



Cultural Variation in Social Judgments of Smiles: The Role of Ideal Affect

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Jeanne L. Tsai, Elizabeth Blevins,
and Lucy Zhang Bencharit
Stanford University

Louise Chim
University of Victoria

AQ: 1

Helene H. Fung
Chinese University of Hong Kong

Dannii Y. Yeung
City University of Hong Kong

While significant research has demonstrated that people's beliefs about a group shape how they judge members of that group, few studies have examined whether people's beliefs and values regarding emotion (their "ideal affect") shape how they socially judge people's emotional facial expressions. We predicted that the more people valued and ideally wanted to feel excitement and other high arousal positive states (HAP), the more affiliative (extraverted, agreeable) they would judge excited (vs. calm) faces. Moreover, because European Americans typically value HAP more than Hong Kong Chinese do, we predicted that European Americans would rate excited (vs. calm) targets as more affiliative than would Hong Kong Chinese. We found consistent support for these hypotheses in four studies. In Studies 1a and 1b, these effects held regardless of target race (White, Asian) and target sex (male, female); emerged for human as well as computer-generated faces; and did not consistently emerge for nonaffiliative social judgments (i.e., dominance, competence). In Studies 2 and 3, we replicated these findings in more realistic contexts. In Study 2, culture and ideal affect predicted participants' extraversion judgments of excited Facebook profiles. In Study 3, culture and ideal affect predicted participants' extraversion and agreeableness judgments of an excited job applicant, which increased their likelihood of hiring that applicant. Together, these findings suggest that people's culture and ideal affect shape how affiliative they judge excited (vs. calm) smiles. We discuss the role these processes may play in perpetuating biases in multicultural settings.

Keywords: culture, emotional expression, extraversion, agreeableness, affiliation

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When we meet people for the first time, we almost instantaneously judge them to be warm and friendly, or cold and hostile (Abele & Bruckmuller, 2011; Ybarra, Chan, & Park, 2001). On

what basis do we make these judgments? One body of literature suggests that these judgments reflect characteristics of the judges, such as their beliefs, attitudes, and values. Most of this work has focused on how people's stereotypes about particular groups influence their judgments about members of those groups (e.g., Bargh, Chen, & Burrows, 1996; Barrett & Bliss-Moreau, 2009; Devine, 1989). Fewer studies, however, have examined how people's *beliefs or values regarding emotion* influence their judgments of others, even though studies have shown clear links between people's actual emotional experiences and their judgments of stereotyped groups (e.g., Bodenhausen, Kramer, & Süsser, 1994; Bodenhausen, Sheppard, & Kramer, 1994). Yet another body of literature suggests that social judgments reflect characteristics of the targets, or people being judged. For instance, decades of research demonstrate that judges make social inferences based on targets' emotional facial expressions (e.g., Hareli, Shomrat, & Hess, 2009; Hess, Blairy, & Kleck, 2000; Knutson, 1996; Montepare & Dobish, 2003). Fewer studies, however, have examined how the social judgments that people make based on targets' emotional facial expressions might vary across individuals and cultures, despite cultural similarities in people's abilities to recognize them (Cordaro et al., 2017; Elfenbein & Ambady, 2002).

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Jeanne L. Tsai, Elizabeth Blevins, and Lucy Zhang Bencharit, Department of Psychology, Stanford University; Louise Chim, Department of Psychology, University of Victoria; Helene H. Fung, Department of Psychology, Chinese University of Hong Kong; Dannii Y. Yeung, Department of Applied Social Science, City University of Hong Kong.

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Correspondence concerning this article should be addressed to Jeanne L. Tsai, Department of Psychology, Stanford University, Building 420 Jordan Hall, Stanford, CA 94305. E-mail: jeanne.tsai@stanford.edu

Here we propose that the quick social judgments people make about others are based both on judges' emotional values as well as their targets' emotional expressions. More specifically, we predict that while people across cultures regard smiles as signs of happiness, people differ across and within cultures in how affiliative they view particular smiles as a function of their ideal affect (i.e., the affective states that they value and ideally want to feel). These processes are important to understand because they may result in unconscious biases toward those whose expressions match people's values, as well as biases against those whose expressions do not.

To test our predictions, we conducted four empirical studies. Before describing these studies, we review the existing literature on emotion-based social judgments, and then describe Affect Valuation Theory, the framework motivating this research.

Social Judgments Based on Emotional Facial Expression

Decades of empirical research reveal that people judge others along two fundamental dimensions: (1) *dominance* (also referred to as "agency"), and (2) *affiliation* (also referred to as "communion"), which comprise the "interpersonal circumplex" (e.g., Bakan, 1956; Leary, 1957; McCrae & Costa, 1989; Plutchik & Conte, 1997; Wiggins, 1979, 1995). Because the primary focus of the present work is on judgments of affiliation, we focused on traits described by the upper right quadrant of the interpersonal circumplex, shown in Figure 1. Traits such as *dominant* and *assertive* index high dominance and neutral affiliation, whereas traits such as *warm* and *agreeable* index high affiliation and neutral dominance. Traits such as *extraverted* and *friendly* are higher in affiliation than *dominant* and *assertive*, but are also higher in dominance than *warm* and *agreeable*. More recently, researchers have also focused on *competence* (competent, intelligent) when examining how people judge other individuals as well as other groups (e.g., Fiske, Cuddy, & Glick, 2007; Tiedens, 2001; Todorov, Mandisodza, Goren, & Hall, 2005).

What cues do people use to judge these traits in others? As mentioned above, one cue is emotional facial expression. For instance, Knutson (1996) observed that in a North American

sample, people who showed happiness, anger, and disgust were judged as higher in dominance than those who showed fear, sadness, or a neutral face (see Hareli et al., 2009; Montepare & Dobish, 2003 for replications). Tiedens (2001) observed that people who showed anger were judged as more competent than those who showed sadness.

With regard to affiliation, people who showed happiness (by smiling) were judged as more affiliative than those who showed anger, disgust, fear, and sadness (Knutson, 1996; see Hareli et al., 2009; Montepare & Dobish, 2003 for replications). Indeed, smiling targets elicit warmer feelings, are rated as more attractive and intelligent, and are rated as more extraverted and agreeable than nonsmiling or neutral targets across several cultures, including the United States, Hong Kong, and Brazil (e.g., Albright et al., 1997; Lau, 1982; Matsumoto & Kudoh, 1993; Otta, Lira, Delevati, Cesar, & Pires, 1994; Senft, Chentsova-Dutton, & Patten, 2016).

These social judgments, however, also vary depending on the type of smile expressed. For instance, in Frank, Ekman, and Friesen (1993), participants rated targets who showed "authentic" (Duchenne) smiles as more affiliative (i.e., more trustworthy and likable) than those who showed "fake" (non-Duchenne) smiles. Similarly, when playing a monetary game, participants rated partners with "authentic smiles" as more trustworthy than those with "fake smiles" (Krumhuber, Manstead, & Kappas, 2007). Targets with smiles that were longer in duration were rated as more trustworthy and less dominant than smiles that were shorter in duration (Krumhuber et al., 2007), and targets with open smiles (upper and lower teeth exposed) were rated as more extraverted and as better leaders than targets with closed smiles (Otta et al., 1994; Otta, Abrosio, & Hoshino, 1996). Indeed, as the intensity of targets' smiles increased, so did judgments of their affiliation and dominance (Hess et al., 2000).

Most of these studies, however, have primarily focused on U.S. and Western European samples, and therefore, relatively little is known about how culture shapes social judgments of smiles. The handful of studies that do exist suggest some cultural variation. While Chinese and Germans viewed smiling targets as more intelligent than nonsmiling targets, the reverse was true for Iranians (Krys, Hansen, Xing, Szarota, & Yang, 2014) and Japanese (Matsumoto & Kudoh, 1993). Similarly, while U.S. Americans associate greater smiling with greater emotional stability and trustworthiness, Chinese associate greater smiling with less emotional stability (Albright et al., 1997), and Japanese associate greater smiling with less trustworthiness (Ozono et al., 2010). Moreover, while smiling was associated with greater sociability for both U.S. Americans and Japanese, U.S. Americans based their judgments of sociability (friendliness and approachability) on smiling more than did Japanese (Matsumoto & Kudoh, 1993). Other cultural comparisons also yield differences; for instance, while increased eye wrinkling (associated with increased smile intensity) indicated greater authenticity for French Canadians, it did not for Gabonese (Thibault, Levesque, Gosselin, & Hess, 2012).

Few of these studies, however, have empirically demonstrated *why* these differences may exist. The one exception is Krys et al. (2016), who observed that the more cultures avoided uncertainty, the less they associated smiles with intelligence. Moreover, trust toward smiling individuals was reduced in cultures with higher levels of corruption (based on indices such as public mistrust of politicians, lack of transparency in policy making, perceptions of

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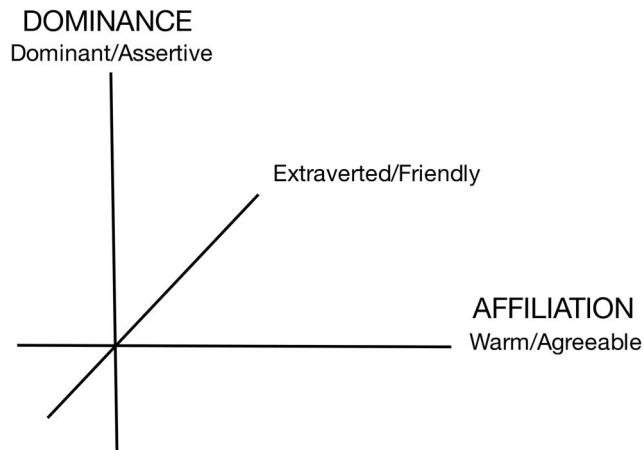


Figure 1. Interpersonal circumplex.

corruption in society). Here we propose that cultural and individual differences in the social judgments of different types of smiles may also reflect the emotions that people value and ideally want to feel, or their “ideal affect.”

The Role of Culture and Ideal Affect: Affect Valuation Theory

Although most people want to feel good, people differ in the specific affective states they value or ideally want to feel (i.e., their “ideal affect”). “Affect” refers to feeling states that are defined in terms of arousal (from “high” to “low”) and valence (from “positive” to “negative”; Barrett & Russell, 1999; Watson & Tellegen, 1985). High arousal positive states (HAP) include excitement and enthusiasm, whereas low arousal positive states (LAP) include calm and peacefulness. Affect Valuation Theory (AVT) incorporates ideal affect into existing models of affect and emotion (Tsai, 2007, 2017; Tsai, Knutson, & Fung, 2006).

The first premise of AVT is that how people ideally want to feel differs from how they actually feel (their “actual affect”). Whereas actual affect is a response to an event or a tendency to respond in a certain way, ideal affect is a value, goal, or state that people desire and work to attain. While actual affect tells people how they are doing at a particular time (“How do I feel?”), ideal affect helps people interpret and evaluate their actual feelings (“Is this a good or bad feeling?” “Does this feel right?”). Although related, actual affect and ideal affect are empirically distinct (Koopmann-Holm & Tsai, 2014; Tsai et al., 2006).

The second premise of AVT is that cultural factors shape ideal affect more than actual affect (Koopmann-Holm, & Tsai, 2014; Tsai et al., 2006; Tsai, Miao, Seppala, Fung, & Yeung, 2007), while temperamental factors shape actual affect more than ideal affect (Diener & Lucas, 1999; Gross, Sutton, & Ketelaar, 1998; Lykken & Tellegen, 1996; McCrae, Costa, & Yik, 1996; Schimmack, Radhakrishnan, Oishi, Dzokoto, & Ahadi, 2002). For instance, North American culture values HAP more than does Hong Kong Chinese culture, whereas Hong Kong Chinese culture values LAP more than does North American culture, even after controlling for differences in how much European Americans and Hong Kong Chinese actually experience HAP and LAP (e.g., Tsai et al., 2006; Tsai et al., 2007; Tsai, Louie, Chen, & Uchida, 2007). Moreover, cultural values that promote independence (e.g., wanting to influence others) and interdependence (e.g., wanting to adjust to others) account for greater variation in ideal affect than actual affect, whereas temperamental factors (e.g., extraversion and neuroticism) account for greater variation in actual affect than ideal affect (Tsai et al., 2006; Tsai, Louie, Chen, & Uchida, 2007).

Cultural differences in ideal affect are reflected in the emotional content of children’s storybooks, women’s magazines, and social media, as well as in the official photos of business, government and academic leaders (Huang & Park, 2013; Tsai et al., 2007, 2016). For instance, best-selling children’s storybooks in the U.S. contained more open, toothy “excited” smiles and fewer closed “calm” smiles than did best-selling children’s storybooks in Taiwan (Tsai et al., 2007). Furthermore, when we read European American, Asian American, and Taiwanese Chinese preschoolers stories containing characters who engaged in activities in either excited versus calm ways and were praised by their mothers for doing so, we altered preschoolers’ affective preferences. Across

cultures, children who read about the “excited” character preferred excitement (vs. calm) more in a subsequent task than did children who read about the “calm” character (Tsai et al., 2007). This study demonstrated that short-term media exposure can influence children’s affective preferences. We predict that longer-term media exposure has even deeper and longer lasting effects.

The third premise of AVT is that ideal affect predicts people’s behaviors above and beyond their actual affect. For instance, the more individuals value HAP, the more likely they are to engage in physically rigorous exercise (Hogan, Chim, Sims, & Tsai, 2015), to prefer stimulating versus soothing consumer products (Tsai, Chim, & Sims, 2015), and to prefer a physician who promotes a dynamic versus a relaxed lifestyle (Sims, Tsai, Koopmann-Holm, Thomas, & Goldstein, 2014). In all of these studies, people’s ideal HAP predicted behavior above and beyond their actual experience of HAP.

The Role of Ideal Affect in Judging Others

More recently, our work has begun to examine how ideal affect—across and within cultures—shapes people’s responses to others. Specifically, we predict that when people view targets whose expressions match their ideal affect (“ideal affect match”), they respond to them more positively. Indeed, as mentioned above, we observed that the more people valued HAP, the more likely they were to choose an excitement (versus calm)-focused physician for their future care, whereas the more people valued LAP, the more likely they were to choose a calm (vs. excitement)-focused physician for their future care (Sims & Tsai, 2015; Sims et al., 2014). Given cultural differences in ideal affect, we would expect European Americans to respond more positively than East Asians to excitement (vs. calm)-focused physicians. Indeed, European Americans preferred, recalled the recommendations of, and more positively evaluated excitement (vs. calm)-focused physicians compared with Asian Americans (Sims et al., 2018). In another study, when presented with excited and calm faces and asked to choose the one they wanted to see again, European Americans chose excited (vs. calm) faces more than Hong Kong Chinese did (Park, Tsai, Chim, Blevins, & Knutson, 2016). These differences even appear to influence with whom people share resources: European Americans shared more with excited (vs. calm) recipients when playing multiple trials of the Dictator Game than did Koreans (Park, Blevins, Knutson, & Tsai, 2017).

