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# Diverse According to Whom? Racial Group Membership and Concerns about Discrimination Shape Diversity Judgments

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## Abstract

People often treat diversity as an objective feature of situations that everyone perceives similarly. The current research shows, however, that disagreement often exists over whether a group is diverse. We argue that diversity judgments diverge because they are social perceptions that reflect, in part, individuals' motivations and experiences, including concerns about how a group would treat them. Therefore, whether a group includes in-group members should affect how diverse a group appears because the inclusion or apparent exclusion of in-group members signals whether perceivers can expect to be accepted and treated fairly. Supporting our claims, three experiments demonstrate that racial minority group members perceive more diversity when groups included racial in-group members rather than members of other racial minority groups. Moreover, important differences exist between Asian Americans and African Americans, which underscore the need for more research to explore uniqueness rather than commonalities across racial minority groups.

## Keywords

diversity, racial minority, discrimination, in-group representation

Demographic diversity affects a wide range of attitudes and behavior, including cooperation, group commitment, and task performance (Milliken & Martins, 1996; Tsui & Gutek, 1999). For example, diversity can spark creativity, increase flexibility, and improve decision making (Ely & Thomas, 2001; Nemeth, 1986; Phillips & Lloyd, 2006). However, diversity can also increase conflict, decrease cohesion, obstruct communication, and generate anxiety within teams and organizations (Purdie-Vaughns, Steele, Davies, Ditlemann, & Crosby 2008; Trawalter, Richeson, & Shelton, 2009; Williams & O'Reilly, 1998). Taken together, this literature shows that diversity is an integral feature of social interactions. That said, diversity is multifaceted, difficult to define, and the potential exists for it to mean different things to different people at different times (J. M. Bell & Hartmann, 2007; Harrison & Klein, 2007; Unzueta & Binning, 2010). Even so, people often talk about diversity as if everyone ought to "know it when they see it." That is, they conceptualize diversity as an objective feature of situations rather than a social perception that can vary across individuals and situations.

Informal conversations and formal policy decisions about diversity usually proceed under the assumption that there is consensus about how much diversity a group or an organization includes. Correspondingly, many studies of diversity

measure or manipulate group composition and compare participants' attitudes and behavior across high and low levels of diversity (e.g., Phillips, Northcraft, & Neale, 2006; Purdie-Vaughns et al., 2008). Although people often may agree that one group is more diverse than another, this approach to studying diversity ignores potentially meaningful variability in the extent to which people's evaluations of the same group differ; that is, a given group may appear to be more diverse to one person than another. The current research addresses this issue by questioning whether there tends to be consensus about how much diversity exists in a particular group.

## Diversity as a Social Perception

Diversity can refer to variability in any attribute or affiliation in a social system, including but not limited to race (Williams

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& O'Reilly, 1998). Even when focusing exclusively on race, however, diversity is multidimensional and complex. For example, people evaluating racial diversity may take into account both the number of racial groups and the number of individuals from each racial group who are included in a team or organization, but it is unclear how people should weight these two components. In addition, there are other important factors to consider, such as how well racial minority group members are represented across different levels of the organizational hierarchy (Binning & Unzueta, 2013; Unzueta & Binning, 2012). Depending on how individuals combine information (e.g., number of groups represented, how many people from each group are included, representation across the hierarchy), people's perceptions of diversity may differ, even when evaluating the same group or organization. However, variability in perceived diversity is almost never discussed, and this variability may be unrecognized or underappreciated by many people.

Although diversity involves objective features of groups, we contend that diversity judgments are subjective social perceptions that are often influenced by people's motivations and experiences. One well-documented source of influence on social perceptions is group membership. Group membership can create perceptual differences in a variety of seemingly objective judgments about aspects of situations ranging from the amount of rough play in football games (Hastorf & Cantril, 1954) to the needs of survivors following natural disasters (Sommers, Apfelbaum, Dukes, Toosi, & Wang, 2006). Group categorization is so important that classification according to arbitrary and irrelevant criteria is sufficient to affect judgment and behavior (Tajfel, 1970). However, race is far from being an irrelevant criterion. It is a primary social category that people spontaneously use to code situations (Fiske & Neuberg, 1988; Taylor, 1981). Moreover, it is particularly salient and important to members of racial minority groups, even in situations that do not call attention to racial issues in Whites' minds (Feagin & Sikes, 1994; McIntosh, 1988). Accordingly, it seems likely that diversity judgments will differ according to perceivers' racial group membership.

## Diversity Judgments Differ Between Racial Groups

Social stigma intensifies concerns about group-based discrimination and shapes the way people think about issues related to race (Crocker & Major, 1989). When judging diversity, stigma may prompt people to consider whether a group or organization includes racial in-group members because people expect in-group members to accept them and treat them fairly (Ashforth & Mael, 1989; Brewer, 1981; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Moreover, people may infer that out-group members who work alongside in-group members should also be willing to accept them and treat them fairly. In short, people who face group-based

stigma are likely to attend to whether a team or an organization includes in-group members.

Importantly, considering the role of race-based social stigma can inform specific predictions about how people from different racial groups judge diversity. Social psychological research on diversity has often focused on differences between groups as a function of numerical majority and minority status (e.g., comparisons of Whites and African Americans). Although this work has undoubtedly advanced our understanding of many aspects of diversity, more research needs to examine differences that are likely to exist between racial minority groups (e.g., comparisons of Asians and African Americans, especially in terms of how they view and relate to each other). Given that each racial group has a unique history and set of contemporary challenges that may influence the way individuals think about and respond to diversity issues (Ogbu, 1987), an important gap exists in the literature on diversity. In the following section, we consider the role of experience with race-based social stigma and formulate separate hypotheses about perceived diversity for members of different racial minority groups.

## Racial Minority In-Group Representation

Decades of polling and research demonstrate that Whites and racial minority group members experience issues related to race differently. Racial minority group members are much less optimistic about race relations than are Whites (USA Today/Gallup, 2008); they believe racism is more widespread, and these beliefs affect interracial encounters. For example, many racial minority group members are concerned about being treated disrespectfully and unjustly when interacting with Whites (Bergsieker, Shelton, & Richeson, 2010; Shelton & Richeson, 2006). These concerns, however, are mitigated by diversity. Higher levels of diversity are associated with more trust (Purdie-Vaughns et al., 2008), increased feelings of safety and social satisfaction (Juvonen, Nishina, & Graham, 2006), and heightened expectations that people can expect to be treated fairly and have the same opportunities as others in the organization (Colquitt, Noe, & Jackson, 2002). In sum, racial minority group members associate diversity with comfort and opportunity to succeed.

Although racial minority group members will likely feel more comfortable in racially heterogeneous than all-White teams, the presence of fellow in-group members should be particularly effective at assuaging concerns about trust, fairness, and security (Ashforth & Mael, 1989; Brewer, 1981; Turner et al., 1987). In other words, heterogeneity *per se* should not satisfy people's diversity goals as well as in-group representation. Therefore, we predict that racial minority group members' perceptions of diversity will be sensitive to in-group representation, above and beyond the in-group's contribution to overall racial heterogeneity. More formally, the *in-group representation hypothesis* predicts that racial minority group members will perceive teams to be more

racially diverse when teams include in-group members than when teams include racial minority out-group members.

We expect all racial minority groups to be sensitive to in-group representation. However, the size of the in-group representation effect may depend on the type of discrimination each racial group faces. Social stigma intensifies concerns about group-based discrimination (Crocker & Major, 1989), but every racial minority group has a unique history that includes different manifestations of stigma, discrimination, and prejudice (Ogbu, 1987). Moreover, every racial minority group faces a unique set of challenges and opportunities in the present and different outlooks for the future. Therefore, considering the type of stigma racial minority groups face should allow us to make more precise predictions about the role of in-group representation in perceived diversity. In the current article, we focus on potential differences between African Americans and Asian Americans.

### *African Americans*

African Americans have lower status in society, face more negative stereotypes, and report more discrimination than other racial minority groups (Heilman, Block, & Lucas, 1992; Romero & Roberts, 1998; Sidanius & Pratto, 1999). In addition, the majority of African Americans report feeling “not too close” or “not close at all” to other racial minority groups, especially Asian Americans (Thornton & Mizuno, 1995, 1999). Taken together, African Americans may be more likely to think about and judge diversity in terms of the extent to which a team includes African Americans rather than the extent to which other racial minority groups are represented.

### *Asian Americans*

Asian Americans have higher status and report less discrimination than other racial minority groups (Sidanius & Pratto, 1999). They face more discrimination and receive a lower return on their investment in education than Whites (Hurh & Kim, 1989; Narasaki, 1995; Romero & Roberts, 1998), but they achieve higher levels of education and earn higher incomes than other racial minority groups (M. P. Bell, Harrison, & McLaughlin, 1997; Hirshman & Wong, 1986). In addition, Asian Americans report the highest levels of self-efficacy to be successful (Wong, Lai, Nagasawa, & Lin, 1998). In short, Asian Americans face a different type of stigma than African Americans, which is likely to create differences in the way that Asian and African Americans think about group-based discrimination (Crocker & Major, 1989).

Taken together, prior research indicates clear differences in the type of race-based discrimination African Americans and Asian Americans face. We therefore expect African Americans and Asian Americans to have unique perspectives on issues related to race and racial diversity. In particular, we expect the

type of discrimination African Americans experience will prompt them to be more concerned about in-group representation in groups than Asian Americans. More formally, the *unique perspectives hypothesis* predicts that in-group representation will have a stronger effect on perceived racial diversity for African Americans than Asian Americans.

## **The Current Research**

We conducted three experiments to investigate differences in diversity judgments across individuals. Study 1 assessed the extent to which diversity judgments differed as a function of the racial composition of a team and perceivers' racial group. Study 2 manipulated discrimination salience to test whether concerns about discrimination heightened racial minority group members' sensitivity to in-group representation. Finally, Study 3 conceptually replicated the discrimination salience effect on in-group representation and tested the extent to which the results of Studies 1 and 2 generalized to other team compositions.

