Race-Status Associations:
Distinct Effects of Three Novel Measures Among White and Black Perceivers

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Abstract

Race is fraught with meaning, but unequal status is central. Race-status associations (RSAs) link White Americans with high status and Black Americans with low status. RSAs could occur via observation of racially distributed jobs, perceived status-related stereotypic attributes, or simple ranking. Nine samples ($N = 3,933$) validate three novel measures of *White=high status/Black=low status* RSAs—based on jobs, rank, and attributes. First, RSA measures showed clear factor structure, internal validity, and test-retest reliability. Second, these measures differentially corresponded to White Americans' hierarchy-maintaining attitudes, beliefs, and preferences. Potentially based on observation, the more spontaneous Job-based RSAs predicted interracial bias, social dominance orientation, meritocracy beliefs, and hierarchy-maintaining hiring or policy preferences. Preference effects held after controlling for bias and support for the status quo. In contrast, the more deliberate Rank- and Attribute-based RSAs *negatively* predicted hierarchy-maintaining beliefs and policy preferences; direct inferences of racial inequality linked to preferences for undoing it. Third, *Black=low status*, rather than *White=high status*, associations largely drove these effects. Finally, Black Americans also held RSAs; Rank- or Attribute-based RSAs predicted increased perceived discrimination, reduced social dominance, and reduced meritocracy beliefs. Although individuals' RSAs vary, only White Americans' Job-based stratifying associations help maintain racial status hierarchies. Theory-guided evidence of race-status associations introduces powerful new assessment tools.

Keywords: race-status associations, inequality, stereotypes, hierarchy maintenance

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While senator, Barack Obama was on numerous occasions mistaken for a waiter or a valet at black-tie events (Westfall, 2014). Oprah Winfrey was once famously denied access to a \$38,000 handbag while shopping at a boutique store; the employee claimed that the bag was “too expensive” for her (Thompson & Magnay, 2013). A charged scene at a pool party resulted in police being called on Black teens using a private community pool; tensions elevated after White residents allegedly told the teens to “go back to your Section 8 home” (referring to public housing units reserved for those living at or below the poverty line) (Cole-Frowe & Fausset, 2015). These and other well-publicized anecdotes illustrate Black Americans being stereotyped as lower in status than White Americans—with implications for interracial relations.

Social psychological research supports the anecdotal evidence; stereotypical associations linking Black Americans with low status are undeniable. Race is perceived as a highly salient status characteristic (Biernat & Kobrynowicz, 1997; Berger, Fisek, Norman, and Zelditch, 1977; Berger, Rosenholtz, & Zelditch, 1980; Berger, Wagner, & Zelditch, 1985; Bertrand & Mullainathan, 2004; Correll & Ridgeway, 2003). In general, people more readily associate “poor” with “Black” than with “White” (Brown-Iannuzzi, Cooley, McKee, & Hyden, 2019; Brown-Iannuzzi, Dotsch, Cooley, & Payne, 2017; Cox & Devine, 2015; Freeman, Penner, Saperstein, Scheutz, & Ambady, 2011; Kahn, Ho, Sidanius, & Pratto, 2009; Kuntsman, Plant, & Deska, 2016; Lei & Bodenhausen, 2017; Massey & Denton, 1993; Shedd, 2015; Zou & Cheryan, 2017). Race-status associations clearly are central to stereotypes of Black Americans.

This literature, however, lacks crucial methodological tools and theoretical considerations. First, the implications of holding such stereotypic race-status associations for

hierarchy-maintaining attitudes, beliefs, or preferences remain largely unknown. Such investigations require measures that capture individual variability in associating Black Americans with low status and White Americans with high status. Understanding the implications of race-status associations rests on valid measures that pick up individual differences in holding these associations.

Second, the literature lacks specificity across operationalizations—do race-status associations persist across kinds of group-based status, operationalized in multiple ways, such as perceived occupational status, hierarchical rank, or status-relevant attributes? Third, the field also lacks single-category specificity—do *Black=low status* or *White=high status* associations most strongly relate to hierarchy-maintaining outcomes? This, too, requires measures that directly compare race-status association effects across operationalizations and between racial categories.

Fourth and finally, Black participants have been largely excluded from prior examinations of race-status associations. The generalizability of race-status associations, therefore, is unclear: Do Black perceivers also express stereotypic associations between race and status? What are the implications of holding such associations for members of a disadvantaged racial group? The current work addresses each query with the development of multiple race-status association measures, advancing social psychology's understanding of White and Black Americans' perceptions of the race-status interplay—and the consequences for racial inequality.

Associations Between Race and Status

Evidentiary Bases

Social psychological research has explored racial prejudice (associations between social groups and affective (positive versus negative) evaluations) and documented stereotypes (associations between social groups and the content of specific attributes) for nearly a century

(since Katz & Braly, 1933)—including social class stereotypes (Lott & Bullock, 2001; Kaplan, 1965). But only recently have several social psychologists simultaneously delved deeply into stereotypes involving class and social status (see Kraus et al., 2017; Moore-Berg & Karpinski, 2019; Moya & Fiske, 2017). Status is broadly defined as the respect, admiration, and voluntary deference afforded by others, which corresponds to perceptions of superiority versus inferiority (Anderson, Hildreth, & Howland, 2015; Galinsky, Rucker, & Magee, 2015; Magee & Galinsky, 2008)^{1,2}. The current work primarily explores associations between race and social class or socio-economic status—largely construed as an antecedent to status broadly (Anderson et al., 2015) and defined as one's place in the hierarchy, comprised of occupational status, household income, and educational attainment (Kraus, Park, & Tan, 2017; Moore-Berg & Karpinski, 2019; Tablante & Fiske, 2015). Socio-economic status is one of the primary stereotype dimensions along which people organize social groups (Koch, Imhoff, Dotsch, Unkelbach, & Alves, 2016).

Race-status associations thus represent a type of descriptive stereotype, characterizing White Americans as high in social status and Black Americans as low in social status. In exploring stereotypes involving status and class, social psychologists have found mental representations consistent with stereotypic associations between race and status. Mental representations of the poor or welfare recipients are seen as more Black, while those of the rich or non-welfare recipients are seen as more White (Brown-Iannuzzi, Dotsch, Cooley, & Payne, 2017; Lei & Bodenhausen, 2017). When completing racial categorization tasks, people take

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¹ Status is also described as prestige (e.g., Barkow, 1975; Cheng, Tracy, Foulsham, Kingstone, & Henrich, 2013; Emerson, 1962; Goldhamer & Shils, 1939; Henrich & Gil-White, 2001; Thibaut & Kelley, 1959), esteem or competence (Berger, Norman, Fisek, and Zelditch 1977; Ridgeway & Erickson, 2000; Webster and Foschi 1988), or superiority (e.g., Fiske, Cuddy, Glick, & Xu, 2002; Zou & Cheryan, 2017). Our conceptualization of status is most consistent with social psychological definitions, which describe status as group-based superiority/inferiority.

² Status is empirically and conceptually related to power—broadly defined as control over valued resources (Anderson et al., 2015; Emerson, 1962; Fiske, 1993; Keltner, Gruenfeld, & Anderson, 2003; Magee & Galinsky, 2008; Thibaut & Kelley, 1959)—though status and power can have distinct antecedents and consequences. We focus exclusively on perceived status, though race-status associations likely correspond with race-power associations.

longer to categorize poor White Americans as “White” and take longer to recall seeing poor versus rich White targets (Kuntsman, Plant, & Deska, 2016). Trait attributions also support race-status associations. Black Americans are described as poor or uneducated (and Black-occupied spaces as impoverished or low-income), while White Americans are described as educated, intelligent, rich (Bonam, Bergsieker, & Eberhardt, 2016; Bonam, Yantis, & Taylor, 2018; 2020; Fiske, Bergsieker, Russell, & Williams, 2009; Katz & Braly, 1933; Krueger, 1996). This new wave of research supports investigating race and status simultaneously—indeed, scholars have called for such investigations (e.g., Brannon, Higginbotham, & Henderson, 2017; Brannon & Markus, 2013; Kraus, Rucker, & Richeson, 2017; Mattan, Kubota, & Cloutier, 2017; Mattan, Kubota, Dang, & Cloutier, 2018; Moore-Berg & Karpinski, 2019; Richeson & Sommers, 2016).

Societal Drivers

Associations between race and status are likely rooted in a number of factors, including a growing racial wealth gap. This gap in part reflects a history of discriminatory policy and institutional inequalities that manifest in racial disparities in college graduation rates, differential returns on a college degree, and racial income gaps. All contribute to race-based residential and occupational segregation (Smith, McPherson, & Smith-Lovin, 2014; Tomaskovic-Devey et al, 2006) and the widening Black-White wealth gap (Sullivan et al., 2015). Today’s racial inequality is therefore grounded in the structural perpetuation of intergenerational wealth among White Americans, and its relative absence among Black Americans (Oliver & Shapiro, 2006).

