



How Are Asian Americans Seen and Evaluated? Examining Ethnic Stereotypes and their Cultural Complexity

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Abstract

Human stereotypes are more complicated and subtle than scholars or lay people often think. Based on the EPA (i.e., evaluation, potency and accuracy) theory of stereotypes (Lee, 2011; Lee, B., W. & Luo, 2007; Lee, J., & McCauley, 2013; Lee, McCauley & Jussim, 2013; Lee, V. S., & Ma, 2007), it was hypothesized and found that stereotypes of Asian Americans are derived on the basis of both evaluative considerations (prejudice) and a realistic assessment of group characteristics. This produces a pattern of stereotypic judgments that contains both agreement and disagreement when comparing stereotypes of Asian Americans among different perceiver groups (European Americans, non-Asian Minority-Americans). The results of the present study also highlight complexities that arise when one considers the effect of inter-group contact on stereotyping. Specifically, an increase in the *frequency* of inter-group contact was associated with a reduction in negative stereotyping, whereas an increase in the *quality* or closeness of inter-group contact was associated with an *increase* in negative stereotyping. It is concluded that inter-group stereotyping reflects a complex mixture of psychological processes that are in need of further investigation.

Key words: Cognition and communication; Stereotypic complexity; Attitudes toward minorities; Stereotype accuracy; Intergroup communication and contact

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INTRODUCTION

Stereotypes involve ascribing characteristics to segments of society, social groups, or members of a social group (e.g., Jussim, 2012; Lee, Jussim & McCauley, 1995, pp. 30-31; also see Lee, 2011; Lee & Jussim, 2010; Ottati & Lee, 1995). Individuals rely upon stereotypes almost every day, and often times, stereotypes operate in a subtle or automatic manner. In many situations, negative stereotypes promote prejudice, racism, discrimination, and social injustice (Joshi, 1999; Lee, 1994). Moreover, in some situations, even positive stereotypes (e.g., a model minority) have a negative impact on the target group (see Maddux, Galinsky, Cuddy, & Polifroni, 2008). However, in some instances, stereotypes may provide a relatively accurate or realistic image of a social group. Focusing on stereotypes of Asian Americans, the current study extends previous work by Lee and colleagues on the EPA (i.e., evaluation, potency and accuracy) theory of stereotyping. This theory considers three dimensions of stereotyping. These are evaluation (negative versus positive evaluation of the group), potency (not activated versus activated group representation), and accuracy (inaccurate versus accurate impression of the group) (Lee, J., & McCauley, 2013; Lee, V. S., & Ma, 2007; Lee, J., & McCauley, 1995; Jussim, 2012). The EPA theory is an over-arching theoretical conceptualization that has guided hypotheses and predictions tested in dozens of published papers and chapters (e.g., Lee, B., W., & Luo, 2007; Lee, Chan, & Rose, 2013; Lee, McCauley & Jussim, 2013). Many of these papers focus on very specific predictions generated on the basis of the EPA theory. In contrast to prior studies related to the EPA theory, the research reported in this paper possesses two distinctive aspects that are worthy of attention. First, this paper considers *multiple* aspects of the EPA theory and their *simultaneous* influence on stereotyping. In this sense, the present paper more fully conveys the “complexity and subtlety” of stereotyping than does most previous published work regarding the

EPA theory. It more explicitly conveys that stereotyping reflects a mixture of processes rooted in the EPA theory. Second, using EPA theory as a guiding conceptualization, this article focuses on *Asian Americans* as the target group. In particular, the present paper focuses on how out-group members (European Americans, African and Latino Americans) perceive and evaluate *Asian Americans*.

1. STEREOTYPING ASIAN AMERICANS: A HYPOTHETICAL INTERPERSONAL COMMUNICATION

Assume you are an Asian American psychologist. In a public library, you run into two European American men who are strangers to you. You are later informed that their names are Chuck and Jeff. Chuck greets you and smiles with “*ni hao*” in Chinese, which means “hello.” You are surprised but happily reply with “*ni hao*” and also say, “You speak Chinese!” Chuck indicates that he can speak a few Chinese words. The conversation continues as follows:

Chuck: “What do you do for living?”

You: “I am a professor.”

Chuck: “What do you teach?”

You: “Can you guess?”

Chuck: “You are in the natural sciences-physics, mathematics, chemistry, or engineering?”

You: “No, my profession begins with a letter ‘P’.”

Chuck: “You are a physicist?”

You: “No.”

Chuck: “You are a physician or medical doctor?”

You: “No.”

Chuck: “Well, many Asians here are natural scientists, technicians, or medical doctors.”

You: “I am a psychologist.”

Suppose the other European American man, Jeff, who is Chuck’s friend, states with a smile, “Chuck, you are a racist!” Would you agree? In fact, many Asian Americans would probably disagree with this assessment of Chuck. Chuck appears to be a friendly and inquisitive individual interested in meeting Asian Americans. Like many people, he uses common sense or base rates when making inferences about a stranger. In doing so, he generates inferences that are more accurate than random guessing. Even though you may not be an individual who specializes in natural science, Asian Americans are more likely to specialize in the natural sciences than social sciences at most American universities. This is a statistical reality (Lee, 2011). Thus, although Chuck’s perception is incorrect at the individual level, his stereotype-based inference is not irrational or unrealistic. Moreover, because physicists and physicians possess a positive professional image in American society, Chuck’s perception conveys a positive (not prejudicial) impression. For these reasons, you may be reluctant to label Chuck a “racist.”

2. STEREOTYPIC DESCRIPTIONS OF ASIAN AMERICANS AND EPA THEORY

If we ask college students or strangers on the street “what comes to your mind when you think of Asian Americans?” they may respond: “foreigners,” “speaking English with an accent,” “smart or technologically savvy,” “academically successful or intelligent,” “short,” “slanted eyes,” “hard-working or diligent,” “disciplined,” “good food,” “Korean dry cleaners,” “obedient or submissive,” “physically unaggressive,” “politically docile,” “accommodating,” or “model minority” (e.g., Kang, 1993; Kawai, 2005; Lee & Ottati, 1995; Lee, V. S., & Ma, 2007; Li, 2005; Saigo, 2008; Sue & Katani, 1973; Tong, 2003; Tran & Birman, 2010; Yang, 2000; Yee, 1992). These are examples of stereotypes related to Asian Americans reported in the literature. Without a doubt, this list includes both positive and negative stereotypic expressions that vary in terms of accuracy.

