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# Attributions to Discrimination in Multiracial Contexts: Isolating the Effect of Target Group Membership

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Historically, psychological models of how people make judgments of discrimination have relied on a binary conceptualization of intergroup relations, making it unclear how people make judgments of discrimination in diverse, multigroup contexts. We propose that groups can vary in the extent to which they fit the prototype for targets of discrimination and that this variation influences judgments of discrimination in ambiguous circumstances. The present research examined attributions to discrimination when job applicants are rejected for a white-collar position. People consistently made more attributions to discrimination (ATDs) when managers rejected Black American as compared to Asian American job applicants, and when managers rejected Asian American as compared to White American job applicants. People also made more ATDs for rejected Black American as compared to Latino American applicants, but ATDs were similar for Latino and Asian American applicants. Overall, similar patterns were observed in majority White American samples and a Black/African American sample; only an Asian American sample did not make more ATDs for rejected Black than Asian American applicants. Six experiments (N = 2,321) found strong support for the relative fit hypothesis and suggest that, in a white-collar employment context, White Americans are a distant fit to the prototype for targets of discrimination, Asian and Latino Americans are an intermediate fit, and Black Americans are a close fit.

#### Public Significance Statement

Understanding how people make judgments of discrimination has important implications for a wide variety of outcomes including when people will confront discrimination and how juries will decide discrimination lawsuits. Past research on how people make judgments of discrimination has primarily adopted a Black—White binary view of race, making it unclear how people make judgments in racially and ethnically diverse contexts that characterize the modern United States. The present experiments examined judgments of discrimination against job applicants who were rejected for a white-collar job. The results suggest that White and Black Americans, but not Asian Americans, may be less likely to detect discrimination against Asian American job applicants as compared to Black job applicants in white-collar hiring contexts.

Keywords: prototypes of discrimination, attributions to discrimination, diversity science

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Racial and ethnic diversity in the United States is burgeoning. The percentage of the population that identifies as Asian, Latino, and Black American have all increased substantially in recent decades (e.g., Jones et al., 2021). Moreover, Asian, Latino, and Black

Americans all face higher levels of discrimination relative to White Americans across a variety of domains including hiring, which was the focus of the present investigation (e.g., Kline et al., 2022; R. T. Lee et al., 2019, Lippens et al., 2023; Quillian et al.,

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served in a supporting role for conceptualization, formal analysis, investigation, methodology, project administration, software, validation, writing—original draft, and writing—review and editing. Tyler Waldon-Lee served in a supporting role for methodology, software, and writing—review and editing. Caley Lowe served in a supporting role for investigation, methodology, project administration, and software. Stefanie Simon served in a supporting role for conceptualization, methodology, and writing—review and editing

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2017, 2020). In a diverse society plagued by discrimination, developing scientific models of how people make judgments of discrimination is critically important. However, a tradition of adopting a Black—White binary view of race has hindered scientific understanding of how people use information about the group memberships of perpetrators and targets to form judgments of discrimination (O'Brien & Merritt, 2022; Plaut, 2010). Therefore, the present experiments seek to expand beyond the Black—White binary to examine how people make judgments of discrimination in a diverse and multiracial context. More specifically, the present experiments compare judgments of discrimination against White, Asian, Latino, and Black American job applicants rejected for a white-collar job. <sup>1</sup>

According to the prototype model of attributions to discrimination (ATDs), people have prototypes, or expectations, about the race of people who perpetrate and are targeted by discrimination (Inman & Baron, 1996). Most available research suggests that people are more likely to expect perpetrators of discrimination to be White Americans than Black Americans and are more likely to expect targets of discrimination to be Black Americans than White Americans (e.g., Corning & Bucchianeri, 2010; Flournoy et al., 2002; Inman & Baron, 1996; Rodin et al., 1990). Research to date has not extensively investigated the relative fit of non-Black racial and ethnic minority groups (e.g., Asian Americans) to the prototype of discrimination. We propose that groups may vary in the extent to which they fit the prototype for targets of discrimination and that this relative fit to the prototype has important consequences for how people make judgments of discrimination. The present paper reports the results of six separate experiments that to seek to refine the prototype model of ATDs by clarifying how target group membership influences judgments of discrimination in more racially and ethnically diverse contexts than have previously been examined.

# The Prototype Model of ATDs

The prototype model of ATDs is a theoretical framework for understanding how people make a judgment about whether discrimination has occurred in a specific situation. A prototype is an abstract representation of the central tendency or average of the members of a category (e.g., Fiske & Taylor, 1991; Rosch, 1978). Drawing on past research on categorical learning (e.g., Hayes-Roth & Hayes-Roth, 1977; Reed, 1972), Inman and Baron (1996) hypothesized that people learn discrimination prototypes by abstracting the common features of past experiences with examples of discrimination. Similar to other "event" prototypes, discrimination prototypes have a variety of different features including expectations about the characteristics of a typical perpetrator, the characteristics of a typical target, the relationship between a perpetrator and a target, and the context where the event typically takes place (Lalljee et al., 1992; O'Brien et al., 2008; O'Brien & Merritt, 2022). The more closely a particular event matches the event prototype, the more likely it is that the event will be classified as a member of the category. Evidence suggests that people rely on prototypes as a cognitive shortcut to make judgments of discrimination (Bucchianeri & Corning, 2013; Corning & Bucchianeri, 2010; Krumm & Corning, 2008; Marti et al., 2000; Morera et al., 2004).

Support for the prototype model of ATDs has emerged in studies that examine perceptions of racial, gender, age, weight, and sexual orientation discrimination (Baron et al., 1991; Bucchianeri & Corning,

2013; Carlsson & Sinclair, 2018; Inman & Baron, 1996; Krumm & Corning, 2008; Marti et al., 2000; Morera et al., 2004; O'Brien et al., 2008; O'Brien & Merritt, 2022; Rodin et al., 1990; Simon et al., 2013). There is some cross-cultural support for the prototype model and evidence supporting the model has emerged in studies with both adults and children (e.g., Brown, 2006; Carlsson & Sinclair, 2018; Morera et al., 2004; Thijs, 2017; Verkuyten et al., 1997). Thus, evidence for the prototype model of ATDs is relatively robust

According to the model, people generally expect perpetrators of prejudice and discrimination to belong to high status groups and targets to belong to low status groups (e.g., Inman & Baron, 1996; Rodin et al., 1990). By definition, high status groups have more power and control more resources in society than lower status groups, giving high status groups more ability to discriminate against low status groups than the reverse (Sidanius & Pratto, 1999). As a result, people are likely to develop relatively accurate expectations that high status groups will typically perpetrate discrimination against low status groups rather than the other way around (Inman & Baron, 1996; Inman et al., 1998). Thus, White Americans, men, younger adults, and straight people are a closer fit to the perpetrator prototype than Black Americans, women, older adults, and gay people (Baron et al., 1991; Carlsson & Sinclair, 2018; Inman & Baron, 1996; Rodin et al., 1990). On the other hand, Black Americans, women, older adults, and gay people are a closer fit to the target prototype than White Americans, men, younger adults, and straight people.

Context can also influence judgments of discrimination (Flournoy et al., 2002; Inman et al., 1998; O'Brien et al., 2008; Simon et al., 2013). For example, women rejected for jobs in masculine domains are more likely to be perceived as targets of discrimination compared to women rejected for jobs in feminine domains (O'Brien et al., 2008). Likewise, Black people are more likely to be perceived as targets of discrimination when they are rejected for jobs that require skills stereotypically associated with White people compared to when they are rejected for jobs that require skills stereotypically associated with Black people (Simon et al., 2013). Thus, prototypes of discrimination incorporate information about the group status of the perpetrator and the target, but also whether the target is negatively stereotyped in the local context.

# Limitations of the Available Research Testing the Prototype Model

Although research examining the prototype model of ATDs has made crucial inroads into identifying how perpetrator and target group membership influence third-party observers' judgments of discrimination, the available studies have important limitations. These limitations prevent a fuller understanding of how people make judgments of discrimination in a racially and ethnically diverse society. A key limitation is that most research testing the application of the prototype model to judgments of racial discrimination has

<sup>&</sup>lt;sup>1</sup> When we refer to Black, Latino, Asian, and White Americans, we are referring to people who live in the United States and identify as members of these groups irrespective of their citizenship status. We recognize that some members of these large, nonmonolithic groups prefer different labels (e.g., *African American, Latinx*). We chose the present labels because they allow the use of relatively parallel language and were in common use at the time the present manuscript was written.

adopted a Black-White binary focus (e.g., Corning & Bucchianeri, 2010; Flournoy et al., 2002; Inman & Baron, 1996; Marti et al., 2000; Rodin et al., 1990; Simon et al., 2013). For example, in their initial test of the prototype model, Inman and Baron (1996) constructed a series of ambiguous vignettes in which a perpetrator engaged in negative behavior towards a target across a variety of contexts and they independently manipulated the race (White vs. Black) of both the perpetrator and the target. When White perpetrators engaged in negative behavior towards Black targets, people perceived the behavior as more prejudiced compared to all other perpetrator-target combinations.

One critical gap in the current literature is a lack of knowledge about how perceivers make judgments of discrimination in situations involving White people and people who belong to non-Black racial and ethnic minority groups (e.g., Asian and Latino Americans). For example, we were unable to find any published studies that compare judgments of discrimination in situations involving White and Asian American perpetrators and targets. In comparison, at least two published studies have compared judgments of discrimination in situations involving White and Latino American perpetrators and targets (Brown, 2006; Mills & Gaia, 2012). Mills and Gaia (2012) constructed four distinct vignettes that described: (a) a White perpetrator and a Latino target, (b) a White perpetrator and a White target, (c) a Latino perpetrator and a White target, and (d) a Latino perpetrator and a Latino target. Participants perceived more discrimination when a White perpetrator harmed a Latino target as compared to when a White perpetrator harmed a White target or a Latino perpetrator harmed a White target (although not compared to when a Latino perpetrator harmed a Latino target). However, a small sample size along with a confound between the independent variables and the vignettes complicate the interpretation of the Mills and Gaia (2012) study. Brown (2006) conducted a study with children in which a Latino or White teacher showed favoritism to either a child from their ingroup or the outgroup. Brown (2006) found that, regardless of whether the teacher and (dis)favored children were Latino or White, children perceived more discrimination when a teacher favored their ingroup over the outgroup. Thus, the available literature has not yet offered a clear and consistent picture of how people make judgments of discrimination in cases involving White and non-Black minority groups.

A second limitation of the existing literature testing the prototype model in the context of racial and ethnic discrimination is that studies rarely examine how people make judgments in situations where the perpetrators and targets belong to two different minority groups (although cf. Inman et al., 1998). Recently, O'Brien and Merritt (2022) tested how the group membership of a perpetrator influenced judgments of discrimination against a Black American man rejected for a job; a meta-analysis of four nearly identical experiments yielded several findings are relevant to the present research. First, ATDs were higher when the perpetrator was a White American man as compared to an Asian, Latino, or Black American man. Second, ATDs did not differ when the perpetrator was an Asian American versus a Latino American man. Finally, people were more likely to make ATDs when the perpetrator was a White, Asian, or Latino American man as compared to when the perpetrator was a Black American man. This study is consistent with the present perspective that groups may vary along a continuum in their relative fit to the prototypes people have of discrimination; however, the study focuses on *perpetrator* prototypes rather than *target* prototypes. Unfortunately, O'Brien and Merritt (2022) exclusively focus on Black men who are targets of discrimination and do not examine how people make judgments of discrimination in cases involving targets who are Black women or targets who are non-Black racial and ethnic minority men and women.