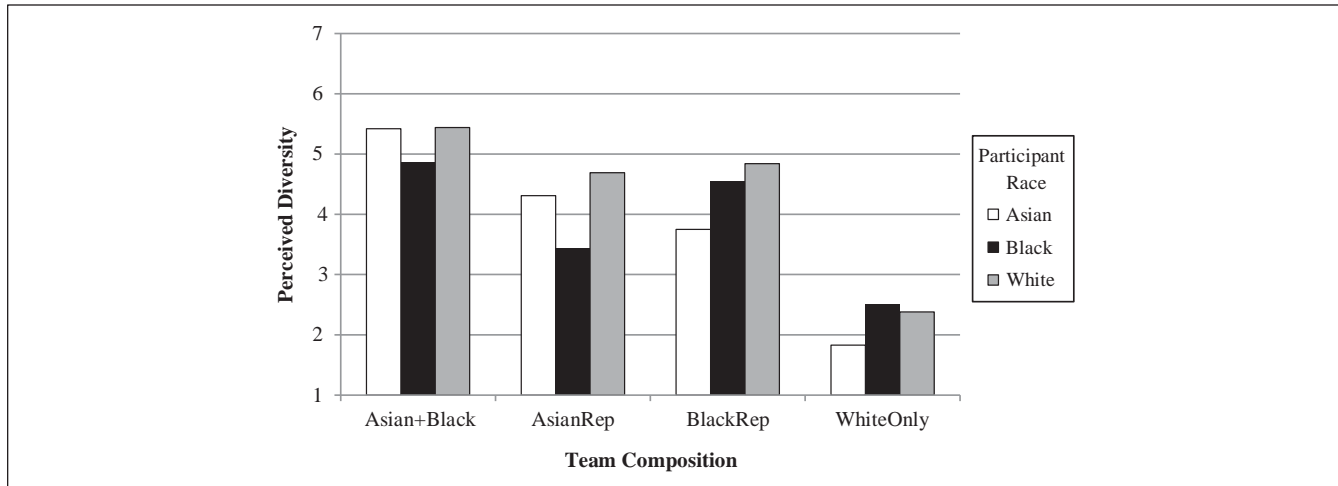
We focused mainly on Asian Americans' and African Americans' perceptions of diversity. In Studies 1 and 3, however, we also explored White Americans' perceptions of diversity as a point of comparison. On the one hand, both Asian Americans and African Americans are out-groups to Whites. Therefore, Whites' perceptions of diversity may primarily reflect racial heterogeneity and tend not to differ as a function of which racial minority groups are represented. On the other hand, we argued above that each racial group has a unique perspective on issues related to race, and it follows that the relationship between any two racial groups is likely to be unique as well. Given these competing views, we conducted exploratory analyses to identify any differences in Whites' perceptions of team diversity as a function of which racial minority groups a team included.

## **Study 1**

Study 1 examined whether and how diversity judgments differed as a function of perceivers' racial group and the racial composition of a team. We hypothesized that in-group representation would be important to racial minority group members' perceptions of diversity, above and beyond the extent to which in-group representation increased heterogeneity. In addition, we predicted that the in-group representation effect would be stronger for African Americans than Asian Americans.

## **Method**

*Participants.* Our sample ( $N = 1,899$ ) included 391 Asian American, 620 African American, and 888 non-Hispanic White members of a panel of U.S. residents maintained by GfK (formerly Knowledge Networks).<sup>1</sup> GfK recruits panel members using random-digit-dialing telephone selection



**Figure 1.** Perceived diversity as a function of participant race and team composition in Study 1.

Note. AsianRep = Asian representation; BlackRep = Black representation.

methods designed to create a nationally representative sample. We oversampled Asian American and African American panelists to maximize the number of participants from these groups, but the panel was not sufficiently large to provide equal sample sizes across racial groups. Our sample was 52.8% female and ranged in age from 18 to 91 ( $M = 49.35$ ,  $SD = 15.93$ ). GfK offers an incentive program for panel membership that includes raffles and sweepstakes with cash and other prizes.

**Procedure.** Participants read that a large corporation formed a management team to lead a new project, and they saw a composite picture that comprised headshots of six people in business attire. Pretesting ensured that the people pictured were equivalent in attractiveness and their racial group was unambiguously identifiable. We manipulated the racial composition of the team to create four conditions. In three conditions, the team was 66% White, which was approximately equal to the general population of the United States (U.S. Census Bureau, 2008). The Asian representation condition (AsianRep) pictured two Asian and four White team members. The Black representation condition (BlackRep) pictured two Black and four White team members. The Asian + Black condition pictured one Asian, one Black, and four White team members. We also included a WhiteOnly condition that pictured six White team members.

**Measure.** While viewing the composite picture of the team, participants completed three items developed by Unzueta and Binning (2012) that assessed perceived diversity (e.g., “This team includes a high degree of ethnic diversity,” “I consider this team to be ethnically diverse,” “This team includes a low degree of ethnic diversity” [reverse coded];  $\alpha = .91$ ). Participants responded using 7-point scales that ranged from *strongly disagree* (1) to *strongly agree* (7).

## Results

A 3 (Participant Race: African American, Asian American, White)  $\times$  4 (Team Composition: Asian + Black, AsianRep, BlackRep, WhiteOnly) ANOVA with perceived diversity as the dependent variable revealed a significant main effect of participant race,  $F(2, 1873) = 28.37$ ,  $p < .001$ ,  $\eta_p^2 = .03$ , and a significant main effect of team composition,  $F(2, 1873) = 310.89$ ,  $p < .001$ ,  $\eta_p^2 = .33$ . However, the interaction of participant race and team composition qualified the main effects,  $F(2, 1873) = 13.31$ ,  $p < .001$ ,  $\eta_p^2 = .04$  (see Figure 1). Therefore, the results supported our central thesis that perceivers’ race moderates the relationship between team composition and perceived diversity.

Two patterns in the results are especially important given our hypotheses (see Table 1 for a complete set of simple comparisons). First, in support of the in-group representation hypothesis, Asian Americans and African Americans judged teams that included racial in-group members to be more diverse than teams that included racial minority out-group members. Specifically, Asian Americans perceived more diversity in the AsianRep than BlackRep conditions, and African Americans perceived more diversity in the BlackRep than AsianRep conditions.

Second, supporting the unique perspective hypothesis, the magnitude of the in-group representation effect across the AsianRep than BlackRep conditions was larger for African Americans (Cohen’s  $d = .71$ ) than Asian Americans (Cohen’s  $d = .35$ ). In other words, the in-group representation was an important antecedent of perceived diversity for members of racial minority groups, but especially African Americans. Also noteworthy, African Americans reported less diversity in the Asian + Black condition than Asian Americans. This difference emerged because Asian Americans reported more perceived diversity in the Asian + Black than AsianRep

**Table 1.** Means and Standard Deviations of Perceived Diversity as a Function of Participant Race and Team Composition in Study 1.

Team composition	Participant race			Overall
	Asian	Black	White	
Asian + Black	5.42 <sub>a1</sub> (1.51)	4.86 <sub>b1</sub> (1.61)	5.44 <sub>a1</sub> (1.38)	5.25 <sub>1</sub> (1.50)
AsianRep	4.31 <sub>a2</sub> (1.50)	3.43 <sub>b2</sub> (1.57)	4.69 <sub>a2</sub> (1.44)	4.21 <sub>2</sub> (1.59)
BlackRep	3.75 <sub>a3</sub> (1.66)	4.54 <sub>b1</sub> (1.57)	4.84 <sub>b2</sub> (1.36)	4.50 <sub>3</sub> (1.56)
WhiteOnly	1.83 <sub>a4</sub> (1.10)	2.50 <sub>b3</sub> (1.48)	2.38 <sub>b3</sub> (1.33)	2.31 <sub>4</sub> (1.36)
Overall	3.84 <sub>a</sub> (1.94)	3.85 <sub>a</sub> (1.81)	4.35 <sub>b</sub> (1.80)	

Note. Letters correspond to simple comparisons across participant race within each level of team composition (i.e., comparisons within table rows). Numbers correspond to simple comparisons across level of team composition within participant race (i.e., comparisons within table columns). AsianRep = Asian representation; BlackRep = Black representation.

condition, whereas African Americans reported equal amounts of perceived diversity in the Asian + Black and BlackRep conditions. In sum, African Americans and Asian Americans responded differently to racial minority out-group representation.

White participants tended to report at least as much diversity as members of racial minority groups. For the Asian + Black and AsianRep teams, White participants reported more diversity than did African American participants (but not Asian American participants). For the BlackRep and WhiteOnly teams, White participants reported more diversity than did Asian American participants (but not African Americans participants). In other words, Whites only perceived more diversity than Asian Americans or African Americans when the focal team did not include in-group members for those racial minority groups. The aggregated level of perceived diversity across team composition conditions (i.e., main effect of participant race) was highest for Whites, but this effect was due to the consistency of Whites' diversity judgments—irrespective of which racial minority group was represented—and not caused by singularly extreme ratings of individual teams.

## Discussion

Study 1 provided clear support for our core premise: A given team may appear to be more diverse to one person than another. Moreover, the pattern of results was consistent with our hypotheses about why differences in perceived diversity should emerge. Specifically, supporting the in-group representation hypothesis, racial minority group members' diversity judgments depended on in-group representation, above and beyond the extent to which the in-group increased racial heterogeneity. Asian Americans and African Americans perceived more diversity in teams that included two people from their own racial group than in teams that included an equal number of racial groups but no one from their racial in-group.

Supporting the unique perspectives hypothesis, the in-group representation effect was stronger for African Americans than Asian Americans. That is, African Americans' diversity

judgments about teams that included four White members and either two Asian or two Black members differed more than Asian Americans' diversity judgments about the same two teams. Although not explicitly predicted given the way we stated the unique perspectives hypothesis, finding that a team that included four White, one Asian, and one Black member was perceived as less diverse by African Americans than Asian Americans was nonetheless consistent with the expectation that in-group representation would be more important to African Americans than Asian Americans. Specifically, differences in diversity judgments about that team should still emerge if African Americans weight in-group representation more heavily than do Asian Americans, even if members of both racial groups use in-group representation and number of racial groups as criteria when judging diversity. All together, the results support our premise that stigma and experience with discrimination affect judgments of diversity.

## Study 2

Study 2 sought to replicate Study 1 and test whether concerns about discrimination underlie the in-group representation effect for racial minority group members. We reasoned that concerns about discrimination prompt racial minority group members to question how an unfamiliar team or organization might treat them. In-group representation more strongly signals acceptance and safety than out-group representation (Ashforth & Mael, 1989; Brewer, 1981; Turner et al., 1987). Therefore, we predicted that thinking about in-group discrimination prior to judging diversity would increase the impact of in-group representation on perceived diversity. However, it is also possible that concerns about discrimination will be more chronically salient for African Americans than Asian Americans because African Americans report having experienced discrimination more than Asian Americans (Heilman et al., 1992; Romero & Roberts, 1998). Therefore, thinking about in-group discrimination prior to judging diversity may increase the impact of in-group representation on perceived diversity more for Asian Americans than African Americans.

Study 2 also measured racial identification to explore within-group variability in perceived diversity and provide an additional means to examine the mechanism behind the in-group representation effect. Racial identification refers to the extent to which individuals place importance on racial group membership and feel a sense of psychological attachment to their racial group (Crocker & Luhtanen, 1990; Phinney, 1990). Stronger racial identification is associated with increased salience of racial group membership and greater sensitivity to discrimination (Branscombe, Schmitt, & Harvey, 1999; Operario & Fiske, 2001; Sellers & Shelton, 2003). Therefore, if concerns about discrimination underlie diversity judgments, then level of racial identification should moderate the effect of in-group representation on perceived diversity. Specifically, in-group representation should have a larger effect on perceived diversity as strength of racial identification increases. If discrimination is more chronically salient for African Americans than Asian Americans, however, differences in the strength of the in-group representation effect as a function of racial identification may be larger for Asian Americans than African Americans.

## Method

**Participants.** Our sample ( $N = 1,080$ ) included 471 Asian and 574 African American U.S. residents recruited by Qualtrics, a private company that specializes in research software and online data collection. Panel members receive a variety of incentives to participate in surveys (e.g., cash, gift cards, frequent flier miles). The sample was 57.8% female, and ranged in age from 18 to 72 ( $M = 34.16$ ,  $SD = 12.74$ ). In terms of education, 13% of participants held a graduate degree, 32% had a bachelor's degree, 39% earned an associate's degree or had taken some college credits, and 15% completed high school diploma or earned a GED.

