

At the Crossroads of Race: Racial Ambiguity and Biracial Identification Influence Psychological Essentialist Thinking

Danielle M. Young, Diana T. Sanchez, and Leigh S. Wilton
Rutgers University

Racial essentialism refers to the widely held belief that race is a biological, stable, and natural category. Although research finds very little evidence that race has biological underpinnings, racial essentialist beliefs persist and are linked to negative outgroup consequences. This study initially demonstrates that label and visual ambiguity concurrently inform racial categorization. It then tests whether exposure to racially ambiguous targets (a) challenges essentialism when ambiguous targets are labeled with biracial categories and (b) reinforces essentialism when ambiguous targets identify with monoracial categories. The results showed that White perceivers ($N = 84$) who were exposed to racially ambiguous, biracially labeled targets showed reductions in their essentialist thinking about race, whereas perceivers who were exposed to racially ambiguous, monoracially labeled targets showed increases in their essentialist beliefs.

Keywords: racial categorization, essentialism, multiracial

Previous research has demonstrated the pernicious consequences of essentialist thinking. Essentialized social categories, such as race and gender, are viewed as distinct, biologically driven, immutable, and informative (Haslam, Rothschild, & Ernst, 2000). Holding beliefs that social categories have underlying biological essences has been linked to stereotyping, ingroup bias, and prejudice (Haslam, Bastian, Bain, & Kashima, 2006). Race is one of the most strongly essentialized social categories (Haslam et al., 2000; Prentice & Miller, 2007), meaning that individuals often conceptualize racial groups such as “Black” or “Asian” as easily (visually) distinguishable from other social groups, stable and invariable across time and cultures, natural, and unchangeable.

Beliefs in underlying social category “essences” serve to explain and reify existing sociostructural inequalities (Keller, 2005; Yzerbyt, Rocher, & Schadron, 1997). For example, people who hold essentialist conceptions of race are more likely to endorse racial stereotypes (Bastian & Haslam, 2006; Haslam et al., 2000; Levy, Stroessner, & Dweck, 1998; Plaks, Stroessner, Dweck, & Sherman, 2001; Yzerbyt, Corneille, & Estrada, 2001); misremember minority group members in stereotypical ways (Eberhardt, Dugupta, & Banaszynski, 2003); and show less concern for, and interest in, interacting with racial outgroup members (Keller, 2005; Verkuyten, 2003; Williams & Eberhardt, 2008). Thus, it is imperative to test if and how essentialist thinking can be reduced and under what conditions essentialism persists, particularly for high status groups (Jayaratne et al., 2006, 2009; Verkuyten, 2003). The

purpose of this study is not to test whether racial essentialist beliefs are accurate (for more discussion on this issue, see Goodman, 2000, and Harris & Sim, 2002); instead, this study focuses on identifying the effect of exposure to racial labels and the effect of visual racial ambiguity on racial categorization and conceptions of race as a biological and immutable construct.

Scholars from several disciplines have theorized about the effect of mixed-race populations and biracial identity on beliefs about race and racial boundaries (DaCosta, 2007; Lee & Bean, 2010; Morning, 2005; Telles & Sue, 2009). In the last decade, the mixed-race population grew 32% to over 9 million Americans, identifying it as one of the fastest growing U.S. population segments (Humes, Jones, & Ramirez, 2011). In response, research has begun to address how visually ambiguous and biracially identified individuals are perceived, although empirical research on biracial populations is still in its infancy (Shih & Sanchez, 2005, 2009). Some scholars have argued that greater public attention surrounding biracial identity as a racial category strengthens the effect of essentialist beliefs about race whereas others argue that this same attention to biracial identities serves to blur racial categories (see Morning, 2005, for review). However, no study to our knowledge has ever experimentally examined whether racial ambiguity (i.e., physical appearances that defy easy categorization within traditional racial categories) and explicit biracial labels (i.e., African American or biracial) influence perceivers’ racial categorization or essentialist beliefs about race. The study presented here fills this gap by empirically examining the effects of biracial labels and racial ambiguity on categorization and racial essentialist beliefs.

Research on Categorization of Ambiguous and Biracial Targets

A growing body of literature exists on the effects of racial ambiguity on racial categorization (i.e., whether people categorize others as Black, White, or multiracial). This work overwhelmingly suggests that perceivers tend to automatically view and categorize targets with biracial ancestry or racially ambiguous physical ap-

This article was published Online First August 5, 2013.

