



# Gendered Races: Implications for Interracial Marriage, Leadership Selection, and Athletic Participation

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Gendered Races:  
Implications for Interracial Marriage, Leadership Selection, and Athletic Participation

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### Abstract

Six studies explored the overlap between racial and gender stereotypes and the consequences of this overlap for interracial dating, leadership selection, and athletic participation. Two initial studies, utilizing explicit and implicit measures, captured the stereotype content of different racial groups: the Asian stereotype was seen as more feminine whereas the Black stereotype more masculine compared to the White stereotype. Study 3 found that preferences for masculinity versus femininity mediated White participants' attraction to Blacks relative to Asians. Analysis of the 2000 United States Census replicated this pattern with interracial marriages. In Study 5, Blacks were more likely and Asians less likely to be selected for a masculine leadership position compared to Whites. Study 6 analyzed the NCAA Student-Athlete Ethnicity Report and found Blacks were more heavily represented in masculine versus feminine sports relative to Asians. These studies demonstrate that the association between racial and gender stereotypes has important real-world consequences.

Keywords: stereotypes, race, gender, attraction, leadership

Racial and gender stereotypes impact virtually every important life outcome, from job interviews to job placement, from housing to education, from police stops to prison terms. For example, Blacks in the United States are less likely to land job interviews than identical White applicants (Bertrand & Mullainathan, 2004) and to receive harsher sentences compared to White perpetrators of similar crimes (Klein, Petersilia, & Truner, 1990; Pettit & Western, 2004). Experimental evidence suggests that these disparities can be partly attributed to stereotypes of Blacks as more aggressive and less intelligent than Whites (Sommers, & Ellsworth, 2000).

Gender stereotypes also profoundly affect life outcomes. A significant gender-wage gap still exists; among full-time workers, women earn 77% of what men earn (US Census, 2005), only 3.2% of Fortune 500 CEOs are currently women (Catalyst, 2011), despite few differences between men's and women's actual leadership skills (Eagly, Karau, & Makhijani, 1995). The descriptive stereotype of women as gentle and nurturing (Eagly & Karau, 2002) combined with prescriptive stereotypes that punish female assertiveness (Rudman & Glick, 1999) can explain why women are more likely to be denied promotions in spite of equal performance (Blau & Devaro, 2007).

Despite these well documented effects of racial and gender stereotypes on consequential life outcomes, both in and outside of organizations (Cuddy, Glick, & Beninger, 2011), only a handful of studies have addressed the possibility that racial and gender stereotypes may somehow interact. Eagly and Kite (1987) suggested the possibility of gender and social-category overlap by showing that the stereotypes of men were similar to the stereotypes of their nationalities. Two recent studies have explored how race affects the sex categorization of faces. Goff, Thomas, and Jackson (2008) found that participants made more sex categorization errors for Black women compared to White women because participants saw Blacks as more masculine

than Whites. Johnson, Freeman, and Pauker (2011) found that participants were better able to categorize Asian Female and Black Male faces compared to Black Female and Asian male faces, presumably because the racial category shared facial phenotypes with the sex category. Even fewer studies have explored the real world implications of the overlap between race and gender. Although some studies have explored the intersectionality of race and gender in the context of hiring, most of these studies are correlational and offer contradictory results. For example, some studies find evidence for the double jeopardy hypothesis that multiple minority status (e.g., non-White women) leads to the most discrimination and negative workplace experiences (Berdahl & Moore, 2006; Kulik, Roberson, & Perry, 2007; Nelson & Probst, 2004), but others find that Black men experience the most discrimination (Sidanius & Veniegas, 2000).

We extend the research on the intersection of race and gender in two important ways. First, we demonstrate the overlap between racial and gender stereotypes goes beyond facial features and is captured in the content of stereotypes. To do so, we adapted the methods of the Princeton Trilogy (Katz & Braly, 1933; Gilbert, 1951; Karlins, Coffman, & Walters, 1969), and also utilized an implicit reaction time method, to measure the gender content of racial stereotypes. Second, we explored the implications of this association for interracial marriages, leadership selection, and athletic participation. Study 3 surveyed a national sample about their interracial dating habits and attraction to Asians or Blacks. Study 4 involved archival analyses of the 2000 United States Census that documented interracial marriage patterns. Study 5 asked participants to evaluate an Asian, White, or Black applicant and select him/her for either a masculine or feminine leadership position. Study 6 analyzed the NCAA Student-Athlete Ethnicity Report to look at whether the masculinity of a sport predicted racial differences in athletic participation.

