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Abstract
We investigated Asian Americans’ perceptions of Asian–White biracials. Because the Asian/White boundary may be more permeable than other minority/White boundaries, we reasoned that Asian Americans are more likely than Black Americans to be skeptical of biracials, perceiving that biracials would prefer to identify as White and would be disloyal to Asians, consequently categorizing them as more outgroup. We further reasoned that Asian Americans’ concerns about and exclusion of biracials would be predicted by greater perceived discrimination against Asian Americans, which increases the incentive for biracials to pass into the higher status racial group. Studies 1 and 2 provided correlational support for these theorized relationships among Asian Americans. Study 2 showed that perceived discrimination did not increase Black Americans’ concerns about biracials’ identity preferences and loyalty. Studies 3 and 4 provided causal evidence for the roles of perceived discrimination and biracial identity preferences, respectively, in Asian Americans’ exclusion of biracials.

Keywords
categorization, discrimination, intergroup processes, person perception, stigma

Factors Involved in Determining Group Membership
The meanings of racial categories are socially constructed. Yet, whether judging targets’ race on appearance or ancestry (two common bases for racial categorization in the United States; e.g., Chen, de Paula Couto, Sacci, Dunham, 2017; to intermarry than any other racial minority group except Native Americans, and most often intermarry with White Americans (Pew Research Center, 2017). At the same time, how Asian Americans perceive Asian–White individuals remains poorly understood. To our knowledge, our research is the first to investigate the perceptions underlying Asian Americans’ categorization of biracials as belonging more to their ingroup or the White racial outgroup.

In the 21st century, racial minority populations are quickly becoming the numerical majority in the United States (Colby & Ortman, 2014), and the rates of interracial marriage (Pew Research Center, 2017) and number of multiracial individuals (Jones & Bullock, 2013) are rapidly increasing. With the increase in both racial minority perceivers and multiracial individuals, investigating the dynamics between these groups is essential to understanding the future of race relations in the United States. Although research on the perception of multiracial people is growing quickly, the majority of previous investigations have focused on how and on what basis White Americans categorize multiracial individuals. The current research extends this growing literature by investigating how racial minority perceivers think about biracials and multiracial individuals— with which racial group(s) they prefer to identify, to whom they are loyal, and with whom they really belong.

Building on the limited research on perceptions of biracials among Black Americans, members of a low-status minority group, our research investigates the psychological factors underpinning the perception of Asian–White biracials among Asian Americans, a group of intermediate social status in the United States (DeNavas-Walt, Proctor, & Smith, 2011; Kahn, Ho, Sidanius, & Pratto, 2009; Macartney, Bishaw, & Fontenot, 2013). Asian Americans are more likely to intermarry than any other racial minority group except Native Americans, and most often intermarry with White Americans (Pew Research Center, 2017). At the same time, how Asian Americans perceive Asian–White individuals remains poorly understood. To our knowledge, our research is the first to investigate the perceptions underlying Asian Americans’ categorization of biracials as belonging more to their ingroup or the White racial outgroup.

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Understanding How Ingroup Disadvantage Predicts Multiracial Categorization

The majority of past research has focused on how and why members of the high-status group (i.e., White Americans) classify minority-White multiracial individuals, documenting that they tend to classify them as members of the low-status group at least in part because doing so helps to maintain the status hierarchy from which they derive advantages (Ho, Sidanius, Cuddy, & Banaji, 2013; Ho, Sidanius, Levin, & Banaji, 2011; Krosch, Berntsen, Amodio, Jost, & Van Bavel, 2013; Kteily, Cotterill, Sidanius, Sheehy-Skeffington, & Bergh, 2014; Peery & Bodenhausen, 2008; see also Davis, 1991). Because much less research has studied perceivers of low- or intermediate-status racial groups, little is known about how they perceive multiracial individuals (or why; Chen & Norman, 2016).

Groups of low and intermediate status are less advantaged by the existing status quo, and members of these groups encounter discrimination. Thus, their perceptions of minority-White individuals are likely to differ from those of high-status group members in important ways. The perception of ingroup disadvantage could lead minority perceivers to include biracials in their ingroup as a result of feeling a sense of commonality with them as joint targets of discrimination (Cortland et al., 2017; Craig & Richeson, 2012, 2016). Consistent with this reasoning, Ho, Kteily, and Chen (2017) examined perceptions of multiracials among Black Americans, members of a low-status group, and indeed found that Black Americans categorized Black–White biracials as Black ingroup members in part due to their sense that Blacks and Black–White biracials shared a common experience of discrimination (see also Chen & Ratliff, 2015; Gaither, Pauker, Slepian, & Sommers, 2016).

On one hand, similar to low-status groups like Black Americans, Asian Americans are negatively stereotyped (Lin, Kwan, Cheung, & Fiske, 2005) and face discrimination (e.g., Milkman, Akinola, & Chugh, 2012; see also Yogeeswaran & Dasgupta, 2010). Accordingly, Asian Americans could respond to anti-Asian discrimination like Black Americans (Ho et al., 2017)—that is, by categorizing Asian–White biracials as members of the ingroup as a result of feeling a sense of commonality with them as mutual targets of discrimination.

On the other hand, there are reasons to think that perceptions of ingroup disadvantage may influence multiracial categorization differently among members of groups with intermediate status compared with those with low status. In particular, there are at least two reasons why perceptions of ingroup discrimination might predict the categorization of biracials as outgroup by members of intermediate-status groups (like Asian Americans). The first reason is related to the permeability of racial boundaries. Because high-status group members are less likely to exclude biracial targets with
higher (vs. lower) in status from their ingroup (Kteily et al., 2014), biracials whose minority parent group is relatively higher in status may have a greater possibility of “passing” to the high-status group. Indeed, past work has found that Whites are less likely to exclude Asian–White biracials, relative to Black–White biracials (Ho et al., 2011). As such, perceivers from intermediate-status groups may have more reason than low-status perceivers to attend carefully to the loyalties and identity preferences of biracials, factors that we highlighted above as important predictors of categorization. Beyond increased permeability between the Asian/White (vs. Black/White) boundary due to Asian Americans’ intermediate social status, there may also be increased permeability for other reasons. For example, increased phenotypic overlap between Asians and Whites compared with Blacks and Whites could allow Asian–White biracials to have greater ability to physically pass as White compared with Black–White biracials, on average. In general, we reasoned that if minorities perceive that there is ingroup disadvantage and that biracial individuals are able to pass into the higher status outgroup, they should be increasingly concerned about biracials’ desire to identify with the outgroup and potential disloyalty to the ingroup. Thus, relatively high levels of boundary permeability, influenced by factors such as social status and phenotype, could play a role in Asian Americans’ focus on Asian–White biracials’ allegiances when determining their group membership, especially under conditions of high discrimination.

