Just over 50 years ago, the United States Supreme Court ruled bans on interracial marriage unconstitutional (Loving v. Virginia, 1967). This landmark case was brought by Mildred Loving, a Black woman, and Richard Loving, a White man, who had been sentenced to prison for marrying. In 1960, interracial relationships constituted only 0.4% of marriages in the US, and have risen to 12% more recently (Wang, 2015), with White male–Asian female being the most common and Black male–White female being the second most common combinations of interracial couples (Fryer, 2007).

Despite the increasing prevalence of interracial relationships, negative attitudes toward interracial couples persist (Skinner & Rae, 2018). A
significant proportion of Americans explicitly disapprove of interracial marriage and dating (Bobo, 2004; Jacobson & Johnson, 2006; Wellner, 2005). In addition, recent research demonstrates that interracial couples elicit neural disgust and implicit dehumanization responses in monoracial individuals (Skinner & Hudac, 2017). Despite converging evidence that people have negative attitudes toward interracial couples, extant research has yet to examine variations in attitudes based on the particular gender and racial composition of interracial couples.

In the current research, we examine Black and East Asian American men’s and women’s attitudes toward different combinations of interracial couples. We are the first, to our knowledge, to examine how these attitudes vary as a function of the interaction between the racial and gender composition of the couple and perceivers’ own identity. In addition, we test whether perceived competition for dateable same-race partners helps explain attitudes. Based on realistic group conflict theory, intergroup hostility arises as a result of conflicting goals and from competition over limited resources (Sherif & Sherif, 1953). We believe that perceived competition is shaped, at least in part, by the prevalence of particular interracial pairings in society.

Men and women of different racial groups vary in the extent to which they pair with individuals of other races. For example, Asian Americans are the most likely to intermarry (29%), followed by Black and White Americans (18% and 11%, respectively; Bialik, 2017). Asian and Black Americans have a significant gender gap in terms of the likelihood of marrying outside their race. Among newlyweds in 2008, Asian American women were twice as likely as Asian American men to marry someone of a different race. The gender pattern was the opposite for Black Americans; Black men were more than twice as likely as Black women to marry someone of a different race. The gender pattern was the opposite for Black Americans; Black men were more than twice as likely as Black women to marry someone of a different race (Passel, Wang, & Taylor, 2010). In addition, the most frequent type of interracial marriage in the US occurs between White men and Asian women, and the second most frequent occurs between Black men and White women (Fryer, 2007). These rates suggest that the prevalence of intermarriage varies as a function of race and gender.

It is crucial to examine attitudes toward interracial relationships using an intersectional approach to understand the influence of both race and gender. We cannot fully understand the experience of people in one category without reference to another category. For example, what it means to be Black is different for women and men, and the experience of being a woman (or man, or trans/nonbinary) varies for Black and White women. Previous research reveals that people’s experiences and appraisals are shaped at the intersection of race and gender (e.g., Crenshaw, 1989; Greenwood & Christian, 2008; Shields, 2008; Warner, 2008). We extend beyond prior literature on attitudes toward interracial couples by examining how the race and gender of participants predict their attitudes toward different racial and gender combinations of interracial couples.

We suggest that the prevalence of particular interracial couples might drive perceived competition for same-race partners, and may predict people’s attitudes toward those couples. These predictions are grounded in realistic group conflict theory, which suggests that when groups compete for the same scarce resources, competition leads to negative attitudes such as prejudice, discrimination, and conflict between groups (Sherif & Sherif, 1953). For example, in a summer camp where boys were split into two groups, each group developed negative attitudes and behaviors toward the other group when they competed for a valued prize (Sherif & Sherif, 1953). Competition for same-race partners may similarly affect attitudes toward interracial couples. We propose that when a particular pairing is perceived as threatening a group’s access to potential same-race partners, the group will have more negative attitudes toward couples of that combination. For instance, Black American women might hold more negative attitudes toward Black male–White female couples compared to White male–Black female couples because the former is more common than the latter. Essentially, the greater prevalence of the first pairing means there is stronger competition to
gain access to single Black men than single Black women. If Black American women want to marry within their racial group, this may lead to their having more negative attitudes toward Black male–White female couples. Similarly, Asian American men might hold more negative attitudes toward White male–Asian female couples compared to Asian male–White female couples because the former is more common than the latter, and Asian women marry outside their race more frequently than Asian men in the US. In other words, particular interracial couples might be seen by Black American women and Asian American men as increasing the competition for their groups’ potential same-race partners.1