People do observe some of these disparities. In so doing, wealth becomes inherent to White Americans, and its relative absence inherent to Black Americans. The media likely contribute to this sense-making process. The poor are depicted as primarily consisting of Black Americans, and Black Americans are disproportionally represented in lower-status economic

positions and White Americans in higher-status positions (Baron & Newman, 1990; Bergmann, 1974; del Río & Alonso-Villar, 2015; Gilens, 1996; Maume, 1999). Moreover, residential and occupational segregation mean that White Americans' observation of racial minorities in high-status, wealth-accruing roles is limited. Therefore, some race-status associations—for example, associations with roles and jobs—may be partly based on observation. Such observation-based race status associations may thus develop by noticing without thinking: relatively spontaneous patterns absorbed and expressed without conscious deliberation.

In contrast, expressing more structural, knowledge-based stereotypic associations may be more deliberative. As noted, historical and current inequities doubtless contribute to overall associations between race and status, but individuals may differ in their perceptions of these inequities. Such variance may occur due to differential knowledge about racial inequality. People vary in race-related classroom education, knowledge of inequality research, or teachings about racial inequality by families, social networks, or communities. Therefore, another form of race-status associations—knowledge of racial groups' relative rank—may be partly based on formal and informal education about inequality and the cultural stereotypes that rationalize it. Expressing such stereotypic associations may thus be more inferential, conscious, and deliberate.

Measuring Race-Status Associations

Individuals undoubtedly vary in race-status associations. But prior work (often relying on reverse correlation methods or implicit measures) has done little to specify the bases of these stereotypic associations. For example, how is it that people simultaneously hold *White=high status/Black=low status* associations (Brown-Iannuzzi et al., 2017, 2019; Freeman et al., 2011; Kahn et al., 2009; Kuntsman et al., 2016; Lei & Bodenhausen, 2017), yet they underestimate Black-White inequality (Kraus et al., 2017; Kraus, Onyeador, Daumeyer, Rucker, & Richeson,

2019)? The tension between findings such as these illustrates the need for specificity and precision in investigating racialized status perceptions. Through measure development, the current work clarifies the differential relationships amongst three measures and distinguishes among them in predicting outcomes that maintain the status quo. Thus, the current work advances and solidifies, methodologically and theoretically, what race-status associations represent for both White Americans and Black Americans. For each measure, we apply validated scale construction procedures (Furr, 2011; John & Benet-Martinez, 2000; Watson, 2004), testing factor structure, temporal stability, concurrent validity and incremental validity. Finally, these measures enable the separate computation and analysis of not only relative *White=high status/Black=low status* associations, but also single-category *White=high status* or *Black=low status* associations. Measure development thus allows for a process-orientated exploration of the differential impact of single-category status associations. We develop three measures: one jobs-based, one rank-based, and one attribute-based.

Jobs-based Race-Status Associations. Prior work has primarily assessed more indirect, unexamined, and immediate race-status associations, relying, for examples, on reverse correlation or implicit association tasks (see Moore-Berg & Karpinski, 2019, for a review). The first measure was thus designed to be relatively spontaneous. This Job-based *White=high status/Black=low status* measure asks perceivers to pair Black and White faces with high- or low-status jobs. Their choices thus bring race-status associations to light without direct acknowledgement of racial inequality. These more spontaneous, less examined associations may be partly based on observation but without much conscious consideration. That is, one can directly observe who is over-represented as CEOs versus janitors, without thinking much about it (cf. Eagly & Steffen, 1984, for a parallel in gender roles); research suggests such observations

can directly shape stereotypes (see Koenig & Eagly, 2014).

Rank-based and Attribute-based Race-Status Associations. More indirect, unexamined, spontaneous associations may be phenomenologically distinct from more direct, examined, deliberate acknowledgement of racial status inequalities. However, prior work has neglected to ask people directly about their group-based beliefs (see Moore-Berg & Karpinski, 2019 for a review). The present work provides evidence for both forms of race-status associations by developing two additional, more deliberative measures. A Rank-based *White=high status/Black=low status* measure asks perceivers to place racial groups on the social hierarchy, and an Attribute-based *White=high status/Black=low status* measure asks perceivers to rate racial groups on status-relevant attributes. Both the Rank- and Attribute-based measures require direct acknowledgement of structural race-status inequalities, thus pulling the veil off of an unequal status quo. These rankings and ratings may therefore express deliberate inferences that may be partly based on knowledge of racial inequality, requiring more conscious consideration and a willingness to acknowledge an unequal status quo. Based on this logic, we predict that the Rank- and Attribute-based measures will be highly correlated, while the Jobs-based measure will be more distinctive (*Hypothesis 1*).

Consequences for Hierarchy-Maintenance

If some people are more likely to associate race and status—be it via racialized job status, sheer rank, or status-relevant attributes—how might holding such stereotypic associations relate to attitudes, beliefs, and preferences that perpetuate racial inequality? Drawing on theory, we posit that the implications of holding the same *White=high status/Black=low status* associations for people's attitudes, beliefs, and preferences depends on their own social identity.

White Americans

As high-status group members, White Americans are more likely to perceive and engage with themselves, others, and society writ large in a way that justifies and reifies the existing social order. Stereotypes can thus serve a status-keeping purpose, reinforcing group boundaries and maintaining an unequal status quo (Fiske, 1993; Jost & Banaji, 1994; Pratto, Sidanius, Stallworth, & Malle, 1994; Snyder & Miene, 1994) by describing disadvantaged groups as incapable of achievement and well-suited to occupy low status (Allport, 1954; Eagly & Steffen, 1984; Hoffman & Hurst, 1990; Fiske, 1993; Jost & Banaji, 1994; Jost & Kay, 2005; Kay et al., 2007; Kay et al., 2009; Sidanius & Pratto, 1999). In this way, stereotypes explain disadvantaged group members deserving their low status; they belong there. Moving from stereotypes broadly to race-status associations specifically, limited evidence suggests that such associations may play a role in hierarchy maintenance. In two studies, White Americans who held stronger implicit associations between “Black” and “poor” were less likely to support redistributive policies that help Black Americans (Brown-Iannuzzi et al., 2019), while, in a single study, White Americans’ mental representations of the poor as Black and the rich as White corresponded with pro-White/anti-Black prejudice (Lei & Bodenhausen, 2017). Stereotypical associations between race and status thus play a role in hierarchy maintenance. A vicious cycle may therefore emerge, whereby stereotypic associations between race and status correspond to beliefs and preferences that ultimately reinforce these stereotypes.

Grounding in theory, we therefore expect that White Americans who more strongly associate Black Americans with low status—and the ingroup with high status—will be more likely to respond in ways that solidify this social order (*Hypothesis 2A*). The current work tests whether race-status associations across Job-, Rank, or Attribute-based operationalizations

“predict”³ several hierarchy-maintaining attitudes, beliefs, and preferences, including pro-White/anti-Black prejudice, social dominance orientation, conservatism, meritocracy beliefs, job preferences for the self, appraisals of outgroup members seeking access to high-status positions, and support for policies aimed to reducing racial inequality. As noted, these measures assess the extent to which participants *associate* race and status (rather than the extent to which they *endorse* such associations). However, if race-status associations do reinforce the status quo, as stereotypes often do, then holding these associations may be enough to provoke intergroup responses that maintain the status quo. The current work tests this empirical question, determining whether stereotypic associations between race and status predict hierarchy-maintaining outcomes.

We expect the more spontaneous, Job-based measure to be most predictive of hierarchy-maintaining attitudes, beliefs, and preferences for two reasons. First, while all measures capture the same construct, the Job-based measure is designed to capture more indirect status associations, likely based on disproportionate observation of Black Americans and White Americans in low- and high-status roles, respectively. Such role-based observations can directly translate to stereotypes (Eagly & Wood, 2012; Koenig & Eagly, 2014), seeping into impressions of groups as inherent qualities (Yzerbyt, 2016; Yzerbyt, Rocher, & Schadron, 1997). Such essentialist notions are known to perpetuate inequality (e.g., Hetey & Eberhardt, 2014; Williams & Eberhardt, 2008). Second, because Jobs-based race-status associations may result from people’s (partial and biased) observations of racial disparities, they are likely absorbed without much consideration. Hence, they may be expressed nonverbally and indirectly (e.g., pairing faces with jobs), without conscious analysis. Subtler measures of potentially controversial attitudes

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³ We use this term advisedly, not to imply causal direction but to register our analysis guidelines.

often predict hierarchy maintenance better than deliberate measures (e.g., Dovidio, Kawakami, & Gaertner, 2002; Fazio & Olson, 2003; Nosek, 2005), presumably because such measures decrease social desirability concerns. These factors make the Jobs-based measure particularly likely to predict responses that maintain inequality.

In contrast, the Rank- and Attribute-based measures are designed to capture direct acknowledgement of racial status inequality; such acknowledgement may run contrary to motivations to see the status quo as equitable (see Kraus et al., 2017; 2019). Both measures ask for subjective inferences, without an objective standard, but they require acknowledging the judgment. Rank- and Attribute-based race-status associations should therefore reflect more deliberate judgments (a notion we explore further in the Suppelmental Study). Based on our conceptual analysis, we expect the Job-based measure to be most predictive of hierarchy-maintaining attitudes, beliefs, and preferences among White Americans (*Hypothesis 2B*).