A second possible reason that perceived ingroup disadvantage could lead members of intermediate-status groups to exclude biracials is not due to group-focused concerns but rather due to concern for the well-being of the individual. Specifically, to the extent that perceivers want to support biracials’ individual upward mobility, perceivers may endorse biracials’ “passing” into the more advantaged group for their own benefit. From this perspective, individuals perceiving discrimination against the ingroup would categorize biracials as outgroup members.

Summary and Overview

We investigated how Asian Americans’ perceptions of anti-Asian discrimination would influence their perceptions of biracials’ identity preferences, loyalty, and group membership. Study 1 was a survey study that began to investigate the psychological factors underlying Asian Americans’ perceptions of Asian–White biracials. Study 2 was a comparative study that tested whether the psychological processes uncovered by Study 1 were (a) replicated in a new sample of Asian Americans and (b) distinct from the processes underlying biracial categorization among Black Americans. In both studies, we tested the theorized serial mediation: perceived discrimination against the ingroup → perceived biracial identity preferences → perceived biracial loyalty → biracial categorization. We then followed up on the correlational studies with two experiments designed to test the causal chain posited. We first conducted an experiment that manipulated Asian Americans’ perceptions of discrimination to examine how it affected their perceptions of biracials’ identity preferences and disloyalty (Study 3). Next, we conducted a preregistered experiment that manipulated Asian Americans’ perceptions of biracials’ identity preferences to examine its causal impact on Asian Americans’ categorization of biracials via perceived disloyalty (Study 4).

Study I

Study 1 investigated Asian Americans’ perceptions of biracials. In a correlational survey, we examined the relationship between Asian Americans’ perceptions of discrimination and their categorization of biracials. We investigated how these associations might be related to Asian Americans’ perceptions of biracials’ identity preferences, perceived biracial loyalty, and support for biracials’ individual mobility.

Method

Participants. We aimed for approximately 200 Asian American participants and planned to stop data collection at the end of the academic term in which it began. We did not meet the participant goal within the original timeline and put the survey back online for two additional weeks at the beginning of the following term. We did not analyze the data during the approximately 2-week-long pause in data collection.

In total, 210 self-identified Asian undergraduates from UC Davis participated in exchange for partial course credit. Forty-three participants (20.48%) were excluded from data analysis for failing to pass two attention checks embedded in the survey (these questions asked participants to select a specific response on the response scale; those who did not select the response were coded as having failed the attention check). The final sample included 167 Asian Americans (112 females) with an average age of 19.46 years (SD = 1.60). One hundred forty-seven were born in the United States (data analyses using only this subset of participants yielded the same conclusions as reported below, occasionally with even stronger evidence).

Procedure. The survey was administered online via Qualtrics (www.Qualtrics.com). All measures for all studies are presented in the Methodology File. Participants first completed several individual difference measures in random order. Next, participants indicated their perception of the prevalence of discrimination against Asians. Then, they completed measures of biracial identity preferences, biracial loyalty, and support for individual mobility in random order. Finally, participants completed the measure of biracial categorization.

Measures

Perceived discrimination. Asian Americans’ perception of discrimination against the ingroup (M = 4.36, SD = 1.42)
was measured with two items (“To what extent will prejudice and discrimination against members of your racial group impose barriers to their future outcomes?” and “To what extent will prejudice and discrimination against you, because of your race, impose barriers to your future outcomes?”), $r(164) = .76, p < .001$.

Potential intermediary processes (identity preferences, loyalty, and support for individual mobility). We measured participants’ perceptions of how biracials want to identify by asking the question “How much do you think people who are part-Asian and part-White want to identify as White/Asian?” with response options from 1 (not at all) to 7 (very much). We calculated a difference score by subtracting perceptions that biracials wanted to identify with Asians ($M = 4.15, SD = 1.19$) from perceptions that they wanted to identify with Whites ($M = 4.80, SD = 1.07$), such that higher scores indicated a perception that biracials preferred to identify with Whites over Asians ($M = 0.65, SD = 1.65$).

We assessed perceptions of biracials’ loyalty with six items asking about their potential loyalty to White and Asian racial groups ($\alpha = .71; M = 4.47, SD = 0.76$): for example, “Biracials can be trusted to advance the interests of Asians just as much as any other Asian person” ($1 = \text{not at all}; 7 = \text{very much}$) and “Biracials will primarily look out for the interests of . . .” ($1 = \text{Whites}; 7 = \text{Asians}$).

Support for individual mobility ($M = 3.92, SD = 1.20$) was measured with two items: “Biracials should do what’s best for themselves as individuals, even if it means distancing themselves from Asians” and “Biracials should align themselves with Whites if it will help them get ahead,” $r(165) = .52, p < .001$.

Outcome: Biracial categorization. We assessed Asian Americans’ perceptions of Asian–White biracials (as relatively more Asian or more White) using five items adapted from Ho et al.’s (2013) multidimensional measure of hypodescent. These items measured individuals’ perceptions of Asian–White biracials in general (e.g., “Imagine a child with two Asian grandparents and two White grandparents, to what extent do you consider this person to be Asian or White?”) and their views of how biracials would be thought of by others (e.g., “If an Asian American and White person have a kid . . . would you consider the kid more Asian or more White?”) with response options from 1 = completely Asian to 7 = completely White with a neutral midpoint of 4 = equally Asian and White). We averaged the items to create a composite of overall categorization of biracials ($\alpha = .71$), with higher scores indicating relatively more perceived Whiteness (i.e., outgroup categorization).