According to the EPA theory (Lee, 2011; Lee, Albright and Malloy, 2001; Lee, Bumgarner, Widner, & Luo, 2007; Lee, Vue, Seklecki, & Ma, 2007; Lee, Jussim, & McCauley, 1995, 2013; Lee, McCauley, & Jussim, 2013; Ottati & Lee, 1995), stereotypes vary along three dimensions. “E” represents evaluation or valence, “P” represents potency or latency of stereotype activation, and “A” represents accuracy. These are conceptualized as continuous dimensions (McCauley, Stitt, & Segal, 1980; Osgood, 1979). Below is a cubic framework of the EPA theory that depicts the constituent dimensions of stereotyping (see Figure 1).

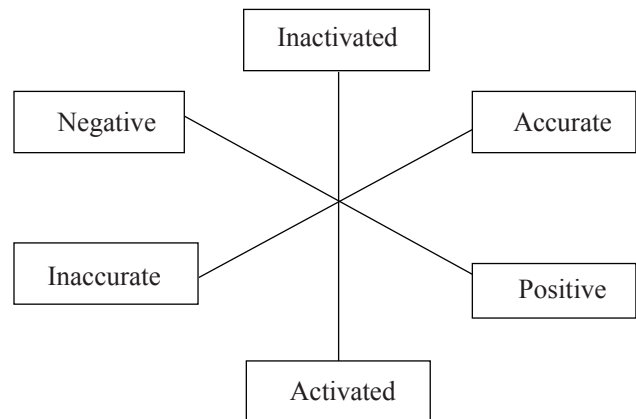


Figure 1
Cubic EPA Theoretical Model of Stereotypes

If people state that Chinese food is “extremely popular,” this reflects a positive stereotype of Chinese people (evaluation dimension). On the other hand, whether Chinese restaurants are more or less numerous than Mexican restaurants in New York City is a matter of factual reality. As such, statements regarding the prevalence of Chinese restaurants can vary in terms of accuracy (accuracy dimension). In addition, individuals are more likely to possess strong beliefs regarding Chinese

cuisine if they are personally familiar with Chinese restaurants. If an individual has never eaten Chinese food, it is unlikely that such information will be available or accessible in memory (potency dimension). An individual cannot form a stereotype regarding a group if information pertaining to the group is insufficiently salient, accessible, or potent (Lee & Ottati, 1995; Lee, 1995).

For present purposes, it is useful to focus on the accuracy (A) and evaluation (E) dimensions of stereotyping (see Figure 2). Research on stereotyping typically focuses on

inaccurate and negative stereotypes falling in the bottom-left quadrant of Figure 2. These stereotypes are socially divisive, and lead to unfair discrimination against social groups. Clearly, it is important to understand how these stereotypes are communicated in society, and to develop approaches that reduce or eliminate stereotypes of this nature. However, according to Lee and colleagues (see Lee, Jussim & McCauley, 1995, p.17; also see McCauley, Stitt & Segal, 1980; Jussim, 2005, 2012; Jussim, Cain, Crawford, Harber, & Cohen, 2009), it is also important for social scientists to understand mental representations of social groups that fall in the other three quadrants. For example, it may be important to consider the effects of positive and accurate stereotypes (e.g. “Chinese restaurants are extremely popular in the U.S.”). Moreover, in some cases, negative but accurate stereotypic statements may illuminate social problems that need to be addressed more effectively. For example, a communication indicating that “female secretaries earn a small income” might motivate organizations to provide female secretaries with a more equitable level of income.

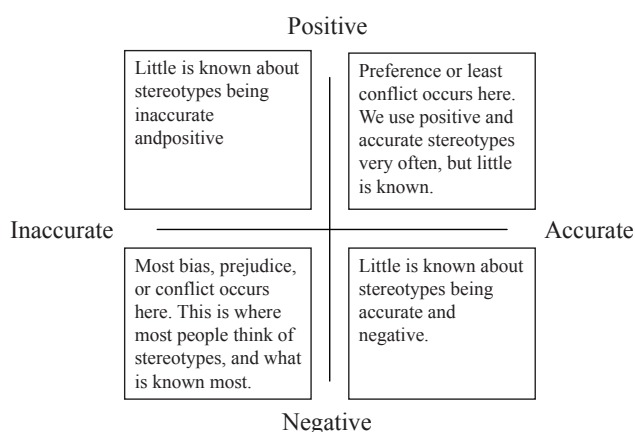


Figure 2
Evaluation (or Valence) and Accuracy of Stereotypes

An accurate yet negative stereotype may also illuminate the historical and cultural experience of a given social group. Consider, for example, a stereotypic indicating “Asian Americans speak English with a foreign accent.” This is more negative than positive. Speaking English with a foreign accent is typically evaluated more negatively than speaking English with no noticeable accent. Yet, individuals obviously stereotype

Chinese people as speaking English with a foreign accent. An individual might therefore express surprise when encountering a Chinese individual who speaks English with “no noticeable accent whatsoever.” Is this prejudicial or racist? Perhaps this is not the case. In this regard, it might be useful to consider the history of Asian immigration patterns.

Due to restrictive immigration policies, very few Asians were permitted to immigrate into the U.S. during the 18th and 19th century (Lee, Quinones- Perdomo, & Perdomo, 2003). After the United States was founded in 1775, its immigration policies favored those from Europe. Asians were excluded because they were seen as strangers from a different shore (Takaki, 1989). The first anti-immigration law in the history of America was the 1882 Chinese Exclusion Act (Cao & Novas, 1996; Dinnerstein, Nichols, & Reimers, 1996/2003; Fong & Shinagawa, 2000; Takaki, 1989). While millions of Europeans immigrated to the USA, very few Asians were granted entry. Finally, in 1965, the Hart-Celler Act allotted 170,000 visas to immigrants from the Eastern Hemisphere. Thus, the prevalence of Asian immigration into the U.S. has dramatically increased in the past 45 years. As a consequence, many Asian Americans are first generation immigrants. Thus, it is not surprising that many Asian Americans speak English with a foreign accent. A consideration of the forces that underlie this reality does not necessarily engender prejudicial attitudes toward Asians. On the contrary, an understanding of this reality may, in some cases, illuminate the historical experience of this social group.