### Study 1: The Gender Content of Racial Stereotypes

Study 1 used a well-established methodology for analyzing stereotype content and consensus (Katz & Braly, 1933; Gilbert, 1951; Karlins et al., 1969). In these studies, one group of participants evaluates the valence of attributes. A second group then assigns attributes to different ethnic groups from that same list. Using the valence ratings from the first pool, the attributes attributed to each ethnic group from the second group can be scored on valence to produce an overall negativity score for each ethnic group.

We followed the exact same procedure, but instead of using valence, we had the first group of participants assess the femininity-masculinity of each trait. This methodology allowed us to calculate the overall masculinity of each ethnic group's stereotype content.

#### *Participants and Methods*

Eighty-five participants completed an online survey (54 female; 54 White, 20 Asian, 7 Black, 4 other;  $M_{\text{Age}}=37.46$ ).

We randomly assigned participants to evaluate the femininity-masculinity of traits or to attribute those traits to each ethnic group. One group of participants rated 99 traits on a 1 (extremely masculine) to 10 (extremely feminine) scale; we recoded this variable so higher values were more masculine. The traits included the 84 original Katz and Braly (1933) attributes, 9 that were added in a replication (see Devine & Elliot, 1995), and 6 additional traits. Masculinity scores were computed for each of the 99 attributes.<sup>1</sup> A second group of participants assigned 10 attributes to each ethnic group (Asians, Whites, and Blacks) out of the 99 attributes.

We scored the trait attributions for each ethnic group according to the femininity-masculinity ratings of the first group. Past Princeton trilogy studies have used a stereotype uniformity measure to indicate the level of agreement across stereotypical traits for a given race

or ethnicity. The present stereotype uniformity scores are consistent with prior studies (see Table 1).

### *Results*

A 3(Race: Asian, White, or Black) x 2(Participant Gender) x 2(Participant Race: White vs. Non-White) mixed measures ANOVA revealed that the stereotype content for Blacks was considered to be the most masculine ( $M=6.34$ ;  $SD=.53$ ), followed by the stereotype content for Whites ( $M=6.06$ ;  $SD=.49$ ), and finally the stereotype content for Asians ( $M=5.41$ ;  $SD=.39$ ),  $F(2,98)=47.62$ ,  $p=.000$  (see Figure 1). All means were significantly different from one another, all  $t$ 's  $> 2.99$ , all  $p$ 's  $< .004$ .<sup>2</sup> Using Princeton Trilogy methods, we found a substantial overlap between the contents of racial and gender stereotypes.

One potential concern with the validity of our gendered-race hypothesis is that the traits may differ on valence or collectivism/individualism and these may co-vary with our femininity and masculinity ratings and differ by ethnicity. We asked a separate group of participants (52 total participants; 35 female; 18 White, 21 Asian, 13 other;  $M_{Age}=20.06$ ) to assess each trait on 1(extremely individualistic) to 10(extremely collectivistic) and a 1(extremely negative) to 10(extremely positive) scales. Then, we conducted a spearman rank order correlation for all 99 traits' collectivism, valence, and masculinity scores. There was a negative correlation between the masculinity and collectivism scores,  $r(99)= -.34$ ,  $p=.001$  and the masculinity and valence scores,  $r(99)= -.54$ ,  $p=.000$ , but a positive correlation between the collectivism and valence scores,  $r(99)=.20$ ,  $p=.043$ . Next, following the Princeton Trilogy method, we scored the trait attributions for each ethnic group according to the valence and then collectivism ratings of these participant groups. The collectivism content of the Asian stereotype ( $M=4.67$ ;  $SD=.34$ ) differed from the White ( $M=4.30$ ;  $SD=.41$ ) and Black ( $M=4.32$ ;  $SD=.25$ ) stereotypes,  $t$ 's  $> 4.90$ ,  $p$ 's  $< .001$ ,

but the White and Black stereotypes did not differ,  $t(52)=.420$ ,  $p=.68$ . The stereotype content for Asians was more positive ( $M=6.98$ ;  $SD=.80$ ) than the stereotype content of Whites ( $M=5.06$ ;  $SD=1.27$ ) and Blacks ( $M=4.40$ ;  $SD=1.26$ ),  $t's > 8.00$ ,  $p's > .001$ , but the White and Black stereotypes did not differ,  $t(52)=1.23$ ,  $p=.224$ .