### Results

Participants in our sample perceived biracials as significantly more White than Asian ($M = 4.20, SD = 0.47$, $t(166) = 5.52, p < .001$, Cohen’s $d = 0.86$). Table 1 presents the zero-order correlations between all of our measured variables.

In our proposed theoretical model, Asian Americans who perceive greater discrimination against their group will believe that biracials want to identify as White more than as Asian. In turn, they will consider biracials disloyal to Asian Americans and, as a result, categorize them as Whites (i.e., as outgroup members). We tested this model (perceived discrimination $\rightarrow$ biracial identity preferences $\rightarrow$ biracial loyalty $\rightarrow$ outgroup categorization) using the serial mediation model in PROCESS Macro (Model 6; Hayes, 2013) with 10,000 bootstraps to estimate indirect effects. The results, depicted in Figure 1, documented that (a) perceived discrimination predicted perceptions that biracials wanted to identify as White (over Asian), $b = 0.23$ (95% CI: [0.05, 0.41]), $SE = .09, p = .01$, (b) biracial identity preferences predicted perceived biracial loyalty controlling for perceived discrimination, $b = -0.21$ $[-0.27, -0.14], SE = .03, p < .001$, and (c) biracial loyalty predicted outgroup categorization, controlling for perceived identity preferences and perceived discrimination, $b = -0.10 \ [-0.20, -0.003], SE = .02, p = .04$. In addition, the indirect effect from perceived discrimination through biracial identity preferences and biracial loyalty to outgroup categorization was significant, $b = 0.005 \ [0.004, 0.02], SE = .004$. Neither of the simple mediations from perceived discrimination $\rightarrow$ identity preferences $\rightarrow$ outgroup...
categorization, $b = 0.01 [-0.001, 0.035], SE = .009$, or from perceived discrimination $\rightarrow$ loyalty outgroup $\rightarrow$ categorization, $b = 0.004 [-0.002, 0.02], SE = .005$, were significant.4

**Discussion**

Study 1 showed that, among our sample of Asian Americans, Asian–White biracials were perceived as more White than Asian on average. Moreover, we found that Asian Americans’ perceptions of biracials’ identity preferences and loyalty predicted their outgroup categorization of biracials, consistent with past research in the group processes literature. Further, our serial mediation analysis suggests that one reason that perceptions of discrimination against the ingroup predict outgroup categorization of biracials may be because it leads Asian Americans to believe that biracials prefer to identify as White, leading to concerns about their disloyalty to the ingroup. Our results provided little evidence for the idea that perceiving discrimination produces a benevolent motivation among Asian Americans to let biracials pass into the high-status racial group for their individual benefit. In fact, those who perceived more discrimination against the ingroup were significantly less supportive of biracials’ individual mobility, although this was not associated with biracial categorization.

Study 1 was an omnibus survey study containing other measures. Study 2 narrowed its focus to the key processes unearthed in Study 1. Study 2 also tested whether our findings among an intermediate-status minority group (i.e., Asian Americans) differ from patterns among a low-status minority group (i.e., Black Americans), as we theorized previously.

**Study 2**

Study 2 sought to test (a) whether the findings from the previous studies would replicate among another sample of Asian Americans and (b) whether the documented processes were distinct from those among a low-status racial minority group, Black Americans. We also sought to refine measurement of the key variables in Study 1. We therefore pilot tested revised measures in a separate sample of Asian Americans ($N = 181$) summarized in the Supplementary Online Material (SOM) and then included these updated measures (described below) in Study 2.

We hypothesized that we would replicate Study 1 among Asian Americans. In particular, we expected perceived discrimination to predict perceptions that Asian–White biracials would prefer to identify as White and that they were disloyal to Asians, leading to outgroup categorization of Asian–White biracials. We did not expect to find evidence for these same patterns among Black Americans. Because Black–White biracials are less likely to be able to ascend into the White outgroup, perceived anti-Black discrimination should be less likely to predict concerns about Black–White biracials’ identity preferences and disloyalty (and subsequent outgroup categorization) than is true for Asian Americans (see also Ho et al., 2017; Lalonde & Silverman, 1994). We therefore predicted significant interactions between perceived discrimination against the ingroup and perceiver group membership (Asian vs. Black) predicting perceived biracial identity preferences, perceived biracial disloyalty, and categorization.

**Method**

**Participants.** We contracted a professional survey company, Prodege, to recruit 300 U.S.-born Black Americans and 300 U.S.-born Asian Americans to our survey.2 Prodege oversaw recruitment and determined the stopping point of data collection given our requested sample goal. Our final sample contained 318 Black Americans (163 males, 155 females) with an average age of 36.43 years ($SD = 12.16$) and 328 Asian Americans (165 males, 161 females, and two other) with an average age of 33.19 years ($SD = 10.18$).
Measures. We pilot tested revised measures of our key variables: perceived discrimination, identity preferences, loyalty, and biracial categorization.

Perceived discrimination against the ingroup was measured with four items, one of which was reverse-coded (e.g., “To what extent will prejudice and discrimination against members of your racial group impose barriers to their future outcomes?”; \( \alpha_{\text{Black}} = .62; \alpha_{\text{Asian}} = .72 \)).

Perceptions of biracials’ loyalty preferences were assessed with two items (e.g., “in general, Asian–White–Black biracials probably take sides with . . .”), with response options ranging from 1 (as more Asian/Black and White) to 7 (as more White) with 4 being a neutral midpoint (as equally Asian/Black and White), \( r_{\text{Black}}(306) = .62, p < .001; r_{\text{Asian}}(318) = .71, p < .001 \).

Perceptions of biracials’ loyalty (\( \alpha_{\text{Black}} = .89; \alpha_{\text{Asian}} = .91 \)) were measured with four items (e.g., “In general, Asian–White–Black–White biracials probably take sides with . . .”), with response options ranging from 1 (Asians/Blacks) to 7 (Whites) with a neutral midpoint of 4 (Asians and Whites equally). Higher scores indicate greater perceived loyalty to the minority ingroup.

Categorization of biracials (\( \alpha_{\text{Black}} = .92; \alpha_{\text{Asian}} = .90 \)) was measured with three items adapted from Ho et al. (2017). For example, “If a Asian American/Black American and a White American have a kid, would you think of the kid as relative Asian/Black or relatively White?” anchored at 1 (relatively Asian/Black) to 7 (relatively White) with a neutral midpoint of 4 (equally Asian/Black and White).