Finally, a third limitation of the literature testing the prototype model in the context of racial and ethnic discrimination is insufficient knowledge about how a perceiver's group membership affects their judgments of discrimination. More generally, it is well-documented that, compared to other groups, White Americans perceive relatively low levels of societal discrimination directed at People of Color (POC; Adams et al., 2006; Carter & Murphy, 2015; J. C. Nelson et al., 2013). With regards to discrimination directed at White people, most research demonstrates that White people perceive more anti-White discrimination than POC (Norton & Sommers, 2011; Peacock & Biernat, 2023; Rasmussen et al., 2022; although, cf. Earle & Hodson, 2020). Thus, compared to POC, White people perceive less societal discrimination directed at POC and more societal discrimination directed at White people.

The questions of whether people of different racial identities vary in their tendency to rely on prototypes or have different prototypes that affect their judgments in specific situations, however, have yet to be definitively answered. That is, it is unclear whether the general factors (e.g., the group status of the perpetrator, the group status of the target, the stereotypes of the target in the local context) that influence attributional patterns when making judgments of discrimination are the same for people across different identity groups. Inman and Baron (1996) were largely silent on the question of whether perceiver characters should affect prototypes of discrimination and some of the research testing the prototype model of ATDs has altogether avoided the question.

Among the research that has attempted to examine the role of perceiver racial identity in shaping prototypes of discrimination, a complicated and sometimes contradictory picture has emerged (Corning & Bucchianeri, 2010; Flournoy et al., 2002; Inman et al., 1998; O'Brien & Merritt, 2022; Simon et al., 2013). For example, Corning and Bucchianeri (2010) found that, when Black people were targeted for unfair treatment, White perceivers' judgments were influenced by the group status of the perpetrator such that they perceived more discrimination when the perpetrator was a White person as compared to when the perpetrator was a Black person. However, Black perceivers' judgments of discrimination were equivalent regardless of whether the perpetrator was a White or Black person, suggesting that Black perceivers did not rely on prototypes. On the other hand, O'Brien and Merritt (2022) found that, when Black men were targeted for discrimination, Black and White perceivers showed a similar attributional pattern such that discrimination judgments were highest for White perpetrators, intermediate for Asian and Latino perpetrators, and lowest for Black perpetrators. Thus, the exact nature of how perceiver group membership shapes prototypes in the context of racial and ethnic discrimination remains elusive.

# The Relative Fit Hypothesis

In the present research, we sought to develop a fuller understanding of how people make judgments of hiring discrimination in a multiracial workplace. We contend that groups may vary along a continuum in the extent to which they resemble a prototype and we refer to this notion as the *relative fit hypothesis*. The present experiments were designed to test a series of predictions derived from the relative fit hypothesis.

Building off past research (Inman & Baron, 1996; Rodin et al., 1990), we expected Black Americans would be a closer fit to the target prototype than White Americans in a white-collar hiring context. White Americans face low levels of hiring discrimination relative to Black Americans; to the extent that prototypes are attuned to reality, White Americans should be a more distant fit to the target prototype than Black Americans (Kline et al., 2022; Lippens et al., 2023; Quillian et al., 2017). Moreover, people are more likely to make judgments of discrimination when targets are negatively stereotyped than when they are positively stereotyped (Flournoy et al., 2002; O'Brien et al., 2008; Simon et al., 2013). White-collar jobs are relatively high status jobs that stereotypically require intelligence and competence. White Americans are stereotyped as relatively high in status, intelligence, and competence whereas Black Americans are stereotyped as relatively low in status, intelligence, and competence (Devine, 1989; Fiske et al., 2002; Zou & Cheryan, 2017). Thus, we hypothesized that Black Americans would be a closer fit to the target prototype than White Americans.

We hypothesized that, in a white-collar hiring context, Asian Americans may be a closer fit to the target prototype than White Americans, but a more distant fit to the target prototype than Black Americans. Like other racial and ethnic minority groups in the United States, Asian Americans face relatively higher levels of discrimination relative to White Americans across a variety of domains including employment and hiring (e.g., Gee & Peck, 2018; R. T. Lee et al., 2019; Lippens et al., 2023; McMurtry et al., 2019; Sue, Bucceri, et al., 2007; U.S. Equal Employment Opportunity Commission, 2015; Yu, 2020). Moreover, in recent years, there has been increased focus on the discrimination experiences of Asian Americans in scholarly discourse and in the media (e.g., Chung, 2022; Hauser, 2021; Riley, 2022; Toh et al., 2021). Based on objective evidence of hiring discrimination against Asian Americans coupled with an increased focus on the discrimination experiences of Asian Americans, we hypothesized that Asian Americans would be a closer fit to the target prototype as compared to White Americans.

There are at least two reasons that Asian Americans may be a more distant fit to the target prototype as compared to Black Americans. First, Asian Americans have often been described as a "model minority" (e.g., Chou & Feagin, 2015; S. J. Lee, 2008). Although experts who study the model minority myth have provided extensive evidence that it mischaracterizes the position of Asian Americans in U.S. society, the model minority myth is nonetheless widely endorsed (Chou & Feagin, 2015). Asian Americans are stereotyped as competent and high in status (e.g., Fiske et al., 2002; Kuo et al., 2020; Zou & Cheryan, 2017). Their presumed status as a "model minority" may lead many people to expect that Asian Americans are relatively more insulated from hiring discrimination, particular for jobs that stereotypically require competence and intelligence. Thus, the prevalence of the model minority myth is one reason to hypothesize that Asian Americans are a more distant fit to the target prototype than Black Americans, especially in the white-collar hiring context that was the focus of the present investigation (see also Kim et al., 2021).

A second reason that Asian Americans may be a more distant fit to the target prototype as compared to Black Americans has to do with the unique position of Black Americans in the U.S. racial hierarchy relative to other racial minority groups—a concept sometimes referred to as Black exceptionalism (e.g., Feagin, 2014; Sears, 2008; Sears & Savalei, 2006; Wilkerson, 2020). Most U.S. residents are aware of the long history of enslavement of Black people that was followed by legalized segregation and Jim Crow Laws. Children in U.S. schools are taught at least some knowledge of this history, even if they are taught a sanitized, "white-washed" version that attempts to minimize the oppression of Black people and White people's role in it (Bonam et al., 2019; Loewen, 1995; J. C. Nelson et al., 2013; Salter & Adams, 2016; Wilkerson, 2020). Moreover, the civil rights movement as well as well as more recent events such as the Black Lives Matter movement have sought, in part, to increase awareness of racial discrimination and injustice against Black people (e.g., Lebron, 2017; Morris, 1986). In comparison, many people may be less familiar and aware of the history of discrimination against other racial and ethnic minority groups in the United States. Thus, Black people may be a closer fit to the target prototype relative to not only Asian Americans, but also relative to other racial and ethnic minority groups who frequently encounter discrimination such as Latino people.3

Although the primary goal of the research was to compare judgments of discrimination against Asian American targets to White and Black American targets, in one experiment we compare judgments of discrimination against Asian American targets to Black and Latino American targets. Generating predictions for how Latino Americans fit the target prototype as compared to Asian or Black Americans is complicated. Unlike Asian Americans, Latino Americans are not viewed as a "model minority." Similar to Black Americans, Latino Americans are stereotyped as relatively low in status, intelligence, and competence (Fiske et al., 2002; Zou & Cheryan, 2017). Thus, if "model minority" stereotypes prevent people from recognizing discrimination against Asian Americans in white-collar contexts, people may be more likely to recognize discrimination against Latino Americans compared to Asian Americans. On the other hand, some scholars have argued that Latino Americans are still situated above Black Americans in the U.S. racial hierarchy (e.g., Feagin, 2014; Sears, 2008; Sears & Savalei, 2006; Wilkerson, 2020). Social movements to raise awareness of oppression and discrimination against Latino Americans have not achieved the same level of visibility as the Civil Rights Movement and Black Lives Matter. Thus, if Black exceptionalism influences judgments of discrimination in white collar contexts, people may be less likely to recognize discrimination against Latino Americans as compared to Black Americans. As there were grounds to make competing predictions, we did not generate definitive predictions about the fit of Latino Americans to the target prototype relative to Asian and Black Americans.

# Overview

In a series of six experiments, we attempt to clarify how the prototype model of ATDs applies to diverse, multiracial contexts. More

<sup>&</sup>lt;sup>2</sup> We discussion the position of Indigenous people and other groups within U.S. society in the "General Discussion" section.

<sup>&</sup>lt;sup>3</sup> Within the psychological literature, researchers examining prototypes of discrimination have frequently examined Black targets, rarely examined Latino targets and, to our knowledge, never examined Asian American targets. One could argue that this pattern in the literature constitutes additional evidence that Black people are a closer fit to the target prototype relative to other racial minority groups.

specifically, the present research examines how target group membership influences judgments of hiring discrimination for a whitecollar job. In Experiment 1, we compared judgments of discrimination when a White American man rejected a qualified White, Asian, or Black American male job applicant. According to the relative fit hypothesis, Asian American applicants are a closer fit to the prototypical target of white-collar job discrimination as compared to White American applicants and a more distant fit to the prototype as compared to Black American applicants. Therefore, we predicted that ATDs for rejected Asian American applicants would be higher than for White American applicants, but that ATDs for rejected Asian American applicants would be lower than for Black American applicants. After finding support for our hypothesis in Experiment 1, Experiment 2 replicated Experiment 1 with one key change—the perpetrator was Latino American instead of White American. The change allowed us to test whether support for the hypothesis was contingent on the perpetrator belonging to a high status group, or if the same pattern of effects would be found when the perpetrator belonged to a marginalized group.

In Experiment 3, we tested support for the relative fit hypothesis when a Latina American woman rejected a White, Asian, or Black American woman. Nearly all research testing the prototype model of ATDs in the context of racial discrimination has focused on how the race of male perpetrators and male targets influences judgements of discrimination. This is a serious limitation of past research given evidence that Black and White men are more prototypic of their respective racial groups than Black and White women (e.g., Purdie-Vaughns & Eibach, 2008; Sesko & Biernat, 2010; Thomas et al., 2014; Zarate & Smith, 1990). In comparison, some evidence suggests that Asian women may be more prototypic of Asian people than Asian men (e.g., Schug et al., 2015). As a result, it was unclear whether we would obtain support for the hypothesis when the rejected job applicants were women.