Existing qualitative data provide initial evidence that attitudes toward interracial couples are shaped by perceptions of same-race partner availability. Black and White students interviewed about their attitudes toward interracial dating at a predominately White university revealed that Black women and White men expressed less favorable attitudes toward interracial dating than White women and Black men. The author suggested that the dating pool is especially limited for Black women and speculated that Black women might view White women who date Black men as “extractors of scarce resources” and thus, as competitors for access to Black men (Schoepflin, 2009, p. 6). Our research aims to provide quantitative and experimental evidence for this proposed phenomenon. Another survey study revealed that in general, men reported more positive attitudes toward interracial dating than women, and White Americans indicated more positive attitudes toward interracial dating than Black Americans (Todd, McKinney, Harris, Chadderton, & Small, 1992). However, extant research has yet to examine how race and gender interact to predict attitudes toward interracial couples, and why people of certain gender and race combinations possess less positive attitudes toward specific interracial couples, which is what we examine here.

Study Overview and Hypotheses

We examined how race and gender interact to predict attitudes toward same-race and interracial couples. We focused on the two most common combinations of interracial couples in the United States: Asian–White and Black–White couples.

Consistent with previous research (Skinner & Hudac, 2017; Skinner & Rac, 2018), we hypothesized that mono-racial individuals would possess more negative attitudes toward interracial than same-race couples.

Based on the varying prevalence of different combinations of interracial couples in the US, in Study 1 we hypothesized that Asian men and Black women would report more negative attitudes toward relatively prevalent interracial combinations (relative to less common ones), as these couples might be seen as increasing competition for potential same-race partners.

In Study 2, we examined how perceived competition from White men for Asian women shapes Asian men’s attitudes toward interracial couples. We hypothesized that greater perceived competition from White men for Asian women would be associated with more negative attitudes towards White male–Asian female couples.

In Study 3, we investigated how perceived competition from White women for Black men influences Black women’s attitudes toward interracial couples. We hypothesized that perceived competition from White women for Black men would lead to more negative attitudes toward Black male–White female relative to White male–Black female couples.

Study 1

Study 1 examined Black and East Asian Americans’ attitudes toward interracial couples and whether their attitudes vary based on the couples’ racial and gender composition and participants’ own identity.

We hypothesized that, on average, participants would indicate more positive attitudes toward same-race couples than toward interracial couples. We expected Black American women to report lower warmth towards Black male–White female couples compared to White male–Black female couples. In contrast, Black American men’s warmth towards the two couple types would not differ. The latter prediction stems from the
relative rarity of White male–Black female pairings (and thus Black men’s relatively lower concern about competition for Black women).

We predicted that among East Asian Americans, men would indicate more negative attitudes toward White male–Asian female couples compared to Asian male–White female couples. In contrast, East Asian American women would not report different attitudes toward the two interracial couple types for reasons similar to those of Black men.

Methods

Participants. All participants were recruited on Amazon’s Mechanical Turk (MTurk), an online survey distribution platform (Buhrmester, Kwang, & Gosling, 2011). They were selected using a demographic screening measure. As the study assessed perceptions of heterosexual couples, those who identified as nonheterosexual and those who identified their gender as neither male nor female were excluded. People who identified with more than one race were also excluded from the study, as we expect mixed-race individuals to have more favorable interracial attitudes than mono-racial individuals (Skinner & Rae, 2018).

Black American sample. One hundred seventy-one self-identified Black individuals participated. Twenty-two were excluded from analyses for failing an attention check. The remaining 149 participants were 62% women with a mean age of 33.26 (SD = 9.97).

East Asian American sample. One hundred sixty-six self-identified East Asian individuals were recruited on MTurk. Six participants were excluded from analyses for failing an attention check. The final sample included 161 participants (52% women) with a mean age of 28.87 (SD = 8.94).

Procedure. After completing informed consent, participants were asked to report their attitudes toward various couples using feeling thermometers. Participants indicated their warmth towards couples in a randomized order.

The Black American sample evaluated an all-Black couple, an all-White couple, a Black male–White female couple, and a White male–Black female couple.

The East Asian American sample viewed an all-Asian couple, an all-White couple, an Asian male–White female couple, and a White male–Asian female couple.

After participants completed the survey, they were probed for suspicion and debriefed.