But why do these differences occur? We predict that people prefer and share more with others whose expressions match their ideal affect because they judge them more positively. Indeed, the relationships between ideal affect and physician choice described above were mediated by judgments of trustworthiness: the more people valued HAP, the more they trusted the excitement (vs. calm)-focused physician, which predicted their increased likelihood of choosing him for their care. Similarly, European Americans shared more with excited (vs. calm) recipients than did Koreans because they rated excited (vs. calm) recipients as more trustworthy than did Koreans. Furthermore, these cultural differences in trustworthiness judgments were mediated by the degree to which people valued HAP versus LAP (Park et al., 2017).

Limitations of Previous Work

There are, however, limitations to the previous work. First, the above studies focused on trustworthiness, which is as affiliative as agreeableness but lower on dominance than extraversion (e.g., Todorov, Said, Engell, & Oosterhof, 2008; Wiggins, 1979). Therefore, it remains unclear whether cultural differences emerge for extraversion and other affiliative social judgments that are higher in dominance than trustworthiness.

Second, it is unclear whether cultural differences in ideal affect shape nonaffiliative judgments such as dominance or competence. On the one hand, it is possible that culture and ideal affect influence all social judgments, especially if they are desirable. On the other hand, previous researchers have demonstrated the primacy and privileged status of affiliation judgments. Affiliation judgments carry greater weight than dominance and competence judgments in overall impressions of targets (e.g., Abele & Wojciszke, 2007), and are recognized and categorized faster, inferred more from behavioral descriptions, and mentioned earlier in descriptions of targets than are dominance and competence judgments (Abele & Bruckmuller, 2011; Ybarra et al., 2001). This may be because judgments of affiliation indicate whether or not targets will behave in ways that benefit the judge (Abele & Bruckmuller, 2011), or put another way, whether or not targets will be “good group members” (i.e., will reciprocate in ways that are consistent with group values and norms; Ybarra et al., 2008, p. 1084).

Thus, we predicted that cultural differences in ideal affect would be particularly relevant when people are judging affiliation (extraversion, agreeableness) because if targets show the affective states valued by a culture, they are by definition signaling adherence to group norms and values. We were agnostic about whether cultural differences in ideal affect would shape social judgments reflecting pure dominance or competence because these judgments indicate whether people have the skills to solve a problem rather than whether they are committed to the group (Ybarra et al., 2008).

Third, in previous work, judges rated others in situations that had important consequences for the judges themselves (e.g., when they were choosing a physician for their future care). In these situations, when people stand personally to gain or lose, it is perhaps not surprising that the emotions that people value should influence their judgments of others. However, there are other situations in daily life in which people’s social judgments have even greater consequences for the targets than for the judges themselves (e.g., when judges are evaluating targets for a job opportunity). Do people’s culture and ideal affect predict social judgments in those situations as well?

The Present Work

To answer these questions, we conducted four studies in which European American and Hong Kong Chinese participants viewed excited and calm faces and judged these faces in terms of extraversion, agreeableness, dominance, and competence. In Study 1, we tested our hypotheses by first examining participants’ social judgments of excited (vs. calm) computer-generated (Study 1a) and human (Study 1b) faces in a relatively decontextualized setting. Studies 2 and 3 examined social judgments of targets in more real-world settings: in the context of social media (Study 2) and in the context of evaluating applicants for a job (Study 3). In Study

3, we also examined whether these social judgments actually predicted whom participants hired for a job.

We compared the responses of European American and Hong Kong Chinese university students because of previous work demonstrating cultural differences between these groups in ideal HAP and ideal LAP, assessed through self-report and behavioral methods. In all of our analyses, we controlled for actual affect when looking at the effects of ideal affect and vice versa, as in previous work, because actual and ideal affect are weakly to moderately correlated, and because we wanted to observe the effects of ideal affect above and beyond those of actual affect.^{1,2} We asked participants to make several social judgments of targets, some serving as fillers, and others assessing the main traits of interest (extraversion, agreeableness, dominance, and competence). To maintain consistency across studies and across aggregates, however, the analyses reported in this article focused on two items for each trait: *extraverted* and *friendly* for extraversion, *warm* and *agreeable* for agreeableness (with the exception of Study 1a, which only included *agreeable*), *dominant* and *assertive* for dominance, and *competent* and *intelligent* for competence. These items have also been used to assess different octants of the interpersonal circumplex in previous research (Wiggins, 1995). The pattern of the results, however, remained the same when we conducted analyses on aggregates containing more than the two items described above (i.e., three competence items for Study 1a; three extraversion items and eight agreeable items for Study 1b; three competence items for Study 2; and six extraversion items, nine agreeable items, and five competence items for Study 3; see the [online supplementary materials](#), Section 6).

To test the effects of culture and ideal affect on trait judgments, we referenced previous studies demonstrating that ideal affect drives cultural differences in giving and physician choice (Park et al., 2017; Sims et al., 2018), which have observed medium-to-large effect sizes ($\eta_p^2 = .08$ to $.55$). Therefore, using a conservative approach, we used the program G*Power (Faul, Erdfelder, Lang, & Buchner, 2007) to identify the sample size that corresponds to an 80% chance of detecting a medium-sized effect ($\eta_p^2 = .06, f = .25$) at $\alpha = .05$. These analyses revealed that a total sample size of 34 participants (17 in each cultural group) would yield sufficient power to test whether there were cultural differences in judgments of excited versus calm targets (repeated measures analysis of variance [ANOVA]: within-between interaction; two groups, two aggregate measurements). Based on these analyses, we aimed to recruit at least 17 subjects per cultural group in each of the four studies.

Study materials and procedures were approved by the Stanford Non-Medical Institutional Review Board, under IRB protocol #15307 (“Cultural variation in the expressions and perceptions of affect”) for Studies 1 and 2, and IRB protocol #26318 (“The effects of cultural context on emotional responses of biculturals”) for Study 3. All study instruments were translated and back-translated into Chinese by bilingual English-Chinese speakers using standard translation methods (Brislin, 1970).

¹ Results were the same when we did not control for actual affect.

² In all of the studies, we first tested models in which Judge Gender was included as a between subjects factor; however, the overall pattern of results remained the same regardless of Judge Gender, and therefore, we dropped Judge Gender from our models for parsimony.

Study 1: Judgments of Excited and Calm Smiles in Photos

As mentioned above, we started by examining participants' social judgments of excited and calm targets in a relatively decontextualized setting. Study 1a used computer-generated faces, whereas Study 1b used more realistic ones.

Study 1a: Computer-Generated Faces

We predicted that (a) European Americans would rate the excited (vs. calm) faces as more extraverted and agreeable than would Hong Kong Chinese, and (b) that these differences would be mediated by ideal affect (HAP, LAP), controlling for actual affect (HAP, LAP). We were agnostic as to whether there would be cultural differences in judgments of dominance and competence.

Method

Participants. Sixty-six European American and 68 Hong Kong Chinese university students participated in the study. European Americans were required to self-identify as European American; have been born in the United States or Canada; have parents who were born in the United States or Canada; and speak English as their primary language. Hong Kong Chinese participants were required to have been born in Hong Kong, Mainland China, Taiwan, or Macau; have parents who were born in Hong Kong, Mainland China, Taiwan, or Macau; and speak Chinese as their primary language. Data from one European American participant was excluded because of missing social judgments. As a result, our final sample included 65 European Americans (64.6% female, age $M = 19.33$, $SD = 1.22$) and 68 Hong Kong Chinese (54.4% female, age $M = 20.81$, $SD = 1.50$). Based on the power analyses described above, our sample size of 133 had sufficient power to test our main hypotheses.

Stimuli. We created 12 different target identities (<http://facegen.com>) that varied in terms of smiles (excited, moderate, calm), race (White, Asian), and sex (male, female), using the Facegen Modeler program, as shown in Figure 2. Excited targets had open mouth smiles with teeth showing, whereas calm targets had closed mouth smiles with no teeth showing. Moderate smiles had open mouth smiles with teeth showing, but the smiles were not as open or wide as the excited smiles. Facegen Modeler parameters for each expression are available in the online supplementary materials (Section 1; see Park et al., 2016 for greater detail). Because the moderate faces were treated as controls, we did not include them in the analyses described below, although the findings were the same when they were included in the analyses (see online supplementary materials, Section 2). To ensure that the observed effects were not due to target identity (regardless of expression), all participants saw the same targets, but differed in terms of which expressions they saw for a particular target.

Measures.

Social judgments. Using a scale from 1 = *not at all* to 5 = *extremely*, participants rated how friendly, extraverted, agreeable, dominant, assertive, intelligent, and competent each face was, as well as a number of filler items.³ As mentioned above, based on the theoretical predictions and factor analyses (provided in online supplementary materials, Section 5), we created three aggregates:

extraversion (friendly, extraverted), *dominance* (dominant, assertive), and *competence* (intelligent, competent). We only had one item to assess *agreeableness*: agreeable. The three aggregates showed moderate to high reliability (Cronbach's α) across cultural groups (extraversion: .84 for European Americans, .73 for Hong Kong Chinese; dominance: .95 for European Americans, .89 for Hong Kong Chinese; competence: .91 for European Americans, .88 for Hong Kong Chinese).

Actual and ideal affect. To assess trait actual and ideal affect, participants completed the Affect Valuation Index (AVI; Tsai et al., 2006), in which they rated how much they ideally wanted to feel and then how much they actually felt 38 states over the course of a typical week. The HAP aggregate included excited, elated, euphoric, and enthusiastic and showed moderate to high reliability (Cronbach's α) across cultural groups (ideal HAP: .80 for European Americans, .63 for Hong Kong Chinese; actual HAP: .77 for European Americans, .67 for Hong Kong Chinese). The LAP aggregate included calm, peaceful, serene, and relaxed and also showed moderate to high reliability across cultural groups (ideal LAP: .84 for European Americans, .83 for Hong Kong Chinese; actual LAP: .81 for European Americans, .73 for Hong Kong Chinese). To control for cultural differences in response style (Chen, Lee, & Stevenson, 1995) and maintain consistency with previous reports, we ipsatized ideal affect and actual affect scores. Specifically, to create ipsatized ideal affect scores, we first calculated the mean and standard deviation of all ideal affect items, and then, for each ideal affect item, we subtracted the mean and divided this difference by the standard deviation. We followed a similar procedure to create ipsatized actual affect scores.

Demographics. Participants reported their age, gender, ethnicity, year in school, place of birth, parents' and grandparents' place of birth, and languages spoken with family and friends.

Procedure. Participants completed an online study on "perceptions of faces." Participants were told to make their ratings as quickly as possible. Participants then viewed faces, rated each face, and completed the AVI and demographic questionnaires.

Study 1a Data Analysis and Results

We first examined whether there were cultural differences in social judgments of excited (vs. calm) faces and then examined whether these differences were mediated by cultural differences in self-reported ideal affect.

Hypothesis 1: Do European Americans rate excited (vs. calm) faces as more extraverted and agreeable than Hong Kong Chinese?

Means and standard deviations are shown in Table 1 (top). We conducted 2 (Judge Culture [European American, Hong Kong Chinese]) \times 2 (Target Expression [excited, calm]) \times 2 (Target Race [White, Asian]) \times 2 (Target Sex [male, female]) repeated measures

³ These included how good of a leader, how well motivates others, how physically attractive, how similar to participants each face was, and how much participants liked each face. We also included one additional item that loaded on the competence factor: successful. As shown in the online supplementary materials, Section 6, the results were the same as those reported in the body of the manuscript when this item was included in the competence aggregate.


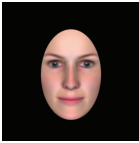
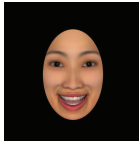
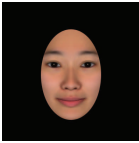












Study	Task	Type of Target	White Targets		Asian Targets	
			Excited	Calm	Excited	Calm
1	Rate photos	a. Computer-generated				
		b. Human				
2	Rate Facebook profiles	Human				
3	Rate job applicants and hire one	Human				

Figure 2. Excited and calm stimuli for Studies 1–3. With exception of Study 3, targets also varied systematically by sex, and participants saw targets of both races and sexes. See the online article for the color version of this figure.

ANOVAs on each social judgment (extraversion, agreeableness, dominance, competence); Judge Culture was treated as a between subjects factor; the other factors were treated as within subjects factors. Data was dropped from one Hong Kong Chinese participant due to missing social judgments for one target identity.

Table 1
Means (and Standard Deviations) of Social Judgments of Excited and Calm Targets for Studies 1a and 1b (Photos) by Judge Culture

Social judgments	Study 1a			
	European Americans (n = 65)		Hong Kong Chinese (n = 68)	
	Excited	Calm	Excited	Calm
Extraversion	3.86 (.66)	2.71 (.46)	3.50 (.72)	3.02 (.49)
Agreeableness	3.35 (.66)	3.12 (.56)	3.10 (.58)	3.15 (.55)
Dominance	2.91 (.83)	2.59 (.57)	2.86 (.56)	2.74 (.60)
Competence	3.04 (.58)	3.37 (.51)	2.96 (.59)	3.17 (.39)

Social judgments	Study 1b			
	European Americans (n = 83)		Hong Kong Chinese (n = 81)	
	Excited	Calm	Excited	Calm
Extraversion	3.51 (.47)	3.23 (.39)	3.29 (.65)	3.15 (.61)
Agreeableness	3.44 (.54)	3.26 (.47)	3.09 (.66)	3.13 (.66)
Dominance	2.77 (.49)	2.77 (.47)	2.72 (.58)	2.78 (.48)
Competence	3.13 (.41)	3.06 (.44)	2.86 (.57)	2.97 (.54)

Extraversion. There was a significant main effect of Target Expression, $F(1, 130) = 132.97, p < .001$, partial $\eta^2 = .51$. Overall, excited faces were rated as more extraverted ($M = 3.69, SE = .06$) than calm faces ($M = 2.86, SE = .04$), $p < .001$, 95% confidence interval (CI) for difference = [.69, .97]. However, this effect was qualified by a significant Judge Culture \times Target Expression interaction, $F(1, 130) = 20.60, p < .001$, partial $\eta^2 = .14$.

