

# A review of multiracial malleability: Identity, categorization, and shifting racial attitudes

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## Abstract

The majority of social perception research to date has focused on perceptually obvious and prototypical representations of social categories. However, not all people belong to social categories that are easily discernable. Within the past decade, there has been an upsurge of research demonstrating that multifaceted identities (both one's own and perceptions of others' identities) influence people to think about social categories in a more flexible manner. Here, we specifically review research on multiracial identity and perceptions of multiracial individuals as 2 domains where researchers have documented evidence of the flexible nature of social identities and social categorization. Integrating frameworks that argue race is a dynamic and interactive process, we provide evidence that studying multiracial perceivers and targets helps reveal that race changes across situations, time, and depending on a number of top-down factors (e.g., expectations, stereotypes, and cultural norms). From the perspective of multiracial individuals as perceivers, we review research showing that flexible identity in multiracial individuals influences the process of social perception driven by a reduced belief in the essential nature of racial categories. From the perspective of multiracial individuals as targets, we review research that top-down cues influence the racial categorization process. We further discuss emerging work that reveals that exposure to multiracial individuals influences beliefs surrounding the categorical (or noncategorical) nature of race, itself. Needed directions for future work are discussed.

## 1 | INTRODUCTION

People routinely categorize others into social groups (e.g., sex, race, and age) and do so almost instantaneously (in under 200 ms; Amodio, Bartholow, & Ito, 2014; Ito & Urland, 2003). Despite the emphasis that social psychological research places on the ease of social categorization, not all people belong to social categories that are easily discernable. For example, what happens when a woman encounters a man who has a mixture of racial features—someone who cannot easily be racially categorized? Does she always categorize this racially ambiguous man in the same way each time she meets him? Does her categorization depend on whether she encounters him at a basketball game or at an international film festival? And does her experience of difficulty in making this categorization or her exposure to those who claim a multiracial identity have any implications for her racial attitudes?

Within the past 10 years, researchers have started to examine multiracial identity and perceptions of multiracial individuals in an effort to better understand the complexities of racial identity and racial categorization (Kang & Bodenhausen, 2015). Although lay people tend to think about social categories, such as race, as biologically based, distinct, and natural (Prentice & Miller, 2007), there is no scientific or biological basis for the category of race. Populations that humans frequently categorize as the “same race” vary on a continuum in terms of their physical features and are not distinguishable by their genetic makeup (Feldman, 2010). Here, we focus on research conducted on multiracial identity and perceptions of multiracial individuals to highlight the many interacting and dynamic forces that contribute to racial identity and categorization. Studying multiracial individuals reveals flexibility in social identities and categorization that is not always apparent when researchers study monoracial individuals who fit more easily within one group. We will highlight recent work demonstrating that (a) multiracial individuals' malleability regarding their own identity leads to flexibility in their social perceptions and behavior; (b) social perceptions of multiracial targets depend on interactions between social contexts, perceiver motivations, and category cues; and (c) exposure to multiracial individuals shifts racial attitudes by changing people's views of racial categories themselves (i.e., seeing race as biologically based or a social construct). Studying complex and multifaceted identities of both perceivers and targets helps to build a better understanding of social categorization and its resultant downstream consequences (e.g., effects on stereotyping, memory, and behavior) and the dynamic and interactive nature of social perception more broadly (Gaither, 2015; Kang & Bodenhausen, 2015; Richeson & Sommers, 2016).

We situate the work discussed within two broader frameworks that overlap in their view that race is a dynamic and interactive *process*, rather than a fixed thing that someone *has*. In terms of racial identity, the extent to which an individual claims an identity or sees it as important in the moment depends on her or his immediate social contexts (e.g., where she or he is and who she or he is with) as well as broader cultural norms and practices, all of which can shift over time and thus lead to shifts in an individual's racial identity (Markus, 2010; Root, 1999). While we review work that emphasizes multiracial individuals' multiple racial identities, not all multiracial individuals acknowledge their multiple racial identities. Some simply claim one identity. But overall, many multiracial individuals have common experiences that shape their identity in similar ways, often in terms of adopting flexibility in their identification. This is likely due to everyday interactions shaped by a broader society that emphasizes a discrete and categorical view of race that may conflict with their personal identity. Similarly, monoracial individuals do not by default have less complex and less malleable racial identities, but the sets of experiences they have in their everyday interactions may lead more monoracial individuals to exhibit consistency in their racial identity.