Measures

Feeling thermometers. Participants were asked to indicate their attitudes by answering the following question: “How do you feel about couples where the woman is [Black/White] or [Asian/White] and the man is [Black/White] or [Asian/White]?” A symbolic representation of each couple was included to aid in quick recognition (materials for all studies are available on the Open Science Framework: https://osf.io/qkvw/; view_only=ee6b983214430456e6c60714eb35e89). The scales were anchored at 0 with the label “cold,” at 50 with the label “neutral,” and at 100 with the label “warm.”

Results and Discussion

Analytic plan. To determine whether participants’ gender predicted attitudes toward different couples, we ran a 2 (couple type: same race vs. interracial) × 2 (male’s race: White vs. Black or Asian) × 2 (participant gender: men vs. women) mixed model ANOVA. Couple type and male’s race were within-subject measures, and participant gender was a between-subject measure. We also tested comparisons between attitudes toward specific couples based on our hypotheses.

Black American sample. The couple main effect was significant; Black participants indicated higher warmth towards same-race couples (M = 85.86, SD = 18.21) compared to interracial couples (M = 78.26, SD = 23.24), F(1, 147) = 19.19, p < .001, ηp² = .12. There was no significant main effect of male race, p = .10. Importantly, the predicted three-way interaction was significant, F(1, 147) = 14.74, p < .001, ηp² = .09.
As hypothesized, Black women indicated lower warmth towards Black male–White female couples ($M = 68.77, SD = 29.48$) compared to White male–Black female couples ($M = 78.51, SD = 24.62$), $F(1, 147) = 21.70, p < .001, \eta^2_p = .13$. Black men, on the other hand, did not differentiate between Black male–White female couples and White male–Black female couples, $p = .12$ (see Figure 1). With respect to same-race couples, Black women indicated greater warmth toward all-Black couples ($M = 91.60, SD = 15.06$) than toward all-White couples ($M = 82.97, SD = 23.21$), $F(1, 147) = 23.00, p < .001, \eta^2_p = .14$, whereas Black men did not indicate different warmth levels between the same-race couples, $p = .17$ (see Figure 2).

East Asian American sample. There was a significant main effect for couple type, $F(1, 159) = 26.48, p < .001, \eta^2_p = .14$. Asian participants indicated higher warmth towards same-race couples ($M = 75.86, SD = 19.41$) compared to interracial couples ($M = 68.82, SD = 20.43$). There was also a significant main effect of male race, $F(1, 159) = 18.29, p < .001, \eta^2_p = .10$. Couples where the male’s race was Asian ($M = 75.03, SD = 18.91$) were rated more positively than those where the male’s race was White ($M = 69.64, SD = 20.30$). These main effects were qualified by the predicted three-way interaction, $F(1, 159) = 6.45, p = .012, \eta^2_p = .04$.

As hypothesized, Asian men indicated lower warmth towards White male–Asian female couples ($M = 60.05, SD = 28.06$) compared to Asian male–White female couples ($M = 71.96, SD = 22.89$), $F(1, 159) = 15.28, p < .001, \eta^2_p = .09$; whereas women’s attitudes did not differ between the two interracial couples, $p = .98$ (see Figure 3). With respect to same-race couples, both men, $F(1, 159) = 5.15, p = .03, \eta^2_p = .03$, and women, $F(1, 159) = 7.67, p = .006, \eta^2_p = .05$, indicated higher warmth toward all-Asian couples than toward all-White couples (see Figure 4).

Consistent with hypotheses, Black and East Asian American men and women reported more positive attitudes toward same-race couples than toward interracial couples. Furthermore, attitudes varied based on participants’ identities as well as
the racial and gender composition of the interracial couples they evaluated. Specifically, Black women and East Asian American men held more negative attitudes towards the more common couples. This is consistent with our hypothesis that particular interracial couples perceived as limiting a group’s access to potential same-race partners may lead to more negative attitudes toward couples of that combination.

Study 1 was consistent with hypotheses but did not provide evidence for the cause of participants’ attitudes. We expected that the perceived competition for potential dating partners shapes attitudes towards interracial couples. Therefore, Study 2 attempted to manipulate perceived competition.

**Study 2**

In Study 2, Asian American men were assigned to one of three conditions which aimed to manipulate their perceived competition from White men for Asian women. The goal was to cause participants to believe that Asian men are advantaged, disadvantaged, or neither in dating. It examined East Asian American men’s attitudes toward White male–White female, Asian male–Asian female, White male–Asian female, and Asian male–White female couples, and whether perceived competition for dateable Asian women predicted these attitudes.