Finally, though descriptive, *Black=low status/White=high status* associations may not be neutral; they may relate to the notion that *Black=bad/White=good* (i.e., pro-White/anti-Black bias) or *hierarchy=good/equality=bad* (i.e., social dominance orientation). However, stereotyping (semantic associations) and prejudice (affective associations) are independent processes, with distinct implications for behavior (e.g., Amodio & Devine, 2006; Cacioppo, Gardner, & Berntson, 1999). Indeed, prior work has found that race-status associations uniquely predict outcomes beyond bias (Brown-Iannuzzi et al., 2019). Grounding in theory and prior work, we expect the relationship between White Americans' Jobs-based race-status associations and preferences—including hiring and policy preferences—to persist above and beyond pro-White/anti-Black bias or support for the status quo (*Hypothesis 2C*).

Black Americans

Black participants are severely under-represented in examinations of race-status associations; in many cases, they are deliberately excluded. Minorities may also hold stereotypic associations between race and status, but because they are not serving group interest, this constitutes an unexplored empirical question. Racial minorities are more likely to articulate injustice and respond in ways that change the social order. Minority group members are less likely to believe that society is fair, that hard work pays off (i.e., meritocracy beliefs), that group hierarchy is legitimate, or that racial inequality has improved (Bialik & Cilluffo, 2017; Kraus et al., 2017; Levin, Sidanius, Rabinowitz, & Federico, 1998; Major et al., 2002; Major, Kaiser, O'Brien, & McCoy, 2007; McCoy & Major, 2007). Overall, Black Americans are less motivated to believe in progress toward equality. As theorized with White Americans, Rank- or Attribute-based measures could correspond to such deliberate beliefs about societal fairness. If so, Black Americans should be especially likely to show Rank- and Attribute-based race-status associations due to a motivated and justifiable desire to articulate historic and systemic injustice.

Another unexplored empirical question asks, Does variance in Black Americans' race-status associations also predict hierarchy-maintaining responses? For White Americans, holding *White=high status/Black=low status* associations entails a (potentially gratifying) downward social comparison; for Black Americans, holding such race-status associations entails a (potentially frustrating) upward social comparison. Holding stereotypic status associations that depict the ingroup as low status may reinforce the notion that they cannot climb the social ladder, especially among low-SES Black Americans, who are more likely to show a positive evaluation of high status (Mattan, Kubota, Li, Venezia, & Cloutier, 2019). For Black Americans, race-status associations should therefore undermine attitudes, beliefs, or preferences that reinforce the status quo—such as social dominance orientation or meritocracy beliefs—and reinforce those that

explain inequality in structural terms—such as perceived discrimination (*Hypothesis 3*).

Single-Category Status Associations

We were particularly interested in relative race-status associations—the difference between status assigned to White Americans and that assigned to Black Americans. Difference scores have often been used in various scales assessing intergroup cognition (e.g., Greenwald, McGhee, & Schwartz, 1998; Haddock, Zanna, & Esses, 1993; Kteily et al., 2015). However, treating a race-status association exclusively as the score of the advantaged or disadvantaged racial group on the relative race-status association measures also constitutes a reasonable approach. Indeed, certain researchers (e.g., Edwards, 2002) have argued that difference scores are less reliable than their components. We therefore also explore single-category status associations. This two-step approach (testing relative race-status associations then single-category components) avoids many of the criticisms leveled at difference score analyses, broadly capturing the predictive power of relative race-status associations, while determining unique contributions of each component.

We expect that *Black=low status* associations most strongly predict hierarchy-maintaining outcomes, beyond bias or support for inequality (*Hypothesis 4*). Historically, social psychology (largely drawing on social identity theory) has explored intergroup bias in terms of ingroup favoritism rather than outgroup derogation (e.g. Brewer, 1979; Turner, 1975; Turner, 1978). Indeed, many scholars suggest that social identity theory better explains ingroup favoritism than outgroup derogation (Rubin & Hewstone, 2004; Sidanius, 2004). That said, although social identity theory emphasizes the relative or comparative nature of group status (Tajfel & Turner, 1979), there undoubtedly exist contexts wherein outgroup derogation outweighs ingroup favoritism. Race-status associations appear to comprise one such context, as

prior work has found that *Black=low status* associations more strongly predicted policy attitudes than *White=high status* associations among White perceivers (Brown-Iannuzzi et al., 2019).

The Present Research

We tested the above hypotheses in nine large U.S. samples drawn from multiple sources. After testing the factor structure and temporal reliability of Race-Status Association (RSA) items (H1; Sample 1), we determined both concurrent validity and incremental validity (Samples 2–7) of each measure among White Americans, establishing how these novel measures provide predictive utility for hierarchy-maintaining outcomes (H2A, H2B), beyond bias towards racial minorities or endorsement of social inequality (H2C). Samples 8 and 9 determined generalizability by exclusively recruiting Black Americans, allowing us to test H3. We tested both relative and single-category RSAs across samples, allowing us to determine the differential impact of *White=high status* versus *Black=low status* RSAs on all outcome variables for each RSA measure (H4). We end with a Supplemental Study that explores the differential impact of RSA measures by testing the theoretical groundwork laid above, which stipulates that the (likely observation-based) Jobs-based RSAs are more spontaneous than (likely knowledge-based) Rank- and Attribute-based RSAs. In sum, this work broadens our theoretical understanding of RSAs' impact across operationalizations and among perceiver groups, explores single-category drivers of RSAs' impact, and, following well-established scale construction procedures (Furr, 2011; John & Benet-Martinez, 2000; Walter, 2002), supplies new tools for its assessment.

Method

Participants

See Table 1 for all participant demographic characteristics across samples. Sample 1 explored White American's mean and relative race-status associations, testing the dimensionality

of the items assessing Job- and Rank-based RSAs. Samples 2–7 explored the concurrent validity of Job- and Rank-based RSA measures, determining how these measures relate to various indicators of socio-political attitudes, beliefs, and preferences among White Americans. Samples 4–7 tested the utility of RSA measures in predicting White American’s hiring preferences beyond bias or support for hierarchy. Participants were randomly assigned to review the resume or videotaped introduction of a Black or White job applicant; we thus increased sample sizes to make predictions. Sample 6 recruited participants with previous hiring experience. Finally, Samples 8 and 9 considered whether Black Americans also hold Job-, Rank-, or Attribute-based RSAs and explored their concurrent validity, determining whether these RSAs predict hierarchy-maintaining attitudes, beliefs, and job preferences among the lower-status racial group.

Across samples, we only analyzed data from White or Black participants born and currently residing in the United States. If participants did not identify as White, Black, or born in the United States in response to demographic, they were excluded. Between five and 24 participants were excluded from each sample who did not identify as White or Black. We report all measures, conditions, data exclusions, and sample size determinations, consistent with best practices promoted by the Center for Open Science.

Table 1

Demographic Characteristics of Participants from All Samples

Variables	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Sample 7	Sample 8	Sample 9
Sample size	481	433	193	433	466	610	1078	114	169
Sample source	Prolific	MTurk	MTurk	MTurk	MTurk	Prolific	Prolific	MTurk	Qualtrics
Participant race	White	White	White	White	White	White	White	Black	Black
Age, mean (<i>SD</i>)	37.8 (13.0)	41.4 (12.1)	37.2 (20.4)	36.3 (10.5)	37.3 (10.9)	40.5 (12.2)	35.7 (12.8)	33.3 (9.7)	43.5 (16.5)
Female, %	54.7	49.00	45.1	51.7	44.7	53.3	54.4	40.4	54.3
High school, %	10.6	15.9	9.8	11.3	15.7	6.2	12.3	7.9	28.7
Graduate degree, %	13.7	13.2	10.9	13.4	8.7	23.9	16.5	4.4	8.5
Median income	US\$50,000–74,999	US\$50,000 –74,999	US\$40,000 –49,999	US\$50,000 –74,999	US\$50,000 –74,999	US\$50,000 –74,999	US\$50,000 –74,999	US\$40,000 –49,999	US\$25,000 –39,999

Measures

See Supplements 1 and 2 for scale items and additional details about all scales used.

Race-Status Associations

We examined Rank-, Attribute-, and Job-based RSAs.

Rank-Based Race-Status Associations. For the Rank-based RSA measure (Figure 1), participants complete a modified version of the MacArthur Scale of Subjective Socioeconomic Status (Adler, Epel, Castellazzo, & Ickovics, 2000; Kraus et al., 2009). Participants view an image of a ladder and are asked to imagine that the ladder represents where different social groups stand in the United States. The top of the ladder represents those groups that are best off; the bottom of the ladder represents those groups that are worst off. Participants rank where the following (randomly ordered) social groups stand on this ladder: men, women, Whites/Caucasian-Americans, Blacks/African-Americans, Latino(a)s/Hispanic-Americans, Asians/Asian-Americans, members of the lower class, members of the middle class, and members of the upper class.

1 **Figure 1**2 *Rank-Based Race-Status Associations Measure*

Think of this ladder as representing where different social groups stand in the United States.

At the **top** of the ladder are the groups that are the best off—those who have the most money, the most education, and the most respected jobs.

At the **bottom** are the groups that are the worst off—who have the least money, least education, and the least respected jobs or no job.

The higher up groups are on this ladder, the closer they are to the very top tier of society; the lower groups are, the farther they are from the very top tier of society.