3. EVALUATION AND STEREOTYPING OF ASIAN AMERICANS

If two perceiver groups possess an accurate stereotype of a target group, they should share a common impression of the target group. When stereotype accuracy is high, the impression of the target group is grounded in the same objective group reality regardless of the perceiver’s group membership. Consider, for example, the stereotype of Asian Americans among two perceiver groups, European Americans and non-Asian Minority-Americans (e.g., African Americans, Latino Americans). If these two groups possess accurate stereotypes of Asian Americans, they should attribute similar trait characteristics to Asian Americans. However, if these two groups evaluate Asian Americans differently, one should observe a systematic pattern of bias that produces divergent impressions of Asians among these two perceiver groups. Specifically, the perceiver group that possesses more prejudicial attitudes toward Asian Americans should be more likely to ascribe negative traits to Asian Americans, and should be less likely to ascribe positive traits to Asian Americans. That is, the evaluative component of stereotyping is manifested as non-corresponding hetero-stereotypes of a

target group when comparing two perceiver groups that differ in their level of prejudice toward the target group (e.g., Iwamoto & Liu, 2010; Lee & Ottati, 1995; Lee & Ottati, 2002; Lee, Ottati, & Husain, 2001).

Do European Americans and non-Asian American minorities (e.g., African Americans, Latino Americans) evaluate Asian Americans in a similar fashion? Research confirms that race and ethnicity of the perceiver play an important role in the formation of stereotypes of a target group (e.g., Iwamoto & Liu, 2010; Lee & Ottati, 1995; Lee & Ottati, 2002; Lee, Ottati, & Husain, 2001). For example, Lee and colleagues (Lee & Ottati, 2002; Lee, Ottati, & Hussain, 2001) found that minority group members (such as African Americans, Asian Americans) endorsed more humanistic treatment of illegal Mexican immigrants than did European Americans. European Americans were, however, quite tolerant of illegal Canadian immigrants, presumably because European Americans and Canadians often share a European origin (Lee & Ottati, 2002; Lee, Ottati, & Hussain, 2001). Findings of this nature suggest that European Americans will harbor a less positive (or more negative) stereotype of Asian Americans than will non-Asian Minority-Americans (i.e., African Americans and Latino Americans). Thus, in the present study, the role of evaluation in stereotyping should produce a tendency for European American perceivers to ascribe more negative (and less positive) traits to Asian Americans than is the case for non-Asian American minority perceivers.

The role of evaluation in stereotyping should also produce a pattern of evaluative consistency when examining the inter-relation between various trait ascriptions. That is, individuals who ascribe a positive trait to the target group (e.g., intelligent) should ascribe other positive characteristics to the target group (e.g., hard-working, self-disciplined), producing a positive correlation between various positive trait ratings. Correlations between positive and negative trait ratings should be negative. Similarly, individuals who ascribe a negative trait to the target group (e.g., lacking in sociability) should ascribe other negative characteristics to the target group (e.g., unintelligent, sly), producing a positive correlation between various negative trait ratings. Exceptions to this pattern suggest that some factor other than evaluation is influencing trait impressions of the target group. For example, if ratings of intellectual competence (a positive trait) are positively correlated with ratings of social ineptitude (a negative trait), it can be inferred that these trait ratings are determined (at least in part) by some factor other than evaluation. In this example, one might conclude that the trait ratings are determined by a prototypic image of the "intellectual nerd," a prototype that combines intellectual accomplishment with social inadequacy. That is, some perceivers might ascribe this prototype to Asian Americans, whereas other perceivers may not. When present effects of this nature are present,

it is clear that evaluation is not the sole determinants of stereotypic beliefs regarding a target group.

4. ACCURACY AND STEREOTYPING OF ASIAN AMERICANS

The two most common methods of assessing accuracy in social perception involve consensus across perceivers and prediction of actual behavior (e.g., Funder, 1987, 2001; Kenny, 1991, 1994; Kenny & Albright, 1987; Lee & Ottati, 1993, 1995; Lee, Albright & Malloy, 2001; Ottati & Lee, 1995). Lee and his colleagues have identified three major ways to measure stereotype accuracy (see Lee et al, 1995; Ottati & Lee, 1995, pp. 35-38). First, accuracy can be measured as an agreement or convergence across hetero-stereotypes (two or several groups' perception of one target group). Second, accuracy can be measured as an agreement or convergence between a hetero-stereotype (other groups' perception of one target group) and an auto-stereotype (perception of one's own group). Third, accuracy can be measured as a convergence between stereotypic perceptions and more objective indicators of the target group's actual behavior (e.g., factual data, statistical evidence). In the current study, the first method of accuracy assessment is employed. Specifically, to the degree that stereotype accuracy is present it is predicted European American perceivers and non-Asian Minority-American perceivers will share a common stereotype of Asian Americans.

In the present study, this should produce at least two patterns of statistical convergence. First, when predicting trait ratings of the target group, group membership of the perceiver should fail to produce different trait ratings. For example, ratings of the degree to which Asian Americans are "hard-working" should fail to significantly differ when comparing European American perceivers to non-Asian Minority-American perceivers. Second, the relative ordering of various trait ascriptions should be similar when comparing one perceiver group to another perceiver group. Thus, if European Americans perceive Asian Americans as more "hardworking" than "intelligent," Minority-Americans should *also* perceive Asian Americans as more "hardworking" than "intelligent." From a statistical perspective, this means that perceiver group membership (European American versus Minority American) should fail to moderate the effect of trait category (e.g., "hardworking" versus "intelligent") on ratings of trait likelihood.