Experiment 4 compared judgments of discrimination when a White American rejected an Asian, Latino, or Black American job candidate. Asian Americans are frequently stereotyped as "model minorities" who are higher in status and more competent than both Black and Latino Americans (e.g., Axt et al., 2014; Fiske et al., 2002; S. J. Lee, 2008; Zou & Cheryan, 2017). If Asian Americans' status as a "model minority" leads to the expectation that discrimination against Asian Americans in white-collar jobs is less likely than discrimination against Black and Latino Americans, then people should perceive lower levels of discrimination against Asian American targets relative to both Latino and Black targets. However, an alternative explanation for the gap in perceived discrimination against Asian American versus Black American targets is that Black exceptionalism may lead people to expect Black people to be targeted for discrimination more often than people from other racial and ethnic minority groups (e.g., see Feagin, 2014; Sears, 2008; Sears & Savalei, 2006; Wilkerson, 2020). If people expect Black Americans to experience more discrimination than other minority groups, then people should perceive higher levels of discrimination against Black American targets relative to both Latino and Asian American targets.

Finally, the goals of Experiments 5 and 6 were to test the relative fit hypothesis and compare judgments of discrimination for rejected White, Asian, and Black American job candidates among racial minority samples. In Experiments 1–4, participants were not recruited on the basis of their racial identity, resulting in samples where the majority of participants were White Americans. As a result, it was unclear whether

similar findings would emerge among Asian American (Experiment 5) and Black American (Experiment 6) samples.

Materials and data from all seven experiments can be found on Open Science Framework (OSF): https://osf.io/rmyvb/.

# **Experiment 1**

The goal of Experiment 1 was to compare judgments of discrimination when a White American man rejected a qualified White, Asian, or Black American applicant for a white-collar position. After participants learned about the rejection, they completed the dependent variables. We predicted that ATDs would be highest for the Black American applicant, intermediate for the Asian American applicant, and lowest for the White American applicant. Experiment 1 was preregistered: https://osf.io/632td/.

Experiment 1 also included a measure of internal attributions and perceptions that the decision was justified. The measure of internal attributions assessed the extent to which participants thought that the decision was based on the applicant's qualifications (O'Brien & Merritt, 2022). Major and colleagues (Crocker & Major, 1989; Major et al., 2002) hypothesized that, when people experience negative outcomes such as rejection for a job, internal attributions to a job candidate's qualifications should be negatively related to ATDs. However, some past research has shown that internal attributions are not always a mirror image of ATDs (O'Brien & Merritt, 2022; Schmitt & Branscombe, 2002). Therefore, we did not make predictions for either internal attributions or perceptions that the hiring decision was justified.

#### Method

#### **Participants**

The final sample included 589 individuals ( $M_{\text{age}} = 47.19$ , SD =17.17). Participants were asked to report their gender; the sample was 38% men, 62% women, and <1% nonbinary/unknown. Participants were also asked to report their race/ethnicity and were given the options Asian/Asian American, Black/African American, Indigenous Nation/Native American, Latinx/Hispanic American, White/European American, and Other (please specify) and told to select all that apply. The majority of participants were White (76% White/European American, 9% Black/African American, 7% Latinx/ Hispanic American, 5% Asian/Asian American, 3% multiracial, and <1% Indigenous Nation/Native American/unknown). Participants were recruited through Prime Panels by CloudResearch (https://www .cloudresearch.com/products/prime-panels/) and received nominal remuneration for participation. With an average of 196 participants in each condition, we had 0.80 power to detect a minimum effect size of d = 0.33 in a pairwise comparison, after applying a Bonferroni correction (i.e., p = .017).<sup>4</sup> All data exclusions were preregistered; see Data Cleaning and Screening section.

<sup>&</sup>lt;sup>4</sup>Because the key hypotheses involved pairwise comparisons, we used G\*Power (Faul et al., 2007) to conduct all a priori and sensitivity power analyses to detect Cohen's d after applying a Bonferroni correction. This approach is a more conservative than using partial  $\eta^2$  values from an ANOVA.

#### **Procedure**

Experiment 1 and all subsequent experiments were administered online with Qualtrics Experience Management software. After consenting to participate, participants were told that the present study was part of a national study to understand processes that influence hiring decisions. They were told they would review information about a recent hiring decision at a company participating in the study. Next, they were shown a photograph of a White man, named Michael Collins, described as the director of product marketing at a research firm who was responsible for hiring a new project manager. Then, participants were randomly assigned to one of three conditions. In the Black American applicant condition, participants viewed a photograph of a Black man named Tyrone Johnson who was applying for the position and received information about Tyrone's qualifications and his answers to interview questions. In the Asian American applicant condition, all information was identical except participants viewed a photograph of an Asian man named Eric Wang (a common Chinese surname). We chose a Chinese surname because people of Chinese descent are the largest Asian American subgroup in the United States and are perceived as highly prototypic of Asian Americans (Goh & McCue, 2021; Monte & Shin, 2022). In the White American applicant condition, participants viewed a photograph of a White man named Wyatt Clark. The photographs of the job applicants were selected from the Chicago Face Database (Ma et al., 2015) and were high in racial prototypicality and of equal attractiveness. Using Photoshop, each face was digitally superimposed over another photo of a male torso in a business suit. After reviewing information about the applicants, participants were told that the director did not hire the applicant because he was not a "good fit." Finally, participants completed the dependent variables, received debriefing information about the study, and were asked for permission to use their data.

#### Measures

The questions were completed in the same order across all participants. The ATD items were intermixed with items assessing justification, internal attributions (adapted from O'Brien & Merritt, 2022), and two filler items to reduce suspicion regarding the main purpose of the study. Next, participants also answered an open-ended, exploratory question about the reason for the decision (participants' answers are available in the online, open data set). Then, participants completed two manipulation and attention checks. Lastly, participants answered demographic questions.

**ATDs.** Participants rated the following items on a Likert-type scale of 0 (not at all) to 10 (very): To what extent do you think the hiring decision was due to discrimination? To what extent do you think the hiring decision was based on race? and To what extent do you think the hiring decision was due to racism? The three items were aggregated to produce one score assessing ATDs ( $\alpha = .95$ ).

**Internal Attributions.** Two items were rated on the same 10-point Likert-type scale that was used for ATDs and averaged to assess internal attributions to the applicant's qualifications (r = .80, p < .001): To what extent do you think the hiring decision was based on the applicant's qualifications? and To what extent do you think the hiring decision was based on the applicant's past experience?

**Justified.** Perceptions pertaining to whether the hiring decision was justified were measured with two items (r = .89, p < .001): *How fair do you think the hiring decision was?* and *How justified do you* 

think the hiring decision was? These items were also measured on the same 10-point Likert-type scale used for ATDs.

**Manipulation and Attention Checks.** To ensure participants were attending to the study, we asked them to identify the manager's race, the applicant's race, and whether the applicant was hired.

# Data Cleaning and Screening

A similar approach to power analyses, data cleaning, and data screening procedures was used in all experiments. An a priori power analysis using G\*Power (Faul et al., 2007) suggested that 234 participants per condition, or 702 total, is necessary for 0.80 power to detect an effect size of d = 0.30, after making a Bonferroni correction. We chose d = 0.30 based on past research on judgments of discrimination (O'Brien & Merritt, 2022). We set a goal of recruiting 828 participants to allow for data exclusions. Ultimately, 882 individuals participated in the study and answered at least one question. However, 44 people did not give permission to use their data and one participant was younger than 18, leaving 837 participants eligible for inclusion in the analyses. Consistent with our preregistered exclusion criteria, participants were removed from analyses if they did not complete at least 80% of the study questions (n = 18), failed to correctly identify the race of the manager (n = 142) or applicant (n = 172). For additional information about data exclusions in Experiment 1 and all subsequent experiments, please see the online supplemental materials. Ultimately, 589 were retained for the final sample.<sup>5</sup> After calculating composite scores for ATDs, internal attributions, and justified, we screened the data to determine whether there were any outliers ( $\pm 3$  SDs from the mean); however, no individuals met the criteria.

#### Transparency and Openness

We have made efforts to adhere to transparency and openness guidelines by posting the raw data from all experiments along with the code required to conduct reported analyses on OSF; the link can be found in the author note. In addition, the materials are also available on the OSF website. Finally, the study design, predictions, and data analysis plan for all experiments were preregistered and the links to preregistrations are included within this article.

# Results

# **Preliminary Analyses**

Means, standard deviations, and correlations among the dependent variables are reported in Table 1.

# Hypothesis Testing

A one-way analysis of variance (ANOVA) performed on ATDs was significant, F(2, 586) = 69.70, p < .001,  $\eta^2 = .192$ , 90% confidence interval (CI) [.146, .236] (see Figure 1). In Experiment 1 (as well as all subsequent experiments), we followed up significant ANOVAs by conducting pairwise comparisons with the critical p-value set to .017, consistent with a Bonferroni correction for three comparisons. Replicating past research, ATDs were significantly

<sup>&</sup>lt;sup>5</sup> If we retain all 837 individuals who were at least 18 years of age and gave permission to analyze their data, the results of the hypothesis tests are unaltered.

**Table 1** *Experiment 1: Descriptive Statistics* 

Variable	M	SD	1	2
1. ATDs	4.62	3.32	_	
2. Justified	4.52	3.02	29*	_
3. Internal attributions	4.54	3.09	26*	.71*

*Note.* ATD = attribution to discrimination.

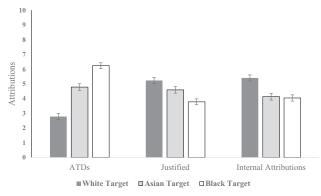
higher when the manager rejected a Black American applicant as compared to a White American applicant, t(586) = 11.78, p < .001, d = 1.157. Consistent with predictions, ATDs were higher than when the applicant was Black American as compared to Asian American, t(586) = 4.78, p < .001, d = 0.489, and when the applicant was Asian American as compared to White American, t(586) = 6.49, p < .001, d = 0.664.

# **Exploratory Analyses**

The manipulation also had a significant impact on internal attributions, F(2,586) = 12.77, p < .001,  $\eta^2 = .042$ , 90% CI [.018, .069]. Internal attributions were significantly lower when the rejected applicant was a Black American as compared to when he was a White American, t(586) = -4.59, p < .001, d = -0.450. Internal attributions did not differ for the Black American as compared to the Asian American applicant, t(586) = -0.276, p = .783, d = -0.023; however, internal attributions were lower when the applicant was Asian American as compared to White American, t(586) = -4.09, p < .001, d = -0.427.

Finally, the manipulation also affected perceptions that the decision was justified, F(2, 586) = 12.49, p < .001,  $\eta^2 = .041$ , 90% CI [.017, .068]. Participants perceived the decision as less justified when the applicant was Black American as compared to White American, t(586) = -4.98, p < .001, d = -0.487. Participants perceived the decision as less justified when the applicant was Black American as compared to when he was Asian American, t(586) = -2.69, p = .007, d = -0.277. However, participants did not perceive the decision as less justified as compared to when the applicant was Asian American as compared to White American, t(586) = -2.08, p = .038, d = -0.214.

**Figure 1** *Experiment 1: Attributions as a Function of Applicant Race* 



*Note.* Error bars represent *SE*. ATD = attribution to discrimination.