As predicted, European Americans ($M = 3.86, SE = .09$) rated excited faces as more extraverted than did Hong Kong Chinese ($M = 3.51, SE = .08$), $p = .004$, 95% CI for difference = [.11, .59]. Moreover, Hong Kong Chinese ($M = 3.01, SE = .06$) rated calm faces as more extraverted than did European Americans ($M = 2.71, SE = .06$), $p < .001$, 95% CI for difference = [.14, .47].

Within cultural groups, European Americans rated excited faces as more extraverted than calm faces, $p < .001$, 95% CI for difference = [.96, 1.36]. Hong Kong Chinese also rated excited faces as more extraverted than calm faces, $p < .001$, 95% CI for difference = [.30, .70]; however, the difference in extraversion judgments of excited (vs. calm) faces for European Americans ($M = 1.16, SE = .10$) was more than twice that for Hong Kong Chinese ($M = .49, SE = .11$), $t(131) = 4.66, p < .001$, 95% CI for difference = [.39, .96], Cohen's $d = .81$. In other words, European Americans made a greater distinction between excited and calm faces in terms of extraversion compared with Hong Kong Chinese. There were no significant interactions involving target race or target sex ($ps > .40$).

Agreeableness. We then examined whether we would observe similar findings for agreeableness. As predicted, there was a significant Judge Culture \times Target Expression interaction, $F(1, 130) = 3.87, p = .051$, partial $\eta^2 = .03$. European Americans ($M = 3.35, SE = .08$) rated excited faces as more agreeable compared with Hong Kong Chinese ($M = 3.11, SE = .08, p = .03$, 95% CI for difference = [.03, .46]). However, unlike the extraversion judgments, there were no cultural differences in agreeableness judgments of calm faces (European American: $M = 3.12, SE = .07$, Hong Kong Chinese: $M = 3.15, SE = .07, p = .79$, 95% CI for difference = [-.22, .17]).

Within cultural groups, European Americans rated excited faces as more agreeable than calm faces, $p = .02$, 95% CI for difference = [.04, .42]. There was, however, an unpredicted Judge Culture \times Target Expression \times Target Race interaction ($p = .003$); inspection of the means revealed that this was driven by European Americans, who overall rated excited targets as more agreeable than calm targets, but this was particularly pronounced for Asian targets. In contrast, Hong Kong Chinese rated excited and calm faces as similarly agreeable, $p = .70$, 95% CI for difference = [-.23, .15]. As with extraversion judgments, the difference in agreeableness judgments of excited (vs. calm) faces for European Americans ($M = .23, SE = .10$) was greater than that for Hong Kong Chinese ($M = -.05, SE = .10, t(131) = 2.04, p = .04$, 95% CI for difference = [.01, .54], Cohen's $d = .36$). In other words, European Americans also made a greater distinction between excited and calm faces in terms of agreeableness compared with Hong Kong Chinese.

Thus, our predictions were overall supported for both affiliation judgments. What about dominance and competence judgments?

Dominance. There was a significant main effect of Target Expression, $F(1, 130) = 11.79, p = .001, \eta_p^2 = .08$. Excited faces were rated as more dominant ($M = 2.89, SE = .06$) than calm faces ($M = 2.66, SE = .05, p = .001$, 95% CI for difference = [.10, .37]). However, the Judge Culture \times Target Expression interaction was not significant, $F(1, 130) = 1.72, p = .19, \eta_p^2 = .01$ and there were no other significant main effects or interaction effects involving Judge Culture and Target Expression ($ps > .30$).

Competence. There was a significant main effect of Target Expression, $F(1, 130) = 25.50, p < .001, \eta_p^2 = .16$. Calm faces were rated as more competent ($M = 3.27, SE = .04$) than excited faces ($M = 3.01, SE = .05, p < .001$, 95% CI for difference = [.16, .37]). The Judge Culture \times Target Expression interaction, however, was not significant, $F(1, 130) = 1.55, p = .22, \eta_p^2 = .01$.

In summary, as predicted, European Americans rated the excited faces as more extraverted and agreeable than did Hong Kong Chinese, and Hong Kong Chinese rated the calm faces as more extraverted than did European Americans. There were no cultural differences in agreeableness judgments of the calm smiles. There were also no cultural differences in competence or dominance judgments of excited (vs. calm) faces: both cultural groups viewed the excited faces as more dominant and less competent than the calm faces. Together, these findings suggest that cultural differences in judgments of the excited (vs. calm) faces were most pronounced for affiliative judgments.

Hypothesis 2: Are cultural differences in judgments of extraversion and agreeableness mediated by ideal affect?

Consistent with prior work, pairwise comparisons revealed that European Americans valued HAP ($M = .78, SE = .06$) more than Hong Kong Chinese did ($M = .59, SE = .05, p = .02$, 95% CI for

difference = [.04, .35], controlling for actual HAP. To examine whether cultural differences in extraversion and agreeableness judgments of excited faces were mediated by cultural differences in ideal HAP, we ran two mediation models with 5,000 bootstrapped samples (Model 4, Process; Hayes, 2012, 2013). Extraversion judgments of excited faces were treated as the dependent variable, Judge Culture (European American = 1, Hong Kong Chinese = -1) as the independent variable, and ideal HAP as the mediator, controlling for actual HAP. We used raw rather than ipsatized scores in these analyses because ipsatized scores restrict variance and can distort regression results.

As shown in Figure 3, Judge Culture significantly predicted ideal HAP, $B = .19, SE = .06, t = 3.18, p = .002$, 95% CI [.07, .31], indicating that European Americans valued HAP more than Hong Kong Chinese. Next, we examined whether ideal HAP significantly predicted extraversion judgments of excited faces, which it did, $B = .22, SE = .09, t = 2.54, p = .01$, 95% CI [.05, .39]: the more participants valued HAP, the more they rated excited faces as extraverted. Actual HAP did not significantly predict extraversion judgments of excited faces, $B = -.15, SE = .10, t = -1.44, p = .15$, 95% CI [-.35, .06]. Judge Culture also predicted extraversion judgments, $B = .18, SE = .06, t = 2.94, p = .004$, 95% CI [.06, .30], such that European Americans rated excited faces as more extraverted than did Hong Kong Chinese. After entering ideal HAP into the model (Model Fit: $F(2, 129) = 15.95, p < .001, R^2 = .23$), however, this path was reduced, $B = .14, SE = .06, t = 2.18, p = .03$, 95% CI [.01, .26]. Furthermore, the indirect effect through ideal HAP was significant, indirect effect = .04, $SE = .02$, 95% CI [.01, .09]. Thus, these findings suggest that ideal HAP partially mediated cultural differences in extraversion judgments of excited faces. In other words, European Americans valued HAP more, which was associated with their likelihood of judging excited faces as more extraverted than Hong Kong Chinese.

We conducted similar analyses to see if ideal HAP mediated cultural differences in agreeableness judgments of the excited targets. As described above, Judge Culture significantly predicted ideal HAP, $B = .19, SE = .06, t = 3.18, p = .002$, 95% CI [.07, .31], with European Americans valuing HAP more than Hong Kong Chinese. However, ideal HAP did not predict agreeableness judgments of excited faces, $B = .07, SE = .09, t = .81, p = .42$, 95% CI [-.10, .24]. Thus, cultural differences in ideal HAP did

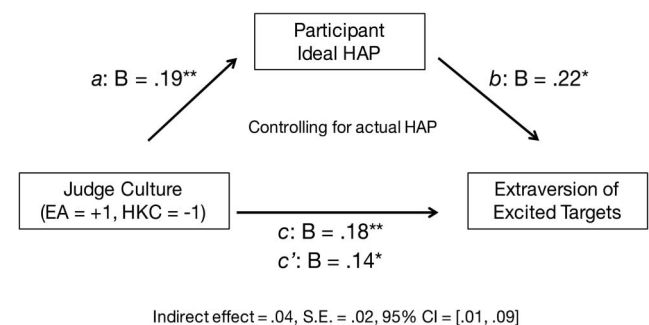


Figure 3. Mediation analyses for Study 1a. EA = European Americans; HKC = Hong Kong Chinese. HAP = High arousal positive affect. * $p < .05$, ** $p < .01$.

not significantly mediate cultural differences in agreeableness judgments of excited targets.

Contrary to previous findings, European Americans also valued LAP ($M = 1.05$, $SE = .06$) more than did Hong Kong Chinese ($M = .86$, $SE = .05$), $p = .02$, 95% CI for difference = $[.04, .34]$. To see whether cultural differences in extraversion judgments of calm faces were mediated by ideal LAP, we conducted a similar mediation analysis with extraversion judgments of calm smiles as the dependent variable, and ideal LAP as the mediator, controlling for actual LAP. Although Judge Culture significantly predicted ideal LAP, $B = .20$, $SE = .07$, $t = 2.92$, $p = .004$, 95% CI $[.06, .34]$, ideal LAP was not significantly associated with extraversion judgments of calm faces, $B = -.04$, $SE = .06$, $t = -.69$, $p = .49$, 95% CI $[-.15, .07]$. Thus, the mediation model was not significant. In other words, cultural differences in ideal LAP did not significantly mediate cultural differences in extraversion judgments of calm targets. We did not conduct similar analyses on agreeableness judgments of calm targets because they did not differ across cultural groups.

Study 1a Discussion

In summary, we found support for both hypotheses: (a) European Americans rated excited targets as more extraverted and agreeable than did Hong Kong Chinese, and (b) differences in extraversion (but not agreeableness) judgments were mediated by cultural differences in the value placed on HAP. Although Hong Kong Chinese rated calm targets as more extraverted than did European Americans, these differences were not mediated by reports of ideal LAP. Moreover, European Americans and Hong Kong Chinese did not differ in their agreeableness judgments of calm targets. No cultural differences emerged for competence or dominance judgments of excited (vs. calm) targets, suggesting that cultural differences in ideal affect may be particularly relevant for affiliative judgments.

This study, however, had two limitations. First, the stimuli were computer-generated, and therefore, it is unclear whether such differences would emerge with more realistic stimuli. Second, Study 1a included only one item to assess agreeableness. Therefore, we examined whether a similar pattern of results would emerge when we used human stimuli and additional items to assess agreeableness.

Study 1b: Human Faces

We hypothesized that (a) European Americans would rate excited (vs. calm) targets as more extraverted and agreeable than would Hong Kong Chinese, and (b) these cultural differences would be mediated by ideal affect (HAP, LAP). Based on Study 1a results, we did not predict cultural differences in judgments of competence or dominance.

Method

Participants. Eighty-three European American and 82 Hong Kong Chinese university students participated in the study. Eligibility criteria were the same as Study 1a. Data from one Hong Kong Chinese participant were removed because they were greater than three standard deviations from the mean; therefore, final

analyses were conducted on 83 European Americans (68.7% female, age $M = 20.70$, $SD = 2.19$) and 81 Hong Kong Chinese (86.4% female, age $M = 21.07$, $SD = 2.65$). Based on the power analyses described above, our sample of 164 had sufficient power to test our hypotheses.

Stimuli. We created a set of 12 target identities by importing posed photographs of real actors into the Facegen Modeler program. We imported photographs of White male and female models from the Interdisciplinary Affective Science Laboratory (IASLab) Face Set posing neutral, closed-mouth happy, and open-mouth happy expressions.⁴ Similarly, we imported photographs of Asian male and female models from the Taiwanese Facial Expression Database posing neutral, low-intensity happy, and high-intensity happy expressions (Chen & Yen, 2007). We included neutral faces as controls; however, because the results did not change when we included them in the analyses, we focus on participants' responses to calm and excited faces (Results with neutral faces are included in online supplementary materials, Section 3). The images were fed into Facegen and then edited in Adobe Photoshop Elements to control for differences between the two image databases, including image quality and luminance, and the distance between target and photographer. This method also allowed us to ensure the position of the target's head and eye level were consistent across targets. As in Study 1a, participants saw the same targets, but different participants saw targets with different expressions to ensure that the observed effects were not due to target identity (see Figure 2).

Measures.

Social judgments. Using a scale from 1 = *not at all* to 5 = *extremely*, participants made judgments of how friendly, extraverted, agreeable, warm, dominant, assertive, intelligent, and competent each target was.⁵ Based on theoretical considerations and factor analyses (see online supplementary materials, Section 5), we created four aggregates: *extraversion* (extraverted, friendly); *agreeableness* (warm, agreeable); *dominance* (dominant, assertive); and *competence* (competent, intelligent). Reliability for these aggregates was moderate to high for each cultural group (extraversion: .62 for European Americans, .86 for Hong Kong Chinese; agreeableness: .81 for European Americans, .92 for Hong Kong Chinese; competence: .91 for European Americans, .92 for Hong Kong Chinese; dominance: .90 for European Americans, .74 for Hong Kong Chinese).

Actual and ideal affect. We used the same measure and aggregates as in Study 1a. Aggregates were moderate to high in reliability for both cultural groups (ideal HAP: .82 for European Americans, .67 for Hong Kong Chinese; actual HAP: .82 for

⁴ Development of the Interdisciplinary Affective Science Laboratory (IASLab) Face Set was supported by the National Institutes of Health Director's Pioneer Award (DP1OD003312) to Lisa Feldman Barrett. More information is available on-line at www.affectivescience.org. The studies reported in the present article, however, were not funded by the National Institutes of Health.

⁵ The filler item was how good of a leader the target was. We also included six other items that loaded onto the agreeableness factor (trustworthy, humble, respectful, virtuous, accommodating, and cooperative) and one other item that loaded onto the extraversion factor (charismatic). As shown in online supplementary materials, Section 6, analyses with these items added to the agreeableness and extraversion aggregates showed the same pattern of results as the two-item agreeableness and extraversion aggregates reported in the main body of the article.

European Americans, .71 for Hong Kong Chinese; ideal LAP: .79 for European Americans, .75 for Hong Kong Chinese; actual LAP: .84 for European Americans, .83 for Hong Kong Chinese).

Demographics. We collected the same demographic data as in Study 1a.

Procedure. As in Study 1a, participants completed an online face rating task. Participants viewed 12 target faces, made social judgments, and completed the AVI and demographic questionnaires.

Study 1b Data Analysis and Results

Hypothesis 1: Do European Americans rate excited (vs. calm) faces as more extraverted and agreeable than Hong Kong Chinese?

Means and standard deviations are presented in Table 1 (bottom). As in Study 1a, we conducted 2 (Judge Culture [European American, Hong Kong Chinese]) \times 2 (Target Expression [excited, calm]) \times 2 (Target Race [White, Asian]) \times 2 (Target Sex [male, female]) repeated-measures ANOVAs on social judgments; Judge Culture was treated as a between-subjects factor; the other factors were treated as within-subjects factors.