**Design.** The experiment was a 2 (Participant Race: Asian, African American)  $\times$  3 (Team Composition: Asian + Black, AsianRep, BlackRep)  $\times$  3 (Discrimination Salience: Asian American, African American, control) between-subjects design. Racial identification was included as a measured variable.

**Procedure.** Participants first read a short article formatted like a newspaper. The content of the article manipulated discrimination salience. Participants then completed a picture evaluation task similar to the one used in Study 1. The content of the pictures manipulated team composition.

## Manipulations

**Discrimination salience.** Participants read one of three "news" articles that were based on a manipulation used by Shelton, Richeson, and Salvatore (2005, Study 2). Participants in the African American discrimination salience condition read that a research consortium found that prejudice

and discrimination against African Americans had increased in recent years, particularly in terms of employment (Asian Americans were not mentioned in the article). Participants in the Asian discrimination salience condition read the same article, but the words "Asian Americans" replaced "African Americans" (African Americans were not mentioned). Participants in a control condition read that a court ruling determined that the fast-food industry could not be held liable for consumers' health problems because companies provide consumers with nutritional information about menu items. A pilot study verified that the articles were equally believable, and believability did not differ as a function of article topic or the raters' racial group.

**Team composition.** Participants viewed one of three picture conditions used in Study 1: AsianRep (two Asian and four White team members), BlackRep (two Black and four White team members), or Asian + Black condition (one Asian, one Black, and four White team members). Study 2 did not include the WhiteOnly condition used in Study 1 because it was not theoretically meaningful.

## Measures

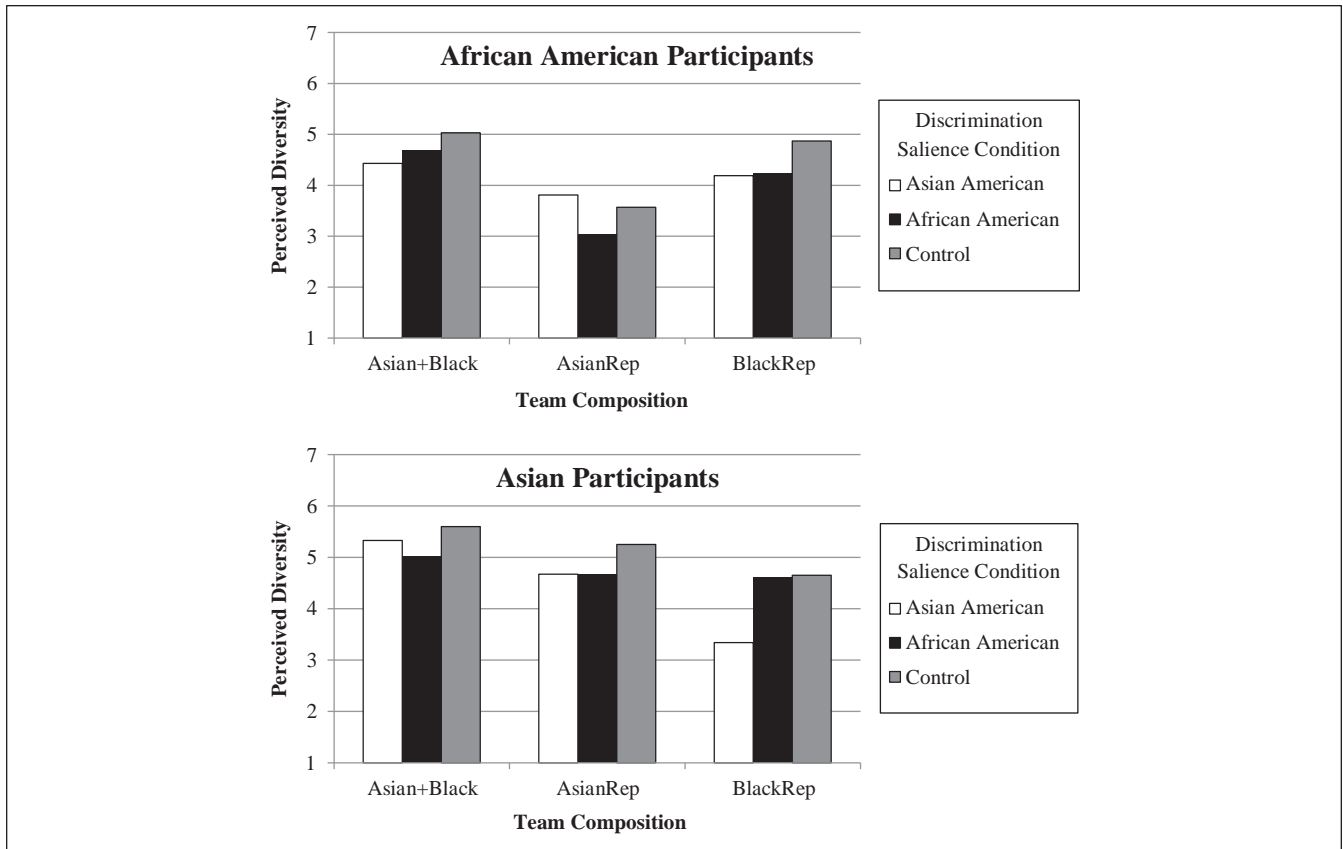
**Perceived diversity.** The measure of perceived diversity was the same as in Study 1 ( $\alpha = .87$ ).

**Racial identification.** Eight items developed by Sellers, Smith, Shelton, Rowley, and Chavous (1998) assessed the extent to which racial group membership was central to the way participants defined themselves (e.g., "In general, my race is an important part of my self-image";  $\alpha = .84$ ). Scores were centered for analyses (Aiken & West, 1991).

**Manipulation check.** At the end of the survey, participants were asked to indicate the topic of the article they read at the beginning of the study. The following options were provided: "African Americans are facing more discrimination these days," "Asian Americans are facing more discrimination these days," "A judge ruled that fast-food restaurants are not liable for patrons' obesity," and "I'm not sure." Thirty-five participants who did not correctly identify the article content were excluded from analyses.

## Results

**Discrimination salience.** A 2 (Participant Race: Asian, African American)  $\times$  3 (Team Composition: Asian + Black, AsianRep, BlackRep)  $\times$  3 (Discrimination Salience: Asian American, African American, Control) ANOVA with perceived diversity as the dependent variable revealed a significant main effect of participant race,  $F(1, 1027) = 36.48$ ,  $p < .001$ ,  $\eta_p^2 = .03$ ; a significant main effect of team composition,  $F(2, 1027) = 29.61$ ,  $p < .001$ ,  $\eta_p^2 = .06$ ; and a significant main effect of discrimination salience,  $F(2, 1027) = 11.65$ ,  $p < .001$ ,  $\eta_p^2 = .02$ . The two-way interaction of race and team



**Figure 2.** Perceived diversity as a function of participant race, team composition, and discrimination salience in Study 2.  
 Note. AsianRep = Asian representation; BlackRep = Black representation.

composition also was significant,  $F(2, 1027) = 22.99, p < .001, \eta_p^2 = .04$ , as was the two-way interaction of discrimination salience and team composition,  $F(2, 1027) = 3.81, p = .006, \eta_p^2 = .02$ . In addition, the three-way interaction of race, team composition, and discrimination salience was significant,  $F(4, 1027) = 2.77, p = .026, \eta_p^2 = .01$  (see Figure 2). Follow-up analyses were guided by our hypotheses (see Table 2 for an extensive set of simple comparisons not discussed in the text).

We first examined the effects of team composition and participant race in the discrimination salience control condition. Analyses focused on the AsianRep and BlackRep conditions because they provided the most direct tests of our hypothesis (see Table 2 for complete results). Results replicated Study 1 and supported the in-group representation and unique perspectives hypotheses. Specifically, the interaction of race and team composition was significant,  $F(1, 1027) = 10.70, p < .001$ . Simple comparisons indicated that Asian participants perceived more diversity in the AsianRep than BlackRep conditions,  $F(1, 1027) = 4.12, p = .043$ , and African American participants perceived more diversity in the BlackRep than AsianRep conditions,  $F(1, 1027) = 20.19, p < .001$ . In support of the in-group representation hypothesis, participants perceived groups that included racial in-group members to be

more diverse than groups that were equally heterogeneous but only included racial minority out-group members.

Consistent with the unique perspectives hypothesis, the in-group representation effect was stronger for African American (Cohen's  $d = .76$ ) than Asian participants (Cohen's  $d = .43$ ). In addition, African Americans reported less diversity in the Asian + Black condition than Asian Americans. In sum, Studies 1 and 2 both found that in-group representation increased perceived diversity, even when the number of racial groups represented was held constant. Moreover, Studies 1 and 2 both suggest that Asian Americans and African Americans judge diversity differently, especially in terms of how they take into account racial minority out-group representation.

We next investigated the role of discrimination salience in the in-group representation effect on perceived diversity. We reported above that the three-way interaction of race, team composition, and discrimination salience was significant. To identify the source of the interaction, we explored whether and how discrimination salience moderated the effect of team composition on perceived diversity separately for Asian Americans and African Americans.

For Asian participants, a 2 (Team Composition: AsianRep, BlackRep)  $\times$  3 (Discrimination Salience: Asian American,



**Table 2.** Means and Standard Deviations of Perceived Diversity as a Function of Participant Race, Team Composition, and Discrimination Salience in Study 2.

Team composition	Discrimination salience condition			Overall
	Asian	African American	Control	
<b>African American participants</b>				
Asian + Black	4.43 <sub>ab1</sub> (1.89)	4.69 <sub>a1</sub> (1.74)	5.03 <sub>b1</sub> (1.47)	4.73 <sub>1</sub> (1.71)
AsianRep	3.81 <sub>a2</sub> (1.56)	3.03 <sub>b2</sub> (1.56)	3.57 <sub>a2</sub> (1.80)	3.47 <sub>2</sub> (1.67)
BlackRep	4.19 <sub>a12</sub> (1.76)	4.24 <sub>b1</sub> (1.84)	4.87 <sub>b1</sub> (1.63)	4.40 <sub>3</sub> (1.77)
Overall	4.13 <sub>a</sub> (1.74)	4.00 <sub>a</sub> (1.85)	4.47 <sub>b</sub> (1.76)	
<b>Asian participants</b>				
Asian + Black	5.33 <sub>ab1</sub> (1.35)	5.02 <sub>a1</sub> (1.20)	5.60 <sub>b1</sub> (1.20)	5.30 <sub>1</sub> (1.26)
AsianRep	4.67 <sub>a2</sub> (1.22)	4.66 <sub>a1</sub> (1.23)	5.25 <sub>b1</sub> (1.25)	4.86 <sub>2</sub> (1.26)
BlackRep	3.34 <sub>a3</sub> (1.56)	4.62 <sub>b1</sub> (1.68)	4.65 <sub>b2</sub> (1.55)	4.20 <sub>3</sub> (1.70)
Overall	4.78 <sub>a</sub> (1.36)	4.45 <sub>a</sub> (1.61)	5.16 <sub>b</sub> (1.39)	

Note. Letters correspond to simple comparisons across discrimination salience condition within each level of team composition (i.e., comparisons within table rows). Numbers correspond to simple comparisons across level of team composition within discrimination salience condition (i.e., comparisons within table columns). AsianRep = Asian representation; BlackRep = Black representation.