Danielle M. Young, Diana T. Sanchez, and Leigh S. Wilton, Department of Psychology, Rutgers University.

This material is based on work supported by the National Science Foundation under Grant No. 1048324 and Grant No. 1226201 awarded to Diana T. Sanchez.

Correspondence concerning this article should be addressed to Danielle M. Young, Rutgers University, 53 Avenue E, Piscataway, NJ 08854-8040. E-mail: danielle.young@rutgers.edu

pearances as minorities (Ho, Sidanius, Levin, & Banaji, 2011; Peery & Bodenhausen, 2008). Such rapid categorizations follow the rule of “hypodescent,” placing ambiguous or biracial targets in the group with the least status (Ho et al., 2011). However, when given time and the option, perceivers have been shown to categorize racially ambiguous persons as multiracial (Chen & Hamilton, 2012; Halberstadt, Sherman, & Sherman, 2011; Peery & Bodenhausen, 2008). Thus, individuals can, and do, think about visually ambiguous individuals’ racial group membership in more complex ways than traditional racial categories.

In contrast to the burgeoning racial ambiguity research, there is currently little research on the effect of having a biracial label on categorization. However, research using monoracial labels suggests that perceivers attend to visual appearance and racial label in tandem. In fact, racial labels may serve to cue processing of ambiguous faces in particular. For example, Pauker and colleagues (2009) found that perceivers had better memory for ambiguous faces labeled as in-group members than those labeled as out-group members, suggesting that perceivers tend to use labels to guide categorization of racially ambiguous targets. In addition, research shows that providing labels that follow the rule of hypodescent for ambiguous looking targets enhances perceivers’ beliefs that the targets have ethnic minority features (Levin & Banaji, 2006). Paired with research demonstrating that racial ancestry information affects categorization (Peery & Bodenhausen, 2008; Sanchez, Good, & Chavez, 2011), these findings suggest that perceivers use racial labels to interpret the physical appearance of minority targets.

The pioneering research on racial categorization has neglected to examine the effects of biracial racial label and physical appearance in concert (e.g., Chen & Hamilton, 2012; Pauker et al., 2009). This is particularly troubling because visual racial ambiguity is in and of itself a designation that reifies the concept of a visually defined, easily recognizable, racial category. Despite this conundrum, visual racial ambiguity is often used explicitly to signify biracial status in research contexts (see Chen & Hamilton, 2012; Pauker et al., 2009; Peery & Bodenhausen, 2008). By neglecting to investigate these two cues in tandem, important questions remain about whether perceivers attend to the physical appearance and the label of targets. In this study, we attempt to untangle the effects of visual ambiguity (i.e., “looking” biracial) and biracial labels (e.g., explicit identification as biracial). We focus on minority labels (monoracial Black or biracial White/Black identification) because Black/White biracial (or monoracial Black) individuals rarely identify as exclusively White (Rockquemore & Brunnsma, 2002). We suggest that visual ambiguity and biracial labels will uniquely contribute to complex, deliberate categorization.

Visual Ambiguity and Biracial Identification May Shift Essentialism

Most categorization studies show that perceivers categorize racially ambiguous targets more slowly than unambiguous targets, regardless of whether they categorize the target as biracial or monoracial. Longer categorization times suggest that racial ambiguity creates uncertainty in perceivers by challenging the ease with which perceivers can determine race (see Chen & Hamilton, 2012). Uncertainty has a long history of being a key opportunity for attitudes and beliefs to shift (for a review, see Prislun & Wood,

2005). In fact, research on uncertainty and racial attitude shifting has demonstrated that in uncertain conditions, participants’ racial bias decreased when participants interacted with a confederate who espoused egalitarian ideals by wearing an “e-racism” shirt.

It then seems reasonable to hypothesize that racially ambiguous targets will foster change in essentialist beliefs by creating uncertainty (which can lead to attitude change) and by directly confronting essentialist beliefs (with a biracial label). For example, essentialist beliefs would be congruent with categorizing an ambiguous-looking individual as monoracial, as opposed to multiracial. Indeed, priming essentialist ideas (vs. control) leads to less use of biracial categorization for individuals with ambiguous appearance (Chen & Hamilton, 2012). Thus, a racially ambiguous individual who is explicitly identified as biracial looms as a direct confrontation to essentialist beliefs, and an ambiguous individual who is explicitly identified as Black is a clear affirmation of essentialist thought. In other words, when physical appearance and racial label are congruent with less essentialist views of race (i.e., racially ambiguous targets with biracial identification) or more essentialist conceptions of race (i.e., racially ambiguous targets with monoracial minority identification), lay perceivers’ notions of race may follow the implicit norm of the target’s label.