Overall, the pattern of data was most consistent with our gendered-race perspective because the stereotype content of Whites and Blacks differed on masculinity but not on valence and collectivism. In addition, our next study tested whether gender was associated with race when holding constant the collectivism and valence of the traits. Further, this study used an implicit measure to test for spontaneous gender-race associations.

#### Study 2: Implicit Association between Racial and Gender Stereotypes

The second study tested whether the association between racial and gender stereotypes existed at an implicit level. We subliminally primed participants with a word related to race (Asian, White, Black) and then measured their reaction times to masculine or feminine words. We predicted that participants primed with Black would respond most quickly to masculine words but those primed with Asian would respond most quickly to feminine words.

#### *Participants and Methods*

Seventy-two individuals participated (41 females; 34 Whites, 20 East Asians, 6 South Asians, 8 Blacks, and 4 Hispanics;  $M_{Age}=20.29$ ). The experiment had 3(Subliminal prime: Asian, Black, White) X 2(trait: masculine, feminine) between-participants design.

Following the procedure of Wittenbrink et al. (1997), participants first identified the ethnic group membership (Black, White, or Asian) of individuals on the basis of first names. This task strengthens the association to the ethnic labels that would subsequently be used as subliminal primes.



Our subliminal prime procedure followed the recommendations of Bargh and Chartrand (2000). Participants had to decide whether a string of letters constituted a word in English as fast and accurately as possible. They were told that light flashes would be presented to distract them but they should concentrate on the center of the screen where the letter strings would appear. For each trial, the prime was flashed for 86 milliseconds at one of four corners on the screen and then immediately masked for 14 milliseconds. Right after the masking string, the target stimulus was presented. It remained on the screen until either the word or nonword buttons was pressed. We varied the location of the prime to ensure that participants could not focus their attention on it. Indeed, when asked after the experiment, none of the participants were able to recognize the prime words.

The flashes of light represented our first experimental factor. Either the word Black, White, or Asian was subliminally presented. For participants randomly assigned to the *masculine condition*, five of the words were masculine: vigorous, strong, muscular, burly, and masculine. In the *feminine condition*, five of the words were feminine: graceful, gentle, beautiful, delicate, and feminine. We preselected physically gendered, rather than behaviorally gendered, attributes to make sure that the traits were positively valenced and not collectivistic.<sup>3</sup>

Following the criteria of Balota and Lorch (1986), target latencies less than 300ms or greater than 1,300ms (2.3% of all latencies) were excluded from the analysis to reduce the distorting effect of outliers.

### *Results and Discussion*

We submitted response latencies to a 3(Subliminal prime: White, Black, Asian) x 2(Traits: masculine, feminine) x 2(sex of participant) between-participants ANOVA and a

significant interaction emerged between prime and traits,  $F(2, 60)=3.58$ ,  $p=.03$ , which was not qualified by participant sex,  $F(2, 48)=.004$ ,  $p=.996$ , nor participant race,  $F(2,48)=.34$ ,  $p=.71$ .

For masculine traits, participants who were subliminally primed with Black ( $M=580.38$ ,  $SD=64.78$ ) responded significantly more quickly to masculine words than participants subliminally primed with Asian ( $M=663.85$ ,  $SD=88.89$ ),  $t(31)=2.09$ ,  $p=.04$ , or White ( $M=690.04$ ,  $SD=122.28$ ),  $t(31)=2.52$ ,  $p=.02$ , which did not differ from each other,  $t(31) < 1$ ,  $p=.50$ . In contrast, participants who were subliminally primed with Asian responded significantly more quickly to feminine words ( $M=517.05$ ,  $SD=56.89$ ) than participants subliminally primed with Black ( $M=583.49$ ,  $SD=85.00$ ),  $t(35)=2.28$ ,  $p=.03$ , or White ( $M=597.65$ ,  $SD=85.00$ ),  $t(35)=2.92$ ,  $p=.006$ , which did not differ from each other,  $t(35)<1$ ,  $p=.65$ .

Even at the implicit level, there was a link between racial and gender stereotypes. When participants were subliminally primed with Black, masculine traits became relatively more accessible. Conversely, subliminally priming Asian made feminine traits more accessible.

### Study 3: Implications for Interracial Dating Patterns

We propose that the association between racial and gender stereotypes has important implications for interracial dating patterns because men tend to prefer women who personify the feminine ideal and women tend to prefer men who embody masculinity. Indeed, femininity confers an advantage to women in the heterosexual dating market and masculinity offers a comparative advantage to men in attracting opposite sex attention (Buss, 2000).