African American, Control) ANOVA with perceived diversity as the dependent variable found a significant main effect of team composition,  $F(1, 1027) = 13.72, p < .001$ , a significant main effect of discrimination salience,  $F(2, 1027) = 9.76, p < .001$ . The interaction of team composition and discrimination salience also was significant,  $F(2, 1027) = 4.34, p = .013$ , indicating that the strength of the in-group representation effect differed across the discrimination salience conditions for Asian participants. Simple comparisons revealed that the difference in perceived diversity across the AsianRep and BlackRep team composition conditions was large in the Asian American discrimination salient condition,  $F(1, 1027) = 18.02, p < .001$ , Cohen's  $d = .95$ ; medium in the discrimination salience control condition,  $F(1, 1027) = 4.12, p = .043$ , Cohen's  $d = .43$ ; and non-significant in the African American discrimination salient condition,  $F(1, 1027) = 0.01, p = .901$ , Cohen's  $d = .02$ .

For African American participants, a 2 (Team Composition: AsianRep, BlackRep)  $\times$  3 (Discrimination Salience: Asian American, African American, control) ANOVA with perceived diversity as the dependent variable found a significant main effect of team composition,  $F(1, 1027) = 36.12, p < .001$ , a significant main effect of discrimination salience,  $F(2, 1027) = 4.33, p = .013$ . The interaction of team composition and discrimination salience also was significant,  $F(2, 1027) = 3.56, p = .029$ , indicating that the strength of the in-group representation effect also differed across the discrimination salience conditions for African American participants. However, simple comparisons revealed that the difference in perceived diversity across the AsianRep and BlackRep team composition conditions was large in both the African American discrimination salient,  $F(1, 1027) = 18.81, p < .001$ , Cohen's  $d = .71$ , and discrimination salience control conditions,  $F(1, 1027) = 20.19, p < .001$ , Cohen's  $d = .76$ , but non-significant in the Asian

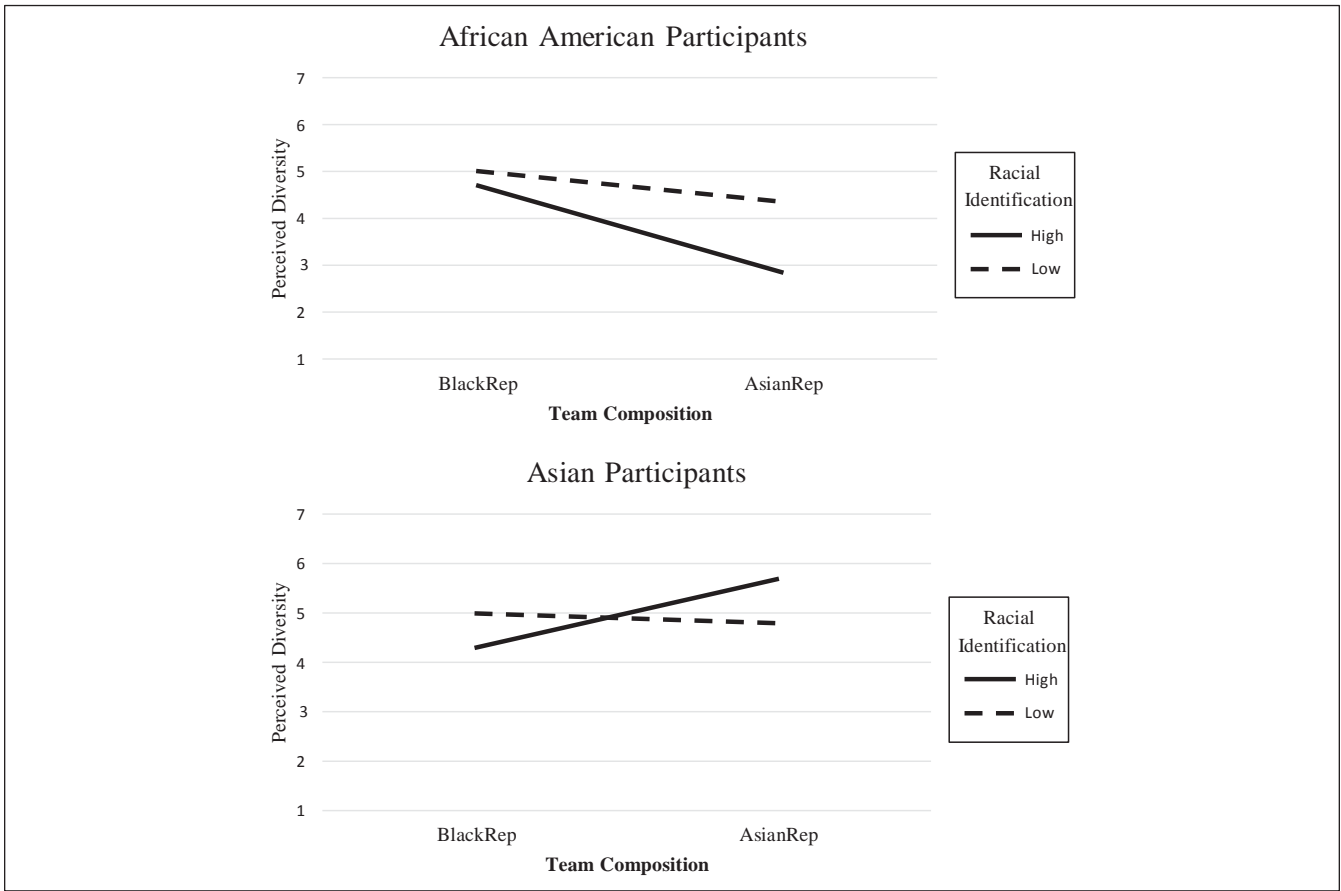
**Table 3.** Perceived Diversity as a Function of Participant Race, Team Composition, and Racial Identification in Study 2.

Predictor	B	SE	T	p
Intercept	4.86	.21	23.11	<.001
Race	-0.22	.29	-0.74	.46
TeamComp	-1.27	.28	-4.50	<.001
ID	-0.13	.20	-0.68	.50
Race $\times$ TeamComp	1.86	.41	4.60	<.001
Race $\times$ ID	-0.18	.26	-0.69	.49
TeamComp $\times$ ID	-0.54	.26	-2.11	.04
Race $\times$ TeamComp $\times$ ID	1.27	.37	3.41	.001

Note. Race = participant race; TeamComp = team composition; ID = racial identification.

American discrimination salient condition,  $F(1, 1027) = 2.04, p = .15$ , Cohen's  $d = .23$ . All together, the pattern of results indicated that discrimination salience influences the extent to which in-group representation affects perceived diversity.

**Racial identification.** We predicted that as strength of racial identification increases, in-group representation would have a larger effect on perceived racial diversity. To eliminate the influence of the discrimination salience manipulation, we examined only participants in the discrimination salience control condition.<sup>2</sup> We ran a moderated regression analysis that used dummy variables for Participant Race (Asian = 1, African American = 0) and Team Composition (AsianRep = 1, BlackRep = 0) and the continuous measure of racial identification (see Table 3). Most important to our hypothesis, the three-way interaction of participant race, team composition, and racial identification was significant,  $B = 1.27, t(217) = 3.41, p = .001$ . We examined the effects of team composition



**Figure 3.** Perceived diversity as a function of team composition and racial identification in Study 2.

Note. AsianRep = Asian representation; BlackRep = Black representation.

and racial identification for Asian and African American participants, respectively, to identify the form of the interaction.

For Asian participants, the effects of racial identification on perceived diversity was significant,  $B = -0.31$ ,  $t(108) = -2.04$ ,  $p = .044$ . Stronger racial identification was associated with less perceived diversity. Consistent with analyses reported above, the effect of team composition on perceived diversity was significant,  $B = 0.59$ ,  $t(108) = 2.26$ ,  $p = .026$ . Asian participants reported higher levels of perceived diversity in the AsianRep than BlackRep conditions. As predicted, the interaction of team composition and racial identification also was significant,  $B = 0.72$ ,  $t(108) = 2.99$ ,  $p = .003$ . Analyses of simple slopes examined the simple effect of team composition at high (+1 *SD*) and low levels (−1 *SD*) of racial identification (see Figure 3). When racial identification was high, the effect of team composition was significant,  $B = 1.40$ ,  $t(108) = 3.75$ ,  $p < .001$ . When racial identification was low, however, the effect of team composition was not significant,  $B = -0.20$ ,  $t(108) = -0.53$ ,  $p = .60$ .

For African American participants, the effect of racial identity was not significant,  $B = -0.13$ ,  $t(112) = -0.63$ ,  $p = .53$ . Perceived diversity did not vary as a function of

racial identification. Consistent with the analyses reported above, the effect of team composition on perceived diversity was significant,  $B = -1.27$ ,  $t(112) = -4.15$ ,  $p < .001$ . African American participants reported higher levels of perceived diversity in the BlackRep than AsianRep conditions. The interaction of team composition and racial identification was marginally significant,  $B = -0.54$ ,  $t(112) = -1.95$ ,  $p = .054$  (see Figure 3). When racial identification was high, the effect of team composition was significant,  $B = -1.87$ ,  $t(112) = -4.25$ ,  $p < .001$ . When racial identification was low, however, the effect of team composition was not significant,  $B = -0.66$ ,  $t(112) = -1.52$ ,  $p = .13$ .

Taken together, results were consistent with our prediction that the in-group representation effect would vary as a function of racial identification; stronger racial identification was associated with a larger effect for in-group representation.

*Alternative explanations for the effect of the discrimination salience manipulation.* We have argued that concerns about discrimination underpin the in-group representation effect, and we manipulated discrimination salience in Study 2 to provide direct evidence for our claim. One could argue, however, that our discrimination salience manipulation may have

increased group salience or identification in addition to (or instead of) intensifying concerns about discrimination. That is, group salience and identification are two potential alternative explanations for the mechanism that underlies the effect of our discrimination salience manipulation on perceived diversity. We conducted additional analyses to evaluate these two alternative explanations.

**Group salience.** To investigate whether group salience contributed to the effect of the discrimination salience manipulation on perceived diversity, we examined perceived diversity in the out-group discrimination salience condition. If group salience were causing people to become more sensitive to whether a particular group was represented, then we should be able to observe a group salience effect irrespective of whether the salient group was an in-group or an out-group. That is, we wouldn't expect group membership to matter if the effect were simply due to cognitive accessibility; if anything, we would expect one's own group to be chronically salient, which would make the group salience effect larger for a stimulus that made an out-group rather than an in-group salient.

We examined perceived diversity when participants viewed teams that included out-groups members across the out-group discrimination salient and control discrimination salience conditions. Specifically, we examined Asian participants' ratings of perceived diversity of a group that included African Americans (i.e., BlackRep condition) across the African American discrimination salient ( $M = 4.62$ ,  $SD = 1.68$ ) and control discrimination salience conditions ( $M = 4.65$ ,  $SD = 1.55$ ). The difference was not significant,  $F(1, 1027) = 0.008$ ,  $p = .929$ . We also examined African American participants' ratings of perceived diversity of a group that included Asian Americans (i.e., AsianRep condition) across the Asian American discrimination salient ( $M = 3.81$ ,  $SD = 1.56$ ) and control discrimination salience conditions ( $M = 3.57$ ,  $SD = 1.80$ ). Again, the difference was not significant,  $F(1, 1027) = 0.785$ ,  $p = .376$ . In sum, the discrimination salience manipulation only affected perceived diversity when it mentioned in-group—not out-group—discrimination. Therefore, it appears that increased salience of an out-group was insufficient to affect perceived diversity.