5. THE EFFECT OF INTER-GROUP CONTACT AND COMMUNICATION

In addition to evaluation and accuracy, the present study considers the role of inter-group contact and communication in determining stereotypes of Asian

Americans. According to the “contact hypothesis,” inter-group contact should reduce prejudice and negative stereotyping of Asian Americans (see Allport, 1954; Lee, McCauley, Moghaddam, & Worchel, 2004; Pettigrew & Tropp, 2006). Bramel (2004) conducted a thorough review of 60 years of research on the contact hypothesis and found that this research is characterized by mixed findings, but Pettigrew and Tropp’s (2006) meta-analysis of 515 studies revealed that contact could lead to reduction in prejudice under certain conditions. It is true that, under some conditions, contact reduces prejudice or negative stereotyping. For example, a survey study by Christian and Lapinski (2003), which aimed to investigate attitudes toward Muslims after the event of September 11th, showed that students having Muslim friends or interactions with Muslims, tended to have less negative attitudes toward Muslims. However, contact alone is often not enough to reduce negative stereotyping (Spencer-Rodgers & McGovern, 2002). Indeed, some have suggested that the contact hypothesis presumes ideal situations, and that contact may not reduce prejudice in many real world situations (e.g., Dixon, Durrheim, & Tredoux, 2005). In some situations, the opposite may actually be true. Contact without equal status between groups, or contact without an appropriate understanding or appreciation of group differences might actually reinforce negative stereotypes.

Contact might also increase prejudice and negative stereotyping for another reason. Specifically, recent research on “moral licensing” suggests that the performance of past good deeds can liberate individuals to engage in negative, problematic, or unethical behaviors in the present; behaviors that they would otherwise avoid for fear of feeling or appearing immoral (e.g., Merritt, Effron, & Monin, 2010). Thus, past performance of non-racist or non-prejudicial behavior might enable individuals to justify the current expression of negative, prejudicial opinions. From this perspective, individuals who report high levels of contact with Asian Americans might feel free to communicate negative or critical assessments of Asian Americans. Thus, taken together, previous research on inter-group contact and moral licensing makes it difficult to predict whether inter-group contact will reduce prejudice, fail to influence prejudice, or increase inter-group prejudice.

Another possibility is that contact will increase the *accuracy* of stereotypes regarding Asian Americans. If this is the case, evidence of evaluative bias should be magnified among individuals who report low levels of contact, whereas evidence of stereotype accuracy should be magnified among individuals who report high levels of contact with Asian Americans. When contact is low, European Americans should be more likely than Minority Americans to ascribe negative trait characteristics to Asian Americans. This difference should be eliminated when contact is high. From a statistical perspective, contact (low versus high) should moderate the effect of perceiver

group membership (European American versus Minority American) on trait ratings of Asian Americans.

6. SUMMARY OF HYPOTHESES

Evaluation Hypothesis EV1: If evaluative bias is present, European Americans should report less positive (and more negative) stereotypes toward Asian American than do non-Asian American minorities (i.e., African Americans and Latino Americans).

Evaluation Hypothesis EV2: If evaluative bias is present, individuals who ascribe a positive trait to Asian Americans (e.g., intelligent) should ascribe other positive characteristics to Asian Americans (e.g., hard-working, self-disciplined), producing a positive correlation between various positive trait ratings. Individuals who ascribe a negative trait to Asian Americans (e.g., lacking in sociability) should ascribe other negative characteristics to Asian Americans (e.g., unintelligent, sly), producing a positive correlation between various negative trait ratings. Correlations between positive and negative trait ratings should be negative. Exceptions to this pattern suggest that some factor other than evaluation is determining trait impressions of Asian Americans.

Accuracy Hypothesis AC1: If stereotype accuracy is present, trait ratings of Asian Americans should fail to significantly differ when comparing European American perceivers to non-Asian Minority-American perceivers.

Accuracy Hypothesis AC2: If stereotype accuracy is present, the relative ordering of various trait ascriptions regarding Asian Americans should be similar when comparing European American perceivers to Minority American perceivers. Perceiver group membership (European American versus Minority American) should fail to moderate the effect of trait category (e.g., “hardworking” versus “intelligent”) on ratings of trait likelihood.

Contact Hypothesis CO1: Increased contact might increase or decrease negative trait ratings of Asian Americans. Increased contact might increase or decrease positive trait ratings of Asian Americans.

Contact Hypothesis CO2: Contact should magnify evidence of accuracy and diminish evidence of evaluative bias. When contact is low, European Americans should be more likely than Minority Americans to ascribe negative trait characteristics to Asian Americans. This difference should be eliminated when contact is high. Contact (low versus high) should moderate the effect of perceiver group membership (European American versus Minority American) on trait ratings of Asian Americans.

7. METHOD

Participants: The data were collected from an introductory psychology course at a Midwest research university. A total of 296 non-Asian or non-Asian

American college students participated in an online study. There were 214 female students and 82 were male (Note 1). The mean age of the participants was 19.7. With regard to the ethnicity of participants, 74% were white or European Americans ($N = 221$); 17% were African Americans ($N = 49$); 4% were Latino/Hispanic Americans ($N = 11$); and 5% were American Indian or more multi-racial ($N = 15$). Asian Americans were not included in this study because there were few Asian Americans on campus (Note 2). Other variable did not play a role in our data analysis (see Note 3).

Measures: To measure various stereotypes of Asian Americans, a total of 25 items were selected from scale of anti-Asian American Stereotypes which demonstrated very high validity and reliability (see Lin, Kwan, Cheung, & Fiske, 2005). This scale includes two major factors or subscales, Excessive Competence and Lack of Sociability or social skills (Lin et al, 2005, p. 37). The “Excessive Competence” subscale was composed of 12 items (see Appendix 1). These included items such as “Asian Americans are Obsessed with competition” (1=strongly disagree, 2=moderately disagree, 3=slightly disagree, 4=slightly agree, 5=moderately agree, 6=strongly agree). Higher scores reflect greater “excessive competency” (see Maddux, Galinsky, Cuddy, & Polifroni, 2008). The other subscale by Lin et al (2005, p. 37) is designed to measure the assumption Asian Americans are poor in sociability (i.e., lacking sociability or social skills) with a 13-item set (see Appendix 1) using statements such as “Asian Americans commit less time to socializing than others do.”