Therefore, we contend that racial ambiguity calls into question perceivers’ essentialized conceptions of race, as evidenced by slowed responses to racial categorization tasks and the use of alternative multiracial categories. Thus, in cases of physical racial ambiguity, a target’s identification as biracial or minority (i.e., whether they follow or break rules of hypodescent) may become a guide for perceivers to determine whether race is immutable or flexible. In a sense, racially ambiguous targets sit at the crossroads of race and their identification may cue norms about the immutability and distinctiveness of racial categories.

Research Overview

In this study, we hypothesize that racial categorization of a target will shift in response to visual racial ambiguity and racial label. In specific, we expect perceivers to categorize targets with ambiguous (i.e., African American and White) phenotypes as less African American (more White) than nonambiguous (i.e., African American only) looking targets. Likewise, perceivers will categorize targets with biracial labels (i.e., White/African American) as less African American (more White) than targets with monoracial (i.e., African American) labels. Furthermore, we expect that perceivers will shift their (essentialist) beliefs about race in accordance with the targets’ racial ambiguity and identification.

Methods

Participants

One-hundred White/European participants (55% female, $M_{\text{age}} = 19.51$ years) participated in this experiment. White participants were the focus of this research because the consequences of essentialist thinking are more negative for high status groups (Jayaratne et al., 2006, 2009; Verkuyten, 2003). Thus, essentialism reduction interventions for majority group members, such as Whites in the United States, may have a broader effect on bias

prevention. Sixteen failed to either complete the manipulation check ($N = 2$) or accurately recall the target's given racial label ($N = 14$) and thus were dropped from analysis, leaving 84 participants.¹

Measures and Materials

Target stimuli selection. To test exposure to actual ambiguous faces and to increase the validity of the study, target photos were selected via pretesting from natural (unmorphed) male photos presented from the shoulders up on a neutral background (taken from Minear & Park, 2004). Intersectional research on race and gender has demonstrated that nonambiguous Black female targets are seen as “less” Black than nonambiguous Black male targets (Goff, Thomas, & Jackson, 2008); thus, using only male targets ensured that racial categorization would not be differentially affected by the gender of the target. Photos were pretested on racial ambiguity and attractiveness by a convenience sample of 14 (10 females, 7 Whites, 4 Asians, 2 Latinos, and 1 multiracial individual). To ensure that effects did not hinge on a specific photograph, three photos that were high in racial ambiguity (categorized as equally African American and White) and three photos that were low in racial ambiguity (categorized solely as African American) were chosen. The chosen photos were matched on attractiveness ($M_{diff} = -.09$, $t(13) = -.34$, $p = .74$). The race and gender of pretest participants did not affect categorization or attractiveness ratings for ambiguous or nonambiguous photos (all p values $> .1$).

Labels. To ensure that participants could potentially view all labels as consistent with the presented phenotypes, only biracial and monoracial minority labels accompanied the target photos. Labels were manipulated by a sentence paired with the target photo: “This is Will, an 18-year-old (African American; African American/White Biracial) student.”

Relative categorization. Participants indicated on a scale of 1 (*not at all*) to 7 (*very much*) the extent to which they considered the target to be African American or White American using the following item: “To what extent do you think of Will as (African American/White American)?” (Sanchez et al., 2011). African-American and White-American categorization were negatively correlated ($r = -.25$, $p < .05$). To create a relative measure of how African American or White American a target was perceived, White-American categorization scores were subtracted from African-American categorization scores so that scores approximating zero indicated equal categorization of White and African American, and higher scores indicated that a target was categorized as more African American than White.

Racial essentialist beliefs. Pre- and posttest essentialist beliefs were measured using a shortened version of the race conceptions scale (RCS; Williams & Eberhardt, 2008; $\alpha = .76$ and $\alpha = .84$, respectively). From the 22 items that comprise the RCS, 10 items were selected to measure the race essentialist concepts presented in the original scale (see Appendix). Pretest measures were gathered before the laboratory session as part of a larger survey whereas posttest measures were gathered in the laboratory as described in the Procedure section. Participants indicated their level of agreement with 10 items on a seven-point scale with anchors of 1 (*do not agree*) to 7 (*strongly agree*), in which higher scores indicated greater race essentialist belief. This scale included such items as “No one can change his or her race—you are who

you are” and “It’s possible to be a full member of more than one race.”