The dynamic interactive model of social perception (Freeman & Ambady, 2011) makes similar predictions about racial categorization being a dynamic process. This model posits that both top-down information (e.g., expectations and activated stereotypes) and bottom-up information (e.g., facial cues) are simultaneously activated when a perceiver sees a target and these factors interact over time to inform social perception. So, put simply, racial categorization is not achieved by relying on *only* visible phenotypic cues (Freeman, Penner, Saperstein, Scheutz, & Ambady, 2011). Instead, multiple information sources are considered, and these interacting sources guide whether a multiracial

person is categorized as Black or White or multiracial by different people, in different contexts, and at different points in time. Building on Freeman and Ambady's (2011) model, we find that it is important to consider additional top-down factors that could impact perceivers' categorizations. In particular, broad cultural conceptions of race and identity/category salience are two important factors in the research we review. Overall, recent research on multiracial perceivers and multiracial targets highlights the importance of attending to cultural contexts, methods, and samples in research on racial categorization (see also Pauker, Williams, & Steele, 2016).

## 2 | MULTIRACIAL INDIVIDUALS AS NOVEL SOCIAL PERCEIVERS

The growth of the multiracial population in the United States (Humes, Jones, & Ramirez, 2011) has led to changes in how institutions define racial identity. Originally terms such as mulatto (in 1850) and quadroon and octoroon (in 1890) were added to the census to remunerate those of mixed race backgrounds, but later these terms were removed and replaced (e.g., the 1930 census explicitly stated that anyone with mixed White and Black blood should be considered Black, in line with laws that espoused the "one-drop rule"; Morning, 2003; Snipp, 2010). These changes over time highlight the socially constructed, dynamic, and historically contingent nature of race. Most recently, the 2000 U.S. Census added the option to check more than one race for the first time, expanding the definition of race to include belonging to more than one race. This multiplicity of holding more than one racial identity poses a novel opportunity to examine how social identity (and malleability in identity) affects social perception (Gaither, 2018).

### 2.1 | Malleability in racial identity

Multiracial individuals are able to adopt a variety of racial identities—from a singular identity (choosing a monoracial identity) to a protean identity (switching back and forth between monoracial identities) or choosing a multiracial identity (Rockquemore & Brunsma, 2002). Numerous studies using the National Longitudinal Study of Adolescent to Adult Health (Add Health) have found that multiracial people are prone to shifts in their identity over time (Doyle & Kao, 2007; Harris & Sim, 2002; Hitlin, Brown, & Elder, 2006). For example, Doyle and Kao (2007) found that the majority of multiracial individuals (59%) changed their self-reported racial identification across two separate time points. Factors that might influence multiracial individuals' racial identity range from the extent to which their physical features appear prototypical of one racial group in the eyes of others to the type of social context they might be in (e.g., at home or in school; Doyle & Kao, 2007; Good, Chavez, & Sanchez, 2010; Rockquemore & Brunsma, 2002). Much of the research has focused on the benefits and costs of this malleability in identity for multiracial individuals' psychological well-being and health (Gaither, 2015; Sanchez, Shih, & Garcia, 2009; Shih, Sanchez, & Ho, 2010; Tabb, 2015). Here, we focus on how malleability in racial identity affects social perception and intergroup relations.

### 2.2 | Malleability in social perception and intergroup relations

To the extent that a multiracial person's malleable racial identification allows them to adapt to different intergroup situations, this malleability should affect multiracial individuals' social perception of others and their intergroup interactions. While many studies have previously argued that social identities fundamentally shape social perception and intergroup relations, empirical studies often compare groups that also differ in other ways besides their race. For example, studies examining the own-race bias—the effect that people better remember in-group (i.e., own-race faces) compared to out-group (i.e., other-race faces)—often compare perceivers who differ in racial group membership. However, White and Black perceivers, for example, differ in many other ways (e.g., in terms of status and experience with White and Black faces), and thus, isolating the effect of social identity can be difficult.