#### Discussion

Experiment 1 replicated previous research by showing that judgments of discrimination were higher for a rejected job applicant when he was a Black American as compared to a White American (e.g., Inman & Baron, 1996; Rodin et al., 1990). However, Experiment 1 demonstrated a novel effect by adding a comparison to a rejected Asian American job applicant. Consistent with the relative fit hypothesis, discrimination judgments for a rejected Asian American job applicant were lower than for a rejected Black American job applicant, but higher than for a rejected White American job applicant.

# **Experiment 2**

The goal of Experiment 1 was to compare judgments of discrimination against rejected White, Asian, or Black American male job applicants when they were rejected by a prototypical perpetrator of discrimination—a White man in a position of power. However, a drawback to this approach was that the Black and Asian American applicants were rejected by an outgroup member whereas the White American applicant was rejected by an ingroup member thus creating a confound. Judgments of discrimination against the White American applicant may have been low either because White American men are not prototypical targets of discrimination or because, regardless of group status, people do not expect others to discriminate against their ingroup. Thus, we felt it was important to examine ATDs for White, Asian, and Black American applicants when all three applicants were rejected by an outgroup member. Therefore, in Experiment 2, a Latino American perpetrator rejected either a Black, Asian, or White American man. The decision to use a Latino American perpetrator in Experiment 2 allowed us to both eliminate the confound in Experiment 1 and examine whether we would observe the same pattern of results if the perpetrator belonged to a marginalized group instead of a group that fits the perpetrator prototype. Once again, we predicted that ATDs would be highest for the Black American applicant, intermediate for the Asian American applicant, and lowest for the White American applicant. Experiment 2 was preregistered: https://osf.io/ qwbrz.

#### Method

# **Participants**

The final sample included 250 individuals ( $M_{\rm age}=19.29, SD=1.19$ ; 32% men, 66.4% women, 1.6% nonbinary/unknown). The majority of participants were White (71.2% White/European American, 3.2% Black/African American, 5.6% Latinx/Hispanic American, 9.2% Asian/Asian American, 10.4% multiracial, <1% Indigenous Nation/Native American/unknown). Participants were undergraduate students recruited through the Tulane University participant pool who received course credit for participating. With an average of 83 participants in each condition, we had 0.80 power to detect a minimum effect size of d=0.51, after applying a Bonferroni correction. All data exclusions were preregistered (see Data Cleaning and Screening section).

# **Procedure**

Participants were randomly assigned to the Black, Asian, or White American applicant conditions. The procedure was identical to

<sup>\*</sup> p < .01.

Experiment 1 with one exception—the director of product marketing was depicted in a photograph as Latino and named Diego Lopez.

#### Measures

The measures in Experiment 2 were the same as Experiment 1; ATDs ( $\alpha$  = .96), internal attributions (r = .74, p < .001), and perceptions of whether the decision was justified (r = .79, p < .001) were all reliable.

# Data Cleaning and Screening

We revised our estimated effect size in Experiment 2 based on the results of Experiment 1. An a priori power analysis suggested that 89 participants per condition, or 267 total, is necessary for 0.80 power to detect an effect size of d=0.49 (the smallest relevant effect size in Experiment 1), after applying a Bonferroni correction. We set a goal of recruiting 315 participants to allow for data exclusions. Although 315 individuals participanted in the study and answered at least one question, only 290 participants provided permission to include their data in the analyses. Additionally, participants were removed if they had excessive missing data (n=1), failed to correctly identify the hiring manager's ethnic group (n=35), or failed to correctly identify the applicant's race (n=11). The final sample consisted of 250 participants. One person's rating of internal attributions was identified as an outlier  $(\pm 3 \ SDs)$  from the mean), and the distribution was winsorized.

#### Results

#### **Preliminary Analyses**

Means, standard deviations, and correlations among the dependent variables are reported in Table 2.

# Hypothesis Testing

A one-way ANOVA performed on ATDs was significant, F(2, 247) = 88.04, p < .001,  $\eta^2 = .416$ , 90% CI [.338, .478] (see Figure 2). Replicating Experiment 1, ATDs were significantly higher when the manager rejected a Black American applicant as compared to a White American applicant, t(247) = 13.04, p < .001, d = 2.151. Consistent with the current hypothesis and Experiment 1, ATDs were higher than when the applicant was Black American as compared to Asian American, t(247) = 4.49, p < .001, d = 0.647, and when the applicant was Asian American as compared to White American, t(247) = 8.61, p < .001, d = 1.359.

# Exploratory Analyses

Replicating Experiment 1, the manipulation also had a significant impact on internal attributions, F(2, 247) = 5.35, p = .005,  $\eta^2 = .042$ ,

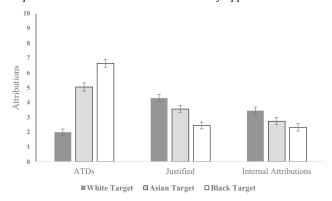
 Table 2

 Experiment 2: Descriptive Statistics

Variable	М	SD	1	2
1. ATDs	4.54	2.99	_	
2. Justified	3.43	2.27	55*	_
3. Internal attributions	2.83	2.28	37*	.56*

Note. ATD = attribution to discrimination.

Figure 2
Experiment 2: Attributions as a Function of Applicant Race



*Note.* Error bars represent *SE*. ATD = attribution to discrimination.

90% CI [.007, .085]. As in Experiment 1, internal attributions were significantly lower when the rejected applicant was Black American as compared to when he was White American, t(247) = -3.23, p = .001, d = -0.498. However, internal attributions did not differ when the rejected applicant was Black American as compared to Asian American, t(247) = -1.18, p = .241, d = -0.181, or Asian American as compared to White American, t(247) = -2.06, p = .040, d = -0.322.

Finally, the manipulation also had a significant impact on perceptions that the decision was justified, F(2, 247) = 15.57, p < .001,  $\eta^2 = .112$ , 90% CI [.054, .172]. As in Experiment 1, participants perceived the decision as less justified when the applicant was Black American as compared to White American, t(247) = -5.55, p < .001, d = -0.868. Participants perceived the decision as less justified when the applicant was Black American as compared to Asian American, t(247) = -3.33, p < .001, d = -0.524; however, when the applicant was Asian American, participants did not perceive the decision as less justified as compared to when the applicant was White American, t(247) = -2.23, p = .027, d = -0.337.

# Discussion

Experiment 2 replicated the results of Experiment 1. Regardless of whether the perpetrator was a White American (Experiment 1) or Latino American (Experiment 2) man, participants perceived higher levels of discrimination when the rejected job applicant was a Black American, intermediate levels of discrimination when the applicant was an Asian American, and lower levels of discrimination when the applicant was a White American. Both experiments supported the relative fit hypothesis.

# **Experiment 3**

One limitation of Experiments 1 and 2 is that they only examined judgments of racial discrimination when men, but not women, are rejected for jobs. Past research suggests that whereas men are more prototypic of White and Black people than women, women are more prototypic of Asian people than men (e.g., Schug et al., 2015; Thomas et al., 2014; Zarate & Smith, 1990). Thus, in Experiments 1 and 2, judgments of discrimination against the Asian American applicant may have been lower than the Black American applicant

<sup>\*</sup> p < .01.

because Asian men are less prototypic of their racial group than Black men. Therefore, it was unclear whether people would still be more likely to make ATDs for a rejected Black job applicant than a rejected Asian applicant if both applicants were women. The goal of Experiment 3 was to replicate Experiment 2 when both the perpetrator and applicants were women. Once again, we predicted that ATDs would be highest for the Black American applicant, intermediate for the Asian American applicant, and lowest for the White American applicant. Experiment 3 was preregistered: https://osf.io/3pjca.

#### Method

# **Participants**

The final sample included 200 individuals ( $M_{\rm age}=18.93$ , SD=2.40; 38.5% men, 59.5% women, 2% nonbinary/unknown). Most participants were White (71% White/European American, 5% Black/African American, 9.5% Latinx/Hispanic American, 7.0% Asian/Asian American, 7.5% multiracial). The sample consisted of Tulane University undergraduate students that were recruited and compensated using the same strategies as Experiment 2. With an average of 66 participants in each condition, we had 0.80 power to detect a minimum effect size of d=0.57, after applying a Bonferroni correction. All data exclusions were preregistered (see Data Cleaning and Screening section).

#### **Procedure**

Participants were randomly assigned to the Black, Asian, or White American applicant conditions. The procedure was identical to Experiment 2 except for the names and photographs of the applicants and the director. We conducted a pilot study in order to select photographs that were of equivalent attractiveness, intelligence, and age. Please see the online supplemental materials for details. The director of product marketing was depicted in a photograph as Latina and named Maria Lopez. In the Black American applicant condition, participants viewed a photograph of a Black woman named Jazmin Walker. In the Asian American application condition, participants viewed a photograph of an Asian woman named Wendy Lee. Finally, in the White American applicant condition, participants viewed a photograph of a White woman named Emily Foster.

# Measures

The measures in Experiment 3 were the same as Experiments 1 and 2; ATDs ( $\alpha$  = .95), internal attributions (r = .70, p < .001), and perceptions of whether the decision was justified (r = .74, p < .001) continued to be reliable.

# Data Cleaning and Screening

On the basis of the same a priori power analysis conducted for Experiment 2, the target sample size was set to 315, or as many participants as we could recruit before the academic semester, whichever happened first. Ultimately, 323 individuals participated in the study and answered at least one question. Of the 323 participants, 292 participants provided permission to include their data in the analyses. Additionally, participants were removed if they were underage (n = 1), failed to correctly identify the hiring manager's

ethnic group (n = 39), or failed to correctly identify the applicant's race (n = 77). The final sample for analyses consisted of 200 participants. Two individuals were identified as outliers ( $\pm 3$  SDs from the mean) on ratings of internal attributions and the distribution was winsorized.

#### Results

#### Preliminary Analyses

Means, standard deviations, and correlations among the dependent variables are reported in Table 3.

# Hypothesis Testing

Replicating Experiment 1 and 2, the one-way ANOVA performed on ATDs was significant, F(2, 197) = 42.23, p < .001,  $\eta^2 = .300$ , 90% CI [.211, .376] (see Figure 3). ATDs were significantly higher when the manager rejected a Black American applicant as compared to a White American applicant, t(197) = 9.19, p < .001, d = 1.655. Additionally, ATDs were higher than when the applicant was Black American as compared to Asian American, t(197) = 4.08, p < .001, d = 0.695, and when the applicant was Asian American as compared to White American, t(197) = 4.63, p < .001, d = 0.785.

# **Exploratory Analyses**

Unlike Experiments 1 and 2, the manipulation did not have a significant impact on internal attributions, F(2, 197) = 1.25, p = .288,  $\eta^2 = .013$ , 90% CI [.000, .043], or perceptions that the decision was justified, F(2, 197) = 2.07, p < .130,  $\eta^2 = .021$ , [.000, .058] (Figure 3).