Beyond improving the measurement of identity preferences, loyalty, and categorization, we also sought to reinforce the theoretical distinction between them that we developed in the introduction by providing empirical evidence for their uniqueness. We tested and confirmed a three-factor structure for these variables in two confirmatory factor analyses—first, in the pilot test with Asian American participants, and, second, in this Study 2 sample (including both Asian Americans and Black Americans). See SOM for details.\(^6\)

Procedure. Participants completed a measure of perceptions of discrimination against their racial ingroup. They also completed measures of perceived biracial identity preferences, loyalty, and categorization, presented in randomized order. The order of perceived discrimination and the three biracial perception measures was additionally counterbalanced. Participants then completed measures of social dominance orientation (SDO) and their ethnic identification and then reported demographic information.

Results

The descriptive statistics for all variables and zero-order correlations between variables by participant race are available in the SOM (Tables S1-S3).

Discussion

We conducted moderated regression analyses to examine whether race (0 = Black, 1 = Asian) significantly moderated the link from perceived discrimination to each of biracial identity preferences, biracial loyalty, and biracial group categorization (these analyses were not affected by the order of variable measurement, and so we collapsed across this factor). All three race by perceived discrimination interactions were significant: biracial identity preferences, \( \beta = .19 \) \([0.03, .36] \), \( SE = .08, p = .02 \), biracial loyalty, \( \beta = .28 \) \([.12, .44] \), \( SE = .08 \), \( p < .001 \), and biracial categorization, \( \beta = .27 \) \([.11, .43] \), \( SE = .08, p < .001 \). In all cases, the associations between perceived discrimination and the outcomes were significant among Asian Americans, but they were nonsignificant among Black Americans.

Serial mediation model. We again tested the serial mediation model (perceived discrimination → perceived biracial identity preferences → perceived biracial loyalty → outgroup categorization) using PROCESS (Model 6; Hayes, 2013) among Asian American participants (see Figure 2). Replicating the findings of Study 1, we found that (a) perceived discrimination predicted perceived biracial identity preferences (White over Asian), \( b = .24 \) \([0.14, 0.36] \), \( SE = .05, p < .001 \), (b) biracial identity preferences predicted lower biracial loyalty to the ingroup, controlling for perceived discrimination, \( b = -0.60 \) \([-0.72, -0.49] \), \( SE = .06, p < .001 \), and (c) perceived loyalty predicted outgroup categorization, controlling for biracial identity preferences and perceived discrimination, \( b = -0.35 \) \([-0.47, -0.23] \), \( SE = .06, p < .001 \). The indirect effect of perceived discrimination on outgroup categorization through identity preferences and then loyalty was significant, \( b = 0.05 \) \([0.03, 0.09] \), \( SE = .02 \). Although the simple mediation from perceived discrimination to outgroup categorization through loyalty was not significant, \( b = 0.02 \) \([-0.01, 0.05] \), \( SE = .02 \), the simple mediation through identity preferences was significant, \( b = 0.10 \) \([0.05, 0.16] \), \( SE = .03 \).
A limitation of the studies thus far is that they measured perceived discrimination against Asian Americans as an individual difference rather than manipulating it. Thus, although we have reasoned that perceived discrimination against Asians can cause the perception that Asian–White biracials will want to identify as White and be disloyal to Asians (with downstream effects on categorization), our data to this point are only consistent with this explanation rather than providing direct evidence for it. We addressed this issue by directly manipulating perceived discrimination against Asian Americans in Study 3.

**Study 3**

Study 3 sought to extend Studies 1 and 2 by experimentally manipulating the first variable of the causal chain in the serial mediation model supported in the previous studies: perceived discrimination. Specifically, we manipulated Asian Americans’ perceptions of discrimination against the ingroup and then measured their perceptions of biracials’ identity preferences, loyalty, and group membership. We tested whether perceived discrimination affected Asian Americans’ outgroup categorization of biracials through perceptions of biracials’ identity preferences and loyalty.

**Method**

**Participants.** We piloted our manipulation of perceived discrimination with a sample of Asian American undergraduates (N = 148). We used G*power to conduct a power analysis on the basis of the effect size obtained for the relationship between our manipulation and the categorization of biracials in this pilot, that is, t(116) = 1.09, p = .28, Cohen’s d = 0.20. To achieve .80 power with a one-tailed test, we required 620 participants.

We recruited 620 participants from Amazon’s mTurk, using their demographic specifications to make “Asian American” a prerequisite to sign up for the survey. Of these, 568 self-identified as Asian Americans (254 females) when asked to provide their race at the end of our survey, 458 of whom were born in the United States. The average age was 30.57 years (SD = 8.82).

**Materials and measures.** We manipulated perceptions of discrimination against Asian Americans by adapting Eliezer, Major, and Mendes’s (2010) manipulation of perceived sexism, in which participants read a purportedly real news report about the prevalence of discrimination against the ingroup. In the high discrimination condition, participants learned that discrimination against Asian Americans was pervasive across work domains and that Asian Americans were clearly disadvantaged compared with Whites. In the low discrimination condition, participants learned that discrimination against Asian Americans was practically nonexistent and that Asian Americans’ outcomes were on par with those of Whites. The manipulation check consisted of three questions assessing participants’ comprehension of the article. The questions asked participants to choose (a) who was paid more (Asian Americans, Whites, or Asian Americans and Whites equally), (b) who was more likely to be promoted (Asian Americans, Whites, or Asian Americans and Whites equally), and (c) how often discrimination toward Asian Americans occurs (rarely, occasionally, or frequently). Participants’ responses to these questions were significantly affected by the discrimination manipulation in the intended direction: Question 1, \( \chi^2(2) = 471.14, p < .001 \), Question 2, \( \chi^2(2) = 451.87, p < .001 \), and Question 3, F(1, 566) = 2310.67, p < .001, \( \eta^2_p = .80 \).

We used the same items as in Study 1 to measure biracial identity preferences, biracial loyalty (\( \alpha = .85 \)), support for individual mobility, \( r(490) = .47, p < .001 \), and categorization of biracials (\( \alpha = .82 \)).