Extraversion. There was a significant main effect of Target Expression, $F(1, 162) = 31.98, p < .001, \eta_p^2 = .17$. Overall, excited faces were rated as more extraverted ($M = 3.40, SE = .04$) than calm faces ($M = 3.19, SE = .04, p < .001, 95\% CI$ for difference = [.14, .28]). Additionally, there was a significant main effect of Judge Culture, $F(1, 162) = 4.08, p = .045, \eta_p^2 = .03$. European Americans judged the faces overall to be higher in extraversion ($M = 3.37, SE = .05$) than did Hong Kong Chinese ($M = 3.22, SE = .05, 95\% CI$ for difference = [.003, .30]). These main effects, however, were qualified by a significant Judge Culture \times Target Expression interaction, $F(1, 162) = 4.24, p = .04, \eta_p^2 = .03$.

As predicted and consistent with Study 1a, European Americans ($M = 3.51, SE = .06$) rated excited faces as more extraverted than did Hong Kong Chinese ($M = 3.29, SE = .06, p = .01, 95\% CI$ for difference = [.05, .40]). Unlike Study 1a, however, there were no significant cultural differences in extraversion judgments of calm targets (European American: $M = 3.23, SE = .06$; Hong Kong Chinese: $M = 3.15, SE = .06, p = .34, 95\% CI$ for difference = [-.08, .23]).

Within cultural groups, European Americans rated excited faces as more extraverted than calm faces, $p < .001, 95\% CI$ for difference = [.18, .39]). Similarly, Hong Kong Chinese rated excited faces as more extraverted than calm faces, $p = .01, 95\% CI$ for difference = [.03, .24]). However, as in Study 1a, the difference in extraversion judgments of excited (vs. calm) faces was greater for European Americans ($M = .28, SE = .05$) than for Hong Kong Chinese ($M = .13, SE = .05, t(162) = 2.06, p = .04, 95\% CI$ for difference = [.01, .30], Cohen's $d = .32$). These findings did not vary as a function of target race or target sex ($ps > .62$).

Agreeableness. Analyses revealed a significant main effect of Judge Culture, $F(1, 162) = 8.53, p = .004, \eta_p^2 = .05$. European Americans overall rated the faces as higher in agreeableness ($M = 3.35, SE = .06$) compared with Hong Kong Chinese ($M = 3.11, SE = .06, p = .004, 95\% CI$ for difference = [.08, .40]). This main effect, however, was qualified by a significant Judge Culture \times

Target Expression interaction, $F(1, 162) = 7.05, p = .01, \eta_p^2 = .04$.

As predicted, and consistent with Study 1a, European Americans rated excited targets ($M = 3.44, SE = .07$) as more agreeable than did Hong Kong Chinese ($M = 3.09, SE = .07, p < .001, 95\% CI$ for difference = [.17, .54]). As in Study 1a, there were no cultural differences in agreeableness judgments of calm targets (European American: $M = 3.26, SE = .06$; Hong Kong Chinese: $M = 3.13, SE = .06, p = .18, 95\% CI$ for difference = [-.06, .30]).

Within cultural groups, European Americans rated excited faces as more agreeable than calm faces, $p = .002, 95\% CI$ for difference = [.07, .31]), but as in Study 1a, Hong Kong Chinese did not differ in their agreeableness judgments of excited and calm faces, $p = .50, 95\% CI$ for difference = [-.16, .08]). Thus, the difference in agreeableness judgments of excited (vs. calm) faces was greater for European Americans ($M = .19, SE = .06$) than for Hong Kong Chinese ($M = -.04, SE = .06, t(162) = 2.65, p = .01, 95\% CI$ for difference = [.06, .40]), Cohen's $d = .41$). These findings did not vary by target race or target sex ($ps > .22$).

Dominance. The main effects of Target Expression, Judge Culture, and their interaction were not significant (Target Expression, $F(1, 162) = .40, p = .53, \eta_p^2 = .002$; Judge Culture, $F(1, 162) = .08, p = .78, \eta_p^2 < .001$; Judge Culture \times Target Expression, $F(1, 162) = .50, p = .48, \eta_p^2 = .003$).

Competence. There was a significant main effect of Judge Culture, $F(1, 162) = 7.37, p = .01, \eta_p^2 = .04$, such that European Americans rated the faces to be higher in competence ($M = 3.09, SE = .05$) than did Hong Kong Chinese ($M = 2.91, SE = .05, p = .01, 95\% CI$ for difference = [.05, .32]). This main effect, however, was qualified by a significant Judge Culture \times Target Expression interaction, $F(1, 162) = 6.54, p = .01, \eta_p^2 = .04$. Unlike in Study 1a, European Americans rated excited faces as more competent ($M = 3.13, SE = .05$) compared with Hong Kong Chinese ($M = 2.86, SE = .06, p < .001, 95\% CI$ for difference = [.13, .43]). There were no cultural differences in competence judgments of the calm faces, $p = .24, 95\% CI$ for difference = [-.06, .24]) (European American: $M = 3.06, SE = .05$; Hong Kong Chinese: $M = 2.97, SE = .05$).

Within cultures, European Americans rated excited and calm faces as similarly competent, $p = .14, 95\% CI$ for difference = [-.03, .18]). In contrast, Hong Kong Chinese rated calm faces to be more competent than excited faces, $p = .03, 95\% CI$ for difference = [.01, .21]).

In summary, as in Study 1a, European Americans rated the excited faces as more extraverted and agreeable than did Hong Kong Chinese. Unlike Study 1a, European Americans also rated the excited faces as more competent than did Hong Kong Chinese. There were no cultural differences in social judgments of the calm faces or in dominance judgments of excited or calm faces.

Hypothesis 2: Are cultural differences in extraversion and agreeableness judgments of the excited targets mediated by ideal HAP?

Unlike Study 1a, there were no significant cultural differences in ideal HAP or ideal LAP, controlling for actual HAP and LAP, $ps > .78$ (European American: ideal HAP $M = .59, SE = .05$, ideal LAP = 1.08, $SE = .04$; Hong Kong Chinese: ideal HAP $M =$

.61, $SE = .05$, ideal LAP = 1.07, $SE = .04$). Thus, because the two cultural groups did not differ significantly in self-reports of ideal affect, we collapsed across cultural groups and examined whether individual differences in ideal HAP predicted extraversion and agreeableness judgments of the excited target. We ran a post hoc power analysis to determine whether we had sufficient power to find the effect of ideal affect on social judgments over and above Judge Culture using a fixed model linear multiple regression, R^2 increase ($R_p^2 = .04$, $f^2 = .04$, $\alpha = .05$), with our 164 participants, 2 tested predictor variables, and 3 total predictor variables. Analyses revealed that we were slightly underpowered at 63.5% power, $F(2, 160) = 3.05$.

In a stepwise linear regression, we entered Judge Culture (European American = 1, Hong Kong Chinese = -1) as the independent variable in the first model, and extraversion judgments of excited faces as the dependent variable. We then added ideal HAP as the independent variable and actual HAP as the covariate in the second model. The first model was significant, $F(1, 162) = 6.72$, $p = .01$, adjusted $R^2 = .03$, as was the second model, $F(3, 160) = 4.83$, $p = .003$, adjusted $R^2 = .07$. Moreover, the addition of ideal and actual HAP significantly improved model fit, $\Delta F(2, 160) = 3.78$, $p = .03$, $\Delta R^2 = .04$. Consistent with our previous results, Judge Culture was a significant predictor of extraversion judgments of the excited faces, $B = .12$, $SE = .04$, $\beta = .21$, $t = 2.78$, $p = .01$. Supporting our hypotheses, ideal HAP was also significantly associated with extraversion judgments of the excited target $B = .16$, $SE = .07$, $\beta = .20$, $t = 2.46$, $p = .02$: the more participants valued HAP, the more they rated excited faces as extraverted. In contrast, actual HAP was *not* associated with extraversion ratings, $B = .01$, $SE = .09$, $\beta = .01$, $t = .16$, $p = .87$.

We conducted similar analyses to see if ideal HAP predicted agreeableness judgments of the excited targets. Again, the first model was significant, $F(1, 162) = 13.90$, $p < .001$, adjusted $R^2 = .07$, as was the second model, $F(3, 160) = 8.03$, $p < .001$, adjusted $R^2 = .12$. The addition of ideal and actual HAP significantly improved model fit, $\Delta F(2, 160) = 4.77$, $p = .01$, $\Delta R^2 = .05$. Judge Culture significantly predicted agreeableness judgments, $B = .18$, $SE = .05$, $\beta = .29$, $t = 3.94$, $p < .001$. Ideal HAP was also marginally associated with agreeableness, $B = .14$, $SE = .07$, $\beta = .16$, $t = 1.95$, $p = .052$: the more participants valued HAP, the more they rated excited faces as agreeable. Actual HAP, however, was not a significant predictor, $B = .13$, $SE = .09$, $\beta = .11$, $t = 1.43$, $p = .16$.

Finally, we conducted similar analyses to see if ideal HAP predicted competence judgments of excited targets. The first model was significant, $F(1, 162) = 12.96$, $p < .001$, adjusted $R^2 = .07$: Judge Culture was positively associated with competence judgments of excited faces, $B = .14$, $SE = .04$, $\beta = .27$, $t = 3.60$, $p < .001$. Although the second model in which ideal and actual HAP were entered was also significant, $F(3, 160) = 5.89$, $p = .001$, adjusted $R^2 = .08$, neither ideal HAP nor actual HAP significantly predicted judgments of competence. Moreover, the second model did not provide a significantly better fit than the first model, $\Delta F(2, 160) = 2.25$, $p = .11$, $\Delta R^2 = .03$. Thus, ideal HAP did not predict competence judgments of excited targets.

Study 1 Discussion

As predicted, in Studies 1a and 1b, European Americans rated excited targets as more extraverted and agreeable than did Hong Kong Chinese. These findings held regardless of target race or sex, and with both computer-generated and more realistic stimuli. In Study 1a, cultural differences in extraversion judgments were mediated by cultural differences in ideal HAP, as measured by our self-report instrument; however, cultural differences in agreeableness judgments were not. In Study 1b, because there were no cultural differences in ideal affect, we could not test mediation; however, ideal HAP predicted extraversion and agreeableness judgments of the excited target across the entire sample. These findings held after controlling for actual HAP, which did not predict extraversion or agreeableness judgments of excited targets. Thus, both studies illustrated that the more people valued HAP, the more extraverted and agreeable they judged the excited target.

These effects did not consistently emerge for dominance or competence judgments. Neither Study 1a nor Study 1b showed cultural differences in judgments of dominance. Although Study 1b revealed cultural differences in judgments of competence, ideal HAP did not predict judgments of competence. Together, these findings suggest that in these contexts, ideal affect is more strongly associated with affiliative than non-affiliative judgments.

One limitation of these studies, however, is that the judgments were made with minimal information about the social context, and therefore, it is unclear whether these processes occur in more realistic settings. Therefore, in the next study, we asked participants to make judgments of excited and calm Facebook profiles, for which affiliative judgments should be particularly relevant. In this study, we focused on extraversion as the affiliative judgment and competence as a nonaffiliative comparison.

Study 2: Judgments of Excited and Calm Smiles in Facebook Profiles

Based Study 1 findings, we hypothesized that (a) European Americans would rate excited (vs. calm) targets as more extraverted than would Hong Kong Chinese, and (b) these cultural differences in extraversion judgments would be mediated by cultural differences in ideal HAP. We were agnostic about whether cultural differences in competence would emerge given the mixed findings in Studies 1a and 1b.

Method

Participants. Sixty-eight European American and 114 Hong Kong Chinese university students were recruited to participate in the study. Participants were excluded if they did not have a Facebook page, resulting in a final sample of 61 European Americans (59.0% female, age $M = 21.23$, $SD = 3.31$) and 95 Hong Kong Chinese (52.6% female, age $M = 20.58$, $SD = 1.18$). European Americans were required to self-identify as European American, while Hong Kong Chinese participants were required to self-identify as Chinese. As in Studies 1a and 1b, our sample of 156 had sufficient power to test our hypotheses based on the power analyses described above.

Stimuli. We recruited four European American (two male, two female) and four Hong Kong Chinese (two male, two female)

volunteers to serve as targets, asked them to pose excited and calm smiles, and then created both an excited profile and a calm profile for each target. We again counterbalanced whether participants saw the excited or calm profile of the specific target to ensure that the observed effects were not due to target identity (regardless of emotional expression). Participants rated a total of 13 different Facebook profiles (four excited, four calm, five fillers; See Figure 2) that varied in terms of race (White, Asian) and sex (male, female). The fillers consisted of pictures without a visible facial expression (e.g., scenic backgrounds, pictures of animals, side profile of face in the shade). All profiles provided information about target sex and affiliated university network (which matched that of the participant) to increase the ecological validity of the task.

Measures.

Social judgments. Participants rated targets in terms of how friendly, extraverted, intelligent, and competent they were, using a scale of 1 = *not at all* to 5 = *extremely*, as well as a number of filler items.⁶ Based on theoretical considerations and factor analyses (see [online supplementary materials](#), Section 5), we created two aggregates: *extraversion* (extraverted, friendly) and *competence* (competent, intelligent), which showed moderate to high reliability across cultural groups (extraversion: .60 for European Americans, .67 for Hong Kong Chinese; competence: .90 for European Americans, .90 for Hong Kong Chinese).

Actual and ideal affect. We used the same measure described above. The HAP aggregate included excited, elated, euphoric, and enthusiastic (α for ideal HAP: .79 for European Americans, .80 for Hong Kong Chinese; α for actual HAP: .82 for European Americans, .81 for Hong Kong Chinese). The LAP aggregate included calm, peaceful, serene, and relaxed (α for ideal LAP: .73 for European Americans, .81 for Hong Kong Chinese; α for actual LAP: .83 for European Americans, .75 for Hong Kong Chinese).

Demographics. Participants reported their age, gender, ethnicity, year in school, place of birth, parents' and grandparents' place of birth, and languages spoken with family and friends.

Procedure. Participants completed an online study on "perceptions of internet profiles." Participants viewed each target's profile, rated each target, and then completed the AVI and demographic questionnaires.

Study 2 Data Analysis and Results

Hypothesis 1: Do European Americans rate excited (vs. calm) faces as more extraverted than Hong Kong Chinese?