# Discussion

Experiment 3 replicated Experiments 1 and 2 with one key change—the perpetrator and targets were all women. The results of Experiment 3 were nearly identical to Experiments 1 and 2 and supported the relative fit hypothesis. People perceived higher levels of discrimination when a rejected job applicant was a Black American, intermediate levels of discrimination when an applicant was an Asian American, and lower levels of discrimination when an applicant was a White American.

# **Experiment 4**

One possible reason for the gap in perceived discrimination against Asian versus Black targets is that, compared to Black Americans, Asian Americans are stereotyped as relatively more competent and higher in status (e.g., Fiske et al., 2002; Kuo et al., 2020; Zou & Cheryan, 2017). In other words, it is possible that Asian

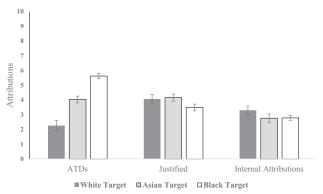
**Table 3** *Experiment 3: Descriptive Statistics* 

Variable	M	SD	1	2
1. ATDs 2. Justified 3. Internal attributions	3.92 3.90 2.97	2.60 2.06 2.29	37* 11	 .46*

Note. ATD = attribution to discrimination.

\* p < .01.

Figure 3
Experiment 3: Attributions as a Function of Applicant Race



*Note.* Error bars represent *SE*. ATD = attribution to discrimination.

Americans' status in the United States as a "model minority" leads to the expectation that Asian Americans are less likely to experience hiring discrimination for white-collar positions than Black Americans (S. J. Lee, 2008). Therefore, the goal of Experiment 4 was to compare judgments of discrimination against Asian and Black Americans to a group that frequently experiences discrimination but is not stereotyped as a "model minority"—Latino Americans.

Compared to Asian Americans, Latino Americans are stereotyped as less competent and lower in status (e.g., Axt et al., 2014; Fiske et al., 2002; Zou & Cheryan, 2017). If Asian Americans' status as a "model minority" discourages other people from recognizing discrimination against Asian Americans, then people should perceive lower levels of discrimination against Asian targets relative to both Latino and Black targets. However, an alternative explanation for the gap in perceived discrimination against Asian versus Black targets is that people are especially attuned to perceive anti-Black hiring discrimination because of Black Americans' unique position in the U.S. racial and ethnic hierarchy (e.g., see Feagin, 2014; Sears, 2008; Sears & Savalei, 2006; Wilkerson, 2020). Thus, people may be more be sensitive to perceiving discrimination against Black targets compared to both Asian and Latino targets.

Experiment 4, we manipulated the race (Asian, Latino, or Black) and gender (male vs. female) of the applicant. The applicant was always matched with a same gender, White director who rejected them. We preregistered our prediction that we would replicate the results of Experiments 1–3 such that people would perceive more discrimination against a Black Americans target relative to an Asian American target; however, we did not make a prediction for how judgments of discrimination against Latino American targets would vary from Black and Asian American targets.

We decided to include target gender as a factor in the experimental design because past research examining attributions to racial discrimination has almost exclusively focused on how people make judgments in situations involving male perpetrators and targets or perpetrators and targets whose gender is unspecified (e.g., Inman & Baron, 1996; O'Brien & Merritt, 2022, Rodin et al., 1990; Simon et al., 2013). The past exclusion of female perpetrators and targets in research examining attributions to racial discrimination has created an epistemic gap regarding how people make judgments of racial discrimination in interactions between women. We wished

to avoid inadvertently contributing to this epistemic gap, and therefore, we retained candidate gender as a factor in the design despite the fact that we did not have hypotheses about a main effect of candidate gender or a candidate gender by candidate race interaction. Experiment 4 was preregistered: https://osf.io/mzueq.

#### Method

# **Participants**

The final sample included 677 individuals ( $M_{\rm age}=40.06$ , SD=12.82; 49.2% men, 48.9% women, 1.9% nonbinary/unknown). Most participants were White (69.1% White/European American, 8.7% Black/African American, 6.5% Latinx/Hispanic American, 9.9% Asian/Asian American, 5.0% multiracial, <1% Indigenous Nation/Native American/unknown). Participants were recruited through Prolific (https://www.prolific.co/) and received nominal remuneration for participation. In Experiment 5, we recruited participants who were 25 and older in order to obtain a sample that was likely to have workplace experience.

With an average of 225 participants in each target race condition, we had 0.80 power to detect a minimum effect size of d = 0.31, after applying a Bonferroni correction. All data exclusions were preregistered (see Data Cleaning and Screening section).

#### **Procedure**

Participants were randomly assigned to condition in a 3 (target race: Asian, Latino, or Black)  $\times$  2 (target gender: male or female) between subjects design. Depending on target gender condition, the director in charge of hiring was depicted as a White woman or man named Emily or Scott Foster. The gender of the director in charge of hiring always matched the gender of the applicant. Depending on condition, participants were shown a photograph a Black, Asian, or Latino applicant named Jazmin/Jamal Walker, Wendy/Eric Lee, or Maria/Diego Lopez. After using the same photographs for male applicants in Experiments 1 and 2, we selected new photographs for the male applicants in Experiment 4 that were piloted to be of equivalent attractiveness, intelligence, and age. See the online supplemental materials for details. All other aspects of the procedure were identical to Experiments 1–3.

#### Measures

The measures in Experiment 4 were the same the previous experiments; ATDs ( $\alpha$  = .98), internal attributions (r = .80, p < .001), and perceptions of whether the decision was justified (r = .91, p < .001) were reliable.

# Data Cleaning and Screening

Our first attempt to conduct Experiment 4 failed to meet our participant recruitment goal, resulting in a final sample size of 217 individuals. Please see the online supplemental materials for detailed information. Analysis of this initial data set suggested that the smallest effect size that emerged in a pairwise comparison was d = 0.32. We then conducted an a priori power analysis which suggested that 205 participants per target race condition, or 615 total, were necessary for 0.80 power to detect an effect size of d = 0.32 in a pairwise comparison, after applying a Bonferroni correction. We set a goal of

recruiting 724 participants to allow for data exclusions. Ultimately, 744 participants answered at least one question and 734 participants provided permission to include their data in the analyses. Participants were removed from analyses if they failed to correctly identify the hiring manager's racial group (n=46) or failed to correctly identify the applicant's race (n=27). The final sample for analyses consisted of 677 participants. There were eight participants' ratings of internal attributions identified as outliers ( $\pm 3$  SDs from the mean), so the distribution was winsorized.

#### Results

# **Preliminary Analyses**

Means, standard deviations, and correlations among the dependent variables are reported in Table 4.

# Hypothesis Testing

A 3 (applicant race)  $\times$  2 (applicant gender) ANOVA performed on ATDs yielded the predicted main effect of applicant race, F(2, 671) = 11.72, p < .001,  $\eta_p^2 = .034$ , 90% CI [.014, .057] (see Figure 4). Replicating Experiments 1–3, ATDs were significantly higher when the manager rejected a Black American applicant as compared to an Asian American applicant, t(671) = 4.35, p < .001, d = 0.417. ATDs were also significantly higher when the manager rejected a Black American applicant as compared to a Latino American applicant, t(671) = 4.06, p < .001, d = 0.387; however, ATDs were not significantly different for the Latino American and the Asian American applicant, t(671) = .33, p = .741, d = 0.030.

Neither the main effect of applicant gender, F(1, 671) = 0.89, p = .345,  $\eta_p^2 = .001$ , 90% CI [.000, .010], nor the applicant gender by applicant race interaction, F(2, 671) = 0.46, p = .632,  $\eta_p^2 = .001$ , [.000, .007], were significant.

#### Exploratory Analyses

A 3 (applicant race) × 2 (applicant gender) ANOVA performed on internal attributions yielded nonsignificant effects of applicant race, F(2, 671) = 1.60, p = .202,  $\eta_p^2 = .005$ , 90% CI [.000, .015], applicant gender, F(1, 671) = 1.42, p = .234,  $\eta_p^2 = .001$ , [.000, .012], and the applicant gender by applicant race interaction, F(2, 671) = 2.49, p = .083,  $\eta_p^2 = .007$ , [.000, .020].

A 3 (applicant race) × 2 (applicant gender) ANOVA performed on perceptions that the decision was justified yielded nonsignificant effects of applicant race, F(2, 671) = 2.92, p = .055,  $\eta_p^2 = .009$ , 90% CI [.000, .022], applicant gender, F(1, 671) = 0.20, p = .654,  $\eta_p^2 < .001$ , [.000, .006], and the interaction between applicant gender and applicant race, F(2, 671) = 2.23, p = .109,  $\eta_p^2 = .007$ , [.000, .019].

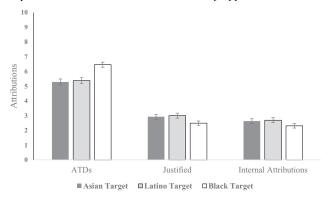
 Table 4

 Experiment 4: Descriptive Statistics

Variable	М	SD	1	2	3
1. ATDs	5.72	2.89	_		
2. Justified	2.81	2.42	64*	_	
3. Internal attributions	2.54	2.37	57*	.65*	_

Note. ATD = attribution to discrimination.

Figure 4
Experiment 4: Attributions as a Function of Applicant Race



*Note.* Error bars represent SE. ATD = attribution to discrimination.

# Discussion

Participants perceived more discrimination when Black American applicants were rejected for a job as compared to either Latino American or Asian American applicants. This finding is consistent with the perspective that people may be more sensitive to perceiving discrimination against Black targets relative to other racial and ethnic minority groups, perhaps due to the unique history of Black people in the United States (e.g., see Feagin, 2014; Sears & Savalei, 2006; Wilkerson, 2020). However, it should be noted that it is unclear whether this same attributional pattern would emerge in other domains, a point we return to in the General Discussion section.

Judgments of discrimination for the rejected Asian American applicant did not differ from the Latino American applicant. We had previously suggested that perceptions of Asian Americans as a "model minority" may reduce recognition of discrimination against Asian American targets, particularly in white-collar hiring contexts. However, the fact that discrimination judgments for Asian American and Latino American targets were very similar, despite the fact that Latino Americans are not stereotyped as a model minority, suggests that the model minority myth may not play a strong role in judgments of discrimination against Asian American targets, at least within the present paradigm.

Finally, applicant gender did not have any effects on judgments of discrimination either as a main effect or as a variable that interacted with the effect of applicant race. This suggests that the effects of applicant race on judgments of discrimination regardless of the gender of the applicant.

# **Interim Summary and Discussion**

The results of Experiments 1–4 provided strong support for the relative fit hypothesis. Consistent with past research, Experiments 1–2 found that participants perceived more discrimination when a Black American man was rejected for a white-collar job as compared to when an equally qualified White American man was rejected for the identical job. However, Experiments 1 and 2 demonstrated a novel effect by adding a comparison to a rejected Asian American man. Discrimination judgments for a rejected Asian American man were lower than for a rejected Black American man, but higher than for a rejected White American man. Experiment 3 extended the

p < .01.

results of Experiments 1 and 2 by demonstrating an identical pattern when women were rejected for the same position. People perceived more discrimination directed at a Black American woman as compared to an Asian American woman, and more discrimination directed at an Asian American woman as compared to a Black woman. Finally, Experiment 4 compared ATDs when equally qualified Black, Latino, and Asian American men and women were rejected for the same position and found that people made stronger judgments of discrimination for Black American men and women as compared to both Latino and Asian American men and women. Collectively, the results of Experiments 1–4 are consistent with the argument that people may assess a target's degree of fit to a prototype such that the closer they match a prototype, the more likely they are to render judgments of discrimination.