Several other items were selected from Ho and Jackson (2001) on attitudes toward Asian Americans. First, to measure **xenophobia** or **negative attitudes** toward Asian Americans, individuals rated nine statements along a six point scale ranging from 1 (strongly disagree) to 6 (strongly agree) (see Appendix 2). These included statements such as “Asian Americans should never represent the United States for anything, since they are not ‘true’ Americans.”

To measure **smartness** or **intelligence** a positive stereotype of Asian Americans, the following five items from Ho and Jackson (2001) were used and measured on the same scale as above: “Generally, Asian Americans are smart.” “Most Asian Americans are intellectually bright.” “The high intelligence of Asian Americans benefits America.” “Asian Americans increase the ‘brain power’ of the United States.” “One should be aware of Asian Americans, as they are too intelligent.”

Third, to measure participants’ perception of **work ethic** in Asian Americans, two more items were selected from Ho and Jackson (2001): “Asian Americans tend to be hardworking and diligent,” and “Asian Americans are very self-disciplined in their work.”

Fourth, the survey included several items to measure participants’ experience, familiarity, and/or contact with Asian Americans. These included a measure of frequency

of contact (“How often do you interact with Asian Americans?”) on a scale from 1 (not often) to 7 (very often), and quality of contact (“How well do you know about Asian Americans?”) on a scale from 1 (not well) to 7 (very well). Finally demographical information was also obtained.

We also need to make clear that we have almost never seen any perfect measure of stereotype accuracy. Every individual operationalization of “stereotype accuracy” possesses its unique strengths and limitations. Therefore, research examines hypotheses using multiple operationalizations of this construct in hopes of observing a convergent pattern of effects across studies as discussed above. Although the present paper does not employ all possible methods of assessing stereotype accuracy, it does consider two separate indicators of stereotype accuracy. That is, these are similarity in the mean ratings of a single trait dimension when comparing distinct perceiver groups, and similarity in the ordering of multiple trait assessments of the target group when comparing distinct perceiver groups.

Procedures: This survey study was conducted on line via www.psychdata.com. Students in introductory classes were first asked to sign up via the department subject pool system at a large Midwestern university within the United States of America. Participants read and completed an informed consent form and clicked the bottom of the computer screen to confirm consent to participate in the online survey study. They were next instructed as follows:

“This research takes place on or off campus online. There are a number of statements collected from a variety of sources related to Asian identity and social judgment. There is no right or wrong answer. For the purpose of scientific research on human identity, we are interested in the extent to which you make judgments. The purpose of this study is to study how Asians or Asian Americans are seen in their work and social settings.”

Participants were asked to rate each statement along a scale ranging from 1 (strongly disagree) to 6 (strongly agree). They also answered demographic questions and questions related to contact. It took them approximately ten minutes to complete the entire survey. The measures described in the measurement section were interspersed among numerous filler items. When participants were finished with the online survey, they were electronically thanked and also received university course credit for participating.

8. RESULTS

8.1 Reliability and Internal Consistency

To assess the internal consistency of the subscales, alpha coefficients (Cronbach, 1951) were computed. Whereas the scale of anti-Asian American Stereotypes (see Lin, Kwan, Cheung, & Fiske, 2005) demonstrated very high validity and reliability, we also examined the reliability of

their subscale item sets. The subscale measuring perceived Asian American Excessive Competency exhibited a great degree of internal consistency ($\alpha=.84$, N of items=12) and the item set measuring perceived Asian American Lack of Sociability (or social skills) exhibited a good degree of internal consistency ($\alpha=.78$, $N=13$). The internal consistency for perception of Asian American smartness or intelligence was also reasonably high ($\alpha=.70$, $N=5$). The item set measuring Xenophobic perceptions of Asian American (i.e., Asian phobia) displayed the highest internal consistency ($\alpha=.93$, $N=9$). In sum, the measures satisfied fairly reasonable criteria with regard to internal consistency (see Note 4).

8.2 Inter-Correlation Between Measures

Before we report our main findings based on our hypotheses, it is important to make clear that our statistical analyses involving multiple simultaneous predictors employ the unique sums of square approach. This eliminates confounds that would otherwise arise when testing hypotheses with an unequal number of individuals in the three perceiver groups.

Table 1 provides the inter-correlation between the various measures. If evaluative bias is present, one should observe a healthy “halo effect.” In other words, inter-correlations within the positive trait item set should be positive, inter-correlations within the negative trait item set should be positive, and “cross-correlations” between positive and negative trait items should be negative. This pattern would imply that the trait assessments are strongly constrained by evaluative consistency mechanisms, a clear sign that the evaluative component of stereotyping is present.

Table 1
Inter-Correlations Between Measures

	1	2	3	4	5	6	7	8
1. Excessive Competency	1.00	.71**	.69**	.22**	.00	.07	-.16**	.02
2. Lack Sociability		1.00	.53**	.24**	.08	.15*	-.21**	-.07
3. Xenophobia/Asian Phobia			1.00	.09 -	.18**	-.14*	-.20**	.01
4. Smartness or Intelligence				1.00	.63**	.61**	-.00	.01
5. Hardworking					1.00	.73**	.12*	.13*
6. Self-disciplined						1.00	.03	.03
7. Frequency of Contact							1.00	.66**
8. Quality of Contact								1.00

suggesting that increased frequency of contact reduced prejudice. Perhaps to a lesser extent, increased quality of contact increased positive stereotyping (although this effect only emerged when predicting “hardworking”). Importantly, frequency of contact and quality of contact were strongly positively correlated, $r = .66$, $p < .01$. This raises questions about the unique effect of each of these variables. For example, quality of contact failed

The bold face coefficients in the upper left of Table 1 reveal that the inter-correlations within the positive item set ranged from .53 to .71. The bold face coefficients toward the lower right of Table 1 reveal that the inter-correlations within the negative item set ranged from .61 to .73. Thus, in both of these cases, evidence of evaluative consistency is clearly present. The nine cross-correlations between positive and negative trait ratings are contained within the boxed portion of Table 1. Presence of evaluative consistency should reveal negative correlations within this box. This occurs when examining the correlation between Xenophobia and Hardworking ($r = -.18$, $p < .01$) and the correlation between Xenophobia and Self-Disciplined ($r = .14$, $p < .05$). However, other correlations within this box are actually positive. For example, ratings of inadequate sociability (a negative trait) are positively associated with ratings of two positive traits, intelligence ($r = .24$, $p < .01$) and self-discipline (.15, $p < .05$). These positive “cross-correlations” suggest that the trait ratings are not solely determined by evaluative component of the Asian American stereotype. In this example, one can speculate that the trait ratings are determined by a prototypic image of the “intellectual nerd,” a prototype that combines intellectual discipline with social inadequacy. Higher ratings of intelligence may therefore increase the perception that Asian Americans lack sociability.