This study focused on East Asian American men because White male–Asian female are the most common interracial couples (Fryer, 2007), and Asians make up the smallest racial minority group in the US (aside from Native Americans; U.S. Census Bureau, 2017). Given the relatively small numbers coupled with the high prevalence of Asian American women dating outside their race, we expect Asian American men to be the subsample most affected by perceived competition for same-race partners.

We hypothesized that Asian men in the disadvantage condition would indicate more negative attitudes toward White male–Asian female couples compared to Asian men in the advantage and control conditions. We expected that Asian men’s perceived competition from White men for Asian women would drive Asian men’s negative attitudes toward White male–Asian female couples. To examine Asian men’s perceived competition, we assessed their zero-sum beliefs—the extent to which they believe White men dating Asian women reduces their own opportunities to date Asian women. This zero-sum framework has been used to conceptualize intergroup competition: getting ahead at the expense of another group. Past research has found that perceived zero-sum competition between groups predicts negative attitudes toward immigrants (Esses, Dovidio, Jackson, & Armstrong, 2001). Perceived competition is the core of realistic group conflict theory, which suggests that when groups compete for the same scarce resources, competition leads to negative attitudes between groups (Sherif & Sherif, 1953).

We hypothesized that the stronger Asian men’s zero-sum beliefs (about competition between White men and Asian men over Asian women), the more negative their attitudes towards White male–Asian female couples, and the more positive their attitudes toward same-race couples. Moreover, because we expected zero-sum beliefs to drive Asian men’s attitudes toward interracial couples, controlling for zero-sum beliefs would eliminate the differences in Asian men’s attitudes toward White male–Asian female couples and Asian male–White female couples.
**Methods**

**Participants.** One hundred twenty-four self-identified heterosexual East Asian American men were recruited on MTurk for Study 2. Ten participants were excluded for failing the attention check. The final sample included 114 participants ($M_{\text{age}} = 30.72, SD = 8.88$).

**Procedure.** Asian American men were randomly assigned to one of three conditions intended to manipulate Asian American women’s dating preferences. In the disadvantage condition, Asian women were described as preferring to date White men over Asian men. A section of the disadvantage condition message read:

> OKCupid data suggests that Asian women are more likely to respond to messages from White men than Asian men. A national survey conducted by Pew Research Center also shows that 68% of Asian women prefer dating or marrying White men to Asian men. Thus, Asian men are facing increasingly fierce competition with White men over Asian women.

In the control condition Asian women were described as having no racial dating preferences, and in the advantage condition Asian women were described as preferring Asian men to White men. In each condition participants were presented with a message followed by an attention check.

Next, we assessed participants’ zero-sum beliefs about competing with White men over Asian women. Participants indicated their warmth towards the four couple types. Finally, participants were debriefed.

**Measures**

**Zero-sum beliefs.** Five items assessed participants’ beliefs about the competition between Asian men and White men over Asian women. Participants were asked to indicate their agreement with items on 7-point scales (1 = strongly disagree, 7 = strongly agree). These items included: “More Asian women dating White men means Asian men lose out”; “As more Asian women date White men, Asian men’s potential romantic partners decrease”; “When White men become more popular with Asian women, it means that Asian men become less popular”; “Asian men do not necessarily lose out when White men date Asian women” (reverse-coded); “White men and Asian men do not have to compete for Asian women” (reverse-coded). The five items were averaged to create a zero-sum belief composite score ($M = 3.89, SD = 1.45; \alpha = .92$).

**Feeling thermometers.** The same measures as for the Asian sample in Study 1 assessed participants’ attitudes toward the different couples.

**Perceived availability of dateable Asian women.** Perceived availability of dateable Asian partners was assessed by asking “How available are dateable Asian [men/women]?” Availability was assessed on a 7-point scale (0 = very unavailable, 6 = very available; $M = 4.29, SD = 1.25$). This measure also served as a manipulation check.

**Results and Discussion**

**Manipulation check.** Two one-way ANOVAs revealed no condition differences in perceived availability of dateable Asian women, $F(2, 111) = 0.46, p = .63$, or in zero-sum beliefs, $F(2, 111) = 1.12, p = .33$. Thus, the manipulation failed. Perhaps the manipulation failed because we mentioned “Asian women” and “dating” in all three conditions. Those words might have aroused dating concerns in our participants across all conditions, which dampened the effect of manipulation.