Studies examining the effect of racial identity salience on multiracial participants' processing and recognition of faces allow researchers to isolate the effect of social identity. These studies demonstrate that multiracial participants can shift their attention and perceive others in line with their salient racial identity. Chiao, Heck, Nakayama, and

Ambady (2006) asked biracial (Black/White) participants to perform a visual search task that involved finding a Black face in a group of White faces or a White face in a group of Black faces. If asked to write an essay about their Black identity, biracial participants performed the task much like Black participants and vice versa if asked to write an essay about their White identity. Participants exhibited a change in visual perception based on the top-down influence of their salient racial identity. Using an identical manipulation of racial identity, Pauker, Ambady, and Freeman (2013) extended this idea to biracial individuals' memory of in-group and out-group faces. When biracial (Black/White) individuals were primed with their Black identity, they recognized Black faces better (similar to Black participants), and when primed with their White identity, they recognized White faces better (similar to White participants). Additionally, biracial individuals also changed how strongly they identified as White or Black in line with their salient racial identity. Examining changes to face processing in multiracial individuals based on contextual changes in racial identity illustrates the malleable nature of even basic social perception (e.g., visual attention and face memory) and provides support for dynamic models of social perception (Freeman & Ambady, 2011).

Similar to social perception research, intergroup relations research often compares different racial groups' reactions to each other and examines their (often awkward and stressful) interactions in hope of understanding the role that racial group membership plays in shaping these reactions and interactions. But again, so many differences between the two racial groups being compared could be driving awkward interactions other than racial group membership. Thus, researchers can examine multiracial-identified individuals to further understand the role of racial identity and the expectations relevant to that identity play in shaping interactions with multiple different racial groups. Gaither, Sommers, and Ambady (2013) found that when primed with their Black identity, Black/White biracial individuals behaved more positively and experienced greater comfort when interacting with a Black partner, and similarly, when primed with their White identity, they behaved more positively and experienced greater comfort with a White partner. Additionally, they also self-reported racial identification in line with their salient racial identity (i.e., depending on whether they wrote an essay about their Black or White identity; Gaither et al., 2013). This was some of the first work to empirically demonstrate that biracial individuals could use flexible racial identification to adapt in intergroup interactions. Having access to multiple racial identities may also enable individuals to facilitate smoother interracial interactions by switching their verbal behavior. In another study, Gaither, Cohen-Goldberg, Gidney, and Maddox (2015) found that biracial Black/White individuals also changed their verbal behavior depending on their salient racial identity. Those biracial individuals primed with a Black racial identity talked with more features characteristic of African American English, and those primed with a White racial identity talked with more features characteristic of varieties of English most commonly spoken by White Americans. These two studies show that multiracial individuals can switch between their racial identities and that their behavior flexibly changes with situational cues that make different racial identities salient. This flexibility may facilitate their ability to fit into different intergroup contexts. On a basic level, multiracial individuals' experiences navigating their racial identity situated within the dominant societal view that race is fixed and discrete may lead them to question a fixed, biologically based view of race altogether.

### 2.3 | Why multiracial people are novel social perceivers

In line with this view that multiracial individuals may reject fixed views of race, research has found that multiracial individuals often show lower endorsement of race essentialism compared to monoracial individuals (Bonam & Shih, 2009; Shih, Bonam, Sanchez, & Peck, 2007). Race essentialism is the tendency to view race as biologically based, immutable, and informative (e.g., Haslam, Rothschild, & Ernst, 2000; Prentice & Miller, 2007) and has been linked to racial stereotyping and prejudice, as well as a strong reliance on using race when perceiving others (Chao, Hong, & Chiu, 2013; Prentice & Miller, 2007). Multiracial individuals (more so than their monoracial counterparts) indicate that they are raised in households that de-emphasize the importance of racial categories and, therefore, tend to reject the idea that race biologically determines abilities (Shih et al., 2007). This lower endorsement of race essentialism could facilitate multiracial individuals' ability to flexibly adopt the perspective of multiple groups and thus could explain many of the effects on social perception and intergroup relations described above.