Where would you place the following social groups on this ladder?

	1	2	3	4	5	6	7	8	9	10
Blacks/African-Americans	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Whites/Caucasian-Americans	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Participants' ranking for White Americans indicates perceived social standing for White Americans, while ranking for Black Americans indicates perceived social standing for Black Americans. To derive continuous Rank-based *White=high status/Black=low status* RSA scores, we subtract the ranking assigned to Black Americans from that assigned to White Americans. Higher scores thus represent White Americans being ranked as higher in the social hierarchy than Black Americans. Separate *White=high status* or *Black=low status* ranking-based RSA scores can also be examined by separately analyzing the ranking assigned to White Americans and that assigned to Black Americans (reversed).

Attribute-Based Race-Status Associations. For the Attribute-based RSA measure (Figure 2), participants rate four social groups on multiple attributes related to social status: status, dominance, power, confidence, wealth, and competitiveness. In an effort to reduce social desirability concerns, participants are asked to imagine that aliens had come to Earth, and that they have been tasked with accurately describing various social groups to these visitors. Participants rate each group on each attribute using a slider scale ranging from 0 to 100, where anchors corresponded to each attribute (e.g., "low status–high status," "low power–high power," "poor–wealthy"). Although participants are told that group selection was random, in reality, all participants respond to the same four social groups: Whites/Caucasian-Americans, Blacks/African-Americans, Latino(a)s/Hispanic-Americans, Asians/Asian-Americans.

1 **Figure 2**2 *Attribute-Based Race-Status Associations Measure (Sample Item)*

Imagine that aliens have come to Earth, and you have been tasked with accurately describing various social groups to them.

On the following pages you will see a series of descriptors. Use the sliders to rate how much each descriptor applies to various social groups in today's society.

How **high-status** are these groups?

3

4

5 Averaging status, wealth, power, and dominance ratings for White Americans creates an

6 indicator of status-relevant attributes ascribed to White Americans, while averaging these same

7 ratings for Black Americans creates an indicator of status-relevant attributes ascribed to Black

8 Americans. These items were determined by exploratory and confirmatory factor analysis in

9 Sample 1 (see below). To derive a continuous Attribute-based *White=high status/Black=low*

10 *status* RSA score, we subtract averaged attribute ratings assigned to Black Americans from that

assigned to White Americans. Higher scores thus represent White Americans being rated as higher in status-relevant attributes than Black Americans. Separate *White=high status* or *Black=low status* Attribute-based RSA scores can also be examined by separately analyzing the averaged attribute ratings assigned to White Americans and that assigned to Blacks Americans (reversed).

Job-Based Race-Status Associations. For the Job-based RSA measure (Figure 3), participants complete a face-job pairing task. Participants read that they will see a series of faces, and that for each face they are to “guess the job or occupation of the person shown.” For each target, participants select one of 14 occupations as that person’s occupation: seven high-status positions and seven low-status positions, randomly ordered. Twenty trials are included: ten Black and ten White target faces, randomly ordered. Participants are therefore allowed to select the same job for more than one target. Racial stimuli were derived from the Chicago Face Database (Ma, Correll, & Wittenbrink, 2015).

Occupations were derived from Fiske and Dupree (2014), who assessed perceived warmth and competence of commonly mentioned jobs in American society. Because perceived competence is closely aligned with social status (Durante et al., 2012), the measure operationalized high- versus low-status occupations as those perceived to require respectively the highest versus lowest level of competence. In this and all studies, participants responded to seven occupations reportedly requiring the most competence—Doctor, Engineer, Scientist, Lawyer, CEO, Nurse, Professor—and seven perceived as requiring the least competence— Janitor, Dishwasher, Garbage Collector, Taxi Driver, Cashier, Maid, Prostitute.

Figure 3*Jobs-Based Race-Status Associations Measure (Sample Item)*

What is this person's job?

☐ Janitor	☐ Lawyer
☐ Doctor	☐ Cashier
☐ Dishwasher	☐ CEO
☐ Engineer	☐ Maid
☐ Garbage Collector	☐ Nurse
☐ Scientist	☐ Prostitute
☐ Taxi Driver	☐ Professor

Sample 2 participants ($n = 433$) later confirmed perceived status differences between high and low-status jobs by rating each of these jobs' status using a modified version of the 10-point MacArthur Scale of Subjective Socioeconomic Status (Adler et al., 2000; Kraus et al., 2009). Conducting an exploratory factor analysis on all subjective socioeconomic status ratings using principal components analysis and an oblique (promax) rotation revealed that status ratings for low-status jobs and high-status jobs loaded together onto two distinct components, which

accounted for 59.83% of the total variance. We then averaged ratings for high-status jobs and averaged status ratings for low-status jobs. Average status ratings of high-status jobs were significantly higher ($M = 8.16$) than ratings of low-status jobs ($M = 2.90$), $t(432) = 75.17$, $p < .001$, and ratings for low and high-status jobs were highly reliable ($\alpha_{\text{high-status}} = .84$, $\alpha_{\text{low-status}} = .89$). Together, these results suggest that the high-competence jobs selected from Fiske and Dupree (2014) are seen as significantly higher in status than the selected low-competence jobs.

To derive continuous Job-based RSA scores, we first determine the number of high- and low-status jobs assigned to White and Black targets. We sum: a) the number of high-status jobs assigned to Black targets, b) the number of low-status jobs assigned to Black targets, c) the number of high-status jobs assigned to White targets, and d) the number of low-status jobs assigned to White targets. We then create a relative *White=high status/Black=low status* Job-based RSA score by subtracting the total number of high-status jobs assigned to Black targets (a) from the total number of high-status jobs assigned to White targets (c). Higher scores thus represent more high-status jobs assigned to White targets than to Black targets. Separate *White=high status* or *Black=low status* Job-based RSA scores can also be examined by separately analyzing the total number of high-status jobs assigned to White Americans and the total number of low-status jobs assigned to Blacks Americans.

Criterion Variables

See Table 2 for descriptive statistics for all criterion variables across samples.

Table 2
Criterion Variables Included in Samples 2–9

Variables	Sample 2 ^a	Sample 3 ^a	Sample 4 ^a	Sample 5 ^a	Sample 6 ^a	Sample 7 ^a	Sample 8 ^b	Sample 9 ^b
Outgroup prejudice*	<i>m</i> = 9.19 <i>SD</i> = 27.52	<i>m</i> = 10.89 <i>SD</i> = 24.23	<i>m</i> = 9.93 <i>SD</i> = 21.94	<i>m</i> = 7.69 <i>SD</i> = 23.68	<i>m</i> = 5.22 <i>SD</i> = 21.79	<i>m</i> = 1.14 <i>SD</i> = 19.76	<i>m</i> = 12.19 <i>SD</i> = 31.69	<i>m</i> = 12.10 <i>SD</i> = 30.80
Social dominance orientation (Ho et al., 2015)	<i>m</i> = 2.50 <i>SD</i> = 1.58 α = .94	<i>m</i> = 2.47 <i>SD</i> = 1.40 α = .93	<i>m</i> = 2.55 <i>SD</i> = 1.46 α = .92	<i>m</i> = 2.36 <i>SD</i> = 1.38 α = .92	<i>m</i> = 2.45 <i>SD</i> = 1.31 α = .90	<i>m</i> = 2.30 <i>SD</i> = 1.18 α = .89	<i>m</i> = 2.25 <i>SD</i> = 1.23 α = .88	<i>m</i> = 2.50 <i>SD</i> = 1.11 α = .75
Conservatism	<i>m</i> = 3.57 <i>SD</i> = 1.98	<i>m</i> = 3.58 <i>SD</i> = 1.89 <i>m</i> = 3.61 <i>SD</i> = 1.40 α = .89	<i>m</i> = 3.65 <i>SD</i> = 1.89 <i>m</i> = 3.66 <i>SD</i> = 1.42 α = .89	<i>m</i> = 3.42 <i>SD</i> = 1.95 <i>m</i> = 3.53 <i>SD</i> = 1.43 α = .88	<i>m</i> = 3.18 <i>SD</i> = 1.83	<i>m</i> = 3.15 <i>SD</i> = 1.84 <i>m</i> = 3.17 <i>SD</i> = 1.30 α = .86	<i>m</i> = 3.26 <i>SD</i> = 1.73 <i>m</i> = 3.33 <i>SD</i> = 1.23 α = .85	<i>m</i> = 3.72 <i>SD</i> = 1.88 <i>m</i> = 3.60 <i>SD</i> = 1.06 α = .60
Meritocracy beliefs (Levin et al., 1998)	—	—	<i>m</i> = 3.49 <i>SD</i> = 1.86 α = .94	<i>m</i> = 3.36 <i>SD</i> = 1.82 α = .95	—	<i>m</i> = 3.05 <i>SD</i> = 1.77 α = .95	—	—
Denial of White privilege (Swim & Miller, 1999)	—	—	—	—	—	—	<i>m</i> = 5.91 <i>SD</i> = 1.26 α = .80	<i>m</i> = 5.76 <i>SD</i> = 1.46 α = .78
Perceived discrimination (Major et al., 2007)	—	—	—	—	—	—	<i>m</i> = 2.24 <i>SD</i> = 1.03 α = .85	<i>m</i> = 2.76 <i>SD</i> = 1.34 α = .87
Low-status job preferences (adapted from Gaucher et al., 2011; Walton & Cohen, 2007)	<i>m</i> = 2.15 <i>SD</i> = 0.91 α = .85	<i>m</i> = 1.99 <i>SD</i> = 0.76 α = .78	—	—	—	—	<i>m</i> = 4.42 <i>SD</i> = 1.13 α = .76	<i>m</i> = 4.34 <i>SD</i> = 1.39 α = .86
High-status job preferences (adapted from Gaucher et al., 2011; Walton & Cohen, 2007)	<i>m</i> = 4.21 <i>SD</i> = 1.09 α = .76	<i>m</i> = 4.28 <i>SD</i> = 1.15 α = .78	—	—	—	—	—	—
Applicant preferences (adapted from Moss-Racusin et al., 2012; Rudman & Glick, 2001; Walton & Cohen, 2007)	—	—	<i>m</i> = 6.02 <i>SD</i> = 0.87 α = .94	<i>m</i> = 6.00 <i>SD</i> = 0.83 α = .94	<i>m</i> = 5.70 <i>SD</i> = 0.97 α = .95	<i>m</i> = 5.83 <i>SD</i> = 0.92 α = .94	—	—
Policy Preferences (adapted from Critcher & Risen, 2014; Kaiser et al., 2009)	—	—	—	—	—	<i>m</i> = 4.71 <i>SD</i> = 1.64 α = .84	—	—