We hypothesize that a man's preference for femininity and a women's preference for masculinity will drive interracial dating preferences. First, we predict that men will be more attracted to Asian relative to Black women. In contrast, we predict that women will be more

attracted to Black relative to Asian men. Second, we predict that preferences for masculinity-femininity would mediate participants' attraction to Asians and Blacks.

### *Participants and Procedure*

Two hundred and sixty-eight heterosexual White participants completed an online survey (182 female;  $M_{\text{Age}}=42.71$ ). We first asked participants the extent to which they were attracted to femininity and attracted to masculinity in a mate (1=not at all, 7=very much so). Participants were then asked to indicate the extent to which they were attracted to Asians, Blacks, and Whites (1=not at all, 7=very much so), and the number of Asians, Blacks, and Whites they had dated.

### *Results*

Men were more attracted to femininity ( $M=5.69$ ,  $SD=1.26$ ) than masculinity ( $M=2.71$ ,  $SD=1.93$ ),  $t(84)=10.22$ ,  $p<.001$ , and women were more attracted to masculinity ( $M=5.46$ ,  $SD=1.55$ ) than femininity ( $M=2.66$ ,  $SD=1.71$ ),  $t(181)=14.68$ ,  $p<.001$ . Because we expected homophily effects for Whites, we based our hypotheses on the participants' propensity to date Asians relative to Blacks.<sup>4</sup>

As predicted, men were more attracted to Asians ( $M=5.13$ ,  $SD=1.71$ ) than to Blacks ( $M=3.71$ ,  $SD=1.84$ ),  $t(85)=7.45$ ,  $p<.001$ , but women were more attracted to Blacks ( $M=3.30$ ,  $SD=1.87$ ) than to Asians ( $M=2.86$ ,  $SD=1.82$ ),  $t(180)=3.17$ ,  $p=.002$ . Whereas 62% of men had dated an Asian woman, only 49% had dated a Black woman. Conversely, only 27% of the women had dated an Asian man, whereas 37% had dated a Black man.

### *Mediation*

We predicted that preferences for femininity and masculinity would mediate the effects of participant sex on attraction to Asians vs. Blacks. We created a measure to capture relative preferences for masculinity by subtracting femininity preferences from masculinity preferences.

We determined relative preferences for Blacks vs. Asians by subtracting attraction to Asians from attraction to Blacks. We regressed Attraction to Asians vs. Blacks on preferences for masculinity,  $B=.14$ ,  $SE=.04$ ,  $p=.000$ , and Participant Sex (coded 1=male; 2=female),  $B=-.98$ ,  $SE=.34$ ,  $p=.004$ . Preferences for masculinity mediated the association between participant sex and Attraction to Blacks vs. Asians, Sobel  $z=-3.36$ ,  $p<.000$ , and the total indirect effect was significant,  $B=.83$ ,  $SE=.25$ ,  $p=.001$ , 95% bias-corrected and accelerated bootstrap confidence interval: .4077 to 1.2955 (Figure 2).

Study 3 found a male romantic preference for Asians over Blacks and a female romantic preference for Blacks over Asians. Further we found that these interracial dating preferences were mediated by a participant's relative preferences for masculinity versus femininity in their romantic partners.

#### Study 4: Archival Analyses of 2000 United States Census

To examine whether the interracial dating preferences found in Study 3 would hold outside the lab and in longer term relationships, we conducted archival analyses of the 2000 United States Census data and found a similar pattern among interracial marriages. Among Black-White marriages, 73% (208,798/287,576) had a Black husband and a White wife. Among Asian-White marriages a strikingly different pattern emerged, where 75% of the marriages (380,475/504,119) possessed a White husband and an Asian wife. An even stronger pattern occurred among Asian-Black marriages, where 86% of the marriages (27,520/31,992) had a Black husband and an Asian wife and this was significantly different from White-Asian marriages,  $\chi^2(1)=1840.48$ ,  $p<.001$ .

One might propose that this pattern of interracial marriages could be explained by existing status disparities among racial groups. Indeed, females tend to prefer high-status males

(Buss, 1989). Black Americans possess lower socioeconomic status (SES; e.g., income, education) than Whites (Iceland & Wilkes, 2006), but the relative SES of Asian-Americans is less clear; although the income and education levels of Asians exceed those of Whites, their poverty rate is higher (Iceland & Wilkes, 2006) and they experience more prejudice (Maddux, Galinsky, Cuddy, & Polifroni, 2008) and discrimination (Kim & Lewis, 1994) than Whites.