**Procedure.** Participants were randomly assigned to read one of the two articles indicating that discrimination against Asian Americans was rare or frequent. After the manipulation, participants answered three comprehension questions. Next, they responded to questions measuring their perceptions of biracials’ identity preferences, biracials’ loyalty, and...
support for individual mobility. The order of the three scales was randomized. Then, they responded to the biracial categorization items and reported demographics. During the funnel debriefing, participants were asked whether they thought anything about the study seemed suspicious and what the study was about. From these open-ended responses, a coder who was blind to our hypotheses and to participants’ condition assignment judged whether participants expressed suspicion that the manipulation was untrue. Twenty-eight (4.9%) participants expressed suspicion about the veracity of the manipulation; however, suspicion rate did not differ by condition (p = .25). After being probed for suspicion, participants were told that the article they read was created for the purpose of the experiment and were directed to sources for accurate information about discrimination toward Asian Americans. Due to the deception, participants had to consent to including their data in the analyses after debriefing. Only one participant did not consent to having their data included.

Results

Effect of perceived discrimination on downstream processes. High discrimination against Asian Americans increased the extent to which participants believed that biracials wanted to identify as more White than Asian (M = 1.06, SD = 2.26) compared with low discrimination (M = 0.20, SD = 1.89), t(566) = −4.93, p < .001, Cohen’s d = −0.41. High discrimination also decreased the extent to which participants thought biracials would be loyal to Asians (M = 4.31, SD = 1.04) relative to when discrimination was low (M = 4.62, SD = 0.83), t(566) = 3.96, p < .001, Cohen’s d = 0.33. There was no direct effect of perceived discrimination on outgroup categorization, t(566) = −0.95, p = .34, Cohen’s d = −0.08. A table of the zero-order correlations between all of these variables is in the SOM (Table S4).

Serial mediation analysis. As in Studies 1 and 2, we tested a serial mediation model using PROCESS (Model 6; Hayes, 2013). Results are displayed in Figure 3. We found that (a) high discrimination led to perceptions that biracials want to identify as White more than as Asian, b = 0.86 [0.52, 1.20], SE = .17, p < .001, (b) biracial identity preferences predicted perceived biracial loyalty, b = −0.25 [−0.28, −0.22], SE = .02, p < .001, controlling for discrimination condition, and (c) biracial loyalty predicted outgroup categorization, b = −0.22 [−0.29, −0.15], SE = .03, p < .001, controlling for discrimination condition and biracial identity preferences. In addition, the indirect effect from discrimination to outgroup categorization through identity preferences and then loyalty was significant, b = 0.05 [0.03, 0.08], SE = .01. Although the simple mediation from discrimination to outgroup categorization via loyalty was not significant, b = 0.02 [−0.004, 0.06], SE = .01, the mediation via identity preferences was significant, b = 0.13 [0.08, 0.20], SE = .03.

In sum, Study 3 supported the idea that perceived discrimination causes Asian Americans to be more concerned that Asian–White biracials prefer to identify as White and are disloyal to the ingroup (indirectly predicting outgroup categorization).

Study 4

In Study 3, we provided causal evidence for the first part of our proposed causal chain. In our final study, we examined whether biracials’ identity preferences, in turn, would have a causal effect on perceptions of biracials’ loyalty, with downstream consequences for categorization. Specifically, in a preregistered experiment (https://aspredicted.org/fm9y6.pdf), we manipulated Asian Americans’ perceptions of how biracials want to identify (as relatively White versus as relatively Asian) and subsequently measured their perceptions of biracials’ loyalty and their categorization of biracials.

Method

Participants. We used Prodege to recruit U.S.-born Asian Americans to the study. We preregistered a target sample size of 210 participants, after data exclusions, to achieve .95
power to detect a moderate effect. The moderate effect size was used in the power analysis based on the smallest of the effects obtained in our pilot test of this manipulation. In the pilot test of our manipulation, we told participants that Asian–White biracials preferred to identify either as White or as Asian. Forty-seven participants were recruited on mTurk, and the smallest effect in that dataset was the link between (manipulated) biracial identity preferences and biracial categorization ($d = 0.51$). The power analysis was conducted using G*power for differences between two independent samples.

We had two preregistered exclusion criteria. First, participants needed to select a score of greater than or less than 4 on the manipulation check items, as appropriate for their experimental condition. That is, those in the White preference condition had to select that Asian–White biracials preferred to identify as White (vs. Asian), and those in the Asian preference condition had to select that Asian–White biracials preferred to identify as Asian (vs. White). We preregistered that anyone who selected the midpoint of 4 (i.e., perceiving that Asian–White biracials wanted to identify equally as White and as Asian) would be excluded. This criterion ended up being stringent—a fair number ($n = 193$) of the total participants collected by Prodege to satisfy our criteria ($n = 399$) selected the neutral midpoint of 4. Participants were slightly more likely to be excluded in the Asian preference condition than the White preference condition, $χ^2(1) = 5.09$, $p = .03$. To be conservative (and although our sample size of 196 after exclusions approximated our preregistered desired sample size), we conducted analyses both with the sample after exclusions and with the entire sample.

Our second exclusion criterion specified that participants would be excluded if they expressed suspicion about the manipulation in an open-ended question near the end of the study. After data collection, a judge blind to study hypotheses coded all responses for suspicion about the manipulation. Ten additional participants were excluded on the basis of this coding. Suspicion rates did not differ by condition ($p = .20$).

Our full sample included 399 U.S.-born Asian Americans (189 males, 209 females, and one other). The average age was 33.23 years ($SD = 10.42$). The sample after the preregistered exclusions contained 196 U.S.-born Asian Americans (104 males, 91 females, and one other) with an average age of 33.49 years ($SD = 10.39$). Because the preregistered exclusions resulted in a much larger number of excluded participants than we anticipated, we report the analyses using the entire sample below to preserve the causal inferences afforded by our experimental methodology. Importantly, analyses that employed our preregistered exclusions (reported in the SOM) reached the same conclusions as the analyses using the entire sample (with larger effect sizes).