**Group identification.** We also examined whether reading about in-group discrimination caused people to identify more strongly with their group. If enhanced identification contributed to effect of the discrimination salience manipulation on perceived diversity, then we should observe an interaction of participant race and discrimination salience condition on strength of racial identification. Specifically, racial identification should be stronger for African American participants in the African American discrimination salience condition than in the Asian American discrimination salience condition. Also, racial identification should be stronger for Asian participants in the Asian American discrimination

salience condition than in the African American discrimination salience condition.

We conducted a 2 (Participant Race: Asian, African American)  $\times$  3 (Team Composition: Asian + Black, AsianRep, BlackRep)  $\times$  3 (Discrimination Salience: Asian American, African American, Control) ANOVA with racial identification as the dependent variable. None of the main effects<sup>3</sup> or interactions were significant (all effect sizes  $\eta_p^2 \leq .005$ ), including the interaction of participant race and discrimination salience condition,  $F(1, 1027) = 0.06$ ,  $p = .94$ ,  $\eta_p^2 = .00$ , which should have been significant if identity-related processes were responsible for the effect of our discrimination salience manipulation on perceived diversity. In short, our discrimination salience manipulation influenced perceived diversity without affecting racial identification, which supports our contention that concerns about discrimination underpin the in-group representation effect.

## Discussion

Study 2 provided further evidence that in-group representation affects racial minority group members' diversity judgments, above and beyond the extent to which in-group representation adds to racial heterogeneity of the group. As in Study 1, Asian Americans and African Americans rated a team as more diverse when it included members of their racial in-group compared with when it included members of another racial minority group, holding constant the number of racial groups represented in the team. This in-group representation effect, however, was again stronger for African Americans than Asian Americans, which illustrates why it is important to study the unique perspectives of each racial group rather than assume that racial minority groups will respond similarly in situations that involve race.

Study 2 also tested our assertion that concerns about discrimination underlie the in-group representation effect among racial minority group members. Discrimination salience affected the extent to which in-group representation influenced diversity judgments, but it did so differently for Asian Americans and African Americans. In-group representation had a stronger effect on Asian Americans' diversity judgments when discrimination against their group was accentuated relative to baseline levels. In contrast, in-group representation was equally important to African Americans' diversity judgments irrespective of whether discrimination against their group was accentuated or at baseline levels. Moreover, the in-group representation effect was somewhat more stable across levels of racial identification for African Americans than Asian Americans. This pattern is consistent with prior research that suggests that discrimination is more chronically salient for African Americans than Asian Americans (e.g., Heilman et al., 1992; Romero & Roberts, 1998).

Also noteworthy, making discrimination against an out-group salient eliminated the in-group representation effect.

Asian Americans and African Americans who read an article about discrimination against a racial minority out-group perceived a team that included four Whites and two racial minority out-group members to be as diverse as a team that include four Whites and two in-group members. Moreover, the amount of perceived diversity people reported when discrimination against an out-group was salient was the same as when people read an article about in-group discrimination and judged a team that included two in-group members. Taken together, the results of Study 2 demonstrate that diversity judgments reflect both chronic and temporary concerns about discrimination and whether targets of discrimination are represented.

### Study 3

Study 3 provided additional tests of when and why in-group representation affects perceived diversity. It complemented Studies 1 and 2 in two important ways. First, it further investigated the mechanism responsible for the in-group representation effect by directly assessing concerns about discrimination and testing for mediation. Second, Study 3 examined whether the in-group representation effect generalized to situations in which Whites were not the numerical majority in the target team. Prior research suggests that people with token or solo status in a team are distinctive in their environment, which in turn enhances the salience of group membership (Crocker & Major, 1989; Hogg & Terry, 2000; McGuire, McGuire, Child, & Fujioka, 1978). Therefore, we investigated whether the in-group representation effect generalized to situations when no racial group held a numerical majority.

### Method

**Participants.** Three hundred eighty upper-level undergraduates majoring in business at a university on the West Coast of the United States completed an online study to partially fulfill class requirements. All participants expected to graduate (and presumably would be on the job market) in less than 18 months. We restricted analyses to participants who self-identified as non-Hispanic White ( $n = 210$ ) or Asian ( $n = 126$ ). We excluded those from other racial groups ( $n = 13$ ), multiple racial groups ( $n = 27$ ), and non-respondents ( $n = 4$ ).

**Procedures.** Participants read that a large company had formed a new management team and saw headshots of eight people in business attire. We manipulated the racial composition of the team to create four conditions. Two focal conditions kept the proportion and number of racial groups represented constant but varied which racial groups were represented. The AsianMajority condition pictured five Asian and three White team members. The BlackMajority condition pictured five Black and three White team members. The Asian + Black diversity condition pictured two

Asian, three Black, and three White team members. The WhiteOnly diversity condition pictured eight White team members.

### Measures

**Perceived diversity.** The same items used in Studies 1 and 2 measured perceived diversity ( $\alpha = .96$ ).

**Racial identification.** As in Study 2, we used eight items developed by Sellers et al. (1998) to assess racial identification ( $\alpha = .88$ ).

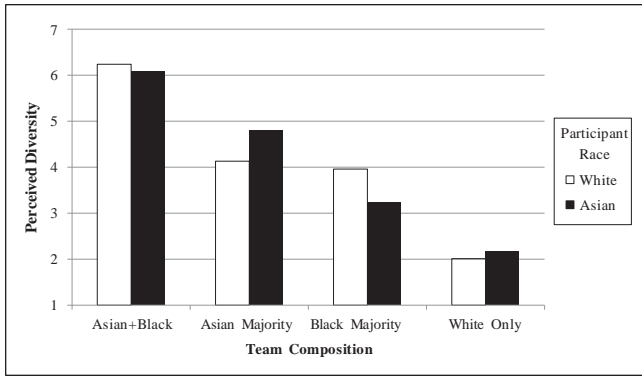
**Concerns about discrimination.** Four items assessed concerns about discrimination: “This team will be effective at dealing with racial diversity issues,” “This team is capable of handling issues related to racial diversity,” “I would be comfortable having this team lead the company’s effort to address racial diversity,” and “This team is NOT well-suited to address issues related to racial diversity.” Items were scored such that high values indicated greater concern about discrimination ( $\alpha = .90$ ).

Exploratory factor analysis conducted with a principle axis factoring method and a promax rotation produced a two factor solution. The perceived diversity items loaded together on one factor, and the concerns about discrimination items loaded together on the other factor. This two factor solution was robust across analyses that used different factoring and rotation methods. Therefore, the data indicate that the measures of perceived diversity and concerns about discrimination assessed distinct constructs.

### Results

**Perceived diversity.** A 2 (Participant Race: Asian American, White)  $\times$  4 (Team Composition: Asian + Black, AsianMajority, BlackMajority, WhiteOnly) ANOVA with perceived diversity as the dependent variable revealed a significant main effect of team composition,  $F(3, 328) = 111.35, p < .001, \eta_p^2 = .51$ , but no significant main effect of participant race,  $F(1, 328) = 0.01, p = .929, \eta_p^2 = .00$ . However, a significant interaction of race and team composition qualified the lower order effects,  $F(3, 328) = 3.50, p = .016, \eta_p^2 = .03$  (see Figure 4).

Analyses of simple effects examined how Asian American and White participants’ perceptions of diversity changed across team compositions (see Table 4 for a complete set of simple comparisons). For Asian American participants, the effect of team composition on perceived diversity was significant,  $F(1, 328) = 70.81, p < .001, \eta_p^2 = .30$ . Simple comparisons with Tukey’s Honest Significant Difference revealed that Asian American participants perceived each team composition to be significantly different in terms of level of diversity (Asian + Black > AsianMajority > BlackMajority > WhiteOnly). For White participants, the effect of team composition on perceived diversity also was



**Figure 4.** Perceived diversity as a function of participant race and team composition in Study 3.

significant,  $F(1, 328) = 70.81, p < .001, \eta_p^2 = .39$ . Simple comparisons with Tukey's HSD revealed that Whites perceived the Asian + Black condition to be the most diverse and the WhiteOnly condition to be the least diverse. Whites perceived the same amount of diversity in the AsianMajority and BlackMajority conditions. Therefore, the pattern of results for Whites across the AsianMajority and BlackMajority conditions in Study 3 paralleled those for Whites across the AsianRep and BlackRep conditions in Study 1; in both studies, Whites' perceptions of diversity did not differ as a function of which racial minority group was represented when the number of racial groups and number of racial minority group members remained constant.

In sum, Study 3 demonstrated that the results of Studies 1 and 2 generalized to when no racial group held a numerical majority in the target team. As predicted, in-group representation affected Asian American participants' perceptions of diversity, above and beyond the extent to which the in-group contributed to the racial heterogeneity of the team. However, Asian Americans also were sensitive to the number of minority groups represented and rated the team in the Asian + Black condition as more diverse than the team in the AsianMajority condition. Moreover, Asian American participants saw clear differences across the AsianMajority and BlackMajority conditions, whereas White participants did not.

**Racial identification.** We hypothesized that strength of racial identification would moderate the in-group representation effect on perceived diversity for Asian American participants.<sup>4</sup> To test this hypothesis, we dummy coded the team composition variable (BlackMajority = 0, AsianMajority = 1) and conducted moderated regression analysis. Consistent with analyses reported above, the effect of team composition on perceived diversity was significant,  $B = 1.57, t(54) = 3.69, p < .001$ . Asian American participants reported higher levels of perceived diversity in the AsianMajority than BlackMajority conditions. The effect of racial identification on perceived diversity also was significant,  $B = -0.83,$

$t(54) = -2.51, p = .01$ . Stronger racial identification was associated with less perceived diversity. Most important to our hypothesis, the interaction of team composition and racial identification was significant,  $B = 1.58, t(54) = 3.69, p < .001$ .

Analyses of simple slopes examined the simple effect of team composition at high (+1 *SD*) and low levels (-1 *SD*) of racial identification. When racial identification was high, the effect of team composition was significant,  $B = 3.14, t(54) = 5.02, p < .001$ . Perceived diversity was higher in the AsianMajority than BlackMajority conditions for Asian Americans with strong racial identification. When racial identification was low, however, the effect of team composition was not significant,  $B = -0.01, t(54) = -0.01, p = .99$ . Perceived diversity did not differ across the AsianMajority and BlackMajority conditions for Asian Americans with weak racial identification. In short, results supported our hypothesis (see Figure 5 for an alternative analytic approach that examines the relationship between racial identification and perceived diversity at each level of team composition).