The correlations between frequency of contact and negative trait ratings are significantly negative (ranging from $r = -.16$, $p < .01$ to $r = -.20$, $p < .01$), and the correlation between quality of contact and hard-working ratings is significantly positive ($r = .13$, $p < .05$). These correlations

to consistently predict the trait ratings despite its shared variance with frequency of contact (which consistently predicted negative trait ratings). This suggests that quality of contact may possess a unique component that reduces or even reverses that presently observed relation between contact and trait ratings. Analyses reported below address this possibility.

8.3 The Effect of Perceiver Ethnicity on Trait Ratings of Asian Americans

Table 2 presents negative and positive stereotypic ratings of Asian Americans as a function of Perceiver Ethnic Group (European American versus non-Asian Minority American). Table 2 reveals that Perceiver Ethnicity significantly influenced all three negative stereotypic ratings (i.e., excessive competence, lacking sociability, Xenophobia). For example, for the stereotype suggesting Asian Americans lack sociability or social skill, there was a significant difference between European Americans ($M = 3.43$) and non-Asian Minority-Americans ($M = 3.12$), $t(265) = 3.01$, $p < .001$, revealing greater prejudice among the European American participants. These findings are consistent with the first evaluation hypothesis (Hypothesis EV1).

Interestingly, a different finding emerged when predicting the positive trait ratings (i.e., academic intelligence, hardworking, self-disciplined). In all three of these instances, perceiver ethnicity failed to influence the trait ratings. For example, for “hardworking,” there was no statistical difference between European American ($M = 4.32$) and non-Asian Minority-American participants ($M = 4.24$), $t(289) = .55$, $p > .25$. These findings are predicted by the first accuracy hypothesis (Hypothesis AC1). That is, because both European American and Minority-American stereotypes accurately reflected Asian American standing on the three positive trait dimensions, the two perceiver groups rated Asian Americans similarly on these dimensions. This suggests that the accuracy component of stereotyping was also present.

Table 2
Positive and Negative Stereotypes of Asian Americans as a Function of Perceiver Ethnic Group (European American versus non-Asian Minority American)

Measures	European American mean (SD)	Non-Asian American Minority		T-value
		mean (SD)	df	
Excessive Competency	3.10(.76)	2.84(.75)	262	2.35*
Lacking Sociability	3.43(.76)	3.12(.70)	265	3.01**
Xenophobia or Asian phobia	2.39(1.08)	1.97(.92)	273	2.86**
Smartness or Intelligence	3.75 (.72)	3.64 (.90)	284	1.10 ns
Hardworking & Diligence	4.32(1.05)	4.24(1.18)	289	.55 ns
Self-Disciplined	4.38 (1.09)	4.24(1.32)	290	.86 ns

*** $p < .001$, ** $p < .01$, * $p < .05$

Note: Higher score means more intensity.

Additional analyses examined the second accuracy hypothesis (Accuracy Hypothesis AC2). In this regard, it is important to note that the relative ordering of the three negative trait ratings was similar when comparing European American and non-Asian Minority American stereotypes of Asian Americans. Table 2 reveals that both perceiver groups endorsed “lacking sociability” most strongly, “excessive competence” less strongly, and “Xenophobic” beliefs least strongly. A mixed 2 x 3 ANOVA analysis formally demonstrated that the two groups did indeed correspond in their relative ratings of these three trait clusters. Specifically, strength of endorsement (dependent variable) was predicted using Perceiver Ethnicity as a between subject variable (European American versus non-Asian Minority American) and Trait Category as a within subject variable (excessive competence, lacking sociability, Xenophobia). This analysis failed to yield a significant two-way interaction between Perceiver Ethnicity and Trait Category ($F < 1$). Thus, Perceiver Ethnicity failed to moderate the effect of Trait Category on the strength of the negative trait endorsements. This means that the relative strength (and ordering) of the three negative traits did not significantly differ when comparing the two perceiver groups. In accordance with the second accuracy hypothesis (Accuracy Hypothesis AC2), the two

perceiver groups agreed in terms of the *relative* magnitude or ordering of the three negative traits. This implies, for example, that the “lacking sociability” trait item more accurately characterizes Asian Americans than does the “excessive competence” trait item.

In an analogous fashion, the relative ordering of the three positive trait ratings was similar when comparing European American and non-Asian Minority-American perceivers. Both perceiver groups endorsed “hardworking” and “self-disciplined” in a relatively equal (and strong) manner. In addition, both groups were less likely to endorse the “intelligence/smartness” rating. Again, a mixed 2 x 3 ANOVA analysis was performed to formally demonstrate that the two groups did indeed correspond in their relative endorsement of the three positive traits. Specifically, strength of endorsement (dependent variable) was predicted using Perceiver Ethnicity as a between subject variable (European American versus non-Asian Minority American) and Trait Category as a within subject variable (intelligence/smartness, hardworking, self-disciplined). Again, this analysis failed to yield a significant two-way interaction between Perceiver Ethnicity and Trait Category ($F < 1$). Thus, Perceiver Ethnicity failed to moderate the effect of Trait Category on the positive trait endorsements. This means that the relative strength (and ordering) of the three positive

traits did not significantly differ when comparing the two perceiver groups. The two perceiver groups agreed in their rating of the *relative* magnitude or ordering of the three negative traits. This implies, for example, that the “self-disciplined” trait item more accurately characterized Asian Americans than did the “smartness/intelligence” trait item.