Note. Cells with “—” (em dashes) indicate that a variable was not included for the sample. Otherwise, cells include means, standard deviations, and Cronbach’s α (when applicable). Variables with an asterisk did not use a 1 (strongly disagree/disapprove) to 7 (strongly agree/approve) scale. Scale items for all variables can be found in the Supplemental Appendix.

^a White participants.

^b Black participants.

Outgroup Prejudice. Participants responded to feeling thermometers. A single-item measure of interracial attitudes, this indicator was selected to reduce the total length of the survey and avoid participant fatigue. Despite their brevity, feeling thermometers have similar convergent validity, discriminant validity, and temporal reliability as multi-item measures (Jaccard, Weber, & Lundmark, 1975). Participants used a slider bar to select how cold/unfavorable or warm/favorable they felt toward the following (randomly ordered) social groups: men, women, Whites/Caucasian-Americans, Blacks/African-Americans, Latino(a)s/Hispanic-Americans, Asians/Asian-Americans, members of the lower class, members of the middle class, and members of the upper class. An index of pro-White/anti-Black prejudice was created by subtracting ratings for Black Americans from ratings for White Americans.

Social Dominance Orientation. Participants completed the extensively-validated 8-item SDO-7s Scale (Ho et al., 2015), responding to items such as “An ideal society requires some groups to be on top and some to be on the bottom” and “We should do what we can to equalize conditions between groups (reverse-scored) (1 = *strongly oppose*, 7 = *strongly favor*).

Conservatism. Participants self-reported conservatism, responding to the item “What is your political affiliation/ideology?” (1 = *very conservative*, 7 = *very liberal*; reverse-coded). Despite its brevity, this standard measure of ideology identification is well-established and well-validated among White Americans (though less so for Black Americans; see Jefferson, under review; Kinder & Kalmoe, 2017).

Meritocracy Beliefs. Participants completed well-validated 4-item measures of Individual Mobility Beliefs (IMB, Major et al., 2002; e.g., “America is an open society where all individuals can achieve higher status”) and Protestant Work Ethic (PWE, Katz & Hass, 1988; e.g., “Most people who don’t get ahead should not blame the system; they really only have

themselves to blame;” 1 = *strongly disagree*, 7 = *strongly agree*) adapted from Levin and colleagues (1998). IMB and PWE scores were standardized and averaged to create a composite measure of meritocracy beliefs (e.g., Major, Kaiser, O’Brien, & McCoy, 2007).

Denial of White privilege (White Participants) and Perceived Discrimination (Black Participants). White and Black participants reported perceptions of ingroup privilege (White participants) and ingroup discrimination (Black participants). White participants responded to the Denial of White Privilege scale (adapted from and validated in Swim and Miller, 1993; e.g., “I do not feel that White people have any benefits or privileges due to their race” (1 = *strongly disagree*, 7 = *strongly agree*)). Black participants responded to five items assessing perceived discrimination (adapted from Major et al., 2007; e.g., “My racial or ethnic group is discriminated against” (1 = *strongly disagree*, 7 = *strongly agree*)). Though this scale has not been thoroughly validated, reliability was high in this and other research (Major et al., 2007).

Own Job Preferences. Participants rated their preferences for all high- and low-status jobs used in the Jobs-based RSA measure (excluding “prostitute”). For each job, five items assessed job preferences (e.g., “This job is appealing”; “I would fit in well at this job”; (1 = *strongly disagree*, 7 = *strongly agree*)). These items have been utilized in previous research that examined job appeal and perceived belonging (Gaucher, Friesen, & Kay, 2011; Walton & Cohen, 2007). Responses to all items were standardized and averaged to form an overall job-preference score for each job. Low-status job preferences scores were created by averaging the job preference scores for low-status jobs; high-status job preferences scores were created by averaging the job preferences scores for high-status jobs. Higher scores represented an increased preference for high-status or low-status jobs. Though this scale has not been validated, scale items were highly reliable for low-status and high-status job preferences scales across samples.

Job Applicant Preferences. White participants reported their hiring preferences for hypothetical Black or White job applicants, represented in either a written resume or a videotaped introduction. Participants reviewed the job applicant's resume or video introduction, then responded to 11 randomly-ordered questions that assessed their applicant preferences, including "How likely is it that you would recommend interviewing this applicant for the job?". These items were adapted from previous research that assessed perceived hireability and belonging of job applicants (Moss-Racusin, Dovidio, Brescoll, Graham, & Handelsman, 2012; Rudman & Glick, 2001; Walton & Cohen, 2007). Though this scale has not been validated, a principal components factor analysis without rotation confirmed that all items loaded onto a single factor across samples, and scale items were highly reliable. Item responses were standardized and averaged. Higher scores represented an increased preference for either a White or a Black job applicant⁴.

Policy Preferences. Four items gauged participants' support for policies that would broadly support Black Americans. Two items were adapted from public opinion Gallup polls (e.g., Crichter & Risen, 2014; e.g., "How much of a role, if any, do you think the government needs to have in trying to improve the social and economic position of Blacks and other minority groups in this country?" (1 = *major role*, 7 = *no role*; reverse-scored). The last two questions assessed support for policy preferences that would aid racial minorities broadly in organizationally-relevant contexts (Kaiser, Drury, Spalding, Cheryan, & O'Brien, 2009; e.g., "Businesses should increase their efforts to promote diversity in the workplace" (1 = *strongly*

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⁴ As an exploratory step, these samples also included an applicant status manipulation, which we controlled for in all analyses. Results revealed inconsistent effects of applicant status; as such, we tested applicant race effects collapsing across applicant status conditions.

1 *disagree*, 7 = *strongly agree*)). Though this policy preferences scale has not been validated, scale
2 items factored together with high reliability.

3 **Results**

4 **Face Validity**

5 We first explored participants' responses to the Job-, Rank-, and Attribute-based RSA
6 measures. We expected that, consistent with prior work, White perceivers would associate White
7 Americans with high status and Black Americans with low status for all measures. As little work
8 has considered race-status associations among Black Americans, predictions for Black perceivers
9 were more nuanced. Black Americans are less motivated to believe in progress toward equality
10 (Bialik & Cilluffo, 2017; Kraus et al., 2017; Levin et al., 1998; Major et al., 2002; Major et al.,
11 2007; McCoy & Major, 2007). As such, we expected that Black Americans would be especially
12 likely to express the more deliberate Rank- and Attribute-based RSAs, grounded in a motivated
13 desire to express systemic injustice.

14 Within all nine samples and across all three RSA measures, relative race-status
15 associations emerged. Paired t-tests revealed that Black Americans were seen as significantly
16 lower in status relative to White Americans ($ps < .001$). Both White American (Samples 1–7)
17 and Black American (Samples 8–9) perceivers showed relative *White=high status/Black=low*
18 *status* RSAs. Further, relative RSAs occurred across operationalizations—White and Black
19 perceivers reported relative Job-, Rank-, and Attribute-based RSAs. Finally, across samples,
20 Latinx Americans and Asian Americans were also seen as significantly lower in status than
21 White Americans. See Table 3 for single-category status associations (i.e., status associations for
22 a given racial group) and relative RSAs (i.e., status associations for a given racial minority group
23 subtracted from status associations for White Americans) across samples.