As one example, Pauker and Ambady (2009) found that multiracial individuals' lower endorsement of essentialism facilitated flexible memory for multiple groups of faces. This study tested Asian, White, and biracial (Asian/White) participants' memory for Asian, White, and biracial faces that were labeled as either Asian or White. Biracial individuals thought of race in a more flexible manner and largely ignored racial labels when remembering biracial faces, remembering biracial faces labeled as Asian or White equally well. On the other hand, monoracial individuals thought of groups in a more essentialist manner and paid more attention to the racial labels provided by the experimenter and thus remembered those faces labeled as in-group members better than faces labeled as out-group members. Thus, participants' beliefs about race determined the extent to which they relied on the provided social categories to guide their memory. Research also suggests possible intergroup benefits for holding a less essentialist, socially constructivist view of race. Bonam and Shih (2009) found that multiracial individuals felt more comfortable with intimate interracial interactions than do monoracial minority and monoracial majority participants. More specifically, multiracial individuals' flexible identity and view of race as socially constructed likely motivated them to feel comfortable affiliating closely with multiple racial groups (Sanchez & Garcia, 2009).

By flexibly moving between the boundaries of multiple racial categories, multiracial individuals' experiences shape their own perceptions of race and have downstream cognitive (e.g., face processing and memory) and behavioral (e.g., interracial behavior) consequences. The evidence supports the notion that malleability in identity facilitates malleability in social perception and intergroup relations and there is some initial evidence that the underlying mechanism could be changes in multiracial individuals' view of race as a category (i.e., through reducing essentialist beliefs). In the next section, we explore whether perceiver's exhibit malleability in racial categorization when perceiving multiracial targets (i.e., do their categorizations change based on their motivations or contextual cues) and whether exposure to multiracial people (i.e., perceiving multiracial targets and experiencing shifting racial categorizations) may even alter perceivers' views of racial categories.

### 3 | PERCEIVING MULTIRACIAL TARGETS: MALLEABILITY IN SOCIAL PERCEPTION

People usually efficiently place others into social categories, such as race, in part because these categories help to organize and simplify person perception (Macrae & Bodenhausen, 2000). Part of the reason race is used as a basis for social categorization in many societies is because these societies implicitly and explicitly highlight the salience of race (Bigler & Liben, 2007) and perpetuate patterns of interactions that reinforce race as a stable, natural, discrete, and biological category (Markus & Moya, 2010). Yet multiracial targets are incompatible with these dominant conceptions of race, particularly notions that race is stable and discrete. This tension between society's conceptualization of race and multiracial individuals' existence complicates the categorization process and also reveals how perceptions of race are dynamic and malleable—changing across social contexts, based on perceiver motivations, and influenced by other top-down cues.

Prior to including multiracial targets in studies on social perception, the literature largely assumed that perceiving others' races happened efficiently, quickly, and with ease. Research on people's perceptions of multiracial targets, however, finds that perceivers take longer and have more difficulty categorizing faces that are racially ambiguous in appearance (e.g., Blascovich, Wyer, Swart, & Kibler, 1997; Chen & Hamilton, 2012; Freeman, Pauker, Apfelbaum, & Ambady, 2010). The literature has used racial ambiguity (e.g., a mixture of racial features, not prototypical of one specific race) as one proxy for multiracial identity, especially when examining how individuals perceive and categorize social targets based on visual cues (e.g., upon seeing another person's face). While certainly not all multiracial individuals are racially ambiguous, many do share the common experience of being hard to categorize and are frequently asked "What are you?" (Tran, Miyake, Martinez-Morales, & Csizmadia, 2016). It may be precisely this ambiguity and difficulty in the categorization process that allows for malleability in social perception (i.e., different racial categorizations of the same target across varying situations and time). Indeed, recent models (Freeman & Ambady, 2011)

and empirical work (Chen, Moons, Gaither, Hamilton, & Sherman, 2014; Freeman et al., 2011; Pauker et al., 2009) highlight how examining racially ambiguous targets bring into focus the influence of top-down features like stereotyping, contextual cues, and motivations. In other words, as race-specifying cues (i.e., a target's phenotype) become increasingly ambiguous, perceivers lean more heavily on top-down influences, such as stereotypical clothing or their essentialist beliefs, to racially categorize others (Freeman et al., 2011).