Means and standard deviations are presented in Table 2. To test our hypotheses, we conducted 2 (Judge Culture [European Amer-

ican, Hong Kong Chinese]) \times 2 (Target Expression [excited, calm]) \times 2 (Target Sex [male, female]) \times 2 (Target Race [White, Asian]) repeated-measures ANOVAs. Judge Culture was treated as a between-subjects factor; the other factors were treated as within subjects factors.

Extraversion. Analyses revealed a significant main effect of Target Expression, $F(1, 154) = 91.96, p < .001, \eta_p^2 = .37$. Excited faces ($M = 3.46, SE = .04$) were rated as more extraverted than calm faces ($M = 3.07, SE = .04$), $p < .001$, 95% CI for difference [.31, .47].

However, as predicted and consistent with Study 1 findings, this main effect was qualified by a significant Judge Culture \times Target Expression interaction, $F(1, 154) = 11.71, p = .001, \eta_p^2 = .07$. Consistent with Studies 1a and 1b, pairwise comparisons revealed that European Americans rated excited faces as more extraverted ($M = 3.58, SE = .06$) than did Hong Kong Chinese ($M = 3.34, SE = .05$), $p = .002$, 95% CI for difference = [.09, .39]. Consistent with Study 1b, the cultural groups did not differ in their extraversion judgments of calm faces (European American: $M = 3.05, SE = .06$; Hong Kong Chinese: $M = 3.09, SE = .05$), $p = .62$, 95% CI for difference = [-.18, .11]).

Within groups, European Americans rated excited faces as more extraverted than calm faces, $p < .001$, 95% CI for difference = [.40, .65]. Similarly, Hong Kong Chinese judged excited faces as more extraverted than calm faces, $p < .001$, 95% CI for difference = [.15, .35]. As in Study 1, however, the difference in extraversion judgments of excited (vs. calm) targets was greater for European Americans ($M = .52, SE = .07$) than for Hong Kong Chinese ($M = .25, SE = .05$), $t(154) = 3.42, p = .001$, 95% CI for difference = [.12, .44], Cohen's $d = .55$. These findings did not interact with target race or target sex ($ps > .14$).

Competence. We conducted similar analyses on judgments of competence. There was a significant main effect of Judge Culture, $F(1, 154) = 37.23, p < .001, \eta_p^2 = .20$, such that European Americans rated targets overall as more competent ($M = 3.45, SE = .05$) than did Hong Kong Chinese ($M = 3.03, SE = .04$), $p < .001$, 95% CI for difference = [.28, .55]. However, there was no significant main effect of Target Expression, $F(1, 154) = 1.31, p = .25, \eta_p^2 = .01$, and no significant Judge Culture \times Target Expression interaction, $F(1, 154) = .04, p = .84, \eta_p^2 < .001$.

In summary, in a more realistic context, European Americans again rated excited targets as more extraverted than did Hong Kong Chinese. There were no differences in extraversion judgments of calm targets. This pattern of results did not emerge for competence judgments.

Hypothesis 2: Are cultural differences in extraversion judgments of excited targets mediated by ideal HAP?

⁶ Filler items included how pleasant, likable, neurotic, and physically attractive the target was, how enjoyable it would be being the target's friend, and how successful the target would be at leading others and motivating others. Trustworthiness was included but because it loaded equally on extraversion and competence factors, we treated it as a filler item. We also included one additional item that loaded on the competence factor: successful. As shown in [online supplementary materials](#), Section 6, the results were the same as those reported in the body of this article when this item was included in the competence aggregate.

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Table 2
Means (and Standard Deviations) of Social Judgments of Excited and Calm Targets for Study 2 (Facebook Profiles)

Social judgment	European Americans (<i>n</i> = 61)		Hong Kong Chinese (<i>n</i> = 95)	
	Excited	Calm	Excited	Calm
Extraversion	3.58 (.45)	3.05 (.45)	3.34 (.47)	3.09 (.46)
Competence	3.47 (.48)	3.42 (.50)	3.04 (.45)	3.01 (.46)

As in Study 1a, pairwise comparisons revealed that European Americans valued HAP ($M = .55$, $SE = .05$) more than Hong Kong Chinese did ($M = .40$, $SE = .04$), $p = .04$, 95% CI for difference = [.01, .28], controlling for actual HAP. There were, however, no significant cultural differences in ideal LAP, $p = .45$, 95% CI for difference = [−.09, .21] (European American: $M = .86$, $SE = .06$; Hong Kong Chinese: $M = .81$, $SE = .05$), controlling for actual LAP.

To examine whether cultural differences in extraversion judgments of excited faces were mediated by ideal HAP, we ran a mediation model. Extraversion judgments of excited faces were entered as the dependent variable, Judge Culture (European American = 1, Hong Kong Chinese = −1) as the independent variable, and raw ideal HAP as the mediator controlling for raw actual HAP. Again, we used raw scores because ipsatized scores restrict variance in correlational analyses.

Judge Culture significantly predicted ideal HAP, $B = .15$, $SE = .06$, $t = 2.70$, $p = .01$, 95% CI [.04, .26], indicating that European Americans valued HAP more than Hong Kong Chinese did. Ideal HAP significantly predicted extraversion judgments, $B = .15$, $SE = .06$, $t = 2.65$, $p = .01$, 95% CI [.04, .27]: the more participants valued HAP, the more they judged excited faces as extraverted. Judge Culture also predicted extraversion judgments of excited faces, $B = .09$, $SE = .04$, $t = 2.46$, $p = .02$, 95% CI [.02, .16], such that European Americans rated excited faces as more extraverted than did Hong Kong Chinese. This relationship was no longer significant after ideal HAP was entered in the model (Model Fit: $F(2, 153) = 46.80$, $p < .001$, $R^2 = .36$), $B = .07$, $SE = .04$, $t = 1.80$, $p = .07$, 95% CI [−.01, .14]. Furthermore, the indirect effect through ideal HAP was significant, indirect effect = .02, $SE = .01$, 95% CI [.01, .05], supporting the prediction that cultural differences in extraversion judgments of the excited target were mediated by ideal HAP. Actual HAP was not significantly associated with extraversion judgments, $B = .09$, $SE = .08$, $t = 1.16$, $p = .25$, 95% CI [−.06, .25]. Thus, as predicted, European Americans rated excited targets as more extraverted compared with their Hong Kong Chinese counterparts, in part because they valued HAP more.

Study 2 Discussion

As predicted, in the context of viewing Facebook profiles, European Americans rated excited targets as more extraverted than did Hong Kong Chinese, and these differences were mediated by cultural differences in ideal HAP. There were no cultural differences, however, in extraversion judgments of calm targets. Judgments of competence did not follow this pattern, again suggesting that ideal affect match may be particularly important for judgments of affiliation.

However, do differences in affiliative judgments matter in real world situations? To answer this question, we conducted a final study in which we examined the links between participants' affiliation, dominance, and competence judgments of excited, calm and neutral job applicants, and their likelihood of hiring them for an internship in the United States and Hong Kong. We standardized applicants' levels of education, experience, and training to ensure that the judgments were related to applicants' emotional facial expressions rather than their qualifications.

Few studies have examined whether social judgments of extraversion, agreeableness, dominance, and competence have similar hiring

consequences in the United States and Hong Kong, although evidence suggests that these traits are related to job performance in the United States. For instance, a meta-analysis of 35–45 studies demonstrated that employees' agreeableness ($r = .11$) and extraversion ($r = .09$) were associated with improved job performance across the fields of sales, customer service, management, and skilled/semiskilled labor (Hurtz & Donovan, 2000). These relationships, however, may also vary depending on one's occupation: for example, extraversion best predicts performance in sales ($r = .15$), while agreeableness best predicts performance in customer service ($r = .17$; Hurtz & Donovan, 2000). Although dominance is sometimes classified as a subdimension of extraversion, it is also independently associated with job performance (e.g., Motowidlo & Van Scotter, 1994) when it is distinguished from extraversion (Vinchur, Shippmann, Switzer, & Roth, 1998). Last, but not least, employees' competence is one of the best predictors of their performance across industries (Hunter & Hunter, 1984; Hunter & Schmidt, 1996; Schmidt & Hunter, 2004; Schmidt, Ones, & Hunter, 1992).

Given the importance of extraversion, agreeableness, dominance, and competence for job performance, it should not be surprising that employers value these traits and weigh them heavily when hiring. For instance, in 1,000 occupations ranging from service workers, salespersons, and managers to teachers, lawyers, and executives, employers report valuing job skills associated with extraversion such as persuasion, negotiating, and giving instructions (Sackett & Walmsley, 2014, obtained through Occupational Information Networks, <https://www.onetcenter.org/>; based on the taxonomy provided by Hough & Ones, 2001). Indeed, in the hospitality industry, managers weigh applicants' extraversion as much as they do their abilities to learn and solve problems when evaluating applicants, and managers are more likely to hire applicants if they are extraverted (Tews, Stafford, & Tracey, 2011). Similarly, in at least 28% of interviews, employers assessed social skills associated with agreeableness (relating to, working with, and cooperating with others; Huffcutt, Conway, Roth, & Stone, 2001; Sackett & Walmsley, 2014), and 96% of personnel officers rated actors who were trained to be assertive/dominant as more likable and hireable than those who were trained to be non-assertive (Gallois, Callan, & Palmer, 1992). Moreover, even though employees' competence is the best predictor of their performance, it is often weighed less heavily in hiring than employees' affiliative traits, particularly in service industries (Tews et al., 2011; Tews, Stafford, & Zhu, 2009).

One limitation of the above work, however, is that most of these studies were conducted in the United States. This may be why in these studies, the authors often equate extraversion with enthusiasm and other HAP (Ashton & Lee, 2008; Bourdage, Wiltshire, & Lee, 2015; Tews et al., 2011). However, as we demonstrated in Studies 1 and 2, in cultures that place less of an emphasis on HAP like Hong Kong, extraversion is less strongly tied to HAP.

Therefore, to examine whether our findings generalized to a job setting, participants watched videos of excited, calm, and neutral job applicants, made social judgments, and then indicated whom they would hire for a consumer resources internship, which involved working with clients and managing projects. Using videos allowed us to examine whether our findings generalized to more dynamic stimuli. As above, we predicted cultural differences in extraversion and agreeableness judgments of excited versus calm

applicants. We did not expect cultural differences in judgments of competence or dominance to emerge given previous results.

Study 3: Judgments of Excited and Calm Job Applicants

We hypothesized that as in Studies 1 and 2, (a) European Americans would rate excited applicants as more extraverted and agreeable than would Hong Kong Chinese, and (b) this cultural difference would result in European Americans being more likely to hire the excited applicant compared with Hong Kong Chinese. We also hypothesized that (c) cultural differences in extraversion and agreeableness judgments of the excited applicant and applicant choice would be mediated by cultural differences in ideal HAP.

Method

Participants. Participants were recruited online through psychology paid subject pool listservs and alumni listservs to participate in the 30-min online study. As in the previous studies, all participants were prescreened for cultural background (i.e., European American or East Asian), age (i.e., 18–50 years old), and education (i.e., current college student or higher) to increase homogeneity within groups. Thirty participants (28 Hong Kong Chinese, 2 European American) were excluded because they completed the prescreen questionnaire more than once and would not have been eligible for the study based on their first prescreen results. The final sample consisted of 98 European Americans (78.6% female; 58.2% were 18–29 years old, 29.6% were 30–39 years old, 12.2% were 40–49 years old) and 100 Hong Kong Chinese (72% female; 72% were 18–29 years old, 25% were 30–39 years old, 3% were 40–49 years old) participants. Consistent with local norms around compensation, European Americans received a \$6 Amazon gift card and Hong Kong participants received a \$50HKD (\$6.40USD) Starbucks gift card.

As in previous studies, using the program G*Power, a priori power analyses indicate that an 80% chance of detecting a significant medium effect ($\eta^2 = .06$, $f = .25$, $f^2 = .06$) at $\alpha = .05$ between the two cultural groups would require a total sample size of 28 (for a 2×3 repeated measures ANOVA), and 186 (for a fixed model multiple regression analysis with three total predictors). Based on these analyses, our sample of 198 yielded sufficient power to test all of our hypotheses.

Stimuli. Participants watched three videos (one excited, one calm, and one neutral) of job applicants from the same culture as the participants (i.e., European Americans watched European Americans; Hong Kong Chinese watched Chinese; see Figure 2). Links to the videos are provided at http://stanford.edu/~ylzhang/study_3_stimuli/. In the videos, applicants described their qualifications for the job. Applicants' descriptions were based on the actual responses of participants from another study who were instructed to apply for an internship (Bencharit et al., in press). Applicants were similar in their qualifications (academic, work, and extracurricular experiences). Videos for excited, calm, and neutral applicants were similar in length and word count across cultures (Time: Excited: $M = 79$ s, $SD = 12.73$, Calm: $M = 80$ s, $SD = 4.24$, Neutral: $M = 79$ s, $SD = 21.21$; Word count: Excited: $M = 285.50$, $SD = 116.67$, Calm: $M = 287$, $SD = 114.55$, Neutral: $M = 281$, $SD = 111.72$), but European American videos

were longer than Hong Kong Chinese videos because of language differences (European American: Time: $M = 70.33$, $SD = 6.51$, Word Count: $M = 203.67$, $SD = 2.08$; Hong Kong Chinese: Time: $M = 88.33$, $SD = 5.51$, Word Count: $M = 365.33$, $SD = 4.62$). Videos differed in emotional expression, which was conveyed through facial expression (open vs. closed vs. no smiles), vocal tone (speaking faster and more emphatically vs. speaking slower and more melodically vs. neutral tone), body movement (more head movements vs. fewer head movements vs. even fewer head movements), and specific word use (excited applicants' words were 3.63% HAP [e.g., excited, passionate], 0% LAP [e.g., calm, relaxed], 1.04% Positive [e.g., content, glad]; calm applicants' words were 0% HAP, 3.88% LAP, 1.46% Positive; neutral applicants used no HAP, LAP, or positive words).

Because of time constraints, we limited the number of applicants that participants viewed by presenting participants with applicants of the same gender. We focused on male applicants because prior research demonstrates a gender bias in favor of male applicants in hiring decisions, and we wanted to examine whether ideal affect match mattered even among preferred applicants (Coffman, Exley, & Niederle, 2017; Isaac, Lee, & Carnes, 2009). We recruited nine European American and five Hong Kong Chinese male university students (age 18–21) to read the descriptions in exciting, calming, and neutral ways while being recorded. Actors were paid \$50 each. To match the native language of the participants viewing the stimuli, European American videos were recorded in English, and Hong Kong Chinese videos were recorded in Cantonese. Actors were similar in weight/build, wore the same white button-up shirt, had short hair, and had no visible tattoos or piercings. Of those videos, we chose six (three European American, three Hong Kong Chinese) that best reflected the targeted emotional expression (see online supplementary materials, Section 4, for emotion ratings of videos) and that were the most closely matched across cultural groups.