Table 3
Status Associations Across Racial Categories Assessed Using Job-, Rank-, and Attribute-based RSA Measures

Sample and RSA measure	Target group	<i>M</i> (<i>SD</i>)	Quartile (25, 50, 75)	Relative RSAs (White Americans–[target group])
Sample 1 ^a (<i>N</i> = 481)				
Job-based	White	6.09 (1.82)	5, 6, 7	—
	Black	4.85 (2.35)	3, 5, 6	1.23***
Rank-based	White	7.57 (1.60)	6, 8, 9	—
	Black	4.54 (1.66)	3, 4, 6	3.03***
	Latinx	4.20 (1.51)	3, 4, 5	3.37***
	Asian	6.45 (1.58)	5, 7, 8	1.16***
Attribute-based	White	79.27 (14.56)	71, 82.3, 90.1	—
	Black	46.79 (18.26)	33.8, 48.3, 59.3	32.48***
	Latinx	47.64 (16.95)	37, 48.1, 58.4	31.63***
	Asian	64.52 (14.98)	55, 65.3, 74.8	14.75***
Sample 2 ^a (<i>N</i> = 433)				
Job-based	White	6.39 (1.92)	5, 6, 8	—
	Black	3.96 (2.48)	2, 4, 6	2.42***
Rank-based	White	7.25 (1.58)	6, 7, 8	—
	Black	4.29 (1.75)	3, 4, 5	2.96***
	Latinx	4.13 (1.57)	3, 4, 5	3.12***
	Asian	6.56 (1.50)	6, 7, 8	0.69***
Attribute-based	White	77.95 (14.76)	68.3, 81.3, 89.4	—
	Black	44.22 (19.16)	30.4, 45, 56.5	33.73***
	Latinx	45.27 (17.42)	33.3, 45.2, 56.7	32.67***
	Asian	64.05 (15.90)	53, 64.7, 76.9	13.90***
Sample 3 ^a (<i>N</i> = 193)				
Job-based	White	5.71 (2.18)	4, 6, 7	—
	Black	3.12 (2.23)	2, 3, 4	2.60***
Rank-based	White	7.15 (1.59)	6, 7, 8	—
	Black	4.17 (1.48)	3, 4, 5	2.98***
	Latinx	4.25 (1.48)	3, 4, 5	2.90***
	Asian	6.21 (1.50)	5, 6, 7	0.94***
Attribute-based	White	77.21 (15.67)	65.8, 80, 89.5	—
	Black	44.43 (18.97)	30, 44.5, 58.8	32.77***
	Latinx	46.49 (15.87)	34.8, 46, 58	30.72***
	Asian	61.08 (15.86)	50.9, 61.2, 71.6	16.12***

Note. RSA = Race-status associations. ***p < .001.

^a White participants.

^b Black participants.

Table 3 (continued)

Sample and RSA measure	Target group	<i>M</i> (<i>SD</i>)	Quartile (25, 50, 75)	Relative RSAs (White Americans–[target group])
Sample 4 ^a (<i>N</i> = 433)				
Job-based	White	5.94 (2.04)	5, 6, 7	—
	Black	3.41 (2.32)	2, 3, 5	2.53***
Rank-based	White	7.38 (1.55)	6, 7, 9	—
	Black	4.62 (1.73)	3, 4, 6	2.76***
	Latinx	4.39 (1.62)	3, 4, 5	3.00***
	Asian	6.49 (1.51)	5, 7, 8	0.89***
Attribute-based	White	78.33 (14.80)	69.8, 81.5, 89	—
	Black	47.33 (19.47)	33.8, 48.8, 61.8	30.99***
	Latinx	46.84 (17.62)	34.6, 47, 58.5	31.48***
	Asian	63.29 (15.84)	51.7, 62.3, 75.9	15.04***
Sample 5 ^a (<i>N</i> = 427)				
Job-based	White	6.26 (1.90)	5, 6, 8	—
	Black	4.14 (2.31)	2, 4, 6	2.12***
Rank-based	White	7.30 (1.50)	6, 7, 8	—
	Black	4.40 (1.63)	3, 4, 5	2.90***
	Latinx	4.12 (1.53)	3, 4, 5	3.18***
	Asian	6.47 (1.58)	5, 7, 8	0.83***
Attribute-based	White	79.20 (13.18)	70.5, 80.3, 89.5	—
	Black	44.59 (18.69)	31.3, 45, 57.8	34.61***
	Latinx	44.65 (17.69)	32.5, 43.5, 55.7	34.54***
	Asian	62.70 (15.52)	52.5, 62.5, 73.7	16.49***
Sample 6 ^a (<i>N</i> = 610)				
Job-based	White	6.06 (1.96)	5, 6, 7	—
	Black	5.12 (2.37)	4, 5, 7	0.94***
Rank-based	White	7.50 (1.60)	6, 8, 9	—
	Black	4.53 (1.66)	3, 4, 6	2.97***
	Latinx	4.40 (1.58)	3, 4, 5	3.11***
	Asian	6.52 (1.61)	6, 7, 8	0.98***
Attribute-based	White	80.46 (13.38)	72.5, 82, 90.3	—
	Black	48.32 (19.00)	35, 49.6, 61.3	32.14***
	Latinx	49.02 (17.19)	36.2, 49.3, 61.3	31.44***
	Asian	65.84 (15.55)	55.5, 66.7, 77.2	14.62***

Note. RSA = Race-status associations. ***p < .001.

^a White participants.

^b Black participants.

Table 3 (continued)

Sample and RSA measure	Target group	<i>M</i> (<i>SD</i>)	Quartile (25, 50, 75)	Relative RSAs (White Americans–[target group])
Sample 7 ^a (<i>N</i> = 1078)				
Job-based	White	5.98 (1.94)	5, 6, 7	—
	Black	4.93 (2.43)	3, 5, 7	1.05***
Rank-based	White	7.62 (1.67)	6, 8, 9	—
	Black	4.58 (1.77)	3, 4, 6	3.04***
	Latinx	4.56 (1.64)	3, 4, 5	3.06***
	Asian	6.51 (1.56)	5, 7, 8	1.11***
Attribute-based	White	—	—	—
	Black	—	—	—
	Latinx	—	—	—
	Asian	—	—	—
Sample 8 ^b (<i>N</i> = 114)				
Job-based	White	6.21 (1.85)	5, 6, 7	—
	Black	4.21 (2.39)	3, 4, 6	2.00***
Rank-based	White	8.14 (1.41)	7, 8, 9	—
	Black	4.82 (1.98)	4, 5, 6	3.32***
	Latinx	4.39 (1.65)	3, 4, 5, 3	3.75***
	Asian	6.61 (1.77)	5, 7, 8	1.53***
Attribute-based	White	82.75 (13.68)	71.7, 82.3, 94.3	—
	Black	46.53 (18.39)	33.1, 46.1, 58.1	36.22***
	Latinx	46.86 (18.43)	33.1, 48.3, 58.5	35.89***
	Asian	64.42 (16.57)	55.1, 64.6, 77.3	18.33***
Sample 9 ^b (<i>N</i> = 164)				
Job-based	White	5.56 (2.23)	5, 6, 7	—
	Black	4.13 (2.44)	2, 4, 6	1.51***
Rank-based	White	8.22 (2.36)	7, 9, 10	—
	Black	5.91 (2.60)	4, 6, 8	2.31***
	Latinx	5.42 (2.45)	3.25, 5, 7	2.80***
	Asian	6.75 (2.33)	5, 7, 8	1.47***
Attribute-based	White	83.45 (18.57)	77.6, 89.3, 96.3	—
	Black	60.22 (22.95)	42.4, 60.1, 78.8	23.23***
	Latinx	57.61 (21.16)	41.2, 55, 73.5	25.84***
	Asian	66.71 (21.52)	50.7, 67.8, 83	16.75***

Note. RSA = Race-status associations. ***p < .001.

^a White participants.

^b Black participants.

Score Creation and Intercorrelations Across Operationalizations

Having established that both White and Black perceivers hold relative Job-, Rank-, and Attribute-based RSAs, we proceeded to create scores that capture individual variability in holding RSAs across operationalizations. We created indices of relative RSAs by computing difference scores for each measure, subtracting 1) the number of high-status jobs assigned to Black targets from the number of high-status jobs assigned to White targets (Job-based RSAs), 2) hierarchical ranking of Black Americans from ranking of White Americans (Rank-based RSAs), and 3) average rating of Black Americans on status-relevant attributes from average rating of White Americans on status-relevant attributes (Attribute-based RSAs). This process was repeated for each sample, leaving continuous indicators of Job-, Rank-, and Attribute-based *White=high status/Blacks=low status* RSA scores. Pearson *r* correlation tests revealed that Job-based RSA scores were only weakly correlated with Rank- or Attribute-based scores. In contrast, Rank- and Attribute-based RSAs were strongly correlated. See Table 4 for intercorrelations and descriptive statistics across samples.

Table 4
Correlations between Job-based, Rank-based, and Attribute-based Race-Status Associations (RSA) Across Samples

Sample	Rank RSA	Attribute RSA
Sample 1 ^a		
Job RSA	.11*	.21***
Rank RSA	—	.69***
Sample 2 ^a		
Job RSA	.22***	.26***
Rank RSA	—	.71***
Sample 3 ^a		
Job RSA	.33***	.33***
Rank RSA	—	.68***
Sample 4 ^a		
Job RSA	.18***	.22***
Rank RSA	—	.64***
Sample 5 ^a		
Job RSA	.23***	.22***
Rank RSA	—	.72***
Sample 6 ^a		
Job RSA	.11*	.14**
Rank RSA	—	.66***
Sample 7 ^a		
Job RSA	—	-.03
Sample 8 ^a		
Job RSA	.09	.28***
Rank RSA	—	.55***
Sample 9 ^a		
Job RSA	.09	.20**
Rank RSA	—	.46***

Note. † $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

^a White participants.