If we assume that Whites have the highest status, followed by Asians, with Blacks having lower status than both groups, then status theorists would predict a pattern of gender composition of interracial marriages with the Black male-White female combination being the least common. The observed pattern from the Census data is virtually the opposite of that. The association between racial and gender stereotypes documented here combined with masculinity-femininity preferences in mate selection provides a parsimonious explanation for the gender composition of interracial marriages in the Census data.

#### Study 5: Implications for Leadership Selection

The next study explored the implications of the association between racial and gender stereotypes for leadership selection. We created two types of leadership positions, one that required feminine traits to be successful and one that required masculine traits to be successful. We asked participants to look at a single job applicant and place them into one of these leadership positions. We predicted that Asians would be more likely to be selected for the feminine leadership position and that Blacks would be more likely to be selected for the masculine position relative to White applicants.

#### *Participants and Procedure*

One hundred and forty eight participants responded to an online survey (100 female; 79 White, 38 Asian, 7 Black and 24 other,  $M_{Age}=19.78$ ).

Participants were instructed to review the application of a candidate for a leadership position within a company.<sup>5</sup> Gender and Race were manipulated in two ways. First, we used a check box on the application for gender and ethnicity. Second, we manipulated names so that they were distinctively Asian, White, or Black (Female names: Ming Lee, Emily, Lakisha, Male names: Ming Hoa, Greg, Jamal, respectively) (Bertrand and Mullainathan, 2004). Participants were then given a choice of selecting the candidate for either the feminine or masculine leadership role. The *feminine role* emphasized that a strong candidate would be collaborative and would require relationship building. Conversely, the *masculine role* required the candidate to be fierce, competitive, and contentious.

### Results

We analyzed the percentage of participants who nominated their candidate to the feminine vs. masculine leadership position using log-linear procedures by conducting a 2 (Race of Candidate: Asian, White, Black) x 2 (Gender of Candidate) x 2 (Nomination to Position: feminine, masculine) log-linear analysis. It produced the predicted effect of Race of Candidate on leadership selection,  $\chi^2(1)=10.28, p=.006$ .<sup>6</sup> Thus, target race significantly predicted to which position the candidate was nominated: 16% of participants nominated the Asian person, 37% of participants nominated the White person, and 43% nominated the Black person for the masculine position (Figure 3).

There was also a marginally significant three-way interaction,  $\chi^2(1)=5.34, p=.07$ . Of the participants who evaluated the female candidates, the pattern followed our predictions perfectly: 14% placed the Asian applicant, 25% placed the White applicant and 54% nominated the Black candidate to the masculine position. Of the participants who evaluated the male candidates, 17% nominated the Asian candidate and 48% placed the White candidate in the masculine position.

Across all the comparisons the only anomaly was that 32% of participants nominated the Black male candidate to the masculine position. This finding could have resulted because the feminine role was described using more positive characteristics than the masculine role; participants may have wanted to demonstrate a lack of prejudice by placing the Black male in the feminine role because it seemed more positive. This may also explain why two-thirds of participants placed their applicant in the feminine role. However, this difference in positivity cannot explain the full pattern of racial differences in leadership selection. Overall, the pattern of leadership selection conformed to our gendered races predictions in 5 of the 6 cells.

We wanted to rule out the possibility that racial differences in nominations to the feminine or masculine positions occurred because of perceptions that Asians are more collectivistic, or Whites and Blacks are more individualistic. We tested this alternative using a similar sample of online participants (84 total participants; 61 female; 48 White, 26 Asian, 7 Black and 3 other,  $M_{Age}=20.65$ ). Participants saw the same applications as before and evaluated how individualistic and collectivistic they perceived the candidate to be using Oyserman's (1993) scale for Collectivism-Individualism; participants rated their agreement with 9 collectivism statements (i.e. "This candidate probably believes that, in the end, a person feels closer to members of their his/her group than to others.") and 9 individualism statements (i.e. "This candidate probably believes that a man/woman of character helps his/her group before all else"). We averaged the collectivism statements to create a collectivism scale ( $\alpha=.84$ ), and the individualism statements for an individualism scale ( $\alpha=.71$ ). Neither the individualism, nor collectivism scale, revealed any main effects or interactions involving Target Race, all  $F$ 's < 1.30, all  $p$ 's > .279. Thus, participants perceived no differences in individualism or collectivism between the Asian, White, and Black candidates.<sup>7</sup>

### Study 6: Archival Analysis of the NCAA Student-Athlete Ethnicity Report (2000-2010)

The previous three studies have established that as masculinity becomes more valued in the romantic or leadership domain, Blacks get selected relative to Asians. Our final study extended these findings to the athletic domain. Our prediction was that as a sport is seen as more masculine, the more likely that Blacks will be an athlete in that sport relative to Asians. We chose to analyze racial differences in collegiate athletic participation in the United States because becoming a student-athlete is competitive and carries significant advantages (i.e., preferential admissions and scholarships). Participation in college athletics also involves a rigorous selection process as most college athletes are selected through a recruitment process by coaches.