Measures.

Social judgments. Using a scale from 1 = *not at all* to 5 = *extremely*, participants rated how friendly, extraverted, agreeable, warm, dominant, assertive, intelligent, competent, educated, skilled, and experienced targets were, as well as a number of filler items.⁷ Ratings of education, experience, and skill were used to ensure that our targets were perceived as equivalent in qualifications. As in previous studies, we created four aggregates: *extraversion* (extraverted, friendly), *agreeableness* (agreeable, warm), *dominant* (dominant, assertive), and *competence* (intelligent, competent) based on theoretical considerations and factor analyses (see online supplementary materials, Section 5). The aggregates showed moderate to high reliability across targets for both cultural groups (extraversion: .79 for European Americans, .62 for Hong Kong Chinese; agreeableness: .60 for European Americans, .71 for

⁷ The filler items were target's physical attractiveness, perceived age of target, perceived similarity of the target to the participant, and how much participants liked the target. We also included seven other items that loaded onto the agreeableness factor (trustworthy, honest, authentic, accommodating, humble, virtuous, and respectful) and two other items that loaded onto the extraversion factor (charismatic, confident). As shown in online supplementary materials, Section 6, analyses with these items added to the agreeableness and extraversion aggregates showed the same pattern of results as the two-item agreeableness and extraversion aggregates reported in the article.

Hong Kong Chinese; dominance: .79 for European Americans, .73 for Hong Kong Chinese; competence: .77 for European Americans, .74 for Hong Kong Chinese).

Actual and ideal affect. To assess actual and ideal HAP and LAP, participants completed the Affect Valuation Index (AVI; Tsai et al., 2006), as in Studies 1 and 2. The HAP aggregate was comprised of enthusiastic, excited, energetic, and elated (α for ideal HAP: .76 for European Americans, .78 for Hong Kong Chinese; α for actual HAP: .86 for European Americans, .74 for Hong Kong Chinese). The LAP aggregate was comprised of calm, peaceful, serene, and relaxed (α for ideal LAP: .84 for European Americans, .79 for Hong Kong Chinese; α for actual LAP: .82 for European Americans, .79 for Hong Kong Chinese).

Demographics. Participants reported their orientation to their culture of origin (i.e., American or Chinese). European Americans ($M = 3.94$, $SD = .84$) were highly oriented to American culture; Hong Kong Chinese were moderately oriented to Chinese culture ($M = 3.02$, $SD = .82$). There were no cultural differences in whether participants were employed for pay (79.2% European American, 85% Hong Kong Chinese), $\chi^2(1, N = 196) = 1.14$, $p = .29$. Although Hong Kong Chinese participants were slightly lower in socioeconomic status, these differences were not statistically significant (1 = lower income, 2 = lower middle income, 3 = middle income, 4 = upper middle income, 5 = upper income; European Americans: $M = 3.20$, $SD = 1.14$; Hong Kong Chinese: $M = 2.90$, $SD = 1.24$), $t(196) = 1.79$, $p = .07$, 95% CI for difference = $[-.03, .64]$.

Procedure. All participants volunteered for a paid online study on “judging job applicants” and completed a prescreening questionnaire. Participants were asked to imagine that they were the hiring manager for a consumer resources internship. They saw an advertisement for the position, followed by a video introduction from each of the three applicants in counterbalanced order. Participants rated each applicant after watching the applicant’s video. After rating all of the applicants, participants chose the one they would hire, completed the AVI and demographic questions, and were debriefed.

Study 3 Data Analysis and Results

Stimulus check. Before testing our hypotheses, we wanted to ensure that the excited, calm, and neutral applicants were rated similarly in terms of experience, education, and skill. Therefore, we aggregated these items ($\alpha = .82$ for European Americans, .78 for Hong Kong Chinese), and examined whether there were applicant differences using a 2 (Judge Culture [European American, Hong Kong Chinese]) \times 3 (Target Expression [excited, calm, neutral]) repeated measures analysis of variance. Judge Culture was treated as a between-subjects factor, and Target Expression was treated as a within-subject factor. There was a main effect of Judge Culture, $F(1, 196) = 5.55$, $p = .02$, $\eta_p^2 = .03$, with European Americans ($M = 3.46$, $SE = .06$) rating all three applicants as more experienced than Hong Kong Chinese ($M = 3.27$, $SE = .06$), 95% CI for difference = $[.03, .34]$. However, as intended, there was no significant main effect of Target Expression, $F(2, 392) = 1.75$, $p = .18$, $\eta_p^2 = .01$, and no significant Judge Culture \times Target Expression interaction, $F(2, 392) = .82$, $p = .44$, $\eta_p^2 = .004$. Thus, within each cultural group, excited ($M = 3.37$, $SE = .05$), calm ($M = 3.41$, $SE = .05$), and neutral ($M = 3.31$, $SE = .05$) applicants

were similar in how experienced, educated, and skilled they appeared. Thus, any observed differences in social judgments of the applicants were not due to differences in the qualifications of the applicants.

Hypothesis 1: Do European Americans rate the excited applicant as more extraverted and agreeable than Hong Kong Chinese?

To examine whether we would replicate our findings from Studies 1–2, we conducted a 2 (Judge Culture [European American, Hong Kong Chinese]) \times 3 (Target Expression [excited, calm, neutral]) repeated measures ANOVA on each social judgment (extraversion, agreeableness, dominance, and competence); Judge Culture was treated as a between-subjects factor, and Target Expression was treated as a within-subject factor. Means and standard deviations are presented in Table 3.

Extraversion. There was a significant main effect of Target Expression, $F(1.96, 383.61) = 149.04$, $p < .001$, $\eta_p^2 = .43$. Excited applicants ($M = 3.97$, $SE = .05$) were rated as the most extraverted, followed by calm applicants ($M = 3.37$, $SE = .05$) and then neutral applicants ($M = 2.81$, $SE = .05$); $p < .001$ for all pairwise comparisons. The main effect of Judge Culture was not significant, $F(1, 196) = .40$, $p = .53$, $\eta_p^2 = .002$. However, as predicted, the Judge Culture \times Target Expression interaction was significant, $F(1.96, 383.61) = 22.87$, $p < .001$, $\eta_p^2 = .10$.

As predicted and consistent with Studies 1 and 2, pairwise comparisons revealed that European Americans rated the excited applicant ($M = 4.16$, $SE = .07$) as more extraverted than did Hong Kong Chinese ($M = 3.78$, $SE = .07$), $p < .001$, 95% CI for difference = $[.18, .59]$. Consistent with Studies 1b and 2, there were no differences between European Americans and Hong Kong Chinese in extraversion judgments of the calm applicant (European American: $M = 3.37$, $SE = .07$; Hong Kong Chinese: $M = 3.37$, $SE = .07$), $p = .94$, 95% CI for difference = $[-.20, .21]$. However, Hong Kong Chinese rated the neutral applicant as more extraverted than did European Americans (European American: $M = 2.55$, $SE = .08$; Hong Kong Chinese: $M = 3.07$, $SE = .08$), $p < .001$, 95% CI for difference = $[.31, .74]$.

Within cultures, European Americans and Hong Kong Chinese both rated the excited applicant as more extraverted than the calm applicant, and the calm applicant as more extraverted than the neutral applicant; all $ps \leq .001$. However, as in the three previous studies, the difference between the excited and calm applicants was greater for European Americans than for Hong Kong Chinese (European American: $M = .79$, $SE = .11$; Hong Kong Chinese: $M = .42$, $SE = .08$), $t(183.69) = 2.75$, $p < .01$, 95% CI for difference = $[.11, .65]$, Cohen’s $d = .39$.

Agreeableness. There was a significant main effect of Target Expression, $F(2, 392) = 91.71$, $p < .001$, $\eta_p^2 = .32$. Neutral applicants ($M = 2.84$, $SE = .05$) were rated as less agreeable than excited ($M = 3.56$, $SE = .05$), $p < .001$, 95% CI for difference = $[-.84, -.59]$, and calm applicants ($M = 3.57$, $SE = .05$), $p < .001$, 95% CI for difference = $[-.84, -.61]$, who did not differ from each other, $p = .85$. The main effect of Judge Culture, $F(1, 196) = .54$, $p = .47$, $\eta_p^2 = .003$, was not significant, but the Judge Culture \times Target Expression interaction was, $F(2, 392) = 16.61$, $p < .001$, $\eta_p^2 = .08$.

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Table 3
Means (and Standard Deviations) of Social Judgments of Excited, Calm, and Neutral Applicants for Study 3 (Videos of Job Applicants) by Judge Culture

Social judgments	European American ($n = 98$)			Hong Kong Chinese ($n = 100$)		
	Excited	Calm	Neutral	Excited	Calm	Neutral
Extraversion	4.16 (.76)	3.37 (.78)	2.55 (.80)	3.78 (.71)	3.37 (.65)	3.07 (.70)
Agreeableness	3.73 (.78)	3.64 (.68)	2.67 (.68)	3.38 (.69)	3.49 (.75)	3.01 (.79)
Dominance	3.45 (.69)	2.59 (.92)	2.37 (.88)	3.20 (.72)	3.00 (.73)	3.17 (.75)
Competence	3.64 (.73)	3.66 (.72)	3.57 (.70)	3.35 (.68)	3.31 (.71)	3.31 (.74)

As predicted, European Americans ($M = 3.73$, $SE = .07$) rated the excited applicant as more agreeable than did Hong Kong Chinese ($M = 3.38$, $SE = .07$), $p = .001$, 95% CI for difference = [.14, .56]. There was not a significant cultural difference in agreeableness judgments of the calm applicant (European American: $M = 3.64$, $SE = .07$; Hong Kong Chinese: $M = 3.49$, $SE = .07$), $p = .14$. However, European Americans ($M = 2.67$, $SE = .07$) rated the neutral applicant as less agreeable than did Hong Kong Chinese ($M = 3.01$, $SE = .07$), $p = .002$, 95% CI for difference = [-.54, -.13].

Within groups, European Americans rated the excited applicant, $p < .001$, 95% CI for difference = [.88, 1.24], and the calm applicant, $p < .001$, 95% CI for difference = [.80, 1.14], as more agreeable than the neutral applicant, but not different from each other, $p = .31$. Hong Kong Chinese showed the same pattern of results: they rated the excited applicant, $p < .001$, 95% CI for difference = [.19, .55], and the calm applicant, $p < .001$, 95% CI for difference = [.32, .65], as more agreeable than the neutral applicant, and not different from each other, $p = .19$. Although the difference in agreeableness judgments between excited and calm applicants was greater for European Americans than Hong Kong Chinese, this was only approached significance. (European American: $M = .09$, $SE = .08$; Hong Kong Chinese: $M = -.11$, $SE = .08$), $t(196) = 1.65$, $p = .10$, 95% CI for difference = [-.04, .43], Cohen's $d = .23$. However, the difference between agreeableness judgments of the excited vs. neutral applicant was significantly greater for European Americans than Hong Kong Chinese (European American: $M = 1.06$, $SE = .10$; Hong Kong Chinese: $M = .37$, $SE = .09$), $t(196) = 5.30$, $p < .001$, 95% CI for difference = [.43, .94], Cohen's $d = .75$.

Dominance. There was a significant main effect of Target Expression, $F(2, 392) = 47.92$, $p < .001$, $\eta_p^2 = .20$. Participants judged excited applicants ($M = 3.33$, $SE = .05$) as more dominant than calm applicants ($M = 2.79$, $SE = .06$), $p < .001$, 95% CI for difference = [.41, .66], and neutral applicants ($M = 2.77$, $SE = .06$), $p < .001$, 95% CI for difference = [.43, .68]. There was no difference in dominance judgments of the calm and neutral applicants, $p = .73$. There was also a significant main effect of Judge Culture, $F(1, 196) = 14.62$, $p < .001$, $\eta_p^2 = .07$, with Hong Kong Chinese ($M = 3.12$, $SE = .06$) rating all applicants higher on dominance than European Americans ($M = 2.80$, $SE = .06$), 95% CI for difference = [.15, .48].

Unlike Studies 1a and 1b, however, these main effects were qualified by a significant Judge Culture \times Target Expression interaction, $F(2, 392) = 34.26$, $p < .001$, $\eta_p^2 = .15$. European Americans ($M = 3.45$, $SE = .07$) rated the excited applicant as more dominant than did Hong Kong Chinese ($M = 3.20$, $SE =$

.07), $p = .01$, 95% CI for difference = [.06, .45], while Hong Kong Chinese rated the calm ($M = 3.00$, $SE = .08$), $p = .001$, 95% CI for difference = [.18, .65] and neutral ($M = 3.17$, $SE = .08$), $p < .001$, 95% CI for difference = [.57, 1.03], applicants as more dominant than did European Americans (Calm: $M = 2.59$, $SE = .08$; Neutral: $M = 2.37$, $SE = .08$).

Within cultural groups, pairwise comparisons revealed that European Americans rated the excited applicant as more dominant than the calm applicant, $p < .001$, 95% CI for difference = [.69, 1.05], and the calm applicant as more dominant than the neutral applicant, $p = .02$, 95% CI for difference = [.03, .40]. Hong Kong Chinese rated the excited applicant as more dominant than the calm applicant, $p = .03$, 95% CI for difference = [.02, .38], but their dominance judgments of the calm applicant, $p = .07$, 95% CI for difference = [-.35, .01] and of the excited applicant, $p = .73$, 95% CI for difference = [-.20, .14] did not differ from those of the neutral applicant.

Competence. There were no differences in competence judgments based on Target Expression, $F(2, 392) = .46$, $p = .63$, $\eta_p^2 = .002$. There was a main effect of Judge Culture, $F(1, 196) = 15.30$, $p < .001$, $\eta_p^2 = .07$, with European Americans ($M = 3.62$, $SE = .06$) rating all applicants as more competent than Hong Kong Chinese ($M = 3.32$, $SE = .05$), $p < .001$, 95% CI for difference = [.15, .45], which is consistent with their ratings of the applicants as more experienced, educated, and skilled. However, the Target Expression \times Judge Culture interaction was not significant, $F(2, 392) = .29$, $p = .75$, $\eta_p^2 = .001$.