One limitation of Experiments 1–4 is that we did not investigate whether support for the hypothesis differed across participants of different racial and ethnic identities. Participants were not recruited based on their racial or ethnic identity and most participants were White and monoracial (ranging from 69% in Experiment 4 to 76% in Experiment 1). We decided to reanalyze the results of ATDs in Experiments 1–4, restricting the sample to White participants only, and excluding participants who identified as part of a racial or ethnic minority group. <sup>6</sup> These analyses are reported in the online supplemental materials. The results are almost identical. All F tests and pairwise comparisons that were significant in Experiments 1-4 were still significant when the analyses were restricted to White participants. Likewise, the two F tests (Experiment 4: main effect of target gender and the target race by target gender interaction) and single pairwise comparison (Asian American vs. Latino American target) that were not significant were unchanged. Although we do not believe it would be appropriate to generalize the results of the Experiments 1-4 to POC, the supplementary analyses suggest that the results of Experiments 1-4 may be generalizable to other White Americans. The goal of the final two experiments was to determine whether we would find a similar pattern of results among POC.

#### **Experiment 5**

The goal of Experiment 5 was to compare judgments of discrimination for rejected White, Asian, and Black American job applicants among Asian Americans. Past research has suggested some similarities (e.g., O'Brien & Merritt, 2022; Simon et al., 2013) and some differences (e.g., Corning & Bucchianeri, 2010; Flournoy et al., 2002, Simon et al., 2013) in the use of prototypes to inform judgments of discrimination among White Americans relative to Black Americans. Thus, it was unclear whether the same attributional patterns that emerged White Americans would emerge among Asian Americans. On the one hand, Asian Americans might be expected to share the same prototypes of racial discrimination as people from other racial backgrounds living in the United States. If they share the same general prototypes of discrimination, then we would expect a similar pattern of results as were observed in Experiments 1–3 such that judgments of discrimination would be highest when rejected job applicants are Black Americans, intermediate when they are Asian Americans, and lowest when they are White Americans. On the other hand, compared to non-Asian Americans, Asian Americans may have more awareness of the discriminatory experiences commonly facing Asian Americans. Thus, among Asian Americans perceivers, Asian and Black Americans alike may be a close fit to the target prototype whereas White Americans may be a distant fit. If Asian and Black Americans are both a close fit to the target prototype, then judgments of discrimination should be relatively high for rejected Black and Asian American job applicants alike as compared to White applicants.

The design was a 3 (applicant race: Black, Asian, White)  $\times$  2 (applicant gender: male or female) between subjects design. In order to examine judgments of discrimination in cases of outgroup rejection, the director who rejected the job applicants was always described as Latino. We preregistered the prediction that participants would perceive more discrimination when the rejected applicant was Black American or Asian American as compared to when the rejected applicant was White American. However, we did not make a prediction for whether ATDs would be different when the applicant was Black American as compared to Asian American. Finally, we also did not have predictions about how the gender of the rejected job applicant would affect ATDs. Nonetheless, we retained gender as a factor in the design because we reasoned that it would make the results of the study more generalizable to both interactions between male perpetrators and targets and between female perpetrators and targets: https:// osf.io/8bcme.

#### Method

#### **Participants**

The final sample included 313 individuals ( $M_{\rm age}=32.42$ , SD=9.18; 52.7% men, 45.4% women, 1.9% nonbinary/unknown). Participants were recruited through Prolific (https://www.prolific.co/) and received nominal remuneration for participation. We specifically requested a sample of participants identifying as East Asian and living in the United States. Although the majority of participants were East Asian (47.6% Chinese, 17.3% Korean, 12.5% other East Asian ethnicities), people of other Asian ethnicities also completed the survey (22.7%)<sup>7</sup> as well. With an average of 104 participants in each applicant race condition, we had 0.80 power to detect a minimum effect size of d=0.45 after applying a Bonferroni correction. All data exclusions were preregistered with one exception—two individuals who did not identify as Asian completed the experiment and were removed from analyses (see Data Cleaning and Screening section).

# **Procedure**

Participants were randomly assigned to condition in a 3 (target race) × 2 (target gender) between subjects design. As in Experiments 2 and 3, the director was always Latino American (Maria/Diego Lopez), and like Experiment 4, the director's gender matched the gender of the applicant (e.g., female applicants were rejected by female directors). All other aspects of the procedure were identical to Experiments 1–4.

<sup>&</sup>lt;sup>6</sup> Unfortunately, there were not enough participants from any of the racial or ethnic minority groups in Experiments 1–4 to conduct parallel analyses with racial and ethnic minority participants.

<sup>&</sup>lt;sup>7</sup>The results of the hypothesis tests are unaltered when the sample is restricted to people of East Asian descent only. Although we did not restrict the sample based on formal citizenship status, all participants were residing in the United States at the time of the study and the majority (>70%) were born in the United States.

#### Measures

The measures in Experiment 5 were identical to Experiments 1–4; ATDs ( $\alpha$  = .97), internal attributions (r = .82, p < .001), and perceptions of whether the decision was justified (r = .91, p < .001) continued to be reliable.

# Data Cleaning and Screening

An a priori power analysis suggested that 65 participants per target race condition, or 195 total, is necessary for 0.80 power to detect an effect size of d = 0.58 (the average effect size for the comparison between Asian American and Black American applicant conditions in Experiments 1-4, plus our initial attempt to collect data for Experiment 4 reported in the online supplemental materials) after applying a Bonferroni correction. We set a goal of recruiting 348 participants to allow for data exclusions. Ultimately, 348 participants answered at least one question and 342 participants provided permission to include their data in the analyses. In an unanticipated deviation from our preregistration plan, two individuals who completed the survey and did not identify as Asian were removed from the analyses. Consistent with the preregistration plan and Experiments 1–4, participants were removed from analyses if they failed to correctly identify the hiring manager's racial group (n = 21) or failed to correctly identify the applicant's race (n = 8). The final sample for analyses consisted of 313 participants. There were no outliers ( $\pm 3$  SDs from the mean) identified.

#### Results

# **Preliminary Analyses**

Means, standard deviations, and correlations among the dependent variables are reported in Table 5.

# Hypothesis Testing

A 3 (applicant race)  $\times$  2 (applicant gender) ANOVA performed on ATDs found the predicted main effect of applicant race, F(2, 307) = 19.60, p < .001,  $\eta_p^2 = .113$ , 90% CI [.060, .167] (see Figure 5). As expected, ATDs were significantly higher when the rejected applicant was Black American as compared to White American, t(307) = 5.86, p < .001, d = 0.863, and when the applicant was Asian American as compared to White American, t(307) = 4.92, p < .001, d = 0.658. However, unlike Experiments 1–4, there was not a significant difference in ATDs when the applicant was Asian American as compared to Black American, t(307) = 1.03, p = .304, d = 0.137.

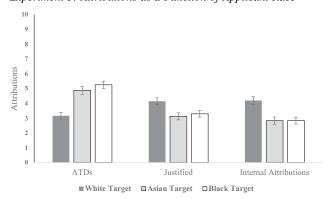
Neither the main effect of applicant gender, F(1, 307) = 1.50, p = .221,  $\eta_p^2 = .005$ , 90% CI [.000, .026], nor the applicant gender

**Table 5** *Experiment 5: Descriptive Statistics* 

Variable	М	SD	1	2	3
1. ATDs	4.41	2.73	_		
2. Justified	3.52	2.38	57*	_	
3. Internal attributions	3.29	2.57	48*	.55*	

Note. ATD = attribution to discrimination.

Figure 5
Experiment 5: Attributions as a Function of Applicant Race



*Note.* Error bars represent *SE*. ATD = attribution to discrimination.

by applicant race interaction, F(2, 307) = 2.54, p = .081,  $\eta_p^2 = .016$ , [.000, .043], were significant.

# **Exploratory Analyses**

A 3 (applicant race)  $\times$  2 (applicant gender) ANOVA performed on internal attributions yielded significant effects of applicant race,  $F(2,\ 307)=10.58,\ p<.001,\ \eta_p^2=.064,\ 90\%$  CI [.024, .110]. Aligning with the pattern observed in ATDs, internal attributions were significantly lower when the rejected applicant was Black American as compared to White American,  $t(307)=-3.91,\ p<.001,\ d=-0.546,$  and when the applicant Asian American as compared to White American,  $t(307)=-3.97,\ p<.001,\ d=-0.526.$  There was no difference in internal attributions when the applicant was Asian American as compared to Black American,  $t(307)=-0.01,\ p=.992,\ d=-0.001.$ 

The ANOVA on internal attributions yielding nonsignificant effects of applicant gender, F(1, 307) = 0.81, p = .368,  $\eta_p^2 = .003$  90% CI [.000, .021], and the applicant gender by applicant race interaction, F(2, 307) = 0.446, p = .640,  $\eta_p^2 = .003$ , [.000, .016].

A 3 (applicant race)  $\times$  2 (applicant gender) ANOVA performed on perceptions that the decision was justified yielded significant effects of applicant race, F(2, 307) = 5.642, p = .004,  $\eta_p^2 = .035$ , 90% CI [.007, .072]. Perceptions of justification were significantly lower when the rejected applicant was Black American as compared to White American, t(307) = -2.57, p = .011, d = -0.366, and when the applicant was Asian American as compared to White American, t(307) = -3.16, p = .002, d = -0.423. There was no difference between in perceived justification for the decision when the applicant was Asian American as compared to Black American, t(307) = 0.52, p = .601, d = 0.073.

Neither the effect of applicant gender, F(1, 307) = 0.72, p = .398,  $\eta_p^2 = .002$ , 90% CI [.000, .020], nor the interaction between applicant gender and applicant race, F(2, 307) = 1.06, p = .348,  $\eta_p^2 = .007$ , [.000, .026] were significant.

#### Discussion

Experiment 5, which was conducted with an Asian American sample, revealed one key similarity and one key difference from Experiments 1–4, which were conducted with majority White

<sup>\*</sup> p < .01.

American samples. First, the majority White and Asian American samples alike perceived more discrimination when rejected job applicants were Black or Asian American as compared to when rejected applicants were White. However, the Asian American sample perceived similar levels of discrimination regardless of whether a rejected applicant was Black or Asian American whereas the majority White samples perceived more discrimination when a rejected applicant was Black as compared to Asian American. We return to this finding in the General Discussion section, but one possibility is that experiences of both anti-Asian discrimination and anti-Black discrimination are salient and cognitively available for Asian American perceivers, leading them to perceive both Asian and Black Americans as a close fit to the target prototype.