We analyzed archival data from the National Collegiate Athletic Association's (NCAA) Student-Athlete Ethnicity Report, which breaks down the racial composition of 30 different collegiate sports (NCAA, 2010) over 11 years from 2000-2010 for Divisions I, II, and III. We analyzed the data collapsing across all years and divisions.

Sixty-five undergraduate sports fans assessed the masculinity of each sport on a 1(Extremely feminine) to 10 (Extremely masculine) scale (46 female; 32 White, 18 Asian, 5 Black, 8 other;  $M_{\text{Age}} = 21.5$ ).<sup>8</sup> As in Study 3, difference scores were computed to assess the relative frequency of Blacks over Asians in each sport. We expected that the perceived masculinity of a given sport would predict the relative number of Blacks vs. Asians in that sport.

As predicted, the perceived masculinity of the sports was significantly associated with the relative number of Blacks versus Asians in those sports ( $\beta = .37$ ,  $B = .00000148$ ,  $SE = .00$ ,  $p = .047$ ). The more masculine a sport was perceived to be, the more likely Blacks were to be college athletes in that sport relative to Asians.<sup>9</sup> Further, to test whether individualism or collectivism were confounded with masculinity, we controlled for the individual or team nature of the sport.



The individual or team nature of the sport had no significant effect on the relative number of Blacks over Asians in that sport ( $\beta=.10$ ,  $B=.306$ ,  $SE=.61$ ,  $p=.564$ ). Further, when the individual or team nature of the sport was controlled for, the predicted effect remained marginally significant ( $\beta=.35$ ,  $B=.00000142$ ,  $SE=.00$ ,  $p=.062$ ).

The masculinity of a sport predicted the relative number of Black and Asian college athletes in that sport. It is important to note that these differential levels of participation are likely driven by both selection processes in recruitment and self-selection processes.

### Discussion

The current studies established that there is an important overlap between racial and gender stereotypes. This overlap provides a parsimonious explanation for the gender composition of interracial couples, racial differences in athletic participation at the collegiate level, and the nomination of candidates from different races into feminine versus masculine positions of leadership.

Although we posit that racial stereotypes are gendered, one might argue that gender stereotypes are instead racialized. Although our studies cannot rule out this alternative possibility, both adults and children categorize others based on gender before race, suggesting that gender is the more primary category (Ocampo, Bernal, & Knight, 1993; Shutts, Banaji, & Spelke, 2010). Thus, we believe that our proposed direction of gendered races is more likely than the opposite pathway.

The present research demonstrates that the intersection of race and gender has important real-world consequences. Considering the overlap between racial and gender stereotypes opens up new frontiers for understanding how stereotypes impact the important decisions that drive our most significant outcomes at work and home.

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## Footnotes

<sup>1</sup> One-way ANOVAs were conducted for each of the 99 traits to analyze differences in femininity scores by participant race and participant gender. The difference between male and female trait ratings was significant in 16% of the cases, all  $F$ 's > 3.86, all  $p$ 's < .059. However, male and female ratings did not significantly differ from the midpoint in opposite directions for any of these traits. The difference between White and Non-White trait ratings was significant in 8% of the cases, all  $F$ 's > 4.57, all  $p$ 's < .047. Again, White and Non-White ratings did not significantly differ from the midpoint in opposite directions for any of these traits.

<sup>2</sup> There was a significant within subjects interaction for Race and Participant gender,  $F(2,98)=3.11, p=.049$ . Women did not perceive a difference between the feminine content of the Black stereotype ( $M=4.67, SD=.62$ ) and that of the White stereotype ( $4.83, SD=.47$ ),  $t(28)=1.50, p=.145$ , but all other differences were significant, all  $t$ 's > 2.68,  $p<.013$ . There were no participant race effects, all  $F$ 's < 1.53,  $p=.22$ .