Procedure

Before coming to the laboratory, participants in the psychology subject pool completed the RCS as part of a prescreening questionnaire for participant recruitment. When arriving at the laboratory, participants were directed into a private cubicle where they completed the experimental task on a computer. Participants were randomly assigned to view one of four possible target conditions in a 2 (label: biracial White/African American or African American) \times 2 (racial ambiguity: low or high) between-subjects design. Each participant viewed one randomly selected target (i.e., either one of the three low racial ambiguity photographs or one of the three high racial ambiguity photographs described in the target stimuli) from their assigned condition. Men and women were equally likely to be assigned to each condition, $\chi^2(3, N = 84) = 2.69$, $p > .4$. Participants were told that previous research had demonstrated that people were relatively accurate when making judgments of individuals based on limited information and were instructed to form impressions of a specific target on the basis of a photo and a short descriptor. Photos were as described above. Short descriptions including the target’s age (18), gender (male), name (Will), and racial label (either African American or White/African American biracial) accompanied the photo. No other information was provided.

Participants responded to several filler items (e.g., “What is the gender of his best friend?”, “What percentage of his friends are Black/African American?”) about their impressions of the target. Interspersed with the filler items were questions to measure racial categorization of the target. After completing these impression measures, participants completed several measures of personal beliefs, including a measure of racial progress (Kaiser, Drury, Spalding, Cheryan, & O’Brien 2009), items about current discrimination against minorities, and the essentialist beliefs measure described above. The Kaiser and colleagues’ (2009) measure of racial progress included items about racial progress in the United States ($\alpha = .68$), attitudes toward affirmative action ($\alpha = .84$), and beliefs in the Protestant work ethic ($\alpha = .66$). These scales either failed to have sufficient reliability (e.g., for the Protestant work ethic scale) or did not differentially affect results when used as a covariate and were dropped from analysis. After completing all of the dependent measures, participants were asked to recall the racial label that accompanied the target photograph as a manipulation check (see *Participants* for more information).

Results

Means, standard deviations, and zero-order correlations for all study variables are shown in Table 1.

Racial Categorization

To examine the effects of label and phenotype on racial categorization, we conducted separate analyses of variance (ANOVA) on the

¹ Twelve of these errors (85.7%) were in conditions in which label and phenotype were not congruent (seven in the low racial ambiguity, biracial label condition; five in the high racial ambiguity, monoracial label condition; $\chi^2(3, N = 98) = 7.89$, $p = .048$). Inclusion of those with inaccurate recall did not significantly alter the results.

Table 1
Means, Standard Deviations, and Zero-Order Correlations for
Dependent Variables

	Mean (SD)	1	2
1. Racial categorization	3.08 (2.30)	—	
2. Essentialism score (pretest)	4.65 (.91)	.38**	—
3. Essentialism score (posttest)	4.78 (1.13)	.21*	.77**

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

racial categorization variable. There were significant main effects of racial ambiguity, $F(1, 80) = 14.98, p < .001, \eta^2 = .13$, and label $F(1, 80) = 20.30, p < .001, \eta^2 = .16$, on the racial categorization of the target (see Figure 1). The target that was higher in racial ambiguity ($M = 2.28, SD = 2.23$) was categorized as African American (vs. White) less than the target that was lower in racial ambiguity ($M = 3.83, SD = 2.08$). In addition, the target that was identified as White/Black biracial ($M = 2.00, SD = 2.10$) was categorized as African American (vs. White) less than the target that was identified as Black monoracial ($M = 3.86, SD = 2.13$). The interaction between label and racial ambiguity was nonsignificant, $F(1, 80) = .89, p = .35$. In summary, racial ambiguity and biracial identification additively increased the extent to which targets were viewed as White (relative to African American).

Analysis of Essentialist Belief Change

To test changes in racial essentialist beliefs, we conducted a mixed Model 2 (label) \times 2 (racial ambiguity) \times 2 (pre- and postessentialism scores) repeated measures ANOVA. A significant main effect of racial ambiguity, $F(1, 80) = 7.59, p = .007$, and a two-way interaction between pretest and label, $F(1, 80) = 7.68, p = .007, \eta^2 = .07$, were qualified by a three-way interaction among racial ambiguity, label, and essentialism, $F(1, 80) = 15.85, p < .001, \eta^2 = .15$ (see Figure 2).