Taken together, the findings in Table 2 suggest that stereotypes of Asian Americans contained both an evaluative component and an accuracy component. In accordance with the EPA theory, stereotypes of Asian Americans appear to be derived on the basis of a mixture of these psychological forces.

8.4 Predicting Asian American Stereotypes Using Perceiver Group Ethnicity, Frequency of Contact, and Quality of Contact (Multiple Regression Approach)

Table 3 provides the results of six regression analyses. In each analysis, a stereotypic trait rating is predicted using Perceiver Ethnicity, Frequency of Contact, and Quality of Contact as the predictors. These results are largely consistent with the previously reported ANOVA analyses in Table 2. Perceiver Ethnicity significantly predicted the *negative* stereotypic ratings; $\beta_{\text{Excessive Competency}} = -.12$, $T = -2.10$, $p = .04$; $\beta_{\text{Lacking Sociability}} = -.16$, $T = -2.78$, $p = .006$; and $\beta_{\text{Xenophobia or Asian Phobia}} = -.16$, $T = -2.83$, $p = .005$. In all of these cases, European Americans provided more negative ratings than did the non-Asian Minority-Americans. However, once again, Perceiver Ethnicity failed to significantly influence the *positive* stereotypic ratings; $\beta_{\text{Smartness/Intelligence}} = -.04$, $T = -.73$, $p = .46$; $\beta_{\text{Hardworking}} = .00$, $T = -.07$, $p = .95$; and $\beta_{\text{Self-Disciplined}} = -.05$, $T = -.87$, $p = .39$. Thus, once again, the results suggest that stereotypes of Asian Americans contained both an evaluative component and an accuracy component.

Table 3
Predicting Asian American Stereotypes Using Perceiver Group Ethnicity, Frequency of Contact, and Quality of Contact

	β	T-value	P-Value
Excessive Competency			
Ethnicity	-.12	-2.10	.04
Frequency of contact	-.31	-4.14	.001
Quality of Contact	.23	3.00	.003
Lacking Sociability			
Ethnicity	-.16	-2.78	.006
Frequency of contact	-.27	-3.68	.000
Quality of Contact	.10	1.40	.16 ns
Xenophobia/Asian Phobia			
Ethnicity	-.16	-2.83	.005
Frequency of contact	-.36	-5.02	.000
Quality of Contact	.28	3.83	.000

	β	T-value	P-Value
Smartness or Intelligence			
Ethnicity	-.04	-.73	.46 ns
Frequency of contact	-.04	-.57	.57 ns
Quality of Contact	-.01	-.13	.90 ns
Hardworking			
Ethnicity	.00	-.07	.95 ns
Frequency of contact	.05	.64	.53 ns
Quality of Contact	.02	.21	.84 ns
Self-Disciplined			
Ethnicity	-.05	-.87	.39 ns
Frequency of contact	.01	.16	.87 ns
Quality of Contact	-.04	-.48	.63 ns

Note: Ethnicity (1=white 2=nonwhite); the number of Asian American friends; the frequency of contact with Asian Americans (1=not often, 7=very often); the quality of contact with Asian Americans (1=not well, 7=a great deal)

As seen in Table 3, the contact variables elicited mixed results. Increased *frequency* of contact with Asian Americans reduced prejudice or negative stereotyping of Asian Americans. That is, increased frequency of contact produced lower ratings of excessive competency, $\beta = -.31$, $T = -4.14$, $p = .001$; lower ratings of lacking sociability, $\beta = -.27$, $T = -3.68$, $p = .000$; and lower ratings of Xenophobic beliefs, $\beta = -.36$, $T = -5.02$, $p < .000$. On the other hand, increased *quality* of contact with Asian Americans *increased* negative stereotyping of Asian Americans. Specifically, increased quality of contact produced *higher* ratings of excessive competency, $\beta = .23$, $T = 3.00$, $p = .003$; and higher ratings of Xenophobic beliefs, $\beta = .28$, $T = 3.83$, $p < .000$. It is important to note that the tendency for quality of contact to increase negative stereotyping is only discernible when controlling for frequency of contact. The bivariate correlation between quality of contact and excessive competence is essentially zero, as is the bivariate correlation between quality of contact and xenophobic beliefs (see Table 1). In the regression analyses, however, inclusion of frequency of contact in the model “unsuppresses” the effect of quality of contact (see Thompson & Levine, 1997 for a discussion of suppressor effects).

In sum, the regression analyses suggest that stereotypes of Asian Americans contained both an evaluative component and an accuracy component. Moreover, the effect of contact on stereotyping differs depending on whether one focuses on the *frequency* of contact or the *quality* of contact with Asian Americans. Consistent with the “contact hypothesis,” increased frequency of contact was associated with a decrease in negative stereotyping of Asian Americans. Yet, in diametric opposition to the contact hypothesis, increased quality of contact actually increased negative stereotyping of Asian Americans. This latter effect might be the result of “moral licensing.” From

this perspective, past performance of non-racist or non-prejudicial behavior toward a social group might “liberate” or enable individuals to justify the current expression of negative, prejudicial opinions toward the social group. Thus, individuals who report high levels of prior contact with Asian Americans might feel free to express negative or critical assessments of Asian Americans.

8.5 Supplementary Analyses: Regression With Interaction Terms

According to the second contact hypothesis (Contact Hypothesis CO2), contact should magnify evidence of accuracy and diminish evidence of evaluative bias. Thus, when contact is low, European Americans should be more likely than Minority Americans to ascribe negative trait characteristics to Asian Americans. This Perceiver Ethnicity effect should be reduced or eliminated, however, when contact is high. In other words, contact should moderate the effect of Perceiver Ethnicity on stereotypic trait ratings. This should produce a two-way interaction between frequency of contact and perceiver ethnicity, or alternatively, a two-way interaction between quality of contact and perceiver ethnicity. Additional regression analyses were performed to test these two-way interactions when predicting each of the trait ratings. All two-way interactions were non-significant ($p > .20$ in all cases). Thus, the second contact hypothesis was not supported.