<sup>3</sup> Both the femininity and masculinity scales were significantly more positive than the midpoint of the scale,  $t(51)=16.69, p=.000$  and  $t(51)=10.58, p=.000$ , respectively, indicating that they were all positive terms. Furthermore, both scales were significantly less collectivistic than the midpoint of the scale,  $t(47)=6.76, p=.000$ , and  $t(47)=8.38, p=.000$ , respectively, indicating that they were all individualistic terms

<sup>4</sup> As we expected, men were more attracted to other Whites ( $M=6.35, SD=1.03$ ) than to Asians,  $t(85)=5.87, p=.000$ , or to Blacks,  $t(85)=11.29, p=.000$ , and women were also more attracted to other Whites ( $M=6.09, SD=1.32$ ) than to Asians,  $t(180)=19.39, p=.000$ , or to Blacks,  $t(180)=16.70, p=.000$ . Furthermore, 97% of the men in the sample had dated a White woman, which is a greater percentage than those that had dated an Asian woman a Black woman.

Similarly, 93% of women had dated a White man, which is a greater percentage than those that had dated an Asian man or a Black man.

<sup>5</sup> Landy (2008) has argued that the generalizability of experimental findings of the effect of stereotyping on personnel decisions is limited by the artificial lack of individuating information provided about the targets. However, others have asserted that these experimental findings are indeed valid, given that (a) they closely converge with findings from natural settings, and (b) extensive evidence suggests that having access to individuating information rarely prevents perceivers from relying on stereotypes (e.g., Heilman & Eagly, 2008).

<sup>6</sup> An ANOVA including participant race and gender as factors revealed no significant interactions with target race and/or gender, all  $F$ 's < 2.38, all  $p$ 's > .096.

<sup>7</sup> On the collectivism scale, there was only one effect, a main effect for gender,  $F(1,78)=5.38$ ,  $p=.023$ , such that women were considered to be more collectivistic than men ( $M=3.32$ ,  $SD=.50$  vs.  $M=3.02$ ,  $SD=.59$ , respectively),  $t(82)=2.46$ ,  $p=.016$ .

<sup>8</sup> One-way ANOVAs were conducted for each of the 30 sports to analyze differences in masculinity scores by participant race and participant gender. The difference between male and female trait ratings was significant in 7% of the cases, all  $F$ 's > 4.39, all  $p$ 's < .04. However, male and female ratings did not significantly differ from the midpoint in opposite directions for any of these traits. White and Non-White participants trait ratings significantly differed in 7% of the cases, all  $F$ 's > 4.73, all  $p$ 's < .033. Similarly, White and Non-White ratings did not significantly differ from the midpoint in opposite directions for any of these traits.

<sup>9</sup> Because the data are correlational, it is plausible that the relative number of Blacks vs. Asians in a sport could affect how masculine observers perceive the sport to be.



Table 1. Uniformity indexes for stereotype content studies.

	1933	1951	1967	1995	2012
<b>Asian</b>	—	—	—	—	12.88
Chinese	12	14.5	10.8	—	—
Japanese	10.9	26	9.4	—	—
<b>Whites</b>	—	—	—	—	17
Americans	8.8	13.6	9.6	—	—
English	7	9.2	8	—	—
<b>Blacks</b>	4.6	12	12.3	4.5	11.42

*Note:* Stereotype uniformity is computed by assessing the fewest number of traits needed to account for 50% of all possible trait allocations (Katz & Braly, 1933; Gilbert, 1951; Karlins, Coffman, & Walters, 1969; Devine & Elliot, 1995). For example, the summed frequency of all trait allocations for Asians was 553. Thus, it took 12.88 traits to account for 50% ( $553/2=276.5$ ) of all possible trait allocations. With instructions to choose 10 representative traits and 99 total traits, a stereotype uniformity score of 5 would indicate perfect agreement and a score of 49.5 would indicate perfect disagreement. Because participants in the four prior studies were encouraged to select 5, rather than 10, traits, a stereotype uniformity score of 2.5, rather than 5, indicated perfect agreement. Because thirty percent of the sample (16 participants) provided either more or less than 10 attributes per ethnic group, masculinity scores were summed across trait ratings and divided by the number of traits chosen to control for number of traits chosen for each racial group.

Figure 1. Mean masculinity of the stereotype content of Blacks, Whites, and Asians in Study 1.