An analysis of simple effects showed that for participants who viewed ambiguous targets, labeling had effects on essentialism change (biracial label $F(1, 82) = 9.47, p = .003$; monoracial label, $F(1, 82) = 14.13, p < .001$), but for those who viewed targets with low racial ambiguity, labeling did not have any effect on essentialism change (biracial label $p = .13$; monoracial label $p = .56$). Consistent with predictions, participants who formed impressions of racially ambiguous, biracial-identified targets showed decreases in their essentialist thinking ($M_{pretest} = 4.29, M_{posttest} = 3.80$), whereas participants who formed impressions of racially ambiguous, monoracial-identified targets showed increases in their essentialist thinking ($M_{pretest} = 4.53, M_{posttest} = 5.01$; see Figure 2).

Discussion

Racial ambiguity and identification contributed to racial categorization, showing that label and physical appearance additively inform this initial step in person perception. However, identification and appearance interact to alter essentialist beliefs. Consistent with the hypotheses, racially ambiguous targets shifted essentialist beliefs in accordance with the identification of the target. These findings suggest that essentialist beliefs about race are malleable and racially ambiguous targets have the potential to influence such

beliefs. Labels applied to individuals with ambiguous phenotypes may challenge or reify existing essentialist beliefs by either complicating the “distinct” and “easily recognizable” aspect of essential categories or by confirming the rigidity of racial boundaries (Haslam et al., 2000). That is, perceiving a person whose appearance may interrupt the categorization process (i.e., a person who is phenotypically racially ambiguous) and whose label challenges binary (White or African American) understandings of race can test, and possibly reduce, essentialist beliefs. In contrast, someone whose appearance is racially ambiguous, but whose identification confirms automatic categorization tendencies (i.e., is labeled as African American), may reinforce essentialist ideas about race and thus increase essentialist thinking. The potential for multiracial labels to decrease and monoracial labels to increase essentialism can be seen in previous research. For example, when given the option, multiracial labels are chosen more often than are monoracial labels to categorize ambiguous individuals (Chen & Hamilton, 2012), which may point to a reduction in essentialism.

This study extends previous research by demonstrating that not only identification (e.g., Levin & Banaji, 2006) or ambiguous phenotypes (e.g., Pauker et al., 2009) affect person perception but also that these categorization cues are additive in informing categorization and can alter the beliefs of the person who perceives. This study begins the important exploration into the contexts that give rise to changes in psychological essentialism, which in turn may shed light on methods for stereotype reduction. It is important to note that exposure to either a racially ambiguous individual or a biracial label alone was not sufficient to change essentialist thinking; only concordant biracial phenotype and labels reduced essentialist thinking. Although a racially ambiguous individual challenges exclusive categorical (either/or) thinking about race, it is identification that guides how this challenge is processed. Indeed, “looking” biracial and identifying as African American increased essentialist beliefs. This lends support to the idea that viewing a racially ambiguous individual creates uncertainty and that a perceiver’s beliefs may shift according to the available norms (i.e., the racial label). In this case, for an ambiguous target,

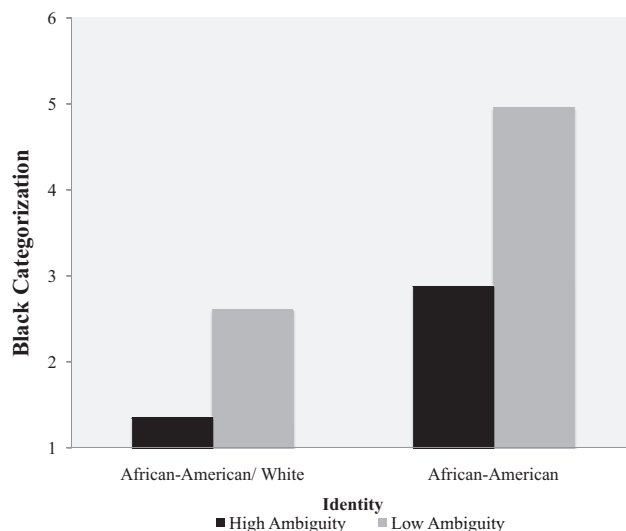


Figure 1. Differences in categorization by label and racial ambiguity.