9. DISCUSSION

In accordance with the EPA theory of stereotyping, the findings of this study suggest that stereotypes of Asian Americans are derived on the basis of a mixture of psychological forces. The role of evaluation was evident when examining stereotypes of Asian Americans as a function of Perceiver Ethnicity (European American versus non-Asian Minority-American). Specifically, as predicted, European American perceivers expressed more negative stereotypes toward Asian Americans than did non-Asian Minority-Americans (i.e., African Americans and Latino Americans). The role of evaluation was also evident when examining the inter-correlations between various trait ratings of Asian-Americans. Endorsement of one positive trait item was positively associated with endorsement of other positive trait items. In addition, endorsement of one negative trait item was positively associated with endorsement of other negative trait items. This correlational pattern suggests that stereotypic beliefs are determined, in part, by the perceiver’s evaluation of the target group. Importantly, however, the pattern of trait endorsements also suggested that evaluation was not the sole determinant of stereotypic perceptions of Asian Americans. In some instances, endorsement of a negative trait (e.g., “lacks sociability”) was positively associated with endorsement of a positive trait (e.g., “smart/intelligent”). This suggests that stereotypes of

Asian Americans are not exclusively derived on the basis of evaluative considerations.

The role of accuracy was also evident in the present study. For example, when examining positive trait ratings of Asian Americans, European Americans and non-Asian Minority-Americans reported similar magnitudes of trait endorsement. In addition, European Americans and non-Asian Minority-Americans agreed in the relative ordering of trait ascriptions when describing Asian Americans. For example, both of these perceiver groups rated Asian Americans as higher in “self-discipline” than “intelligence.”

Effects of interpersonal contact and communication were extremely interesting and provocative in the present study. Whereas increased *frequency* of contact reduced negative stereotyping of Asian Americans, increases in the *quality* of interpersonal contact actually increased negative stereotyping of Asian Americans. Importantly, this later effect only emerged when controlling for frequency of contact, suggesting that suppressor effects may be present when examining the effects of these two forms of contact. The observed effect of contact frequency was compatible with the traditional “contact hypothesis,” a hypothesis that predicts contact can reduce prejudice under appropriate circumstances. In the present college student sample it is likely that intergroup contact and communication occurred within an educational context in which students share a common level of status. Under conditions of this nature, it appears that intergroup contact and communication may indeed reduce prejudice as predicted by the “contact hypothesis.”

However, if this is the case, why might an increase in the *quality* of interpersonal contact simultaneously *increase* negative stereotyping of Asian Americans under such conditions? While a complete answer to this question is beyond the scope of the present paper, a provocative possibility involves the role of “moral licensing.” Specifically, it is possible that past performance of non-prejudicial behavior toward a social group “liberates” or enables individuals to justify negative or critical communications regarding the social group. As such, individuals who report close levels of contact with Asian Americans might feel free to express negative or critical assessments of Asian Americans. Future research is needed to further explore this interesting possibility.

CONCLUSION

The present paper advances previous work in this area by provides two unique contributions. First, we considered *multiple* aspects of the EPA theory and their *simultaneous* influence on stereotyping—i.e., the “cultural complexity and subtlety” of stereotyping. Second, the EPA theory was employed to examine stereotyping of Asian Americans by non-Asian Americans in cognition and communication. In accordance with the EPA theory, the results of the present study suggest that stereotypes of Asian Americans

are multi-faceted, complex, and nuanced. Although the expression of negative and inaccurate stereotypes obviously produces negative social outcomes, it is important to recognize that not all social stereotypes are negative or inaccurate. A comprehensive model of social stereotyping needs to recognize real group differences, and provide a prescription for the realistic appreciation of diversity.

NOTES

a. In our sample, we had more female than male participants. We were aware that this unequal sample size could skew our results. There are two explanations. First, we recruited our participants from introductory psychology classes online. Most of the students in those classes were psychology majors. Not to our surprise, there are more female than male psychology majors. Second, in our data analysis we did not obtain any gender difference when our dependent variables were examined.

b. With regard to our ethnic and racial minority participants, there were less than 5 Asian Americans. We did not include these Asian American participants in our data analysis because the sample is too small to be meaningful. For other non-Asian American minority participants, we combined them into one category because we did not have many Latino or Native American participants on campus. Thus we did not separate African Americans from other non-Asian American minority participants.

c. In our demographical data, we did not directly measure the social economic status of the participants. We collected the data about their education and age. We did not find educational level or age statistically showed any significant difference with regard to our dependent variables.

d. For the measurement of hardworking or self-disciplined, there was only one item in either case. Thus no alpha coefficient was reported.

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APPENDIXES

Appendix 1

Lin et al.'s (2005) Asian American Excessive Competence" Subscale:

Constantly in pursuit of more power.
Obsessed with competition.
Think they are smarter than everyone else.
Striving to become number one.
Motivated to obtain too much power in society.
Compare own achievements to other people's.
To get ahead of others, can be overly competitive.
Regarding education, aim to achieve too much.
Working all the time.
Mentality stresses gain of economic power.
Enjoy disproportionate economic success.
Can be regarded as acting too smart.

Lin et al.'s (2005) Asian American Lack of Sociability or Social Skills Subscale:

Commit less time to socializing than others do.
Dislike being center of attention at gatherings.
Do not put high priority on their social lives.
Not very vocal.
Do not interact smoothly in social situations.
Not as social as other groups of people.
Do not spend a lot of time at social gatherings.

Rarely initiate social events or gatherings.
Tend to be shy and quiet.
Have less fun compared to other social groups.
Do not function well in social situations.
Not very "street smart".
Do not know how to have fun and relax.

Appendix 2

Ho and Jackson's (2001) Measure of Asian Phobia or Negative Attitude toward Asian Americans:

Asian Americans should never represent the United States for anything, since they are not "true" Americans.

Asian Americans should think in more American ways.

It is annoying when Asian Americans speak in their own languages.

Asian Americans are gradually taking over the United States.

There are too many Asian Americans in this country.

Asian Americans should have stayed in their own countries where they belong.

Asian Americans are buying up too much land in the United States.

Asian Americans are taking jobs that rightfully belong to U.S.-born Americans.

The number of Asian American students on college campuses is growing at too fast a pace.