### 3.1 | Evidence for flexibility in categorization

In line with recent models of social perception (Freeman & Ambady, 2011), we argue that top-down and bottom-up cues interact to guide the process of multiracial categorization. That is, if and when a multiracial individual is categorized as Black or White or Multiracial will change across perceivers, contexts, and time. Though some studies have focused on the outcomes of perceivers' categorization of multiracial targets in one particular way (i.e., in line with hypodescent—the tendency to categorize individuals with mixed racial ancestry into their socially subordinate group; Davis, 1991; Ho, Sidanius, Levin, & Banaji, 2011), much of this research has also revealed the flexibility and nuance of the racial categorization process more broadly. For example, studies have found that the same targets can be processed and categorized differently depending on perceivers' characteristics, such as their essentialist beliefs (e.g., Chao et al., 2013; Eberhardt, Dasgupta, & Banaszynski, 2003; Gaither et al., 2014), prejudice (e.g., Ho, Roberts, & Gelman, 2015; Hugenberg & Bodenhausen, 2004), hierarchy maintaining motives (Ho, Sidanius, Cuddy, & Banaji, 2013; Krosch, Berntsen, Amodio, Jost, & Van Bavel, 2013; Kteily, Cotterill, Sidanius, Sheehy-Skeffington, & Bergh, 2014), or racial identity (e.g., Gaither, Pauker, Slepian, & Sommers, 2016; Ho, Kteily, & Chen, 2017; Knowles & Peng, 2005). Studies reveal that target's characteristics, such as socioeconomic status (e.g., Freeman et al., 2011; Young, Sanchez, & Wilton, 2015), racial identity of targets (e.g., multiple minority identities; MacLin & Malpass, 2001; Pauker, Carpinella, Lick, Sanchez, & Johnson, in press; Tskhay & Rule, 2015), and accompanying category cues, such as hairstyles, labels, or stereotypes (e.g., Dickter & Kittel, 2012; MacLin & Malpass, 2001; Tskhay & Rule, 2015), change categorizations. Contextual factors, such as exposure to economic scarcity (e.g., Krosch & Amodio, 2014; Rodeheffer, Hill, & Lord, 2012) and intergroup exposure (e.g., Freeman, Pauker, & Sanchez, 2016; Halberstadt, Sherman, & Sherman, 2011; Pauker et al., in press), also impact the racial categorization process. In all of these studies, the same Black/White target, for example, can be categorized as *either* Black or White depending on the situation, context, or perceivers' motivations.

### 3.2 | The need to expand categorization methods

Recent research has also revealed that the types of methods researchers use can serve as an additional top-down factor that constrains multiracial categorization. For example, when multiracial is included as a category option, perceivers tend not to categorize in line with hypodescent (Chen et al., 2014; Chen & Hamilton, 2012; Pauker et al., in press; Peery & Bodenhausen, 2008). Additionally, when the methods allow responses that are less categorical, such as through tracking mouse movements or measuring face processing via event-related potentials, people show evidence of processing multiracial targets in a more nuanced manner. For example, White participants show evidence of partial activation of both the Black and White categories when categorizing Black/White targets (Freeman et al., 2010) and little early differentiation between in-group faces and racially ambiguous Black/White or Asian/White faces (Dickter & Kittel, 2012; Willadsen-Jensen & Ito, 2006; 2008). These results also highlight the importance of not only examining the products of racial categorization (the ultimate outcome) but also the process of getting to that outcome (Freeman et al., 2016; Freeman & Ambady, 2011). Indeed, differences in process (more ease or more difficulty in resolving competition between multiple active categories) or changes in early processing driven by contextual information, like the racial context of the other faces, predict trust and implicit evaluations (Freeman et al., 2016; Ito, Willadsen-Jensen, Kaye, & Park, 2011).

In sum, we see more malleability in the ways people process and categorize multiracial targets when we examine a broader array of outcome measures, targets, and social perceivers. But this leads to the question of whether there might be potential downstream effects that stem from perceiving or experiencing this malleability and/or difficulty in categorization?