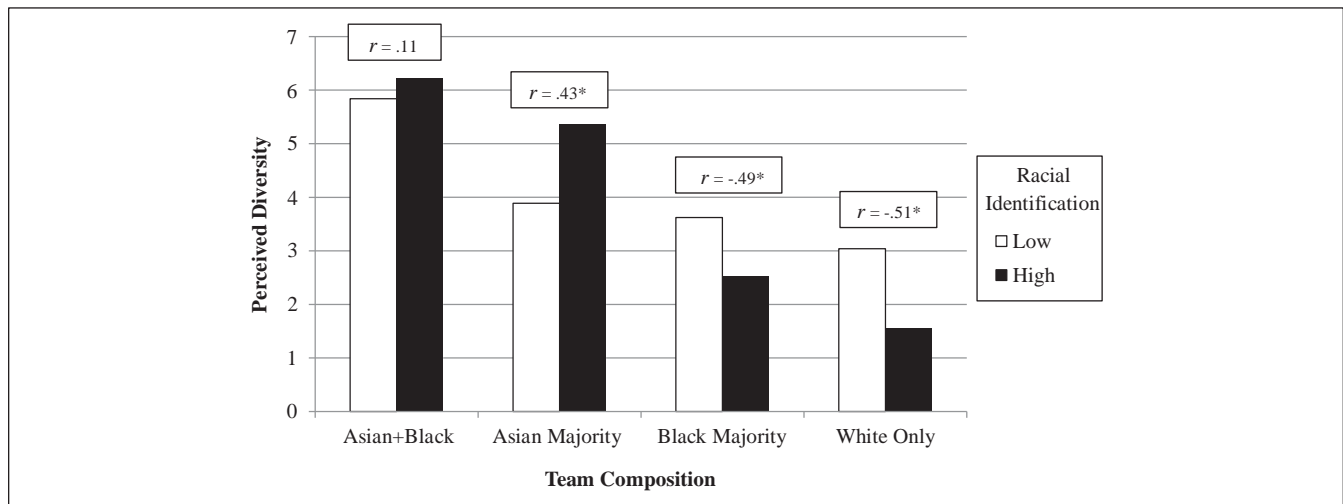
**Concerns about discrimination.** We hypothesized that concerns about discrimination would mediate the relationship between team composition and perceived diversity.<sup>5</sup> Given that strength of racial identification moderated the effect of team composition on perceived diversity, we conducted a test of mediated moderation (see Figure 6). This approach subsumes and improves a simple mediation model that includes team composition as the sole predictor because the mediated moderation model estimates the strength of the indirect effect of team composition on perceived diversity at different levels of racial identification.

To facilitate mediated moderation analysis with a categorical predictor variable, our analyses focused on the AsianMajority and BlackMajority team composition conditions. As seen in Figure 6, the effects of team composition, racial identification, and the interaction of team composition and racial identification on concerns about discrimination were significant. In addition, the effect of concerns about discrimination on perceived diversity was significant. We then used a bootstrapping procedure with 1000 bootstrap samples to estimate the size of the indirect effects of team composition on perceived diversity through concerns about discrimination at both high (+1 *SD*) and low levels (-1 *SD*) of racial identification (Preacher, Rucker, & Hayes, 2007). In support of our hypothesis, the indirect effect of team composition on perceived diversity was significant when racial identification was high,  $\beta_c = 1.90$  (bias corrected 95% confidence interval = [0.96, 3.48]),  $z = 3.46, p < .001$ , as well as when racial identification was low,  $\beta_c = 0.87$  (bias corrected 95% confidence interval = [0.18, 1.68]),  $z = 2.39, p = .02$ . In other words, concerns about diversity mediated the effect of team composition on perceived diversity across levels of racial identification. Therefore, results provide additional evidence that concerns about discrimination underpin the in-group representation effect.

**Table 4.** Means and Standard Deviations of Perceived Diversity as a Function of Participant Race and Team Composition in Study 3.

Team composition	Participant race		Overall
	Asian	White	
Asian + Black	6.08 <sub>a1</sub> (0.92)	6.24 <sub>b1</sub> (0.85)	6.17 <sub>1</sub> (0.88)
AsianMajority	4.80 <sub>a2</sub> (1.70)	4.13 <sub>b2</sub> (1.57)	4.42 <sub>2</sub> (1.65)
BlackMajority	3.23 <sub>a3</sub> (1.67)	3.96 <sub>b2</sub> (1.58)	3.76 <sub>3</sub> (1.63)
WhiteOnly	2.17 <sub>a4</sub> (1.22)	2.00 <sub>b3</sub> (1.29)	2.07 <sub>4</sub> (1.26)
Overall	4.39 <sub>a</sub> (2.02)	4.14 <sub>a</sub> (1.96)	

Note. Letters correspond to simple comparisons across participant race within each level of team composition (i.e., comparisons within table rows). Numbers correspond to simple comparisons across level of team composition within participant race (i.e., comparisons within table columns).

**Figure 5.** Perceived diversity as a function of team composition and racial identification among Asian participants in Study 3.

Note. Bars depict the interaction of racial identification and team composition using median splits of racial identification,  $F(3, 112) = 12.72, p < .001, \eta^2 = .17$ . Pearson correlation coefficients indicate the strength of the relationship between perceived diversity and the continuous measure of racial identification within each team composition condition.

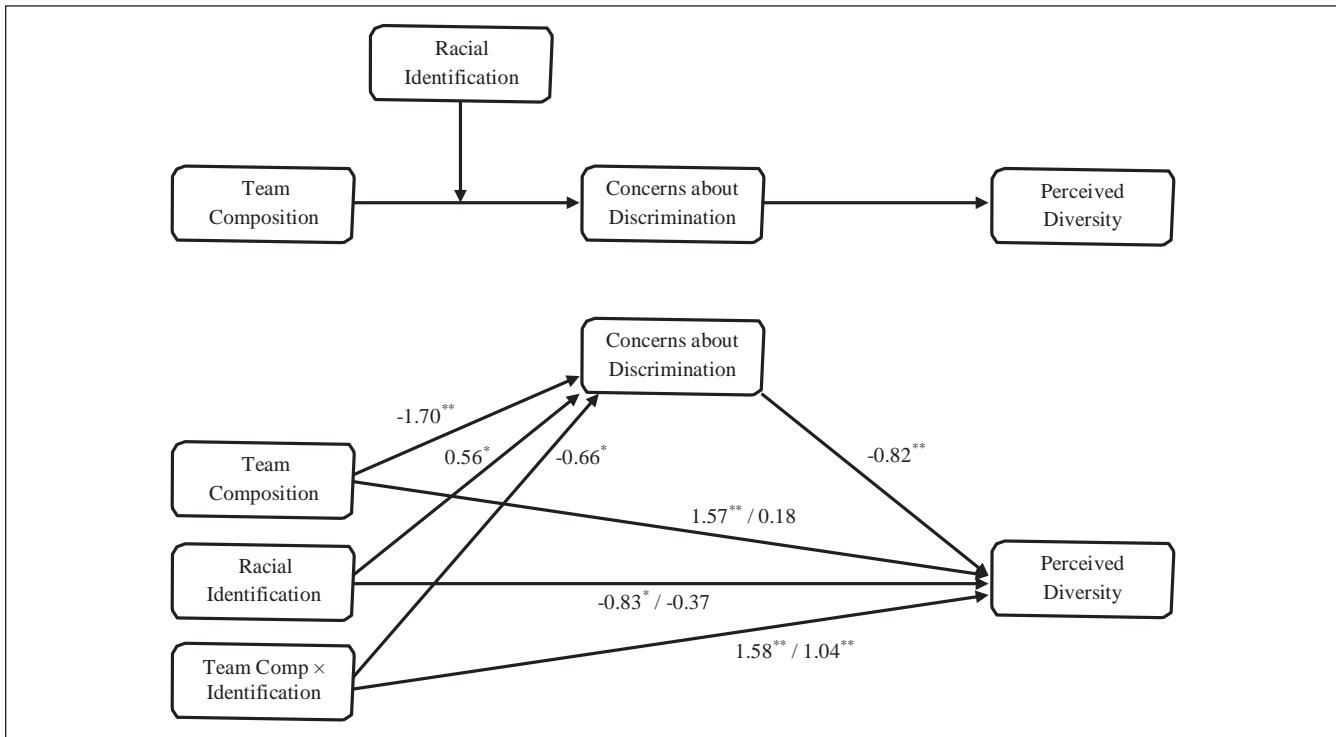
\* $p < .05$ .

## General Discussion

We began this project to investigate whether there is likely to be a high degree of consensus about how much diversity exists in a group or organization. Three experiments revealed systematic differences in perceived racial diversity in people's evaluations of the same team. In particular, in-group representation was important to how diverse a team appeared to members of racial minority groups. Asian Americans and African Americans reported marked differences in racial diversity according to whether a team included members of their own racial group rather than an equal number of members of another racial minority group. Moreover, this in-group representation effect was stronger for African Americans than Asian Americans (Studies 1 and 2) and positively associated with strength of racial identification (Study 2 and 3). Taken together, the studies demonstrated that people from different racial groups can disagree about the amount of diversity teams and organizations include.

Moreover, these disagreements can occur not just between Whites and racial minority group members but also between members of different racial minority groups.

The studies also demonstrated that concerns about discrimination play a role in how in-group representation affects diversity judgments made by racial minority group members. We expected that group-based stigma and experience with discrimination would cause people to pay more attention to whether their racial group was represented because the presence (or apparent exclusion) of in-group members signals whether perceivers can expect to be accepted and treated fairly by the group (Ashforth & Mael, 1989; Brewer, 1981; Turner et al., 1987). Three separate sources of evidence support our argument. First, we found that the in-group representation effect was stronger for African Americans than Asian Americans, which is consistent with prior research that indicates that African Americans have lower status in society, face more negative stereotypes, and report more discrimination than other racial minority groups (Heilman et al.,



**Figure 6.** Conceptual and statistical models of the effects of racial identification and team composition on perceived diversity through concerns about discrimination for Asian participants in Study 3.

Note. Team composition is a dummy variable (BlackMajority = 0, AsianMajority = 1). Values presented along each path represent unstandardized coefficients. The first number listed on each path between predictors and perceived diversity represent direct effects, and the second number represents the remaining direct effect of predictors on perceived diversity after controlling for concerns about discrimination. Bootstrap estimates indicated that the size of the indirect effect of the interaction of team composition and racial identification was significant at both high (+1 SD) and low levels (-1 SD) of racial identification.

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

1992; Romero & Roberts, 1998; Sidanius & Pratto, 1999). Second, Study 2 manipulated concerns about discrimination and found that reading an article that discussed discrimination against Asian Americans increased the strength of the in-group representation effect for Asian Americans. Third, Study 3 measured concerns about discrimination and found that in-group representation decreased concerns about discrimination, which in turn increased perceived diversity. In sum, our studies provide converging evidence that concerns about discrimination underlie the in-group representation effect.

Studies 2 and 3 also identified some boundary conditions to the in-group representation effect that also indicate that concerns about discrimination play a role in it. Specifically, Study 2 found that making discrimination against an out-group salient eliminated the in-group representation effect. In addition, Studies 2 and 3 both found that people for whom racial group membership was not a central part of how they define themselves did not exhibit the in-group representation effect, which is relevant to our argument given that strength of racial identification is positively associated with perceived discrimination (Sellers & Shelton, 2003). Taken together, the

results of these two studies suggest that discrimination—either in-group or out-group—can prompt people to consider whether a target of discrimination is represented in a group rather than simply focus on racial heterogeneity when making diversity judgments.

It is also important to note that Study 2 found that the in-group representation effect was strong and consistent for African Americans, irrespective of whether they read an article that discussed discrimination against African Americans prior to judging diversity. Therefore, it appears that concerns about discrimination underlie the in-group representation effect, but African Americans may be chronically concerned about discrimination to a degree that in-group representation usually plays a prominent role in their diversity judgments.