**Measures.** We manipulated perceptions of biracials’ identity preferences by having participants read a purportedly real news article created for this experiment (see Methodology File). One version of the article summarized research indicating that Asian–White biracials tend to identify primarily as White over Asian American. The other version of the article stated that research showed that Asian–White biracials tended to identify primarily as Asian American rather than as White. The manipulation check consisted of the two items, $r(397) = .76$, $p < .001$, assessing biracials’ identity preferences from Study 2 on a 1 to 7 scale. A score of 4 indicated that participants believed biracials wanted to identify equally as Asian and as White. Scores greater than 4 indicated perceptions that biracials wanted to identify with Whites over Asians, and scores lower than 4 indicated perceptions that biracials wanted to identify as Asian over White.

We assessed participants’ perceptions of biracials’ loyalty ($α = .92$) and perceptions of their group membership ($α = .90$) using the same items used in Study 2.

**Procedure.** Participants read the news article and completed the manipulation check items. Next they responded to the questions assessing their perceptions of biracials’ loyalty and then their perceptions of biracials’ group membership.

**Results.** We conducted a manipulation check using an independent samples $t$ test and found that the manipulation significantly influenced participants’ perceptions of biracial identity preferences, $t(397) = -9.67$, $p < .001$, $d = -0.97$. Participants who read that biracials primarily identify as Asian believed that they wanted to identify as Asian over White ($M = 4.55$, $SD = 1.24$), whereas participants who read that biracials primarily identify as White believed that they wanted to identify as White over Asian ($M = 4.76$, $SD = 1.26$).

Biracials’ identity preferences affected perceptions of biracials’ loyalty, $t(397) = -9.60$, $p < .001$, $d = -0.96$. Participants who learned that biracials primarily identify as Asian thought that biracials would be more loyal to Asians ($M = 3.44$, $SD = 1.08$) compared with those who learned that biracials primarily identify as White ($M = 4.50$, $SD = 1.12$). Biracials’ identity preferences also influenced perceptions of biracials’ group membership, $r(397) = -6.16$, $p < .001$, $d = -0.62$. Participants who learned that biracials primarily want to identify as Asian thought that biracials were more Asian ($M = 3.79$, $SD = 1.03$) compared with participants who learned that biracials primarily identify as White ($M = 4.43$, $SD = 1.03$).

Next, we used PROCESS (Model 4; Hayes, 2013) to test mediation with 5,000 bootstrap samples (see Figure 4). The direct path from identity preferences to biracial loyalty was significant ($Path\ a$), $b = -1.06$ [−1.27, 0.84], $SE = .11$, $p < .001$. When entered simultaneously with the identity preference condition, biracial loyalty significantly predicted outgroup categorization ($Path\ b$), $b = -0.52$ [−0.59, −0.44], $SE = .04$, $p < .001$. 

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The total effect of identity preferences on outgroup categorization (Path c) was also significant, $b = 0.64$ [0.43, 0.84], $SE = .10$, $p < .001$. Bootstrapping revealed that the indirect effect from identity preferences to outgroup categorization through perceptions of biracial loyalty was significant, $0.55$ [0.38, 0.72], $SE = .09$. When accounting for the significant indirect effect through biracial loyalty, the direct effect of identity preferences on outgroup categorization was reduced to nonsignificance (Path $c'$), $b = 0.09$ [–0.10, 0.28], $SE = .10$, $p = .34$.

Unstandardized indirect effect of biracial identity preference and loyalty on categorization of biracials $= 0.55$ (95% CI: [0.38, 0.72]).

**General Discussion**

Across four studies, we have provided the first systematic investigation of the perceptions of biracial individuals among Asian Americans. Whereas a substantial body of work has examined high-status majority group members’ (i.e., White Americans’) perceptions of biracials (Chen & Hamilton, 2012; Chen, Moons, Gaither, Hamilton, & Sherman, 2014; Ho et al., 2013; Ho et al., 2015; Ho et al., 2011; Krosch & Amodio, 2014; Krosch et al., 2013; Peery & Bodenhausen, 2008), and some recent work has begun to examine low-status minority group members’ (i.e., Black perceivers’) perception of biracials (Ho et al., 2017), no research has previously considered perceptions of biracials among members of a minority group with intermediate status.

We considered how factors such as the identity preferences of biracials and perceptions of their loyalty would factor into Asian Americans’ categorization judgments, consistent with prior research on suspicion toward non-prototype group members (e.g., Moreland et al., 1993). We further considered how these factors would be affected by perceptions of discrimination against Asian Americans, given prior work concluding that perceived discrimination is relevant to minority group members’ categorization judgments (Ho et al., 2017) and because perceived discrimination should predict greater concern about group members’ identity preferences and loyalty when individual upward mobility is an option.

Our studies provide insight into the underlying processes contributing to Asian Americans’ perception of Asian–White biracials. Study 1 showed that perceiving ingroup disadvantage was associated with Asian Americans’ beliefs that biracials want to identify with Whites and would be disloyal to the ingroup, predicting their categorizations of biracials as relatively more White than Asian. Study 2 confirmed these patterns in another sample. Furthermore, Study 2 supported our prediction that Asian Americans would react differently to perceptions of discrimination than would members of a low-status minority group, Black Americans—a prediction based on our reasoning that, relative to Black–White biracials, Asian–White biracials would have more ability to pass as White, prompting greater concerns among Asians about biracials’ identity preferences and loyalty. Indeed, whereas perceived discrimination led Asian Americans to question biracials’ identity preferences and loyalty, it was not associated with Black Americans’ perceptions of Black–White biracials’ identity preferences or loyalty to Blacks. Study 3 provided experimental evidence for the first causal link in our model, demonstrating that perceptions of anti-Asian discrimination cause perceivers to believe that biracials want to identify as White and will be disloyal to the Asian American ingroup, leading them to categorize biracials as White. Finally, Study 4 provided causal evidence that the perception that biracials want to identify as White leads Asian Americans to question their loyalty to Asians, predicting outgroup categorization. Together, these studies highlight one indirect mechanism by which perceived discrimination against the ingroup can result in exclusionary tendencies among one racial minority group of intermediate status by illuminating discrimination’s link with variables largely overlooked in prior work on multiracial categorization: biracials’ identity preferences and loyalties.
Future Directions and Remaining Questions

Our serial mediation analyses and experimental evidence provided consistent support for the following causal chain: perceived discrimination $\rightarrow$ perceived identity preferences $\rightarrow$ perceived disloyalty $\rightarrow$ categorization. However, we do not mean to suggest that this is the only possible order in which these variables are interrelated. In particular, under some conditions, perceivers may categorize biracials as ingroup or outgroup members—perhaps because they look more like one group than the other—and subsequently infer their loyalties and identity preferences. Future work could test for evidence of different causal relationships between the variables we consider here, including the conditions under which categorization precedes perceptions of biracials’ allegiances.