# **Experiment 6**

The goal of Experiment 6 was to test whether a Black American sample would yield the pattern observed in the mostly White American samples (Experiments 1–4), or if the pattern would more closely follow that of the Asian American sample (Experiment 5). Experiment 6 was an exact replication of Experiment 5 with a Black American sample. Based on the similarity between Experiment 6 and previous experiments, we preregistered the prediction that participants would perceive more discrimination when the rejected applicant was Black or Asian American as compared to when the rejected applicant was White American: https://osf.io/gzc7e.

However, we were uncertain whether Black American participants in Experiment 6 would perceive equivalent levels of discrimination against rejected Black and Asian American applicants (similar to an Asian American sample in Experiment 5) or perceive more discrimination against a rejected Black American applicant as compared to an Asian American applicant (similar to majority White samples in Experiments 1-4). On the one hand, because they are a disadvantaged racial minority group, discrimination targeting other racial minority groups in the United States may be highly salient and cognitively available for Black Americans (e.g., Craig & Richeson, 2012, 2016). If discrimination targeting both Black and non-Black racial minority groups is highly salient for Black Americans, then Asian and Black Americans alike may be a close fit to the target prototype and Black Americans may perceive similar levels of discrimination when either a Black or Asian American job applicant is rejected for a job. On the other hand, Black Americans have less contact with Asian Americans as compared to other Black Americans (e.g., Bikmen, 2011; McCauley et al., 2001) and therefore may be less aware of discrimination directed at Asian Americans. If discrimination targeting Asian Americans is less salient than discrimination targeting other Black Americans, then Black Americans may be a closer fit to the target prototype than Asian Americans. Thus, participants may perceive more discrimination when a Black American job applicant is rejected as compared to an Asian American job applicant. Finally, we retained candidate gender in the design despite the fact that we did not have hypotheses about the effect of candidate gender so that the results of Experiment 6 would be directly comparable to the results of Experiment 5.

# Method

# **Participants**

The final sample included 292 individuals ( $M_{\text{age}} = 36.47$ , SD = 12.27; 48.3% men, 50.7% women, 1.0% nonbinary/unknown).

Participants were recruited through Prolific (https://www.prolific.co/) and received nominal remuneration for participation. We specifically requested a sample of participants identifying as Black and/or African American. Three participants did not identify as Black or African American and were removed from analyses. With an average of 97 participants in each applicant race condition, we had 0.80 power to detect a minimum effect size of d = 0.47 in a pairwise comparison after applying a Bonferroni correction. All data exclusions were preregistered (see Data Cleaning and Screening section).

#### Procedure

The procedure was identical to Experiment 5.

#### Measures

The measures in Experiment 6 were identical to Experiments 1–5; ATDs ( $\alpha$  = .97), internal attributions (r = .67, p < .001), and perceptions of whether the decision was justified (r = .87, p < .001) continued to be reliable. In addition, we a measure of racial solidarity for exploratory purposes that is not described here but is available in our open data set.

# Data Cleaning and Screening

As in Experiment 5, we set a goal of recruiting 348 participants to allow for data exclusions. Ultimately, 358 participants answered at least one question and 347 participants provided permission to include their data in the analyses. Though we tried to recruit a sample of all Black and/or African American participants, three individuals did not identify as such, and were removed from analyses. Consistent with the preregistration plan and Experiments 1–5, participants were removed from analyses if they failed to correctly identify the hiring manager's ethnic group (n=46) or the applicant's race (n=13). The final sample for analyses consisted of 292 participants. There were no outliers  $(\pm 3 SDs)$  from the mean) identified.

#### Results

# **Preliminary Analyses**

Means, standard deviations, and correlations among the dependent variables are reported in Table 6.

# Hypothesis Testing

A 3 (applicant race)  $\times$  2 (applicant gender) ANOVA performed on ATDs found the predicted main effect of applicant race, F(2, 286) = 39.43, p < .001,  $\eta_p^2 = .216$ , 90% CI [.147, .279] (see Figure 6). As expected, ATDs were significantly higher when the rejected applicant was Black American as compared to White American, t(286) = 8.63, p < .001, d = 1.222, and when the applicant was Asian American as compared to White American, t(286) = 2.79, p = .006, d = 0.402. Replicating Experiments 1–4, but not replicating Experiment 5, ATDs were significantly higher when the rejected applicant was Black American as compared to Asian American, t(286) = 5.70, p < .001, d = 0.817.

Neither the main effect of applicant gender, F(1, 286) = 0.93, p = .336,  $\eta_p^2 = .003$ , 90% CI [.000, .023], nor the applicant gender by applicant race interaction, F(2, 286) = 1.90, p = .152,  $\eta_p^2 = .013$ , [.000, .038], were significant.

**Table 6** *Experiment 6: Descriptive Statistics* 

Variable	М	SD	1	2	3
1. ATDs	4.87	3.19	_		
2. Justified	2.91	2.67	46*	_	
3. Internal attributions	2.83	2.73	54*	.64*	_

*Note.* ATD = attribution to discrimination.

# **Exploratory Analyses**

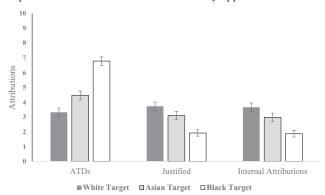
A 3 (applicant race)  $\times$  2 (applicant gender) ANOVA performed on internal attributions yielded significant effects of applicant race,  $F(2, 286) = 11.75, p < .001, \eta_p^2 = .076, 90\%$  CI [.031, .125]. Internal attributions were significantly lower when the rejected applicant was Black American as compared to White American, t(286) = -4.78, p < .001, d = -0.690, and when the applicant was Black American as compared to Asian American, t(286) = 2.92, p = .004, d = 0.444. There was not a significant difference in internal attributions when the applicant was Asian American as compared to White American, t(289) = -1.79, p = .074, d = -0.244.

The ANOVA on internal attributions yielding nonsignificant effects of applicant gender, F(1, 286) = 0.004, p = .952,  $\eta_p^2 = .000$ , 90% CI [.000, .001], and the applicant gender by applicant race interaction, F(2, 286) = 0.75, p = .472,  $\eta_p^2 = .005$ , [.000, .023].

A 3 (applicant race)  $\times$  2 (applicant gender) ANOVA performed on perceptions that the decision was justified yielded significant effects of applicant race, F(2, 286) = 12.89, p < .001,  $\eta_p^2 = .083$ , 90% CI [.036, .133]. Perceptions of justification were significantly lower when the rejected applicant was Black American as compared to White American, t(286) = -4.98, p < .001, d = -0.725, and when the applicant was Black America as compared to Asian American, t(286) = -3.22, p = .001, d = -0.488. There was not a significant difference in perceptions of justification when the applicant was Asian America as compared to White American, t(286) = -1.69, p = .092, d = -0.226.

Neither the effect of applicant gender, F(1, 286) = 0.30, p = .584,  $\eta_p^2 = .001$ , 90% CI [.000, .016], nor the interaction between applicant gender and applicant race, F(2, 286) = 1.82, p = .163,  $\eta_p^2 = .013$ , [.000, .038] were significant.

Figure 6
Experiment 6: Attributions as a Function of Applicant Race



*Note.* Error bars represent *SE*. ATD = attribution to discrimination.

#### Discussion

The results of Experiment 6, which was conducted with a Black American sample, replicated the results of Experiments 1–3, which were conducted with majority White American sample. People perceived more discrimination when Black American applicants were rejected as compared to Asian American applicants and when Asian American applicants were rejected as compared to White American applicants.

#### **General Discussion**

In six experiments, we drew on the prototype model of ATDs (e.g., Inman & Baron, 1996) to understand how people make judgments of hiring discrimination in a racially and ethnically diverse context. According to the relative fit hypothesis, groups vary in the extent to which they fit the prototype of discrimination with concomitant consequences for how people make ATDs in ambiguous circumstances. We hypothesized that, in a white-collar employment context, Asian Americans are a closer fit to the target prototype for hiring discrimination than White Americans, but they are a more distant fit than Black Americans. Consistent with the relative fit hypothesis, the first three experiments demonstrated that people were more likely to make judgments of discrimination when an Asian American job applicant was rejected than a White American job applicant, but less likely to make judgments of discrimination when an Asian American job applicant was rejected compared to a Black American job applicant. Moreover, this same pattern of effects emerged regardless of whether the perpetrator was White American (Experiment 1) or Latino American (Experiments 2 and 3) and whether male perpetrators rejected male targets (Experiments 1 and 2) or female perpetrators rejected female targets (Experiment 3).

Although we were relatively confident from the outset that Black Americans would be a closer fit to the target prototype of discrimination than Asian Americans, we were less certain about the relative fit of Latino Americans to the target prototype as compared to Asian and Black Americans. On the one hand, Latino Americans are not targeted by the "model minority" myth in the same way as Asian Americans; however, on the other hand, some scholars have argued that Latino Americans are still situated above Black Americans in the U.S. racial hierarchy (Chou & Feagin, 2015; Feagin, 2014; Sears, 2008; Sears & Savalei, 2006; Wilkerson, 2020; although cf. Zou & Cheryan, 2017). Experiment 4 compared judgments of discrimination when Asian, Latino, and Black American job applicants were rejected by a White American perpetrator. The results demonstrated that, whereas judgments of discrimination were higher for rejected Black American applicants as compared to either Latino or Asian American applicants, judgments of discrimination for rejected Latino and Asian American applicants were similar. Moreover, this same pattern was found for both male and female job applicants. The results suggest that, ultimately, Black Americans may be a closer fit to the target prototype for hiring discrimination, at least within a white-collar context, as compared to both Asian and Latino Americans.

Most participants in the first four experiments ( $\sim$ 70%) were White Americans, but a sizable minority of participants belonged to other racial and ethnic groups raising questions about the extent to which similar findings would be observed among members of different racial and ethnic groups. We attempted to address this issue by taking two steps. First, we conducted supplemental analyses of ATDs for the first four experiments that was restricted to White American, monoracial participants. The results of all statistical

<sup>\*</sup> p < .01.

tests were unchanged, leading us to conclude that the reported results of the first four experiments accurately characterize the responses of White Americans, but leaving unaddressed whether the results would generalize to members of racial and ethnic minority groups.

Second, we conducted two additional experiments that recruited participants who belonged to racial minority groups. In Experiment 5, we examined judgments of discrimination for rejected White, Asian, and Black American job applicants among Asian American participants. We found that judgments of discrimination were lower when the target was White as compared to either Black or Asian American, but that judgments of discrimination were similar for Black and Asian American applicants. In Experiment 6, we conducted an exact replication of Experiment 5 among Black Americans and found that judgments of discrimination were lower when the target was White as compared to Asian American, and lower when the target was Asian American as compared to Black American. Stated differently, across six experiments, the only instance in which we did not observe a difference in judgments of discrimination between rejected Asian and Black American job applicants was among Asian American perceivers.