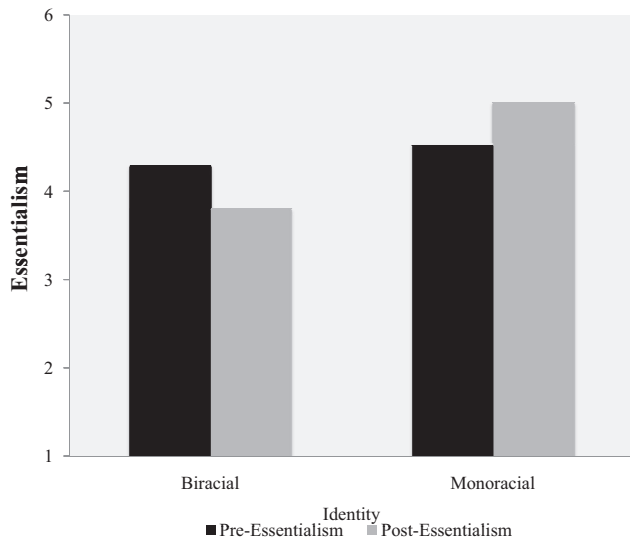


Figure 2. Pre- and postessentialism scores by label for highly racially ambiguous targets.

an African-American label confirmed and increased essentialist ideas. These findings lend support to the proposal that the increase in biracial individuals may challenge conventional thinking about race (e.g., Daniel, 2002), but this challenge may come with caveats. Biracial individuals may only challenge current racial concepts when they are multiply categorizable and are identified as biracial. In contrast, targets that are labeled as monoracial despite racially ambiguity may actually justify essentialist views, as demonstrated through the increase in essentialism after viewing a target with these conditions.

Past research demonstrated that priming essentialist thinking has negative consequences, such as reducing concern with social inequalities and decreasing motivation to have contact with out-group members (Williams & Eberhardt, 2008), increasing prejudice and in-group bias (Keller, 2005), and decreasing likelihood of categorizing someone as multiracial (Chen & Hamilton, 2012). However, this study proposes that hard-to-categorize populations present a “natural ambiguity” and a reoccurring challenge to essentialist thinking (Chen & Hamilton, 2012) that may lead to a reduction in the negative consequences of essentialist beliefs. Thus, this study suggests that the rise in visibility of multiracial populations carries with it consequences, not just for understanding categorization but also for an important categorization heuristic—psychological essentialism.

Limitations and Future Directions

To our knowledge, no research has yet directly investigated the combined effect of racial label and appearance on deliberate categorizations of minority targets. Nor has prior research formally tested the theory that racial ambiguity may influence conceptions of race that match the norm set by the identification of a target. Although this is an initial test of these theories, this study does have several strengths. This study is the first study to our knowledge to demonstrate the potential for essentialism shifts, and it does so using pre- and posttests. Second, the experimental design,

with multiple photo possibilities for each condition, controls for the possibility that effects hinge on a particular photo and ensures they are not subject to intersectional effects of race and gender. Furthermore, the effect sizes, although not large, are impressive when paired with the minimal manipulation of the independent variables.

Despite these strengths, this study also has several limitations that point to several avenues for future investigation. The current study specifically focuses on White participants as a key demographic for essentialist interventions, raising the question of how minority perceivers categorize and perceive ambiguous and biracial targets as well as how these groups’ essentialist ideals may be affected by exposure to these individuals. Essentialist views, although upholding social inequities that disadvantage minorities, are not held solely by White European Americans (Williams & Eberhardt, 2008). Expanding this research to include minority targets is an important step in understanding the full effect of ambiguous and biracially identified individuals on essentialist beliefs. This study also restricted the target photos’ gender to male to control for the combined effect of race and gender (Goff et al., 2008); however, this control leads to the question of how intersectionality influences racial categorization and essentialist beliefs. Intersectional race and gender research is vital to the full understanding of person perception, and research that incorporates gender and visual racial ambiguity could further illuminate the ways in which the social categories of race and gender mutually inform each other (Johnson, Freeman, & Pauker, 2012).

This study also exclusively explored the effects of minority labels (i.e., either biracial or monoracial minority labels). Although this was done in service of the ecological validity of the study, future research should investigate how monoracial White labels affect categorization and essentialist beliefs on racially ambiguous targets. Future research should also explore different methods of conveying biracial identification aside from labels. Although labels have been used consistently in research as a symbolic identifier of race (Eberhardt et al., 2003; Pauker et al., 2009), there has been little exploration as to the meaning imbued by a label. Do these labels reflect a target’s or society’s categorization of a target? Prior research that examines these different levels of categorization (societal, target) finds a strong degree of overlap between them ($r = .77, p < .01$; Sanchez, Good, & Chavez, 2011). These results suggest that if perceivers perceive that society views a target as Black, they also believe that the target views himself as Black. In other words, the label, whether representing society or a target’s categorization, may be conveying similar information. Despite this overlap, target and society identity could serve as a cue for conceptions of race, and this remains an important avenue for future information.