In summary, as predicted, European Americans rated the excited applicant as more extraverted and agreeable than did Hong Kong Chinese. This pattern of results also emerged for the first time in judgments of dominance, perhaps because of the hiring context, or the dynamic nature of the stimuli. Next we examined whether there was a cultural difference in choice of the excited applicant, and whether this difference was due to cultural differences in extraversion, agreeableness, and dominance judgments of the excited applicant.

Hypothesis 2: Are European Americans more likely to hire the excited applicant than Hong Kong Chinese, and is this due to cultural differences in extraversion, agreeableness, and dominance judgments of the excited applicant?

To examine whether there were cultural differences in applicant choice, we ran a chi-square test of independence between Judge Culture (European American, Hong Kong Chinese) and Applicant Choice (excited, calm, neutral). As predicted, analyses revealed a significant association, $\chi^2(2, N = 198) = 7.87$, $p = .02$, Cramer's

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$V = .20$. As shown in Figure 4, whereas 46.9% of European Americans chose the excited applicant (adjusted standardized residual = 2.6), only 29% of Hong Kong Chinese did (adjusted standardized residual = -2.6). 37.8% of European Americans (adjusted standardized residual = -.9) and 44% of Hong Kong Chinese (adjusted standardized residual = .9) chose the calm applicant. 15.3% of European Americans (adjusted standardized residual = -2.0) and 27% of Hong Kong Chinese (adjusted standardized residual = 2.0) chose the neutral applicant. Based on these adjusted standardized residuals, the largest cultural difference emerged for choice of the excited applicant, followed by choice of the neutral applicant. Logistic regression analyses (Judge Culture: -1 = Hong Kong Chinese, 1 = European American; Choice of Excited Applicant: 0 = Did not hire, 1 = Hired) confirmed that, as predicted, European Americans were twice as likely to hire the excited applicant than were Hong Kong Chinese (Model Fit: $\chi^2(1) = 6.81$, $-2 \text{ Log Likelihood} = 16.72$, $p < .01$, Nagelkerke pseudo $R^2 = .05$), $B = .77$, $SE = .30$, Wald = 6.67, $p = .01$, Odds Ratio = 2.17, 95% CI [1.21, 3.89]. In addition, European Americans were half as likely to hire the neutral applicant than were Hong Kong Chinese (Model Fit: $\chi^2(1) = 4.10$, $-2 \text{ Log Likelihood} = 13.32$, $p = .04$, Nagelkerke pseudo $R^2 = .03$), $B = -.72$, $SE = .36$, Wald = 3.96, $p = .047$, Odds Ratio = .49, 95% CI [.24, .99].

To test whether judgments of extraversion, agreeableness, and dominance mediated these effects, we used a multiple parallel mediation model (Model 4, Process; Hayes, 2012, 2013) that defined Judge Culture (-1 = Hong Kong, 1 = European American) as the independent variable; extraversion, agreeableness, and dominance judgments of the excited applicant as parallel multiple mediators; and choice of the excited applicant (vs. the other two applicants) as the dependent variable. Results are based on 5,000 bias-corrected bootstrapped resamples. As reported above, there was a significant total effect of Judge Culture on choice of the excited applicant, $B = .39$, $SE = .15$, $Z = 2.58$, $p = .01$, Wald = 6.67, with European Americans choosing the excited applicant more than Hong Kong Chinese. In addition, Judge Culture significantly predicted judgments of extraversion, $B = .19$, $SE = .05$, $t = 3.67$, $p < .001$, 95% CI [.09, .29], agreeableness, $B = .17$,

$SE = .05$, $t = 3.35$, $p = .001$, 95% CI [.07, .28], and dominance $B = .13$, $SE = .05$, $t = 2.53$, $p = .01$, 95% CI [.03, .23], indicating that European Americans rated the excited applicant as more extraverted, agreeable, and dominant than did Hong Kong Chinese (as reported above).

However, while agreeableness, $p = .37$, 95% CI [-.30, .83], and dominance, $p = .61$, 95% CI [-.62, .36], judgments did not predict choice of the excited applicant, extraversion judgments did: the higher the excited applicant was rated on extraversion, the more likely he was to be hired, $B = 1.13$, $SE = .33$, $Z = 3.42$, $p < .001$, 95% CI [.48, 1.78]. The direct effect of Judge Culture on choice of the excited applicant was no longer significant after parsing out the indirect effects of extraversion, agreeableness, and dominance judgments of the excited applicant (Model fit: $-2 \text{ log likelihood} = 227.56$, $p < .001$, McFadden's $R^2 = .13$): $B = .18$, $SE = .17$, $Z = 1.12$, $p = .26$, 95% CI [-.14, .51]. Importantly, the indirect effect through extraversion judgments was significant Effect = .22, $SE = .09$, 95% CI [.08, .45], while the indirect effects through agreeableness judgments, Effect = .05, $SE = .05$, 95% CI [-.05, .18], and dominance judgments were not, Effect = -.02, $SE = .03$, 95% CI [-.10, .04]. Thus, extraversion judgments fully mediated cultural differences in choice of the excited applicant.

Hypothesis 3: Does ideal HAP predict judgments of extraversion and choice of the excited applicant?

As in Study 1b, there were no cultural differences in ideal HAP ($p = .49$, 95% CI for Difference = [-.16, .08]) between European Americans ($M = .82$, $SE = .04$) and Hong Kong Chinese ($M = .77$, $SE = .04$). Thus, we collapsed across cultural groups and examined the predicted link between ideal HAP and extraversion judgments of the excited applicant and choice of the excited applicant.

We used a mediation model (Model 4, Process) that defined ideal HAP (raw scores) as the independent variable, judgments of extraversion as the mediator, and choice of the excited applicant (vs. the other two applicants) as the dependent variable, controlling for actual HAP. Results are based on 5,000 bias-corrected bootstrapped resamples. There was not a significant effect of ideal HAP on choice, $B = -.02$, $SE = .23$, $Z = -.1$, $p = .92$, Wald = .01. However, we found a significant indirect effect of ideal HAP on choice through extraversion judgments, Effect = .38, $SE = .17$, 95% CI [.10, .77]. Consistent with our predictions and with previous results, ideal HAP predicted judgments of extraversion, $B = .26$, $SE = .08$, $t = 3.12$, $p = .002$, 95% CI [.10, .43], such that participants who valued HAP more rated the excited applicant as more extraverted. Actual HAP did not predict judgments of extraversion, $p = .40$, 95% CI [-.23, .09]. Moreover, extraversion judgments predicted choice of the excited applicant, $B = 1.43$, $SE = .28$, $Z = 5.15$, $p < .001$, 95% CI [.88, 1.97], such that the higher the excited applicant was rated on extraversion, the more likely he was to be hired. The direct effect of ideal HAP on choice remained not significant after including extraversion judgments in the model (Model fit: $-2 \text{ log likelihood} = 227.35$, $p < .001$, McFadden's $R^2 = .13$): $B = -.43$, $SE = .27$, $Z = -1.58$, $p = .11$, 95% CI [-.97, .11]. Thus, ideal HAP did not directly influence choice of the excited applicant; instead, participants' ideal HAP predicted their extraversion judgments of the excited

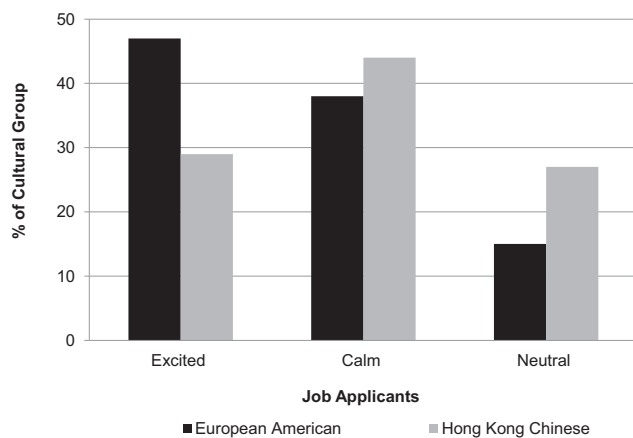


Figure 4. Percentage of participants that hired excited, calm, and neutral applicants by cultural group in Study 3.

applicant, which in turn predicted their likelihood of choosing the excited applicant.

While judgments of agreeableness and dominance did not predict choice of the excited applicant, these social judgments may be influenced by ideal HAP over and above the effects of Judge Culture reported above. Thus, for each social judgment, we ran a stepwise multiple regression analysis in which we defined Judge Culture ($-1 =$ Hong Kong Chinese, $1 =$ European American) as the independent variable in the first model, and then added ideal HAP, controlling for actual HAP, as independent variable in the second model. For agreeableness, the first model, adjusted $R^2 = .05$, $F(1, 196) = 11.22$, $p = .001$, and the second model, adjusted $R^2 = .09$, $F(3, 194) = 7.29$, $p < .001$, fit the data well, and the second model significantly improved model fit, $\Delta R^2 = .05$, $\Delta F(2, 194) = 5.09$, $p = .01$. As predicted, ideal HAP was positively associated with agreeableness judgments of the excited applicant, $B = .17$, $SE = .08$, $\beta = .15$, $t = 2.06$, $p = .04$, 95% CI [.01, .33], while actual HAP was not, $p = .10$, 95% CI [-.03, .29].

However, similar analyses conducted on dominance judgments of the excited applicant revealed that while the first ($F(1, 196) = 6.42$, $p = .01$, adjusted $R^2 = .03$) and second ($F(3, 194) = 3.74$, $p = .01$, $R^2 = .04$) models were significant, the fit was not significantly improved by the second model, $\Delta R^2 = .02$, $\Delta F(2, 194) = 2.35$, $p = .1$. Moreover, neither ideal HAP, $p = .26$, 95% CI [-.07, .25], nor actual HAP, $p = .17$, 95% CI [-.05, .27], predicted dominance judgments. Thus, ideal HAP predicted agreeableness but not dominance judgments of the excited applicant.

Does ideal affect predict social judgments of the neutral applicant? We also observed unpredicted cultural differences in choice of the neutral applicant. To examine whether extraversion, agreeableness, and dominance judgments (for which cultural differences emerged) predicted choice of the neutral applicant, we ran a similar mediation model in which we defined Judge Culture ($-1 =$ Hong Kong, $1 =$ European American) as the independent variable; judgments of extraversion, agreeableness, and dominance as parallel multiple mediators; and choice of the neutral applicant (vs. the other two applicants) as the dependent variable. As reported above, Judge Culture predicted extraversion, $B = -.26$, $SE = .05$, $t = -4.90$, $p < .001$, 95% CI [-.37, -.16], agreeableness, $B = -.17$, $SE = .05$, $t = -3.22$, $p = .002$, 95% CI [-.27, -.07], and dominance judgments, $B = -.40$, $SE = .06$, $t = -6.87$, $p < .001$, 95% CI = [-.51, -.28], of the neutral applicant, with Hong Kong Chinese rating the neutral applicant as more extraverted, agreeable, and dominant than European Americans.

While there was no significant effect of agreeableness judgments, $p = .32$, 95% CI [-.32, .97], or dominance judgments, $p = .25$, 95% CI [-.24, .92], on choice of the neutral applicant, the higher the neutral applicant was rated on extraversion, the more likely he was to be hired, $B = .64$, $SE = .38$, $Z = 1.66$, $p = .096$, 95% CI [-.12, 1.39]. Indeed, the indirect effect of extraversion judgments was significant, Effect = $-.17$, $SE = .10$, 95% CI [-.40, -.01], while the indirect effects of agreeableness judgments, Effect = $-.06$, $SE = .06$, 95% CI [-.20, .03], and dominance judgments, Effect = $-.14$, $SE = .13$, 95% CI [-.41, .12], were not. The significant total effect of Judge Culture on choice of the neutral applicant, $B = -.36$, $SE = .18$, $Z = -1.99$, $p = .047$, Wald = 3.96, was no longer significant after entering extraversion, agreeableness, and dominance judgments of the neu-

tral applicant in the model (Model fit: $-2 \log$ likelihood = 180.93, $p < .001$, McFadden's $R^2 = .12$), Direct effect: $B = -.05$, $SE = .21$, $Z = -.22$, $p = .83$, 95% CI [-.45, .36]. Thus, similar to the results for excited applicants, extraversion judgments alone mediated cultural differences in choice of the neutral applicant.

To examine whether ideal LAP or ideal HAP predicted choice of neutral applicant, we used a mediation model (Model 4, Process) that defined ideal LAP (or HAP; raw scores) as the independent variable; judgments of extraversion, agreeableness, and dominance as parallel multiple mediators; and choice of the neutral applicant (vs. the other two applicants) as the dependent variable, controlling for actual LAP (or HAP). There were no significant indirect effects of ideal LAP (or HAP) through social judgments (for ideal LAP: extraversion: 95% CI [-.27, .01], agreeableness: 95% CI [-.15, .02], dominance: 95% CI [-.26, .02]; for ideal HAP: extraversion 95% CI [-.18, .11], agreeableness: 95% CI [-.03, .17], dominance: 95% CI [-.10, .14]); no total effect of ideal LAP (or ideal HAP) on choice before including social judgments in the model ($p = .33$ to $.52$), and no significant direct effect of ideal LAP (or ideal HAP) on choice of the neutral applicant after including these variables in the model ($ps = .60$). In summary, neither ideal LAP nor ideal HAP was related to choice of the neutral applicant, or to extraversion, agreeableness, and dominance judgments of the neutral applicant.

Study 3 Discussion

As predicted, European Americans viewed the excited applicant as more extraverted and agreeable than Hong Kong Chinese did, which increased their likelihood of hiring the excited applicant compared with Hong Kong Chinese. Moreover, across the entire sample, the more participants valued HAP, the more likely they were to rate the excited applicant as extraverted and agreeable. Interestingly, ideal HAP was not directly associated with choice of the excited applicant, and instead indirectly affected choice of the excited applicant through extraversion judgments. Although European Americans also viewed the excited applicant as more dominant than did Hong Kong Chinese, this difference was not associated with choice of the excited applicant. Moreover, dominance judgments were not associated with ideal HAP.

Consistent with Studies 1b and 2, there were no differences in extraversion or agreeable judgments of the calm applicant. There were, however, cultural differences in extraversion and agreeable judgments of the neutral applicant. Hong Kong Chinese rated the neutral applicant as more extraverted and agreeable than did European Americans. Moreover, cultural differences in extraversion judgments of the neutral applicant mediated cultural differences in choice of the neutral applicant: Hong Kong Chinese viewed the neutral applicant as more extraverted than did European Americans, which increased their likelihood of choosing him for the internship compared with European Americans. In part this may be because while Hong Kong Chinese rated the calm applicant as more calm than the neutral applicant, they still primarily saw the neutral applicant as calm (see [online supplementary materials](#), Section 4). In summary, this study demonstrates that while extraversion judgments have important implications for hiring decisions in both cultures, extraversion is more strongly associated with excited job applicants in the United States than in Hong Kong.