**Asian American men’s attitudes toward different couples.** We ran a 2 (couple type: same race vs. interracial) × 2 (male’s race: White male vs. Asian male) × 3 (condition: disadvantage vs. advantage vs. control) mixed ANOVA, with couple type and male’s race as the repeated measures, and competition condition as the between-subject measure. The three-way interaction was not significant ($p = .85$); therefore, we collapsed across conditions for further analyses.
We ran a 2 (couple type: same race vs. interracial) × 2 (male’s race: White male vs. Asian male) repeated measures ANOVA. There was a significant main effect of couple type, $F(1, 113) = 29.00, p < .001, \eta_p^2 = .20$. Asian American men indicated higher warmth towards same-race ($M = 72.12, SD = 19.11$) than towards mixed-race couples ($M = 62.80, SD = 18.58$). The main effect of male’s race was also significant, as Asian American men indicated higher warmth towards couples with an Asian male ($M = 71.44, SD = 16.98$) than towards couples with a White male ($M = 63.48, SD = 18.04$), $F(1, 113) = 46.76, p < .001, \eta_p^2 = .29$. These main effects were qualified by a significant Couple Type × Male’s Race interaction, $F(1, 113) = 14.09, p < .001, \eta_p^2 = .11$.

Simple effects revealed that Asian American men reported lower warmth toward White male–Asian female couples ($M = 56.83, SD = 22.53$) than toward Asian male–White female couples ($M = 68.78, SD = 20.18$), $F(1, 113) = 38.65, p < .001, \eta_p^2 = .26$. Asian American men also reported less warmth toward White male–White female ($M = 70.13, SD = 20.61$) than toward Asian male–Asian female couples ($M = 74.11, SD = 19.43$), $F(1, 113) = 12.37, p = .001, \eta_p^2 = .10$ (see Figure 5).

These results replicated Study 1, suggesting a consistent pattern of Asian American men possessing the most negative attitudes toward White male–Asian female couples compared to the other couple types.

Zero-sum beliefs and attitudes toward couples. We ran bivariate correlations between zero-sum beliefs, perceived availability of dateable Asian women, and attitudes toward couples (see Table 1 for correlations). We found that zero-sum beliefs negatively predicted perceived availability of dateable Asian women, $r(114) = -.23, p = .013$. This suggests that greater perceived competition with White men predicted Asian men’s perception that Asian women are less available.

Zero-sum beliefs predicted Asian American men’s attitudes toward the different couples. Zero-sum beliefs positively predicted Asian American men’s warmth toward White male–White female couples, $r(114) = .22, p = .02$; marginally predicted attitudes toward Asian male–Asian female couples, $r(114) = .16, p = .08$; but negatively predicted warmth toward White male–Asian female couples, $r(114) = -.21, p = .03$. There was no significant correlation between

![Figure 5. Asian men’s attitudes toward four combinations of couples (Study 2). Note. *p < .05.](image-url)

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<td>1. White male–Asian female</td>
<td>56.82 (22.50)</td>
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<td>2. Asian male–White female</td>
<td>68.78 (19.94)</td>
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<td>3. White male–White female</td>
<td>70.13 (20.58)</td>
<td>.41**</td>
<td>.45**</td>
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<td>4. Asian male–Asian female</td>
<td>74.11 (19.39)</td>
<td>.40**</td>
<td>.50**</td>
<td>.82**</td>
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<td>5. Zero-sum belief</td>
<td>3.89 (1.45)</td>
<td>-.21*</td>
<td>-.10</td>
<td>.22**</td>
<td>.16</td>
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<td>6. Availability of Asian women</td>
<td>1.31 (1.25)</td>
<td>.16</td>
<td>.03</td>
<td>.11</td>
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<td>-.23*</td>
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$N = 114$

Note. *p < .05. **p < .01.
zero-sum beliefs and attitudes toward Asian male–White female couples, \( r(114) = -0.10, p = .27 \). In other words, the more Asian American men believe they must compete with White men over Asian women, the more positive their attitudes toward same-race couples, but the less positive their attitudes toward White male–Asian female couples. This is consistent with our hypothesis that attitudes are predicted by the extent to which a particular couple type is seen as relating to Asian American men’s perceived competition with White men for Asian women.

**Exploratory analysis: Do zero-sum beliefs relate to Asian men’s attitudes toward interracial couples?** To examine whether Asian American men’s attitudes toward different couples still differ after controlling for zero-sum beliefs, we ran a 2 (couple type: same race vs. interracial) \( \times \) 2 (male’s race: White male vs. Asian male) repeated measures ANCOVA. Controlling for Asian men’s zero-sum beliefs, attitudes toward the two interracial couples were no longer significantly different from each other, \( F(1, 112) = 0.18, p = .67 \). This suggests that zero-sum beliefs explain the difference in Asian American men’s attitudes between White male–Asian female and Asian male–White female couples. In other words, Asian American men’s belief that they compete with White men over Asian women predicts less favorable attitudes toward White male–Asian female couples.