## 4 | PERCEIVING MALLEABILITY: CONSEQUENCES FOR SOCIAL PERCEPTION AND BEYOND

There is a dearth of empirical social psychological research examining the impact of exposure to multiracial or racially ambiguous targets on intergroup attitudes (Dovidio, Love, Schelhass, & Hewstone, 2017). Just as possessing multiple racial identities allowed flexibility in social perception for multiracial individuals, could *perceiving malleability* in multiracial targets also lead to flexibility in social perception for perceivers with potential downstream consequences for intergroup attitudes? In other words, the perceptual experience of dealing with ambiguity and trying to resolve features that do not neatly fit into traditional categories or exposure to those that self-identify with a social identity that spans multiple categories (i.e., as multiracial) may dynamically shape beliefs about race. For example, seeing racially ambiguous individuals may give the mind practice with dealing with complexity and encourage flexibility, which in turn may break down the very building blocks upon which negative intergroup attitudes are built (e.g., racial categories). Next, we discuss some recent evidence supporting how perceiving malleability may have downstream implications for race essentialism and intergroup attitudes.

### 4.1 | Exposure to multiracial targets and race essentialism

Two factors have been shown to influence how exposure to multiracial targets impact intergroup outcomes: racial ambiguity and explicit biracial/multiracial identification. Racial ambiguity is inherently incompatible with essentialist beliefs about race because essentialism presupposes the ease of racial categorization. Those who endorse racial essentialism tend to see race as immutable and racial categories as distinct (Haslam et al., 2000; Plaks, Malahy, Sedlins, & Shoda, 2011). Contact with those who appear racially ambiguous (i.e., could belong to multiple different categories), then, fundamentally challenges the notion that racial groups are distinct. Thus, multiracial targets may challenge core elements of essentialism by reducing the ability of categories to easily inform inferences and convey essences. Moreover, racially ambiguous targets who explicitly challenge the categories themselves by dually identifying (e.g., biracial identification) may call into question the categorical system rather than prompt standard recategorization and subtyping processes.

Young, Sanchez, and Wilton (2013) found that exposure to a racially ambiguous (Black/White) individual who identified as biracial decreased White perceivers' endorsement of race essentialism. However, exposure to the same racially ambiguous individual who instead identified as Black actually led to an increase in White perceivers' race essentialism. Relatedly, other work demonstrates that an actual social interaction with a racially ambiguous individual labeled as biracial compared with an individual labeled as Black, or not labeled at all, also resulted in lower levels of race essentialism endorsement (Gaither, Babbitt, & Sommers, 2018). Recent work has also shown that reductions in race essentialism continue over the course of 2 weeks after a social interaction with a racially ambiguous partner occurs (Sanchez, Young, & Pauker, 2015). Encouraging social interactions with multiracial individuals may hold promise as a method by which to reduce racial essentialism.

### 4.2 | Exposure to multiracial targets and other intergroup consequences

Initial evidence also suggests that exposure to multiracial targets has other intergroup consequences. Biracial-identified individuals may serve as reminders that distinctions between racial groups can be permeated and thus cause individuals to perceive greater similarity between groups—an important precursor to positive changes in

intergroup relations. Wilton, Sanchez, and Giamo (2014) found that exposure to biracial-identified, racially ambiguous (Asian/White) targets increased perceptions of intergroup similarity, but only for Whites who were less racially identified. Highly racially identified group members are typically protective of their group and may see their racial category as less permeable. In another work, Gaither, Toosi, Babbitt, and Sommers (in press) found that exposure to biracial-identified, racially ambiguous (Asian/White, Black/White and Asian/Black) targets reduced Whites' endorsement of colorblindness—an ideological approach that, despite its appeal, contributes to negative intergroup interactions, stereotyping, and prejudice (Apfelbaum, Norton, & Sommers, 2012). Finally, there is some evidence consistent with the idea that exposure to multiracial targets may lead to improved intergroup outcomes through reducing race essentialism. Pauker, Xu, Williams, and Biddle (2016) found children in Hawaii (including White children) compared with those in the mainland United States exhibit less essentialist thinking about race and reduced out-group stereotyping. Notably, Hawaii is a unique context that boasts a minority-majority population whose demographics include about 30% multiracial individuals (U.S. Census, 2012), which suggests that this context and/or multiracial contact may reduce race essentialism and associated stereotyping. In fact, in a recent longitudinal study, Pauker, Carpinella, Meyers, Young, and Sanchez (2017) found that White individuals transitioning from the continental United States to Hawaii decreased in their endorsement of race essentialism 6–9 months after arrival. This decrease in essentialism was associated with numerous positive benefits, including a decrease in modern racism and social dominance orientation, and an increase in cognitive flexibility, over time. This longitudinal study suggests one way in which multiracial identity, exposure to multiracial targets, and reductions in essentialism may mutually interact. This study also highlights how cultural contexts (and the people in them) shape and are shaped by ways of perceiving, categorizing, and thinking about race.