Finally, this study also investigates a one-time experimental exposure to targets, and future investigations should explore if the effect of multiple and prolonged exposure, in naturalistic and laboratory settings, shifts categorization and essentialist views. It is interesting to note that the essentialist belief scale used does not deal exclusively with essentialism surrounding the categories of African American and White American; therefore, the change in essentialist thinking is not anchored solely to the racial categories manipulated. Research should further identify the conditions under which essentialism (specific and general) is reduced via exposure

to diversity, which may lead to pathways to reduce stereotyping and prejudice.

References

- Bastian, B., & Haslam, N. (2006). Psychological essentialism and stereotype endorsement. *Journal of Experimental Social Psychology, 42*, 228–235.
- Chen, J. M., & Hamilton, D. L. (2012). Natural ambiguities: Racial categorization of multiracial individuals. *Journal of Experimental Social Psychology, 48*, 152–164.
- DaCosta, K. M. (2007). *Making multiracials: State, family and the market in the redrawing of the color line*. Palo Alto, CA: Stanford University Press.
- Daniel, G. R. (2002). *More than Black?: Multiracial identity and the new racial order*. Philadelphia, PA: Temple University Press.
- Eberhardt, J. L., Dasgupta, N., & Banaszynski, T. L. (2003). Believing is seeing: The effect of racial labels and implicit beliefs on face perception. *Personality and Social Psychology Bulletin, 29*, 360–370.
- Goff, P. A., Thomas, M. A., & Jackson, M. C. (2008). "Ain't I a Woman?": Towards an intersectional approach to person perception and group-based harms. *Sex Roles, 59*, 392–403.
- Goodman, A. H. (2000). Why genes don't count (for racial differences in health). *American Journal of Public Health, 90*, 1699–1702.
- Halberstadt, J., Sherman, S. J., & Sherman, J. W. (2011). Why Barack Obama is Black: A cognitive account of hypodescent. *Psychological Science, 22*, 29–33.
- Harris, D. R., & Sim, J. J. (2002). Who is multiracial? Assessing the complexity of lived race. *American Sociological Review, 67*, 614–627.
- Haslam, N., Bastian, B., Bain, P., & Kashima, Y. (2006). Psychological essentialism, implicit theories, and intergroup relations. *Group Processes & Intergroup Relations, 9*, 63–76.
- Haslam, N., Rothschild, L., & Ernst, D. (2000). Essentialist beliefs about social categories. *British Journal of Social Psychology, 39*, 113–127.
- Ho, A. K., Sidanius, J., Levin, D. T., & Banaji, M. J. (2011). Evidence for hypodescent and racial hierarchy in the categorization and perception of biracial individuals. *Journal of Personality and Social Psychology, 100*, 492–506.
- Humes, K. R., Jones, N. A., & Ramirez, R. (2011). *Race and Hispanic origin in the 2010 Census*. *2010 Census Briefs*, 1–23.
- Jayaratne, T. E., Gelman, S. A., Feldbaum, M., Sheldon, J. P., Petty, E. M., & Kardias, S. L. (2009). The perennial debate: Nature, nurture, or choice? Black and White Americans' explanations for individual differences. *Review of General Psychology, 13*, 24–33.
- Jayaratne, T. E., Ybarra, O., Sheldon, J. P., Brown, T. N., Feldbaum, M., Pfeffer, C. A., & Petty, E. M. (2006). White Americans' genetic lay theories of race differences and sexual orientation: Their relationship with prejudice toward Blacks, and gay men and lesbians. *Group Processes & Intergroup Relations, 9*, 77–94.
- Johnson, K. L., Freeman, J. B., & Pauker, K. (2012). Race is gendered: How covarying phenotypes and stereotypes bias sex categorization. *Journal of Personality and Social Psychology, 102*, 116–131.
- Kaiser, C. R., Drury, B. J., Spalding, K. E., Cheryan, S., & O'Brien, L. T. (2009). The ironic consequences of Obama's election: Decreased support for social justice. *Journal of Experimental Social Psychology, 45*, 556–559.
- Keller, J. (2005). In genes we trust: The biological component of psychological essentialism and its relationship to mechanisms of motivated social cognition. *Journal of Personality and Social Psychology, 88*, 686–702.
- Lee, J., & Bean, F. (2010). *The diversity paradox: Immigration and the color line in 21st century America*. New York, NY: Russell Sage Foundation.