**Study 3**

Given the failed manipulation in Study 2 and our desire to demonstrate causality, Study 3 manipulated Black women’s perceived competition from White women for Black men. We examined Black women’ attitudes toward four combinations of couples: White male–White female, White male–Black female, Black male–Black female, and Black male–White female couples.

In line with Study 1, we expected that Black women would indicate more positive attitudes toward same-race couples than toward interracial couples; Black women would indicate lower warmth towards Black male–White female couples compared to White male–Black female couples. Importantly, we hypothesized that the difference in warmth toward Black male–White female and White male–Black female couples would be larger for Black women who perceived high competition from White women for Black men compared to Black women who did not perceive high competition. This difference would be tested with a two-way ANOVA.

**Participants**

Participants were 209 self-identified Black women recruited on Amazon’s Mechanical Turk (MTurk). Fifty-three individuals were excluded from analyses for failing the attention check. The remaining 156 participants had a mean age of 39.90 (SD = 14.84).

**Procedure**

After consenting, participants were randomly assigned to one of two conditions designed to manipulate the perceived scarcity of dating partners and Black women’s competition with White women. The participants were simply told to read the following passage. In the competition condition, participants read sentences like: “The dating trends make things difficult for Black women, as Black men have shown an increasing tendency to date and marry White women instead of their Black counterparts,” “Black women, who by comparison are much more likely to have same-race relationships, are faced with increasingly stark competition from White women,” and “Increased interracial dating options for White women could mean decreased options for Black women, who seem to be losing out in the competition.” In the control condition, participants read “Please respond to the following questions.” We utilized a cleaner manipulation by not mentioning “Black men” or “dating” in the control condition. After reading the prompts, participants indicated their warmth towards the four different types of couples using feeling thermometers: White male–White female, White male–Black female, Black male–Black female, and Black male–White female couples. Finally, participants were debriefed.
Measures

Attention check. The attention check was a factual multiple-choice question based on the manipulation. Participants were asked to choose one of four possible options that best described the message they had just read. Those who failed to answer the question correctly were excluded from analyses.

Zero-sum beliefs. Zero-sum beliefs about perceived competition with White women for Black men were measured using the same items as in Study 2 but worded for Black women ($M = 3.23$, $SD = 1.70$; $\alpha = .89$).

Feeling thermometers. Attitudes towards couples were assessed using the same measures described in Study 1 for the Black American sample.

Results and Discussion

Manipulation check. Black women in the competition condition ($M = 3.59$, $SD = 1.87$) reported higher zero-sum beliefs about their competition with White women for Black men than those in the control condition ($M = 2.96$, $SD = 1.51$), $t(150) = 2.34, p = .021$. Thus, the manipulation was successful.

Black women’s attitudes toward couples. In order to test whether Black women preferred same-race to interracial couples, we ran a 2 (couple type: same race vs. interracial) $\times$ 2 (male’s race: Black vs. White) ANOVA. Replicating previous studies, there was a significant main effect of couple type, $F(1, 155) = 54.57, p < .001, \eta_p^2 = .26$; Black women indicated higher warmth towards same-race ($M = 80.94$, $SD = 23.54$) than towards interracial couples ($M = 63.34$, $SD = 23.79$). The main effect of male’s race was also significant, $F(1, 155) = 4.85, p = .029, \eta_p^2 = .03$. These main effects were qualified by a significant Couple Type $\times$ Male’s Race interaction, $F(1, 155) = 34.88, p < .001, \eta_p^2 = .18$.

Black women’s attitudes toward interracial couples. To examine how condition affected attitudes toward specific interracial couples, we ran a 2 (couple type: White male–Black female vs. Black male–White female) $\times$ 2 (condition: competition vs. control) ANOVA, with couple type as the repeated measure and condition as the between-subject measure. There was a main effect for couple type, such that Black women indicated greater warmth towards White male–Black female couples ($M = 70.52$, $SD = 23.77$) than towards Black male–White female couples ($M = 61.88$, $SD = 25.81$). There was not a significant main effect for condition, $F(1, 155) = 0.40, p = .528$. Importantly, the two-way interaction was significant, $F(1, 155) = 7.30, p = .008, \eta_p^2 = .05$. As shown in Figure 6, the difference in attitudes between White male–Black female and Black male–White female couples was larger in the competition than in the control condition.