Error bars represent  $\pm 1$  SEM

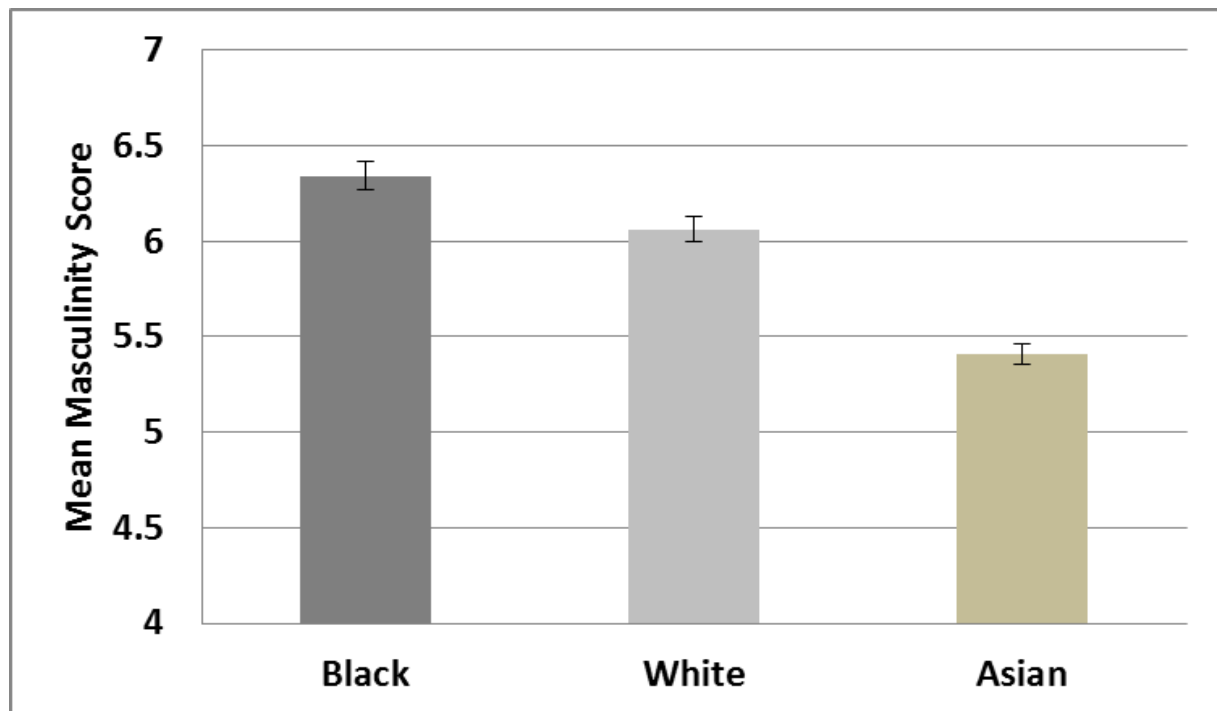
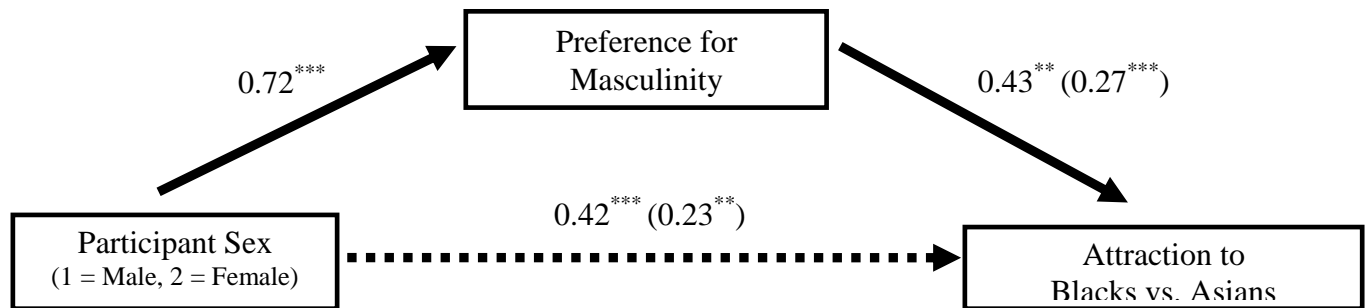


Figure 2. Mediation of Participant Sex on attraction to Asians vs. Blacks by relative preferences for Masculinity in Study 3. Numbers represent standardized regression coefficients; numbers in parentheses represent simultaneous standardized regression coefficients.



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

Figure 3. Percentage of respondents who chose the masculine (vs. feminine) position for the Black, White, and Asian leadership candidate in Study 5.