- Levin, D. T., & Banaji, M. R. (2006). Distortions in the perceived lightness of faces: The role of race categories. *Journal of Experimental Psychology: General, 135*, 501–512.
- Levy, S. R., Stroessner, S. J., & Dweck, C. S. (1998). Stereotype formation and endorsement: The role of implicit theories. *Journal of Personality and Social Psychology, 74*, 1421–1436.
- Minear, M., & Park, D. C. (2004). A lifespan database of adult facial stimuli. *Behavior Research Methods, Instruments, & Computers, 36*, 630–633.
- Morning, A. (2005). Multiracial classification on the United States Census: Myth, reality, and future impact. *Revue Européenne des Migrations Internationales, 21*, 111–134.
- Pauker, K., Weisbuch, M., Ambady, N., Sommers, S. R., Adams, R. B., & Ivcevic, Z. (2009). Not so Black and White: Memory for ambiguous group members. *Journal of Personality and Social Psychology, 96*, 795–810.
- Peery, D., & Bodenhausen, G. V. (2008). Black + White = Black: Hypodescent in reflexive categorization of racially ambiguous faces. *Psychological Science, 19*, 973–977.
- Plaks, J. E., Stroessner, S. J., Dweck, C. S., & Sherman, J. W. (2001). Person theories and attention allocation: Preferences for stereotypic versus counterstereotypic information. *Journal of Personality and Social Psychology, 80*, 876–893.
- Prentice, D. P., & Miller, D. T. (2007). Psychological essentialism of human categories. *Current Directions in Psychological Science, 16*, 202–206.
- Prislin, R., & Wood, W. (2005). Social influence in attitudes and attitude change. In D. Albarracín, B. T. Johnson, & M. P. Zanna (Eds.), *The handbook of attitudes* (pp. 671–705). Mahwah, NJ: Erlbaum.
- Rockquemore, K. A., & Brunson, D. L. (2002). Socially embedded identities: Theories, typologies, and processes of racial identity among Black/White biracials. *The Sociological Quarterly, 43*, 335–356.
- Sanchez, D. T., Good, J. J., & Chavez, G. (2011). Blood quantum and perceptions of Black-White biracial targets: The Black ancestry prototype model of affirmative action. *Personality and Social Psychology Bulletin, 37*, 3–14.
- Shih, M. J., & Sanchez, D. T. (2005). Perspectives and research on the positive and negative implications of having multiple racial identities. *Psychological Bulletin, 131*, 569–591.
- Shih, M., & Sanchez, D. T. (2009). When race becomes more complex: Towards understanding the landscape of multiracial identity and experiences. *Journal of Social Issues, 65*, 1–11.
- Telles, E. E., & Sue, C. (2009). Racial mixture: Boundary crossing in comparative perspectives. *Annual Review of Sociology, 35*, 129–146.
- Verkuyten, M. (2003). Discourse about ethnic group (de-)essentialism: Oppressive and progressive aspects. *British Journal of Social Psychology, 42*, 371–391.
- Williams, M. J., & Eberhardt, J. L. (2008). Biological conceptions of race and the motivation to cross racial boundaries. *Journal of Personality and Social Psychology, 94*, 1033–1047.
- Yzerbyt, V., Corneille, O., & Estrada, C. (2001). The interplay of subjective essentialism and entitativity in the formation of stereotypes. *Personality and Social Psychology Review, 5*, 141–155.
- Yzerbyt, V., Rocher, S., & Schadrin, G. (1997). Stereotypes as explanations: A subjective essentialistic view of group perception. In R. Spears, P. J. Oakes, N. Ellemers, & S. A. Haslam (Eds.), *The social psychology of stereotyping and group life* (pp. 20–50). Malden, MA: Blackwell Publishing.

Appendix**Shortened 10-Item RCS**

1. No one can change his or her race—you are who you are.
2. It's natural to notice the racial group to which people belong.
3. Siblings born to the same parents will always be of the same race as each other.
4. Young children probably learn about which people fall into which racial groups automatically, without much help from adults.
5. A person's race is fixed at birth.
6. The political climate can dictate whether someone is categorized as Black or White.
7. The average person is highly accurate at identifying people by race.
8. It's easy to tell what race people are by looking at them.
9. Racial groups are primarily determined by biology.
10. It's possible to be a full member of more than one race.