While this exciting work suggests that increased exposure to complex identities could break down categorical representations of race and the negative intergroup attitudes built on these representations, a number of limitations are worth noting. First, this work has almost exclusively been conducted with White perceivers and has relied on self-reports of exposure to racial diversity and racial ambiguity. Second, researchers know little about the conditions (e.g., does quantity or quality of contact matter more) under which exposure to racial ambiguity and biracial labels affect race essentialism and other intergroup outcomes. Indeed, there might be conditions where exposure to such racial ambiguity or biracial labels could lead to more entrenched essentialism. For example, political conservatives or those high in social dominance orientation may find racial ambiguity threatening (Ho et al., 2013; Krosch et al., 2013) and lead them to reinforce rather than re-evaluate their essentialist beliefs. This work opens the door for many new research directions.

## 5 | FUTURE DIRECTIONS

### 5.1 | Multiracial social perceivers

While many multiracial individuals exhibit malleability in their identification, not all multiracial individuals exhibit malleability (Rockquemore & Brunσμα, 2002). Since empirical research to date has primarily utilized between-subjects designs, researchers have not explicitly tested malleability within a biracial individual or whether the extent to which a multiracial individual adopts a more malleable versus less malleable identity impacts social perception and intergroup relations. Additionally, most research has primed multiracial perceivers with one parental identity or another (e.g., priming a Black/White biracial as Black or White). Priming a multiracial perceiver with a multiracial identity could lead them to view both their Black and White identity as in-groups and lead to enhanced attention or memory. This could be tested empirically in future research. Finally, perhaps malleability in racial identity only applies to social perceptions and intergroup relations for groups that are part of the social perceivers' ancestry. Presumably the effects of identity malleability or moving effortlessly between and among various identities on social perception occur by highlighting an overlapping in-group with the target. For example, an Asian/White individual may only show benefits



in processing Asian faces or White faces, but not Black faces. One open question, then, is does identity malleability break down the reliance on racial categories broadly or only facilitate flexibility in perceiving certain racial categories? Future studies could examine this through including a broader array of targets, including targets that do not share any overlap with any of the multiracial individual's potential in-groups.

## 5.2 | Perceiving multiracial targets

There are many limitations to the existing work on perceiving multiracial targets. Future research could tackle these limitations by examining more diverse samples, across varying social environments, with a wider array of methods, and including more varied targets (beyond only White/racial minority combinations). For example, most of the work on perceiving multiracial targets has been conducted with White perceivers in the United States. Thus, many of the biases observed in the literature on the racial categorization of multiracial people (such as hypodescent) may be a product of the sociocultural context or the meaning of White identity in that context (i.e., as a dominant, high-status identity). Since the rule of *hypodescent*—the tendency to categorize individuals with mixed racial ancestry into their socially subordinate group—was once codified in American law (Davis, 1991), the historical treatment of race in U.S. society could serve as a top-down factor that shapes current perceptual biases. Thus, we would expect in other cultural contexts with different historical treatments of race that hypodescent would not be evident. Instead, patterns of multiracial categorization in other cultures should reflect the dominant narrative of race in that culture (Chen, Paula Couto, Sacco, & Dunham, 2017). Fully exploring the role of cultural conceptions of race will require conducting more research outside of the U.S. context or in U.S. contexts that may vary in their conceptions of race (e.g., Hawaii; Pauker et al., 2017).