### *Theoretical Implications*

The current article makes at least two important contributions to the literature on diversity. First, it highlights that people's conceptualizations of diversity are much more complex than dictionary definitions and naïve theories of

“diversity” suggest. People’s diversity judgments are not simply based on heterogeneity (see also Unzueta & Binning, 2012; Unzueta, Knowles, & Ho, 2012). Instead, in-group representation can strongly influence people’s perceptions of teams and organizations, above and beyond the extent to which it increases diversity in terms of proportions of representation. To the extent that people’s diversity judgments serve as the foundation on which people construct their policy preferences and other attitudes about groups, these differences in perceived diversity may have far reaching effects.

Second, the current research indicates that African Americans and Asian Americans approach diversity differently, even though both groups are a numerical minority in the general population. Specifically, African Americans and Asian Americans differ in terms of how important it is for teams to include others from their own racial group, and this pattern of differences is consistent with our predictions that were based on type of stigma and discrimination these groups face. This finding is important because most prior research suggests, at least implicitly, that the similarities between racial minority groups’ perspectives on diversity issues outweigh the differences. For example, prior work suggests that both African Americans and Asian Americans do not consider organizations that lack racial minority representation in upper-level positions to be diverse (Unzueta & Binning, 2012). However, this work operationalized racial minority representation by combining Latinos, Blacks, and Asians into a single category, thus making it impossible to tease apart the in-group representation effects uncovered by the present studies. Therefore, the current studies show that it can be useful to consider information about each group’s unique history and current challenges to refine our understanding of how race and other demographic characteristics affect relationships.

One limitation of the current research is that it did not examine Latinos. Latinos are the largest and fastest-growing ethnic minority group in the United States, and they recently surpassed non-Latino Whites as the largest racioethnic group in California, the most populous state (Carroll, 2014). Therefore, it is imperative that future research investigate the in-group representation effect for Latinos and explore how other racial groups perceive and respond to their inclusion or exclusion. We can think of no reason why the in-group representation effect would not generalize to Latinos and other groups. Based on the rationale behind the unique perspectives hypothesis, however, it is important to examine how each racial minority group perceives and responds to inclusions of racial minority out-groups. For example, African Americans may feel differently about teams that include Whites and Latinos than those that include Whites and Asians (cf. Unzueta & Binning, 2010). Given that the number of combinations increases dramatically as the number of groups increases, a great deal of research is necessary to fully explore the basic proposition represented by the unique perspectives hypothesis in the current research.

Along similar lines, we expect that finer-grained analyses of how people categorize themselves in terms of subgroups within their racial group (e.g., regional, national, cultural groups) would reveal additional distinctions that are important to how people judge diversity. For example, a Korean perceiver may respond more strongly to the inclusion of one highly similar other (e.g., a fellow Korean) than the inclusion of multiple others who are less similar (e.g., two Vietnamese). In Study 3, we found no evidence that people who self-identified as East Asian and Southeast Asian responded differently, but it could be that our stimuli (i.e., headshots without any accompanying information) simply did not provide enough information for people to make narrow guesses about the targets’ ancestry. It is difficult to identify individuals’ specific heritage based on a headshot alone (absent family name or other indicators) because human physiology is quite variable, even within regions (National Human Genome Research Institute, 2005). Moreover, in the case of Latinos, the category itself includes a great deal of racial and cultural diversity. Therefore, future research should employ a variety of methods, including some that are better suited to support further differentiation within racioethnic categories (e.g., surnames of targets).

In addition, future research should explore whether people shift their identity depending on the context in which they are making their judgments (Lau & Murnighan, 1998; McGuire et al., 1978). For example, a person might think of herself as Asian American when in a group composed mainly of African Americans and Whites, but she may think of herself as Korean American when in a group composed mainly of other Asian Americans. That is, racial in-group representation may need to reach a certain threshold (e.g., plurality, majority) before people begin to apply narrower categories. Studies could be designed to identify when people are likely to shift from superordinate identities (e.g., Asian, Latino) to more specific identities (e.g., Korean, Vietnamese, Cuban, Mexican) and assess how this categorization affects perceived diversity and relationships with groups.

Another question that warrants further investigation is how Whites’ intergroup concerns shape their perceptions of diversity and attitudes toward organizations. Our primary focus was to examine how racial minority group members evaluate and experience diversity, but our studies nonetheless provided some opportunities to compare Whites’ diversity judgments with those of African Americans and Asian Americans. Whites reported the highest levels of perceived diversity overall in Study 1, but this effect was due to the consistency of Whites’ diversity judgments across teams that included members of different racial minority groups rather than extreme ratings of individual teams. That is, perceived diversity did not differ between Whites and racial minority group members when racial minority in-group members were included on the focal team. Whites only perceived more diversity than racial minority group members when no racial minority in-group members were included on the focal team.



That said, the current research clearly indicates that Whites are sensitive to the number of racial groups represented; the more groups are represented, the more diverse they perceive the group to be. However, future research will need to systematically evaluate Whites' perceptions of diversity across varying levels of in-group representation, including situations with no in-group representation.

Future research also should consider motives that may uniquely affect Whites' perceptions and responses to racial diversity. For example, some Whites fear appearing biased and attempt to avoid the topic of race altogether (e.g., Apfelbaum, Sommers, & Norton, 2008; Plant & Devine, 1998, 2003). Whites who are uncomfortable with the topic of race may report high levels of perceived diversity to avert further discussion of the issue, or they may report low levels of perceived diversity to avoid appearing insensitive. In addition, some Whites are concerned about reverse discrimination (Norton & Sommers, 2011), which may prompt them to be more sensitive to in-group representation overall, or it may cause them to be particularly concerned about which out-groups are represented (e.g., the groups they perceive to be taking away jobs from their group may be most salient). Regardless of these potential conditional relationships, however, the overall pattern in our results suggests that Whites may chronically underestimate the extent to which others feel that existing levels of diversity in a team or organization are inadequate. That said, it is important to remember that some Whites are genuinely committed to multiculturalism (Plaut, Thoman, & Goren, 2009) or intrinsically motivated to eliminate racial biases (Plant & Devine, 1998). Therefore, future research should identify when and how different motives and beliefs influence Whites' diversity judgments rather than assume that Whites always attempt to justify their group interest.

It is also important to consider the role that context plays in diversity judgments. The current research examined perceived diversity in organizational settings. The norms and expectations people have for the workplace may differ from those they have about social groups and other institutions in society, which in turn may influence how or possibly even whether they evaluate diversity in the group. Therefore, the importance of in-group representation as well as the proportion of in-group representation people expect seems likely to vary across situations.

### **Practical Implications**

The current research demonstrates that organizations must focus on all relevant groups if they wish to attract and retain people from a variety of backgrounds and improve their impressions of how the organization approaches diversity issues. Demographic heterogeneity affects diversity judgments somewhat, but the inclusion of fellow in-group members further influences the way people perceive groups. Therefore, people motivated to address diversity must be

willing to have candid conversations about specific types of representation rather than use "diversity" as a catch-all phrase. Framing diversity discussions in terms of "how much" there is in a group is inherently limited. Instead, conversations must address specific factors that contribute to how various people feel about the group; policies that monitor the overall number of minority group members cannot ensure that members of all groups will feel equally comfortable. In short, diversity is too complex for any one-size-fits-all solution.

Our results also indicate that a lack of diversity may simultaneously trouble some people but not be apparent to others. Given that Whites in our studies reported the highest levels of diversity and Whites hold the vast majority of top management positions in businesses in the United States, many leaders of organizations may underappreciate the extent to which diversity is a concern for their employees and job candidates, and *why* diversity is a concern for them. Moreover, some leaders may devote a significant amount of time and effort to addressing diversity in their organization but still have problems because they use different criteria than others use. For example, Whites and Asian Americans may believe that their organization is reasonably diverse ("we've hired several Asian American employees recently"), but African Americans may not perceive it as such ("they haven't hired any Black employees"). Leaders' failure to understand the potential for differences of opinion about diversity may cause others to question fairness and feel resentment or betrayal. Therefore, an easy first step toward addressing diversity issues in organizations is to assess perceived diversity across members (and potentially also non-members) and ensure that different points of view are identified.

### **Conclusion**

Conversations about race in the United States historically have focused on relations between Whites and racial minority groups rather than on relations between racial minority groups (Milliken & Martins, 1996). Likewise, research on interracial interactions has concentrated on encounters between Whites and other groups (e.g., Ickes, 1984; Shelton & Richeson, 2006; Trawalter et al., 2009). As society becomes more racially diverse, it is increasingly important to understand how people from different racial groups evaluate diversity and form attitudes about teams and organizations. Historical and contemporary challenges are part and parcel of being a member of a particular group, and they can shape how individuals' judge diversity. Therefore, scholars and practitioners alike must take these and other unique features of groups into account when addressing diversity issues.

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## Notes

1. Given the amount of diversity in physical features among Latinos, we were unable to unambiguously manipulate whether Latinos were represented in the target groups using only pictures. In other words, we could not cleanly test how Latinos responded to in-group representation or how others responded to whether Latinos were represented in the teams using the current method. Therefore, we did not examine Latinos in the current research.
2. The pattern of results is the same if participants in all conditions are included in analyses.
3. The main effect of participant race was not significant,  $F(1, 1027) = 1.40, p = .24, \eta^2_p = .001$ , which indicates that the difference in magnitude of the in-group representation effect between Asian Americans and African Americans is not simply due to differences in strength of racial identification.
4. Our hypotheses were agnostic about racial identification for Whites because Whites are less likely than racial minority group members to define themselves in terms of race (Frankenberg, 1993). Exploratory analyses revealed that White participants' racial identification was unassociated with perceived diversity in any of the team composition conditions (all  $\beta$ s < .10).
5. Given that Study 2 manipulated concerns about discrimination and found effects on perceived diversity, both our theory and our data support our causal argument that the effects of team composition and racial identification on perceived diversity go through concerns about discrimination. That said, an alternative model that depicts the effects of team composition and racial identification on concerns about discrimination through perceived diversity is statistically equivalent and produces identical values on indices of fit.