^b Black participants.

1

2 Temporal Reliability

3 Recently, researchers have criticized the relatively little attention paid to temporal
4 stability of various explicit and implicit indicators of bias (Gawronski, Morrison, Phillips, & Galdi,
5 2017; Payne, Vuletich, & Lundberg, 2017). To assess the temporal stability of the RSA measures
6 among White perceivers, we asked Sample 4 participants to complete the Job- and Attribute-

1 based RSA measures at two different time points, 10 weeks apart⁵. Of the original 433
 2 participants whose responses were analyzed in Wave 1, 221 (51%) participants elected to
 3 complete Wave 2, and 213 participants' RSA scores could be matched based on matching unique
 4 identifiers⁶. Pearson r correlations revealed that relative Job- and Attribute-based RSA scores
 5 correlated highly across the two administrations (Job-based: $r(212) = .69, p < .001$; Attribute-
 6 based: $r(212) = .68, p < .001$), suggesting high temporal stability (Cattel, Eber, & Tatsuoka,
 7 1970). Exploring single-category status associations revealed that, for the Job-based RSA
 8 measure, temporal stability was slightly higher for *Black=low status* associations ($r(212) = .72, p$
 9 $< .001$) than for *White=high status* associations ($r(212) = .66, p < .001$). In contrast, for the
 10 Attribute-based RSA measure, reliability was slightly higher for *White=high status* associations
 11 ($r(212) = .64, p < .001$) than for *Black=low status* associations ($r(212) = .55, p < .001$). For more
 12 direct acknowledgement of racial status inequality, *White=high status* associations—the
 13 deliberate assertion that the ingroup is societally privileged—may be more stable, while
 14 *Black=low status* associations may be more sensitive to situational variables. In contrast, for
 15 more subtle indicators of race-status beliefs, *Black=low status* associations—the spontaneous
 16 assertion that Black Americans occupy low-status positions in our society—may be more stable,
 17 while Job-based *White=high status* associations may be more subject to situational variables. We

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⁵ The Rank-based RSA measure was not included in Wave 2 due to experimenter error.

⁶ A multivariate analyses of variance (MANOVA) indicated no significant difference between those who completed both waves and those who only completed wave one on any of the relative or single-category RSA measures assessed, $F(4, 427) = 1.10, p = .360$, Wilks' $\lambda = 0.99, \eta_p^2 = .013$. Nor was there any significant difference on any of Sample 4's six criterion variables (MANOVA: $F(6, 427) = 0.75, p = .611$, Wilks' $\lambda = 0.99, \eta_p^2 = .010$; Univariate ANOVAs: $ps > .172$). Univariate ANOVAs suggest that, across RSA measures, the only difference as a function of attrition was a small but significant effect of having completed the second wave on reporting slightly higher Jobs-based *Black=low status* associations, $F(1, 431) = 4.31, p = .039, \eta_p^2 = .010$. While there remains a possibility that participants who completed both waves vary in some way from those who only completed Wave 1, overall, results suggest that they did not differ markedly on critical measures.

must note, however, that temporal stability was not tested among Black perceivers, as such it remains unknown whether these effects generalize to the disadvantaged racial group.

Factor Analyses

Having established the presence and temporal reliability of *White=high status/Black=low status* Job-, Rank-, and Attribute-based RSAs across samples, we proceeded to explore the factor structure of all RSA items. We expected Rank- and Attribute-based *White=high status/Black=low status* RSA measures to correlate highly and factor together—as these measures require deliberate acknowledgement of inequality. The Job-based RSA measure, however, should be more distinct—allowing people to express RSAs without direct acknowledgement of inequality (H1).

Exploratory Factor Analysis

We split Sample 1 in half to conduct exploratory factor analysis (EFA) on the first half. The sample size on the first randomly-selected half of Sample 1 ($n = 239$) and the resulting Kaiser-Meyer-Olkin measure of sampling adequacy index (0.81) both suggest that this sample size was sufficient to conduct an EFA (Comrey & Lee, 1992; Kaiser, 1970; Tabachnick & Fidell, 2007). EFA using principal components analysis and an oblique (promax) rotation determined the factor structure of all standardized Job-, Rank-, and Attribute-based RSA items, including: 1) total number of high-status jobs assigned to White targets (i.e., Job-based *White=high status* RSAs), 2) hierarchical ranking of White Americans (i.e., Rank-based *White=high status* RSAs), 3) ratings of White Americans on status-relevant attribute items (i.e., Attribute-based *White=high status* RSAs), 4) total number of low-status jobs assigned to Black targets (i.e., Job-based *Black=low status* RSAs), 5) hierarchical ranking of Black Americans (reversed; i.e., Rank-

1 Based *Black=low status* RSAs), and 6) ratings of Black Americans on status-relevant attributes
 2 (reversed; i.e., Attribute-based *Black=low status* RSAs).

3 All RSAs items loaded onto three interpretable components with eigenvaluges greater
 4 than 1.00, accounting for 64.81% of the total variance (Table 5). (a) Rank- and Attribute-based
 5 *Black=low status* items formed the strongest component, while (b) Rank- and Attribute-based
 6 *White=high status* items formed the next strongest component. (c) Job-based *Black=low status*
 7 and *White=high status* items—the number of low-status jobs assigned to Black targets, and the
 8 number of high-status jobs assigned to White targets—loaded onto a third component.⁷

Table 5

RSA Measures: Exploratory Factor Analysis of all RSA items Using Principal Components Analysis With Promax Rotation (Sample 1; White Participants)

RSA measure and item	Promax rotation		
	1	2	3
Job-based			
High-status job assignment (W)	.79	.04	-.17
High-status job assignment (B)(-)	.77	-.04	.12
Rank-based			
Hierarchical ranking (W)	-.14	.79	-.01
Hierarchical ranking (B)(-)	-.03	.04	.80
Attribute-based			
High-status (W)	.01	.87	-.13
Power (W)	-.01	.79	.12
Wealth (W)	.02	.70	-.02
Dominance (W)	.10	.76	.03
High-status (B)(-)	.08	-.08	.87
Power (B) (-)	.03	.01	.81
Wealth (B) (-)	.04	-.05	.85
Dominance (B) (-)	-.18	.04	.80

⁷ Perceived competitiveness loaded onto a fourth component, while race-confidence association items did not load particularly highly onto any single component (lower than the ideal cut off of .70, see Hair et al., 2010). We therefore exclude the attribute-based items concerning perceived competitiveness and confidence from further consideration. Across samples, relative Attribute-based RSA scores were thus computed as an average of the status, power, wealth, and dominance ascribed toward Black Americans subtracted from the average ratings of status, power, wealth, and dominance ascribed toward White Americans across studies.

Note. RSA = Race-status associations. Loadings greater than .70 are bolded. Items were standardized; items indicated with (–) are reversed.

Confirmatory Factor Analysis

To confirm this factor structure, we conducted a confirmatory factor analysis on the second half of Sample 1 ($n = 240$) using the Lavaan package of the statistical software R (Rosseel, 2012). This analysis tested the factor structure suggested by the EFA, in which the second-order factor (Race-Status Associations) was predicted by three first-order factors: 1) Rank- and Attribute-based *White=high status* associations, 2) Rank- and Attribute-based *Black=low status* associations, and 3) Job-based *White=high status* and *Black=low status* associations. We considered several model fit indices to evaluate the fit of the proposed model: the root-mean-square error of approximation (RMSEA), the root-mean-square error of approximation (SRMR), and the comparative fit index (CFI). Present standards suggest that RMSEA values below or close to 0.05, SRMR values below .08, and CFI values greater than .95 indicate a good fit (Hu & Bentler, 1999; Jackson, Gillaspy, & Purc-Stephenson, 2009). Per these standards, this model had acceptable fit indices: RMSEA = .06, 90% CI [.05, .08], SRMR = .05, CFI = .96, BIC = 6665.61.

We next compared this three-factor solution to an alternative model in which status beliefs about White Americans and Black Americans are captured by a one overall latent construct. To do so, we loaded all Job, Rank-, and Attribute-based status indicators for White Americans and Black Americans onto a single “generalized status associations” latent construct, using the same maximum likelihood estimation with robust standard errors, correlating the errors of the same pairs of items. Results revealed that this one-factor model did not meet current standards of acceptable fit: RMSEA = .26, 90% CI [.025, 0.28], SRMR = .24, CFI = .30, BIC =

7286.16. Finally, we computed the difference in model BICs to determine whether the difference in fit between these two models was significant, in keeping with guidelines put forth by Raftery (1995). The difference in BICs (620.55) is greater than 10, providing substantial evidence that the original three-factor model fit the data better than the alternate single-factor model.

Concurrent Validity

Having established the presence of overall RSAs among White and Black perceivers across operationalizations and tested the RSA items' factor structure, the next step in supporting the validity of Job-, Rank-, and Attribute-based RSAs was to examine the unique relation between each RSA measure and criterion variables related to hierarchy-maintaining attitudes, beliefs, and preferences. We begin by exploring concurrent validity of RSA measures across domains among White perceivers before moving to results featuring Black perceivers.

