$ ,  $p<.001$ ,  $d=1.01$ ). This suggests that India is a culture with relatively low levels of

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relational mobility. The lack of main effect on perspective-taking is consistent with findings from Studies 1 and 2 for those in relationally-stable cultures.

<sup>7</sup> Relational mobility did not moderate the effect of perspective-taking on stereotyping ( $b=-.02$ ,  $SE=.30$ ,  $t=-.07$ ,  $p=.944$ ). This was unexpected; we suspect that this occurred due to the ordering of tasks that captured the indirect effect through motivation to form new relationships.

<sup>8</sup> In exploratory analyses, we measured and empirically tested prejudice as the dependent variable in several of our studies. We present our analyses in the Supplementary Materials.