General Discussion

In four studies conducted in the United States and Hong Kong, we consistently observed cultural differences in the social judgments of excited (vs. calm) smiles, especially those related to affiliation. While members of both cultures rated excited smiles as more extraverted than calm smiles, European Americans consistently rated excited smiles as even *more* extraverted than did Hong Kong Chinese. Although there was less of a distinction between excited and calm smiles in terms of agreeableness, European Americans still overall rated excited smiles as *more* agreeable than did Hong Kong Chinese. As a result, European Americans judged excited targets to be much more affiliative than calm targets compared with Hong Kong Chinese (see **Figure 5** for weighted means across all four studies). These findings held for computer-generated and human, static and dynamic, White and Asian, and male and female faces.

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When cultural differences in ideal HAP emerged in Studies 1a and 2, they mediated cultural differences in extraversion judgments of excited targets. When cultural differences in ideal HAP did not emerge in Studies 1b and 3, ideal HAP still predicted extraversion judgments of the excited targets across the entire sample. Although cultural differences in ideal HAP did not mediate cultural differences in agreeableness judgments in Study 1a, ideal HAP predicted agreeableness judgments across the entire sample in Studies 1b and 3. These findings held after controlling for actual HAP, suggesting that the degree to which people want to feel excited and other HAP predicts their judgments of extraversion and agreeableness above and beyond how much they actually feel HAP on average.

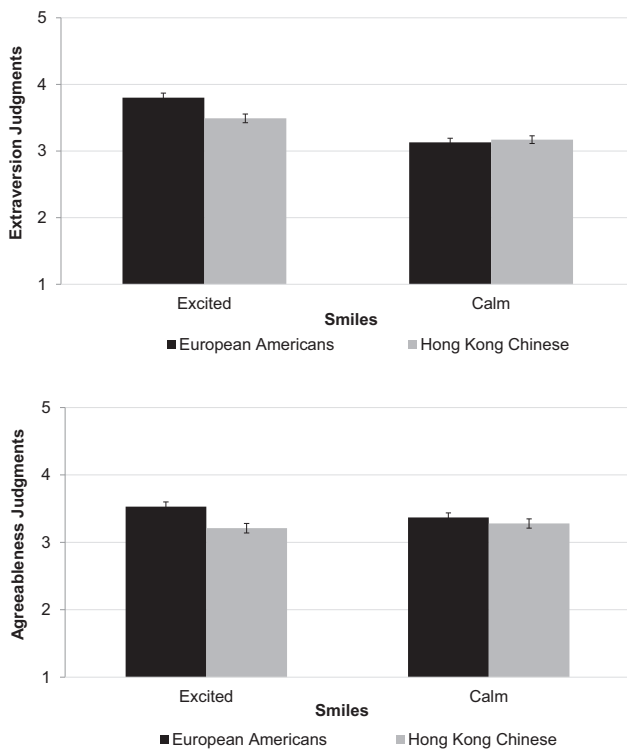


Figure 5. Weighted means (SE) for extraversion (top) and agreeableness (bottom) judgments of excited and calm smiles by cultural group across the four studies.

We found mixed support for our prediction that Hong Kong Chinese would judge calm faces as more extraverted and agreeable than European Americans. Consistent with our predictions, Hong Kong Chinese rated the computer-generated calm smiles as more extraverted than did European Americans in Study 1a, and Hong Kong Chinese rated the neutral applicant, whom they often viewed as calm, as more extraverted than did European Americans in Study 3. Surprisingly, these differences emerged despite the fact that European Americans unexpectedly valued LAP more in both studies (discussed below), and the fact that across all studies, ideal LAP did not correlate with extraversion judgments of the calm targets. Contrary to predictions, in Studies 1b, 2, and 3, there were no cultural differences in extraversion judgments of the calm faces, and across all studies, there were no cultural differences in agreeableness judgments of the calm faces.

These findings run contrary to our previous findings that the more people valued LAP, the more they trusted and chose calm versus excitement-focused physicians (Sims et al., 2014, 2015) and the more they enjoyed calming (vs. exciting) amusement park rides and exercise (Chim, Hogan, Fung, & Tsai, 2017). In those studies, however, European Americans valued LAP less than Hong Kong Chinese, and participants had more time to process information about calm physicians and calm activities than in the present studies. Thus, it is possible that because valuing LAP is associated with wanting to attend and adjust to one's environment (Tsai et al., 2007), differences in ideal LAP may be less related to snap judgments about calm smiles. Future studies are needed to test this hypothesis.

Implications for Affect Valuation Theory

These findings have important implications for Affect Valuation Theory. First, they suggest that ideal affect match (i.e., when targets show the expressions valued by the judge) results in more positive judgments in a broader range of situations than previously examined. In previous work, ideal affect match predicted judgments of trustworthiness in situations in which the judgments had important consequences for the judges (e.g., when judges were choosing physicians [Sims et al., 2014]). The present work demonstrates that ideal affect match also matters in situations in which the judgments have greater consequences for the targets than the judges (i.e., when judging Facebook profiles or hiring for an internship).

Second, these findings also provide evidence of specificity. In the situations examined here, the strongest evidence for ideal affect match was when judges valued HAP and rated the affiliation (extraversion and agreeableness) of excited targets. Although European Americans also rated excited targets as more competent when they were viewing realistic faces in Study 1b and as more dominant when they were viewing videos of job applicants in Study 3, ideal HAP did not significantly predict either judgment, and these differences did not emerge in the other studies. Thus, ideal affect match may matter most for affiliative judgments. As described above, this may be because affiliative cues signal adherence to group norms, and one important way of signaling this adherence is by smiling in a way that reflects that group's values. Future studies are needed to examine whether these findings hold in situations where affiliation matters less.

Third, the findings raise the question of whether cultural differences in ideal affect are always best assessed via self-report methods. Indeed, there may be cases where more implicit and automatic mea-

asures of ideal affect may better capture cultural differences. In Studies 1a and 2, there were cultural differences in ideal HAP, and they mediated cultural differences in extraversion judgments of the excited targets. However, even when there were no cultural differences in ideal HAP, European Americans still rated the excited targets as more extraverted than did Hong Kong Chinese. As Heine, Buchtel, and Norenzayan (2008) have argued, because of the “reference group effect,” or use of different reference points by members of different cultural groups, cultural differences may be stronger when assessed using behavioral compared with self-report measures. Although consistent cultural differences in self-reports of ideal affect have been observed in previous work, it is possible that under certain circumstances, these self-report instruments may be less sensitive to deeper cultural differences. We are currently exploring this possibility.

Finally, the findings raise the possibility of changes in ideal affect because of social, political, and economic events. As mentioned above, across all of the studies, we did not replicate previous findings that East Asians value LAP more than European Americans (Park et al., 2016, 2017; Tsai et al., 2006, 2007). This was largely driven by increases in the valuation of LAP in our European American samples, resulting in either no cultural differences in ideal LAP, or European Americans valuing LAP more than Hong Kong Chinese. Because this is the first time we have observed this, we can only speculate about its meaning. It is possible that this is because of the current political climate in the United States (i.e., distrust of the current administration, increased threat of terrorism). Indeed, after the September 11, 2001 attacks on the World Trade Center, we observed an increase in absolute levels of ideal LAP among European Americans. Thus, rather than reflect deep changes in ideal LAP, recent increases in ideal LAP among European Americans may reflect current events in the United States. These changes in ideal affect may play a lesser role in shaping more deeply ingrained social judgments. Future research is clearly needed to examine the links between self-reported ideal affect and time of assessment, and to examine whether these cultural similarities and differences in ideal LAP are sustained over time.

Implications for Social Judgment and Emotional Expression

These findings broaden our understanding of how beliefs shape person perception. Although previous studies have looked at how stereotypes and other beliefs shape perception of others, to our knowledge, these studies are the first to examine how *emotional values* also shape perception of others. Although previous studies have documented cultural differences in the social judgments of smiles, those studies primarily compared smiling with neutral faces. In the present work, we compared different types of smiles. In addition, while previous studies have speculated about the sources of cultural differences in social judgments of smiles, few have found empirical support for such speculations (see Kryś et al., 2016 for an exception). Here we propose and find evidence for the prediction that cultural differences in affiliative judgments of excited targets are due at least in part to how much people value excitement and other high arousal positive states. Because our data were correlational, however, future studies are needed to determine causality.

These studies also advance our understanding of emotion-related social judgments. Across all studies, excited smiles were

consistently judged as more extraverted than calm smiles. There was, however, much more variability for the other traits across the studies. For instance, in Study 1a, both cultural groups viewed calm targets as more competent than excited targets, but this pattern changed in Study 1b, and there were no differences in competence judgments of the excited and calm targets in Study 2, when competence may have mattered less, or in Study 3, when information about experience and training were provided. Similarly, in Studies 1a and 3, both cultural groups rated excited targets as more dominant than calm ones, but in Study 1b, no such differences emerged. And while both cultural groups viewed calm applicants as more agreeable than excited applicants in Study 3, European Americans saw excited targets as more agreeable than calm targets in Study 1b. These findings suggest that while the excited smile may be a stable signal of extraversion across situations, the specific smiles associated with other traits, including agreeableness, may vary more depending on the specifics of the immediate situation.

Similarly, the studies provide support for distinguishing among affiliative traits. As demonstrated through the interpersonal circumplex, extraversion and agreeableness, while both affiliative, also vary in terms of dominance, and this difference matters in certain situations. Although we found support for our predictions for both extraversion and agreeableness, the effects were stronger and more consistent across studies for extraversion than agreeableness. Moreover, judgments of extraversion, not agreeableness, predicted hiring in Study 3. This may be because extraversion is easier to judge at zero acquaintance than agreeableness (Ambady, Hallahan, & Rosenthal, 1995; Kenny, Horner, Kashy, & Chu, 1992) and because extraversion may matter more in situations where people’s judgments of others have greater consequences for the targets than the judges.

Finally, these findings have important implications for understanding the predictive validity of people’s emotional expressions across cultures. For instance, previous research has demonstrated that the intensity of college students’ smiles in their photos is correlated with their personality traits as well as their well-being years later (Harker & Keltner, 2001). Similar relationships even have been observed in children (Oveis, Gruber, Keltner, Stamper, & Boyce, 2009). Most of this work, however, has been conducted in Western contexts. Our findings suggest that although across cultures, excited smiles are judged as more extraverted than calm smiles, the degree to which an excited smile conveys extraversion also depends on culture and ideal affect. Thus, previously observed links between smile intensity and well-being may vary in magnitude across cultures as a function of cultural differences in the value placed on excitement and other high arousal positive states. Future studies are needed to examine whether this is the case, and more generally, whether cultural differences in the smiles associated with extraversion and agreeableness reflect even broader cultural differences in conceptions of extraversion and agreeableness.

Implications for Bias in Multicultural Settings

In Study 3, we examined these processes in the real world context of job hiring. Because European Americans rated the excited applicant as significantly more extraverted than the calm and neutral applicants, European Americans were most likely to

hire the excited applicant, even though the excited applicant's qualifications were the same as those of the calm and neutral applicants. Hong Kong Chinese also rated the excited applicant as higher in extraversion than the calm and neutral applicants, but these differences were much less pronounced, and therefore, Hong Kong Chinese were less likely to hire the excited (vs. calm and neutral) applicant than European Americans. Hong Kong Chinese rated the neutral applicant as more extraverted than did European Americans, and therefore, were more likely to hire him.

These findings have important implications for understanding how culture and ideal affect may result in unconscious bias and discrimination against specific cultural groups and individuals. For cultures and individuals that value excitement and other HAP, people who display excited smiles may appear to be significantly more extraverted than people who display calm smiles. Thus, in job settings, when extraversion matters (as it often does), the excited applicant may appear to be a significantly better fit for the job than the calm applicant. In other words, individuals within and across cultures who express excitement less (in part because they value HAP less) may be judged as significantly less extraverted than they are. Indeed, these processes may explain why Asian Americans are underrepresented in top leadership positions in academia, business, and government (Rutiman, 2009), why Asian Americans as a group are stereotyped as competent but cold (Fiske, Xu, Cuddy, & Glick, 1999), and why Asian Americans in particular have been encouraged to show more excitement and enthusiasm during job interviews (Hyun, 2005). What makes this particularly problematic is that unlike stereotypes about race or gender, people are relatively unaware of their emotional values and how they might influence their judgments of others. Indeed, our findings held across target race and target sex, suggesting that under certain circumstances, ideal affect match may influence social judgments even more than racial and gender matches between judges and targets. We are currently examining the specific conditions under which ideal affect match may play a greater (or lesser role) in social judgment across a variety of clinical, educational, and occupational settings.

Limitations and Future Directions

These studies were limited in several ways. First, they focused on judgments of different types of smiles or positive emotional expressions. Future studies, however, should examine how ideal affect influences judgments of different negative emotional expressions. For instance, do Americans confer greater status to angry versus sad individuals (Tiedens, 2001) because they value high arousal states more? Second, as mentioned above, we could not determine causality. While it is possible that ideal affect influences perceptions of excited targets as more extraverted, it is also possible that people view excited targets as more extraverted, which makes them value high arousal positive states more. Future studies are needed to assess whether one or both mechanisms hold. Third, in Study 3, participants viewed only male applicants of the same race as the participant. Thus, future studies are needed to assess whether Study 3 findings generalize to female applicants and applicants of other races. Fourth, in our studies, participants made their judgments relatively quickly. We are currently examining whether similar findings emerge when participants are given more time to deliberate before making their judgments. Finally, our studies compared European Americans and Hong Kong Chinese, and it would be important to examine whether our findings generalize

to individuals living in other cultural contexts, especially those that vary in dimensions that might alter the overall importance of emotional facial expression (e.g., historical homogeneity; Rychlowska et al., 2015).

Conclusion

When we meet people for the first time, we often make quick judgments about how affiliative (extraverted, agreeable) they are based on their smiles, and these judgments can have important consequences for how we treat them. However, through four studies conducted in the United States and Hong Kong, we demonstrate that these judgments say as much about us—namely, what emotions we value and what cultures we live in, as they do about the smiles of the people we are judging. This may not only explain why we are drawn toward some people and away from others, but may also shed light on the cultural and affective biases that serve as barriers to advancement for many Asian Americans and members of other cultural groups in the United States.

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