Study 3 provided experimental evidence that greater perceived competition with White women increases Black women’s preference for White male–Black female couples relative to Black male–White female couples. In addition, we found that Black women reported higher warmth toward same-race than toward interracial couples, and indicated greater warmth towards White male–Black female than towards Black male–White female couples. These results are consistent with the findings in Study 1, and extend them to show that competition drives the difference in attitudes toward different interracial couples.
**General Discussion**

The goal of this research was to examine attitudes toward interracial couples, and how those attitudes might vary based on the gender and racial composition of the couple as well as participants' identity. We know that Asian women and Black men are more likely than their male and female counterparts (respectively) to date Whites (Fryer, 2007), but we know little about how those patterns relate to perceived competition for ingroup partners, or attitudes toward interracial dating in general.

In line with previous research (e.g., Bobo, 2004; Jacobson & Johnson, 2006; Skinner & Rae, 2018; Wellner, 2005), our research revealed that Black and East Asian Americans express more negative attitudes toward interracial than same-race couples. They also reported more negative attitudes toward relatively prevalent interracial combinations, as those couples may be seen as increasing competition for potential same-race partners. Black and Asian Americans displayed gender differences in attitudes toward interracial couples. Black women reported more negative attitudes toward Black male–White female couples compared to White male–Black female couples; Black men's attitudes did not differ between the two interracial couples. Asian men indicated more negative attitudes toward White male–Asian female couples than toward Asian male–White female couples; Asian women's attitudes between the two interracial couples did not differ. We found converging evidence in two racial groups that perceivers' identities interact with the racial and gender composition of interracial couples to predict attitudes toward those couples.

In Study 2, Asian American men's attitudes toward the four couple types no longer differed after controlling for zero-sum beliefs about competition from White men for Asian women. In addition, the stronger Asian American men's zero-sum beliefs, the more positive their attitudes toward same-race couples, but the less positive their attitudes toward White male–Asian female couples. Although we were unable to establish a causal relationship between perceived competition and attitudes toward couples due to the failed manipulation in that study, these results suggest that perceived competition is an important predictor of Asian men's attitudes toward White male–Asian female couples.

Study 3 successfully manipulated Black women's perceived competition from White women for Black men. Consistent with our hypothesis, the difference in attitudes toward White male–Black female and Black male–White female couples was larger in the competition than in the control condition. In addition, it replicated the finding from Study 1 showing that Black women reported lower warmth toward interracial than toward same-race couples, and lower warmth toward Black male–White female than White male–Black female couples. Black women reported more negative attitudes toward relatively prevalent interracial (Black male–White female) compared to less common interracial (White male–Black female) couple combinations, as these couples were likely seen as increasing competition for potential same-race partners. Thus, our results converged across three studies with two racial minority groups and suggest that perceived competition drives differential attitudes toward different interracial couples.

Based on the mere exposure effect, one might expect more common interracial couples to be viewed more positively than less common interracial couples (Zajone, 1968, 2001). In other words, we might expect that individuals would report greater warmth toward more common couple pairings (Black male–White female and White male–Asian female) than toward less common couples (White male–Black female and Asian male–White female). That our findings worked against the established mere exposure effect speaks to their strength and consistency. Our results suggest that perceived competition predicts Black women's and Asian men's attitudes toward interracial couples to a greater extent than their exposure to particular couple types.

**Alternative Explanations**

While we focused on competition for same-race partners as the main predictor of attitudes toward interracial couples, other factors such as stereotypes may also contribute to differential attitudes.
Among heterosexual couples, men tend to show preference for women who embody femininity while women prefer men who embody masculinity (e.g., Rennels, Bronstad, & Langlois, 2008; Rhodes, 2006). Given that Asian men are perceived as being less masculine than White men (e.g., Galinsky, Hall, & Cuddy, 2013; Wilkins, Chan, & Kaiser, 2011), they may be seen as less desirable than White men. Thus, Asian men may perceive strong competition from White men for Asian women, and may hold negative attitudes toward White male–Asian female couples because of gender preferences in addition to concern about competition.

Similarly, the stereotype that Black women are relatively masculine and thus less attractive (e.g., Galinsky et al., 2013; Goff, Thomas, & Jackson, 2008; Mok, 1999; Rudder, 2014) may contribute to relatively low demand for Black women. This low demand may predict Black women’s perception that they have to compete for in-group dating partners, which may drive their negative attitudes toward couples perceived as limiting their group’s dating opportunities (e.g., Black male–White female couples).