Most studies have also primarily sampled White perceivers, without examining whether racial minority perceivers are similar or different from White perceivers (often because they do not include a large enough sample from a single racial minority group). In fact, a recent meta-analysis examining the categorization of multiracial and racially ambiguous targets found that 38% of the studies reviewed had entirely White samples and only 15% of studies examined whether categorizations differed depending on participants' race (Young, Sanchez, Pauker, & Gaither, 2018). In other words, 85% of the studies reviewed either did not or could not examine how perceiver race impacted their findings. Different racial groups have different histories, experiences, and perspectives, and in order to fully understand racial categorization, future research will need to start including more racial minority perceivers.

In terms of using a wider array of methods, perceivers appear to use whatever information they are provided with when categorizing and perceiving multiracial targets. For example, they attend to the amount of ancestry via parental lineage (known in the literature as blood quantum) in social perception (Good, Sanchez, & Chavez, 2010; Sanchez, Good, & Chavez, 2010). Many methods inadvertently prime a particular "answer" through the choices offered in the task. For example, some tasks provide forced choice options ("White" or "Asian") or a scale that ranges from "White" to "Black." It is possible that these methods themselves prime a dichotomous way of thinking about race or give perceivers clues to the target's racial identity. Future research should examine social perceivers categorization of multiracial targets when given *no* clues (either via ancestry information or via the task choices). This would reveal information about perceivers' spontaneous racial categorization (without the method or task serving as an additional top-down factor constraining these categorizations).

The types of stimuli used in research on multiracial targets have almost exclusively used targets that are part-White. A few studies have examined minority–minority multiracial targets (e.g., MacLin & Malpass, 2001; Pauker et al., in press; Tskhay & Rule, 2015) and find malleability in categorizations depending on social category cues (e.g., hairstyle and categorization task anchors) and the diversity of the perceivers' social environment. In order to understand malleability in the perception of multiracial targets more broadly, it will be important for future research to expand beyond examining part-White targets.

With regard to the effect of exposure to multiracial targets on intergroup outcomes, it will be important for future work to specifically examine how exposure to multiracial targets affects racial minority perceivers (and

whether the effectiveness of this exposure varies based on targets' racial ancestry; e.g., White/Black vs. Asian/Black vs. more than two categories). Future research should also examine the cross-category effects that perceiving malleability may produce. For example, does perceiving malleability in race translate to malleable perceptions of gender or improved gender attitudes?

### 5.3 | Harnessing multiple identities

Just as perceiving malleability through exposure to multiracial targets may impact broad cognitive flexibility, perhaps the multiplicity of having more than one identity can expand cognition even outside of social-related constructs. Gaither, Remedios, Sanchez, and Sommers (2015) found that activating a multiple identities mind-set for both multiracial and monoracial individuals caused them to think more creatively and flexibly. People often think about themselves using singular identity mind-sets (e.g., I am a scientist) as opposed to multiple identity mind-sets (e.g., I am a female scientist). This work suggests, however, that activating a multiple identity mind-set or exposure to multiracial people who directly combat fixed thinking about social categories both undermine fixed thinking and increase creativity. Thus, interventions that harness the benefit of activating multiple identities (even in monoracial individuals) could serve to increase malleable social perception and break down reliance on racial categories in intergroup relations. Therefore, as our population becomes more multiracial and our exposure to multiracial individuals increases, these findings may help us to better understand how social perception is evolving and adapting to this increasing complexity.

## 6 | SUMMARY AND CONCLUSION

We have discussed one major theme in research on multiracial individuals and multiracial targets: malleability and its impact on social perception. Much discussion has taken place in both academic disciplines (e.g., history, sociology, psychology, and political science) and public forums (e.g., NY Times) about the impact of mixed-race population growth on race relations and lay conceptions of race (Dacosta, 2007; Daniel, 2002; Lee & Bean, 2010; Saulny, 2011; Velasquez-Manoff, 2017). While it is naïve to think that the growing multiracial population will solve long-standing issues surrounding race, the current review reveals some commonalities in how multiracial identities and exposure to multiracial targets may influence social perception. Adopting multiracial identities and exposure to multiracial targets leads to considerable flexibility in processing race-related cues. It may be that even though both adopting and perceiving multiracial identities involves increased complexity and can create difficulty for the target and perceiver, this complexity may in turn foster flexibility. Understanding these processes can facilitate the development of interventions to promote improved race relations by harnessing the benefits of malleability and diversity more broadly.

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