Our findings also highlight other interesting questions for future research. For example, it is worth noting that we found that the direct link between perceived discrimination and biracial categorization was relatively weak across studies. Specifically, the correlation between perceived discrimination and the categorization of biracials as White was $r = .14$ (nonsignificant) in Study A, $r = .16$ (significant) in Study 1, and $r = .21$ (significant) in Study 2. Although we did observe a significant indirect effect on biracial categorization when manipulating perceived discrimination in Study 3, we observed no significant main effect. Thus, although we found consistent correlational and causal evidence for an indirect effect from perceived discrimination to the outgroup categorization of Asian–White biracials via concerns about biracials’ identity preferences and loyalty, there are likely to be important moderators of the link between discrimination and outgroup categorization and/or countervailing influences linking anti-Asian discrimination to biracial categorization. For example, it is possible that highly trusting individuals will be more likely to respond to discrimination against Asian Americans by embracing Asian–White biracials rather than by questioning their loyalties.

Relatedly, although an important strength of the present research is its examination of a range of possible psychological mechanisms that might account for Asian Americans’ categorization of Asian–White biracials, future work could consider additional factors. Here, in addition to the role of identity preferences and disloyalty, we considered the potential roles of support for biracial individuals’ upward mobility, desires for hierarchy maintenance or attenuation (i.e., SDO), and ingroup identification. Yet we did not measure other mechanisms that could have accounted for the inclusion of biracials into the Asian ingroup. For instance, it would be worthwhile for future work to measure Asians’ feelings of solidarity or common fate with Asian–White biracials. Although the direction of the overall link between perceived discrimination and categorization suggests that solidarity with Asian–White biracials on the basis of shared discrimination is not the predominant response among Asian Americans, it may well be relevant to a subset of Asian Americans. Optimal distinctiveness needs (Brewer, 1991) may also play a role in Asian Americans’ categorizations of biracials because Asian–White biracials blur the boundaries between Asians and Whites. Future studies could manipulate Asian Americans’ motivations for assimilation and differentiation to determine how these motives influence their relative inclusion or exclusion of biracials.

In addition, it would be useful for future work to more directly test the reasons behind the differences we observed between Asian and Black perceivers (for whom some prior research suggests that egalitarianism and perceptions of shared discrimination predict ingroup categorization of Black–White biracials; Ho et al., 2017). As ours was the first comparative study of minorities’ perceptions of biracials’ group membership, there are many unanswered questions as to the underlying reasons for these group differences. Earlier research has proposed that the permeability of the Asian–White racial boundary, at least partially rooted in Asian Americans’ intermediate status ancestry (DeNavas-Walt et al., 2011; Kahn et al., 2009; Macartney et al., 2013), could be the key to precipitating Asian Americans’ increased concerns about biracial passing and loyalty. Beyond target groups’ status, it is possible that other factors relevant to permeability could play an important role, such as targets’ phenotypic appearance. That is, it may be that Asian–White biracials are seen as more phenotypically similar to Whites than Black–White biracials, which could make it easier for them to “pass” as White and therefore increase Asian Americans’ concerns about Asian–White biracials’ loyalty. Phenotypic variability—and its associated ease of “passing”—could contribute to difference in how targets are treated within a given racial category too. For example, some Black–White biracials may have higher phenotypic Whiteness (e.g., fair skin, less Afrocentric features) than others and, therefore, a higher potential of passing as White. For those Black–White biracial targets, many of the processes that we provide evidence for among Asian Americans could also apply to Black perceivers (see Franco & Franco, 2016). Thus, the proposed role of permeability—as impacted by factors such as group status and phenomenality—needs to be investigated further for its direct role in the perceptions of biracials documented here.

Moreover, the specific historical contexts of Asian Americans and Black Americans differ in several ways that may contribute to the Black–White boundary being less permeable than the Asian–White boundary. Most notably, the United States historically enforced the rule of hypodescent (categorizing a mixed race person consistent with their lower status ancestry) on Black–White multiracials in particular (Jordan, 2014) to maintain a system of slavery (Davis, 1991). Consistent with this history, many Black Americans and White Americans continue to categorize Black–White biracials as more Black than White. The same historical legacy is not present for Asian Americans and Asian–White multiracials, which may make it easier for Asian–White multiracials...
to pass as White, independent of group status or phenotypic similarity. Our findings should be interpreted within these different group contexts in mind.

Another possible factor influencing Asian Americans’ perceptions of Asian–White biracials is cultural tightness. Cultures vary in terms of their tightness–looseness, the degree to which social norms are strong and the extent to which deviance from them is sanctioned (Gelfand, Nishii, & Raver, 2006). Because East Asian cultures are tight relative to North American culture (Gelfand et al., 2011), and because Asian Americans are typically East–West bicultural (Chung, Kim, & Abreu, 2004; Devos, 2006), they may be less tolerant of deviance and non-prototypicality in the ingroup. Future studies could test this idea by experimentally priming Eastern or Western cultural tendencies in Asian Americans prior to measuring their perceptions of non-prototypical group members (including biracials).

Although our work investigates the categorization of targets (biracials) that are non-prototypical on one social dimension (i.e., race), future work could further enrich the present research by considering the role of activating additional social category dimensions (i.e., crossed categorization; see Crisp & Hewstone, 1999). It is possible, for example, that when a biracial target is also non-prototypical of the ingroup on another salient dimension (e.g., religion), the tendency to be concerned about the target’s loyalty will be augmented. On the contrary, an additional shared identity along a different dimension (e.g., affiliation with a political party or religious group) could assuage concerns about non-prototypical members’ identity preferences and loyalty. In any intergroup context, when perceivers scrutinize and exclude potential ingroup members, making additional cross-cutting identities salient could carry potentially important implications for group cohesion and coalition-building. Therefore, we hope that our findings will be useful for understanding intergroup dynamics across different contexts.