## References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: SAGE.
- Apfelbaum, E. P., Sommers, S. R., & Norton, M. I. (2008). Seeing race and seeming racist? Evaluating strategic colorblindness in social interaction. *Journal of Personality and Social Psychology, 95*, 918-932.
- Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review, 14*, 20-39.
- Bell, J. M., & Hartmann, D. (2007). Diversity in everyday discourse: The cultural ambiguities and consequences of "happy talk." *American Sociological Review, 72*, 895-914.
- Bell, M. P., Harrison, D. A., & McLaughlin, M. E. (1997). Asian American attitudes toward affirmative action in employment. *Journal of Applied Behavioral Science, 33*, 356-377.
- Bergsieker, H. B., Shelton, J. N., & Richeson, J. A. (2010). To be liked versus respected: Divergent goals in interracial interactions. *Journal of Personality and Social Psychology, 99*, 248-264.
- Binning, K. R., & Unzueta, M. M. (2013). Perceiving diversity on campus: Race differences in attention to student and faculty representation. *Social Psychological & Personality Science, 4*, 500-507.
- Branscombe, N. R., Schmitt, M. T., & Harvey, R. D. (1999). Perceiving pervasive discrimination among African Americans: Implications for group identification and well-being. *Journal of Personality and Social Psychology, 77*, 135-149.
- Brewer, M. B. (1981). Ethnocentrism and its role in intergroup trust. In M. Brewer & B. Collins (Eds.), *Scientific inquiry in the social sciences* (pp. 214-231). San Francisco, CA: Jossey-Bass.
- Carroll, R. (2014, March 17). *Latinos become California's largest demographic though political clout lags*. Retrieved from <http://www.theguardian.com/world/2014/mar/17/latinos-california-biggest-demographic-politics>
- Colquitt, J. A., Noe, R. A., & Jackson, C. L. (2002). Justice in teams: Antecedents and consequences of procedural justice climate in teams. *Personnel Psychology, 55*, 83-109.
- Crocker, J., & Luhtanen, R. (1990). Collective self-esteem and in-group bias. *Journal of Personality and Social Psychology, 58*, 60-67.
- Crocker, J., & Major, B. (1989). Social stigma and self-esteem: The self-protective properties of stigma. *Psychological Review, 96*, 608-630.
- Ely, R. J., & Thomas, D. A. (2001). Cultural diversity at work: The effects of diversity perspectives on work group processes and outcomes. *Administrative Science Quarterly, 46*, 229-273.
- Feagin, J. R., & Sikes, M. P. (1994). *Living with racism: The Black middle-class experience*. Boston, MA: Beacon.
- Fiske, S. T., & Neuberg, S. L. (1988). A continuum model of impression formation: From category-based to individuating processes as a function of information, motivation, and attention. *Advances in Experimental Social Psychology, 23*, 1-108.
- Frankenberg, R. (1993). *White women, race matters: The social construction of Whiteness*. Minneapolis: University of Minnesota Press.
- Harrison, D. A., & Klein, K. L. (2007). What's the difference? Diversity constructs as separation, variety, or disparity in organizations. *Academy of Management Review, 32*, 1199-1229.
- Hastorf, A., & Cantril, H. (1954). They saw a game: A case study. *Journal of Abnormal and Social Psychology, 49*, 129-134.
- Heilman, M. E., Block, C. J., & Lucas, J. A. (1992). Presumed incompetent? Stigmatization and affirmative action efforts. *Journal of Applied Psychology, 77*, 536-544.
- Hirshman, C., & Wong, M. G. (1986). The extraordinary educational attainment of Asian-Americans: A search for evidence and explanations. *Social Forces, 65*, 1-27.
- Hogg, M. A., & Terry, D. J. (2000). Social identity and self-categorization processes in organizational contexts. *Academy of Management Review, 25*, 121-140.
- Hurh, W. M., & Kim, K. C. (1989). The "Success" image of Asian Americans: Its validity, and its practical and theoretical implications. *Ethnic and Racial Studies, 12*, 514-561.
- Ickes, W. (1984). Compositions in Black and White: Determinants of interaction in interracial dyads. *Journal of Personality and Social Psychology, 47*, 330-341.
- Juvonen, J., Nishina, A., & Graham, S. (2006). Ethnic diversity and perceptions of safety in urban middle schools. *Psychological Science, 17*, 393-400.

- Lau, D. C., & Murnighan, J. K. (1998). Demographic diversity and faultlines: The compositional dynamics of organizational groups. *Academy of Management Review*, *23*, 325-340.
- McGuire, W. J., McGuire, C. V., Child, P., & Fujioka, T. (1978). Salience of ethnicity in the spontaneous self-concept as a function of one's ethnic distinctiveness in the social environment. *Journal of Personality and Social Psychology*, *36*, 511-520.
- McIntosh, P. (1988). *White privilege: Unpacking the invisible knapsack*. Wellesley, MA: Wellesley College Center for Research on Women.
- Milliken, F. J., & Martins, L. L. (1996). Searching for common threads: Understanding the multiple effects of diversity in organizational groups. *Academy of Management Review*, *21*, 402-433.
- Narasaki, K. K. (1995). "Separate but equal?" Discrimination and the need for affirmative action legislation. In G. A. Lew (Ed.), *Perspectives on affirmative action* (pp. 5-8). Los Angeles, CA: Asian Pacific American Public Policy Institute.
- National Human Genome Research Institute. (2005). The use of racial, ethnic, and ancestral categories in human genetics research. *American Journal of Human Genetics*, *77*, 519-532.
- Nemeth, C. (1986). Differential contributions of majority and minority influence. *Psychological Review*, *93*, 23-32.
- Norton, M. I., & Sommers, S. R. (2011). Whites see racism as a zero-sum game that they are now losing. *Perspectives in Psychological Science*, *6*, 215-218.
- Ogbu, J. U. (1987). Variability in minority responses to schooling: Nonimmigrants vs. immigrants. In G. Spindler & L. Spindler (Eds.), *Interpretive ethnography of education: At home and abroad* (pp. 255-280). Hillsdale, NJ: Lawrence Erlbaum.
- Operario, D., & Fiske, S. T. (2001). Ethnic identity moderates perceptions of prejudice: Judgments of personal versus group discrimination and subtle versus blatant bias. *Personality and Social Psychology Bulletin*, *27*, 550-561.
- Phillips, K. W., & Lloyd, D. L. (2006). When surface and deep-level diversity collide: The effects on dissenting group members. *Organizational Behavior and Human Decision Processes*, *99*, 143-160.
- Phillips, K. W., Northcraft, G. B., & Neale, M. A. (2006). Surface-level diversity and decision-making in groups: When does deep-level similarity help? *Group Processes & Intergroup Relations*, *9*, 467-482.
- Phinney, J. S. (1990). Ethnic identity in adolescence and adulthood: A review and integration. *Psychological Bulletin*, *108*, 499-514.
- Plant, E. A., & Devine, P. G. (1998). Internal and external motivation to respond without prejudice. *Journal of Personality and Social Psychology*, *75*, 811-832.
- Plant, E. A., & Devine, P. G. (2003). The antecedents and implications of interracial anxiety. *Personality and Social Psychology Bulletin*, *29*, 790-801.
- Plaut, V. C., Thoman, K. M., & Goren, M. J. (2009). Is multiculturalism or color blindness better for minorities. *Psychological Science*, *20*, 444-446.
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, *42*, 185-227.
- Purdie-Vaughns, V., Steele, C. M., Davies, P. G., Dittmann, R., & Crosby, J. R. (2008). Social identity contingencies: How diversity cues signal threat or safety for African Americans in mainstream institutions. *Journal of Personality and Social Psychology*, *95*, 308-318.
- Romero, A. J., & Roberts, R. E. (1998). Perceptions of discrimination and ethnocultural variables in a diverse group of adolescents. *Journal of Adolescence*, *21*, 641-656.
- Sellers, R. M., & Shelton, J. N. (2003). The role of racial identity in perceived racial discrimination. *Journal of Personality and Social Psychology*, *84*, 1079-1092.
- Sellers, R. M., Smith, M. A., Shelton, J. N., Rowley, S. A. J., & Chavous, T. M. (1998). Multidimensional model of racial identity: A reconceptualization of African American racial identity. *Personality and Social Psychology Review*, *2*, 18-39.
- Shelton, J. N., & Richeson, J. A. (2006). Interracial interactions: A relational approach. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 38, pp. 121-181). San Diego, CA: Elsevier.
- Shelton, J. N., Richeson, J. A., & Salvatore, J. (2005). Expecting to be the target of prejudice: Implications for interethnic interactions. *Personality and Social Psychology Bulletin*, *31*, 1189-1202.
- Sidanius, J., & Pratto, F. (1999). *Social dominance: An intergroup theory of social hierarchy and oppression*. New York, NY: Cambridge University Press.
- Sommers, S. R., Apfelbaum, E. P., Dukes, K. N., Toosi, N., & Wang, E. (2006). Race and media coverage of Hurricane Katrina: Analysis, implications, and future research questions. *Analyses of Social Issues and Public Policy*, *6*, 39-56.
- Tajfel, H. (1970). Experiments in intergroup discrimination. *Scientific American*, *223*, 96-102.
- Taylor, S. E. (1981). A categorization approach to stereotyping. In D. L. Hamilton (Ed.), *Cognitive processes in stereotyping and intergroup behavior* (pp. 83-114). Hillsdale, NJ: Lawrence Erlbaum.
- Thornton, M., & Mizuno, Y. (1995). Religiosity and Black adult feelings toward Africans, American Indians, West Indians, Hispanics and Asian Americans. *Sociological Focus*, *28*, 113-128.
- Thornton, M., & Mizuno, Y. (1999). Economic well-being and Black adult feelings toward immigrants and Whites. *Journal of Black Studies*, *30*, 15-44.
- Trawalter, S., Richeson, J. A., & Shelton, J. N. (2009). Predicting behavior during interracial interactions: A stress and coping approach. *Personality and Social Psychology Review*, *13*, 243-268.
- Tsui, A. S., & Gutek, B. A. (1999). *Demographic differences in organizations: Current research and future directions*. Lanham, MD: Lexington Books.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Oxford, UK: Blackwell.
- Unzueta, M. M., & Binning, K. R. (2010). Which racial groups are associated with diversity? *Cultural Diversity & Ethnic Minority Psychology*, *16*, 443-446.
- Unzueta, M. M., & Binning, K. R. (2012). Diversity is in the eye of the beholder: How concern for the in-group affects perceptions of racial diversity. *Personality and Social Psychology Bulletin*, *38*, 26-38.
- Unzueta, M. M., Knowles, E. D., & Ho, G. C. (2012). Diversity is what you want it to be: How social dominance motives affect construals of diversity. *Psychological Science*, *23*, 303-309.

- USA Today/Gallup. (2008, June 5-July 6). *Majority of Americans say racism against Blacks widespread*. Retrieved from <http://www.gallup.com/poll/109258/MajorityAmericans-Say-Racism-Against-Blacks-Widespread.aspx>
- U.S. Census Bureau. (2008). *2008 population estimates*. Retrieved from [http://factfinder.census.gov/servlet/DTTable?\\_bm=y&-state=dt&-context=dt&-ds\\_name=PEP\\_2008\\_EST&-CONTEXT=dt&-mt\\_name=PEP\\_2008\\_EST\\_G2008\\_T004\\_2008&-tree\\_id=809&-redoLog=false&-currentselections=PEP\\_2006\\_EST\\_G2006\\_T004\\_2006&-geo\\_id=01000US&-geo\\_id=02000US1&-geo\\_id=02000US2&-geo\\_id=02000US3&-geo\\_id=02000US4&-search\\_results=01000US&-format=&-\\_lang=en](http://factfinder.census.gov/servlet/DTTable?_bm=y&-state=dt&-context=dt&-ds_name=PEP_2008_EST&-CONTEXT=dt&-mt_name=PEP_2008_EST_G2008_T004_2008&-tree_id=809&-redoLog=false&-currentselections=PEP_2006_EST_G2006_T004_2006&-geo_id=01000US&-geo_id=02000US1&-geo_id=02000US2&-geo_id=02000US3&-geo_id=02000US4&-search_results=01000US&-format=&-_lang=en)
- Williams, K., & O'Reilly, C. (1998). Demography and diversity in organizations: A review of 40 years of research. *Research in Organizational Behavior, 21*, 77-140.
- Wong, P., Lai, C. F., Nagasawa, R., & Lin, T. (1998). Asian Americans as a model minority: Self-perceptions and perceptions by other racial groups. *Sociological Perspectives, 41*, 95-118.