Given our goals to test and extend the prototype model of discrimination, the predictions focused on ATDs. Nonetheless, we also measured internal attributions and perceptions that the decision was justified for purposes of comparison. Consistent with the argument that people use prototypes as a cognitive shortcut to make judgments about discrimination, the impact of target race on internal attributions and perceptions that the decision was justified were consistently much weaker and, in some cases, not significant. The most consistent finding was that participants were more likely to make internal attributions and view the hiring decision as justified when the rejected job applicant was White as compared to Black American (Experiments 1, 2, 5, and 6).

Collectively, the present experiments provide strong support for the relative fit hypothesis and suggest that groups vary in the extent to which they fit the prototype for targets of discrimination. More specifically, the results suggest that, in a white-collar hiring context, White Americans are a distant fit to the target prototype and Black Americans are a close fit, whereas Asian and Latino Americans are a more intermediate fit. The present results complement the results of recent research by O'Brien and Merritt (2022) which showed that judgments of hiring discrimination against a rejected Black man applying for a white-collar position were highest when the perpetrator was a White American man, intermediate when the perpetrator was a Latino or Asian American man, and lowest when the perpetrator was a Black American man. One potential interpretation of O'Brien and Merritt's (2022) research is groups may also vary in the extent to which they fit the prototype for perpetrators of discrimination such that White Americans are the closet fit, Black Americans are the most distant fit, and Asian and Latino Americans are a more intermediate fit. However, the present research extends on this past research in important ways by examining judgments of discrimination across two different perpetrator groups (i.e., White and Latino Americans), four different target groups (White, Asian, Latino, and Black Americans), by including male and female exemplars from both perpetrator and target groups, and by including more racially diverse samples of perceivers.

# **Implications**

Improving scientific models of how third-party observers make judgments of discrimination is critically important for several reasons.

First, scientific models of how people make discrimination judgments have important implications for how juries may make decisions in discrimination lawsuits. In particular, the results of the present research suggest that plaintiffs who experience relatively less prototypic forms of discrimination may face an uphill battle in convincing juries of the legitimacy of their claims. Second, the present research also has important implications for addressing discrimination the workplace. Many approaches to prejudice and discrimination reduction in the workplace encourage by standers to confront perpetrators to communicate their disapproval (e.g., Ashburn-Nardo et al., 2008; J. K. Nelson et al., 2011). The first step in the confronting prejudiced responses model is bystander interpretation of the event as discrimination—if bystanders do not interpret events as discrimination, then they will not go on to confront it (Ashburn-Nardo et al., 2008). Improving models of how people make judgments of discrimination, particularly in situations involving people with non-Black racial or ethnic minority identities, will allow for the development of interventions to better educate people about how to identify less prototypical acts of discrimination so that they can confront them.

In addition to having important implications for when people might confront discrimination, understanding when observers perceive discrimination could also help identify situations where observer judgments of discrimination may differ from target judgments of discrimination. Recent research on microaggressions documents that people who experience discrimination often have their experiences invalidated by other people (e.g., microinvalidations; Sue, Bucceri, et al., 2007; Sue, Capodilupo, et al., 2007). The experience of microinvalidations has been linked to psychological distress among targets of discrimination. Identifying situations where observers are most likely to fail to perceive discrimination may lead to better educational efforts to reduce microaggressions in general and microinvalidations in particular.

# **Constraints on Generality**

It is important to recognize that, like all research, the present experiments have important constraints on generality (Simons et al., 2017). First, the present experiments only tested the relative fit hypothesis within the hiring process for a white-collar position. Within this paradigm, we initially hypothesized that the model minority myth may contribute to lower discrimination judgments for Asian American targets relative to Black American targets. For example, Asian American's presumed status within white-collar positions may lead some people to believe discrimination against Asian Americans is less likely within this context. According to this line of reasoning, in situations where the model minority myth is activated (e.g., tech jobs, analytics, consulting), participants may perceive less discrimination among Asian American targets compared to Black American targets. The reason that Experiment 4 included a comparison condition to Latino American targets is because Latino Americans are not targeted by the "model minority myth." The results of Experiment 4 showed that discrimination judgments for both Latino and Asian Americans were equivalent and lower than discrimination judgments for Black Americans, suggesting that the model minority myth may not have played a strong role in shaping judgments of discrimination against Asian American targets within the present paradigm. Instead, an alternate possibility is that Black Americans' unique position in the United States, coupled with social movements designed to raise awareness of anti-Black racism may lead Black Americans to come to mind as the most readily available exemplars of discrimination.

Nonetheless, we are reluctant to conclude based on the present results that Black Americans are a closer fit to the target prototype across all hiring domains. For example, in employment domains where Black Americans are more positively stereotyped (e.g., some sectors of the athletic and music industries, see Inman et al., 1998; Simon et al., 2013), people may perceive Asian and Latino Americans as a closer fit to the target prototype for hiring discrimination. According to the racial position model (e.g., Zou & Cheryan, 2017), racial and ethnic minority groups in the United States are disadvantaged along two primary dimensions-perceived inferiority and perceived cultural foreignness. Whereas Black and Latino Americans are perceived and treated as more inferior than Asian and White Americans, Latino and Asian Americans are perceived and treated as more culturally foreign than Black and White Americans (Zou & Cheryan, 2017). This raises questions as to whether there may be some hiring contexts, such as those where "Americanness" is valued, where Asian and Latino Americans are more likely than Black Americans to fit the target prototype.

Finally, it is possible that there are other domains (e.g., policing, criminal justice) where the pattern of effects may be similar to or even strong than the present study. In other words, it is possible that the fit of specific groups to the target prototype may shift across domains (see also O'Brien et al., 2008; Simon et al., 2013). This possibility is not inconsistent with the relative fit hypothesis and should be explored in future research.

In addition to the constraint on generality imposed by focusing the present investigation on judgments of hiring discrimination in a white-collar context, there are also constraints on generality imposed by the sample. First, the participants were only recruited from the United States and thus it is not clear whether we would obtain support for the relative fit hypothesis in cultural contexts outside the United States. Second, we only recruited two racial minority samples, Asian and Black Americans. Therefore, it is unknown how people belonging to other racial and ethnic minority groups including Latinos, Middle Eastern and North Africans, and Indigenous people would perceive discrimination in a similar paradigm. In particular, it is unclear how the racial identity of a perceiver shapes judgments of discrimination against targets belonging to the ingroup, targets belonging to a minority outgroup, and targets belonging to the majority outgroup.

# **Limitations and Future Directions**

The relative fit hypothesis suggests important new directions for the prototype model of discrimination. Perhaps the most obvious direction would be to examine judgments of discrimination against additional racial and ethnic groups in the United States as the present set of studies were limited by the focus on the country's four largest racial and ethnic groups. For example, it will be important to examine judgments of discrimination against Indigenous people in future research. Given the prevalence of both historical and contemporary anti-Indigenous prejudice and discrimination, one might expect that Indigenous people should be a relatively close fit to the target prototype (e.g., Feagin, 2014; Findling et al., 2019; Jimenez et al., 2023; Loewen, 1995). However, given that Indigenous people are often treated as "invisible," we suspect that they may not be a close fit to the target prototype held in the broader U.S. culture and that discrimination against Indigenous

people may be poorly recognized (e.g., Davis-Delano et al., 2021; Fryberg & Eason, 2017; Lopez et al., 2022). Another promising direction for future research on the relative fit hypothesis is to examine judgments of racial and ethnic discrimination in multiracial contexts outside the United States. For example, countries such as Australia and New Zealand with histories of colonization, oppression of indigenous people, and discrimination against more recently arrived Asian immigrants, also have highly stratified societies, and it will be important to investigate the relative fit of various groups to the target prototype of discrimination in these contexts. Finally, the relative fit hypothesis may be useful for understanding judgments of discrimination based on other identities besides race and ethnicity such as sexual orientation and gender identity where there may not be a simple divide into two binary groups (e.g., Quinn-Jensen et al., 2023).

One limitation of the present research is that we did not include perceiver racial identity as a factor in any of the experimental designs. Therefore, we are unable to test whether there are mean differences in discrimination judgments across people with different racial identities. As we describe in the introduction, compared to Americans with minority racial identities, White Americans tend to perceive less societal discrimination directed at racial minority groups and more discrimination directed at White people (e.g., Carter & Murphy, 2015; Rasmussen et al., 2022). In the future, it will be important for researchers to implement research designs that allow for direct comparisons across people of different racial identities. Nonetheless, we believe that the present research contributes to the literature by demonstrating similarities and differences in the attributional patterns across people of different racial identities.

A second, and related, limitation of the present research is that we are unable to address the question of why a different pattern of effects emerged among the Asian American sample as compared to the Black American sample and the majority White American samples. More specifically, we do not know why Asian American people made similar judgments of discrimination against Asian and Black American targets whereas Black and White Americans made stronger judgments of discrimination for Black American as compared to Asian American targets. Prototypes of discrimination are hypothesized to operate as a cognitive shortcut, in part based on the most readily available exemplars that come to mind. Drawing on earlier research on categorical learning (e.g., Hayes-Roth & Hayes Roth, 1977; Reed, 1972), Inman and Baron (1996) hypothesized that people use past experiences to make judgments about whether a new situation is a match to the prototype. One possibility is that, relative to White and Black Americans, Asian Americans have more knowledge about past acts of discrimination against Asian Americans. This possibility is consistent with research by Flournoy et al. (2002), which suggested that Black Americans have more nuanced prototypes of discrimination than White Americans due to group differences in personal experience with anti-Black discrimination. If past acts of discrimination against Asian Americans are relatively cognitive accessible for Asian Americans, then rejected Black and Asian American job applicants alike may be a close fit to the target prototype. Whereas the present research makes important progress by identifying both similarities and differences across Asian, Black, and White American perceivers, additional research is needed to gain a fuller understanding of why perceiver race may shape prototypes of discrimination.

#### Conclusion

The prototype model of discrimination has been generative and scholars have found robust support for the model across different types of discrimination (e.g., gender, race, etc.), in different cultural contexts, and among both children and adults (e.g., Brown, 2006; Carlsson & Sinclair, 2018; Marti et al., 2000; Morera et al., 2004; Thijs, 2017; Verkuyten et al., 1997). Nonetheless, the model has been limited by a binary conceptualization of intergroup relations, and most studies of racial discrimination have focused on Black/ White dynamics specifically. Scientific models of human judgment and behavior are inevitably constrained by the cultural milieu in which scientists develop them (e.g., Barrett, 2022; Roberts et al., 2020). A binary conceptualization of intergroup relations may have appeared to provide a roughly adequate fit to the data at the time the original prototype model was proposed. Nonetheless, the limitations have grown more apparent as the United States has become more culturally and racially diverse and as the world enters an era of increased globalization.

In recent years, scholars have made important headway into understanding intergroup relations in diverse multiracial, multiethnic contexts (e.g., Craig & Richeson, 2012, 2016; Sanchez et al., 2017; Zou & Cheryan, 2017). Collectively, this work demonstrates the inadequacy of binary models of intergroup relations. The relative fit hypothesis provides an important extension to the prototype model of discrimination that helps to explain how lay people make judgments about discrimination in diverse contexts.

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