Finally, we note that in addition to the theoretical implications of this work, our findings may inform some practical issues. The majority of multiracial people in the United States identify either as mixed race or as minorities (Davenport, 2016; Pew Research Center, 2015), and congruency between others’ and self-categorization is important for multiracials’ motivation and well-being (Remedios & Chasteen, 2013; Townsend, Markus, & Bergsieker, 2009). Yet, we find here that Asian–White biracials are likely to be categorized as White by Asian Americans, and previous work has shown that they are seen Asian by White Americans (Ho et al., 2011; see also Halberstadt, Sherman, & Sherman, 2011). As a result, they could experience more frequent experiences of social rejection relative to monoracial individuals and multiracial individuals of other backgrounds. These unique racial experiences may lead Asian–White individuals and other multiracials who are at risk of social exclusion to develop greater resilience and adopt specific coping strategies, but they could also be at increased risk of social isolation and stress. Exploring these possibilities is pressing given the large growth in the population of Asian–White biracials in the United States.

**Conclusion**

Four studies including over 1,800 Asian American perceivers provide the first systematic examination of Asian Americans’ perception of biracials, generating important insights about categorization processes among members of a minority group of intermediate status. In contrast to prior work among members of low-status minority groups, our research documents that Asian perceivers categorize biracials into the high-status racial group. Our work also highlights previously overlooked factors relevant to multiracial person perception and racial boundary maintenance, including concerns about multiracials’ allegiances. These findings highlight the need to examine these perceptions across the racial hierarchy and suggest future avenues for research on both the perceptions of multiracial people and multiracials’ lived experience.

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**Supplemental Material**

Supplemental material is available online with this article.

**Notes**

1. In this and all subsequent studies, participants were asked to self-identify their race in a demographic question that included both “Asian” and “biracial.” We only analyzed participants who self-identified as Asian American in this sample to minimize the possibility that we were studying biracial participants’ perceptions of biracials (a question that was beyond the scope of this research).

2. We also explored other possible factors that could influence Asian Americans’ perceptions of biracials, including their levels of racial identification (Castano, Yzerbyt, Bourguignon, & Seron, 2002) and motivation to enforce the existing racial hierarchy (i.e., their social dominance orientation [SDO]; Ho et al., 2015). Although initially explored, neither racial nor ethnic identification (α = .87; M = 4.90, SD = 1.16) nor SDO (α = .87; M = 2.61, SD = 0.86) was consistently associated with categorizations of biracials in this initial study conducted and were therefore excluded from later studies (see correlations in Table 1).

3. Some of the items in Ho, Sidanius, Cuddy, and Banaji’s (2013) multidimensional measure of hypodescent measured perceptions...
of which race biracials would act like, look like, and fit in with (e.g., “Do you think that the kid will act more like an Asian person or a White person?” and “Do you think that the kid will fit in better with Asian people or White people?”). Although the full measure was included in Studies 1 and 3 (and Study A), we were concerned about the potential conceptual overlap between these (act like, look like, and fit in with) items and the proposed mediators (biracials’ identity preferences and loyalty to Asians). Thus, in the article, we report results excluding these potentially overlapping items from the original scale. Including these items in our measure of categorization changed significance levels for only two statistical tests across those three studies (all in the direction of increased statistical significance). Those results are reported in the Supplementary Online Material (SOM).

4. We conducted a preliminary test of this serial mediation model using data from an omnibus survey in which a sample of 137 Asian American participants completed measures of perceptions of discrimination, biracials’ identity preferences, biracials’ loyalty, and categorization (see Study A in the SOM). Whereas Paths A and B in the serial mediation model were significant in Study A, Path C (the relationship between loyalty and categorization) was not, and thus the overall indirect effect (A × B × C) was also not significant. To avoid future overestimation of the significant effects documented in this manuscript, we include the complete analyses for Study A in the SOM.

5. Studies 2 and 4 were run after the other studies and collected by Prodege. Although we report analyses of Studies 1, A, and 3 including all Asian perceivers (both foreign and U.S. born), the results are at least as significant or more significant when focusing on U.S.-born Asian participants (who may be particularly attuned to and invested in American racial dynamics). Because using Prodege gave us access to a larger number of participants and enabled us to select participants on the basis of being U.S. born, we decided to recruit only U.S.-born Asian Americans in Studies 2 and 4.

6. We also measured participants’ level of education (highest level completed), SDO (α_{Black} = .89; α_{Asian} = .91), and ethnic identification (α_{Black} = .62; α_{Asian} = .61). Although not strongly associated with perceptions of biracials among Asian Americans in our studies (see Note 2), prior work has shown SDO and ethnic identification are linked to Black (and White) Americans’ perceptions of biracials (e.g., Ho et al., 2017; Ho et al., 2013; Krosch, Berntsen, Amodio, Jost, & Van Bavel, 2013; Kieilty, Cotterill, Sidanius, Sheehy-Skeffington, & Bergh, 2014). We therefore checked whether levels of these variables, and education level, differed between the two racial groups in our sample and, if so, planned to test our hypotheses including these variables as covariates. Our results reported in the next section were robust to inclusion of level of education, ethnic identification, SDO, and each of these variables’ interactions with participant race as covariates.

7. We also included the measure of endorsement of the principle of individual mobility to reconsider whether it might predict categorizing biracials as White, especially under conditions of high discrimination against Asians. However, perceived discrimination did not affect support for mobility, r(490) = 1.33, p = .18, Cohen’s d = 0.12, and support for mobility was only weakly correlated with outgroup categorization of biracials, r = .11, p < .01.

8. We included these participants in the reported analyses because their inclusion did not alter any of the reported significance levels.

9. Of note, we found experimental evidence in Study 3 that manipulating perceived discrimination increased perceptions that Asian–White biracials want to identify as White and then experimental evidence in Study 4 that manipulating the perception that Asian–White biracials want to identify as White increases outgroup categorization of biracials. In combination, this provides strong experimental support for the indirect effect we posit.

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