**Future Directions**

Future research can examine attitudes toward interracial couples composed of two minority-group individuals. For example, how might Asian and Black Americans perceive Asian–Black couples based on their racial and gender composition? We expect that Black women and Asian men would perceive Black male–Asian female couples more negatively than Asian male–Black female couples, because Black male–Asian female couples may imply competition for Black men and Asian women, who are perceived as scarce by Black women and Asian men, respectively.

Future work could also explore how White Americans’ identity shapes their attitudes toward different combinations of interracial couples. Here we focused on racial minorities because we reasoned that minority status might contribute to concerns about the scarcity of same-race partners—a concern that is less relevant for racial majority groups. But it would be interesting to explore whether making White Americans think about becoming a racial minority because of changing demographics (e.g., Craig & Richeson, 2014) changes their attitudes toward interracial couples. White Americans may report more negative attitudes toward couples composed of a White and a minority partner when reminded of the changing demographics compared to when they are not reminded of this. This may be because they perceive stronger competition for same-race partners or because they feel concerned about the increasing number of interracial offspring of those pairings.

Future studies can also assess attitudes toward specific individuals within interracial couples to determine whether attitudes toward the male or female drive feelings toward the couple overall. For example, if Asian men’s attitudes toward White male–Asian female couples are mainly driven by their perceived competition from White men, Asian men might indicate lower warmth toward the White male than the Asian female. If their attitudes toward White male–Asian female couples are primarily driven by feeling betrayed by Asian women, Asian men might indicate lower warmth toward the Asian female than the White male.

**Implications**

While previous research has focused on individuals’ willingness to personally engage in interracial relationships (e.g., Bobo, 2004; Jacobson & Johnson, 2006), our research measured people’s attitudes toward those relationships more generally. Furthermore, we utilized quantitative methods and thus contribute to a literature that has largely relied on qualitative interviews (e.g., Schoepflin, 2009). Much research on interracial relationships has focused on Whites’ attitudes, but our work is distinctive in its examination of Blacks’ and Asian Americans’ perspectives. Further, we examined varying attitudes based on the interaction between the gender and racial compositions of couples and participants’ own identities. This intersectional approach is particularly unique, and it helps illuminate the factors that motivate attitudes. Research like this is crucial
given that biases toward mixed-race couples persist (Bobo, 2004; Elizalde, 2016; Marco, 2016; Wellner, 2005) and given the increasing prevalence of interracial relationships (Wang, 2015).

Authors’ note
All studies were part of Roxie Chuang’s undergraduate honors thesis. Study 1 was part of Caroline Mead’s honors thesis.

Acknowledgements
The authors would like to thank Scott Plous for comments on a draft of the manuscript.

Funding
The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was supported in part by The Feldman Family Fund.

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Notes
1. By “group,” we meant Asian men as a group and Black women as a group, respectively.
2. To ensure participant engagement, an attention check asked participants to indicate 50 on a 0–100 scale.
3. The study excluded participants who self-identified as South Asian/Indian American, because most Asian Americans who marry interracially are East Asians. Among the six largest Asian American ethnic groups in the US, Indian American men and women are least likely to marry outside their group (Le, 2013).
4. Results remained significant when participants not born in the US and those who had been in the US for less than 10 years were excluded from analyses. This is true for all following studies.
5. Other measures were included in the study (e.g., participants’ experience with interracial dating and perceived importance of dating same-race partner), but not all were analyzed. Please see the Open Science Framework for measures and data of each study (https://osf.io/qkvwf/?view_only=e6b98321443045ce8dc60714cfb35e89).
6. We ran a 2 (couple type: same race vs. mixed race) × 2 (male’s race: White men vs. Asian men) × 2 (singleness: single vs. nonsingle) mixed model ANOVA, with couple type and male’s race as the within-subject measures, and singleness as the between-subject measure. The three-way interaction was not significant, $F(1, 93) = 0.02, p = .88$. This suggests that participants’ relationship status did not significantly contribute to their attitudes toward couples. Thus, we included participants of any relationship status in analyses. However, we recognize that this test was based on a small sample, so even if a difference existed, it might have been difficult to detect.
7. Prior to conducting Study 2, we ran a study with East Asian American men that resulted in the same main findings of Studies 1 and 2. However, the manipulation also failed. For the write-up of this additional study, please see the Open Science Framework (https://osf.io/qkvwf/?view_only=e6b98321443045ce8dc60714cfb35e89).

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