Relative Race-Status Associations

Based on prior literature, we predicted that White Americans higher in *White=high status/Black=low status* RSAs would show more hierarchy-maintaining attitudes, beliefs, and preferences, including outgroup prejudice, social dominance orientation, meritocracy beliefs, conservatism, denial of White privilege, job preferences for the self, hiring preferences toward Black or White status-seeking job applicants, and policy preferences that support inequality (H2A). We expected Rank- and Attribute-based RSA measures to show similarly predictive power, as they both rely on express acknowledgement of racial status inequality. The Job-based RSA measure, in contrast, is more subtle—and less likely to elicit social desirability concerns. We predicted that the more spontaneous, likely observation-based Job-based RSAs would most strongly predict (less socially desirable) hierarchy-maintaining outcomes (H2B), even after controlling for pro-White/anti-Black bias and support for the status quo (H2C).

Data Analytic Plan. We first tested the concurrent validity of relative RSA measures by regressing each criterion variable on all three relative RSA scores in a series of simultaneous regression analyses. This determined whether the relationship between a given *White=high status/Blacks=low status* RSA measure and a given criterion variable was significant, after any relationships between RSA variables have been taken into account. We next tested incremental concurrent validity, determining whether unique relationships between any given relative RSA measure and hierarchy-maintaining job or policy preferences held after controlling for potentially related variables (such as pro-White/anti-Black bias and social dominance orientation). Finally, we conducted meta-analyses to cumulate the concurrent validity and incremental concurrent validity effects across samples. This yielded a large number of analyses; we therefore refer readers to Table 6 for all meta-analytic results, which we summarize below. (Interested readers can find within-sample analyses in Supplement 3.) Analyses revealed no consistent moderation by participant gender; we therefore collapsed across gender (see Supplement 4 for details).

Table 6

Internal Meta-Analyses: Relative (White=High Status/Black=Low Status) Race-Status Associations (White Participants)

Analyses and criteria	Job					Rank					Attribute				
	<i>n</i> ^a	β	95% CI	Z	<i>p</i>	<i>n</i> ^a	β	95% CI	Z	<i>p</i>	<i>n</i> ^a	β	95% CI	Z	<i>p</i>
Concurrent validity															
Pro-White/anti-Black	6	.33***	[.30, .37]	20.16	.000	6	-.08*	[-.11, -.04]	-3.83	.000	5	.06*	[.01, .10]	2.24	.025
SDO	6	.25***	[.21, .29]	13.56	.000	6	-.17***	[-.21, -.13]	-8.35	.000	5	-.11***	[-.17, -.05]	-3.84	.000
Conservatism	6	.23***	[.20, .27]	13.97	.000	6	-.24***	[-.28, -.20]	-12.33	.000	5	-.22***	[-.27, -.16]	-7.71	.000
Meritocracy beliefs	4	.24***	[.20, .28]	11.91	.000	4	-.32***	[-.39, -.02]	-14.28	.000	3	-.21***	[-.29, -.14]	-5.36	.000
Denial of White privilege	3	.16***	[.12, .20]	7.83	.000	3	-.41***	[-.46, -.37]	-18.79	.000	2	-.30***	[-.30, -.22]	-7.15	.000
Low-status jobs	2	-.12**	[-.20, -.04]	-2.90	.004	2	.01	[-.10, .12]	0.19	.852	2	-.07	[-.18, .04]	-1.33	.182
High-status jobs	2	.11*	[.03, .19]	2.59	.010	2	-.06	[-.17, .05]	-1.11	.267	2	.12*	[.01, .23]	2.12	.034
Black applicants	4	-.17***	[-.22, -.11]	-6.00	.000	4	.02	[-.05, .07]	0.49	.624	3	-.01	[-.10, .08]	-0.32	.752
White applicants	4	.03	[-.04, .11]	1.20	.230	4	.05	[-.00, .11]	1.83	.067	3	.04	[-.04, .12]	0.97	.334
Incremental validity ^b															
Low-status jobs	2	-.13**	[-.21, -.04]	-2.76	.006	2	.01	[-.10, .12]	0.21	.833	2	-.08	[-.19, .03]	-1.40	.160
High-status jobs	2	.11*	[.02, .20]	2.39	.017	2	-.07	[-.18, .04]	-1.18	.239	2	-.07	[-.18, .04]	-1.18	.239
Black applicants	4	-.11***	[-.17, -.06]	-4.02	.000	4	.01	[-.05, .07]	0.33	.742	3	-.03	[-.12, .05]	-0.77	.440
White applicants	4	.08**	[.02, .13]	2.79	.005	4	-.00	[-.06, .06]	-0.08	.937	3	.01	[-.07, .09]	0.34	.734

Note. SDO = Social Dominance Orientation. Results for fixed effects models shown. All continuous variables were standardized. * $p < .05$ ** $p < .01$ *** $p < .001$.

^a Indicates the number of samples included in the meta-analysis.

^b Indicates results controlling for pro-White/anti-Black bias and social dominance orientation.

1   **Job-Based Race-Status Associations.** Holding relative Job-based RSAs—that is,
2   assigning more high-status jobs to White targets than to Black ones—significantly predicted
3   eight out of nine variables relating to hierarchy-maintenance. Specifically, White perceivers who
4   held more relative Job-based RSAs were significantly higher in pro-White/anti-Black bias, social
5   dominance orientation, conservatism, meritocracy beliefs, and denial of White privilege across
6   samples.

7   Holding *White=high status/Black=low status* Job-based RSAs also corresponded to job,
8   hiring, and policy preferences that can maintain inequality. White Americans who were higher in
9   these RSAs were more likely to reject low-status jobs and prefer high-status jobs. With respect to
10   interracial judgments, White perceivers who held Job-based RSAs were more likely to reject a
11   Black job applicant seeking access to a high-status job. Finally, relative Job-based RSAs have
12   implications for policy preferences. White perceivers who were higher in relative Job-based
13   RSAs were more likely to oppose racial policies aimed at reducing inequality in the one large
14   sample (Sample 7; $n = 1079$) in which policy preferences were assessed. These results remained
15   significant after controlling for pro-White/anti-Black bias and social dominance orientation.

16   **Rank-Based Race-Status Associations.** Holding *White=high status/Black=low status*
17   Rank-based RSAs also corresponded to a number of hierarchy-maintaining attitudes and
18   beliefs—in the opposite direction. White perceivers who were higher in relative Rank-based
19   RSAs were significantly *lower* in pro-White/anti-Black bias, social dominance orientation,
20   conservatism, meritocracy beliefs, and denial of White privilege. White Americans who held
21   relative Rank-based RSAs were also less likely to oppose policies aimed at reducing inequality,
22   above and beyond pro-White/anti-Black bias and social dominance orientation.

Attribute-Based Race-Status Associations. As expected, the relationship between relative Attribute-based RSAs and criterion variables largely mirrored that of Rank-based RSAs. White perceivers who were higher in relative Attribute-based RSAs were lower in social dominance orientation, conservatism, meritocracy beliefs, and denial of White privilege. In a departure from Rank-based RSAs' effects, however, relative Attribute-based RSAs significantly predicted increased pro-White/anti-Black bias and an increased preference for high-status jobs. Although the direction of relative Rank- and Attribute-based RSAs' relationship to hierarchy-maintaining beliefs was unexpected, results reveal that these RSA indicators hold distinct predictive power, uncovering new theoretical avenues.

Taken together, these results clearly support the theoretical expectations presented. For White perceivers, holding relative *White=high-status/Black=low-status* RSAs predicted attitudes, beliefs, and preferences that maintain the racial status hierarchy (H2A); the more subtle, spontaneous Job-based RSA measure—which did not require deliberate acknowledgement of a racial status hierarchy—was most predictive of increased hierarchy-maintaining outcomes (H2B); and the relationship between Job-based RSAs and job or policy preferences persisted after controlling for outgroup bias and support for the status quo (H2C).

Single Category Race-Status Associations

We expected that, consistent with prior work (Brown-Iannuzzi et al., 2019), *Black=low status* (versus *White=high status*) associations would most strongly predict hierarchy-maintaining outcomes (H4).

Data Analytic Plan. First, Job-, Rank-, and Attribute-based *Black=high status* scores were reversed, creating *Black=low status* RSA scores across measures. Next, we regressed each criterion variable on Rank-, Attribute-, and Job-based *Black=low status* RSA scores and Job-,

1 Rank-, and Attribute-based *White=high status* RSA scores in a series of simultaneous regression
2 analyses. This tested whether the relationship between a given single-category RSA measure and
3 a given criterion variable is significant, after any relationships with other *Black=low status* or
4 *White= high status* RSA scores have been taken into account. We again refer readers to
5 Supplement 3 for coefficients within samples and Table 7 for internal meta-analyses,
6 summarizing meta-analytic results in the text below.

Table 7

Internal Meta-Analyses: Single-Category (Black=Low Status; White=High Status) Race-Status Associations (White Participants)

Category, analyses and criteria	Job					Rank					Attribute				
	<i>n</i> ^a	β	95% CI	<i>Z</i>	<i>p</i>	<i>n</i> ^a	β	95% CI	<i>Z</i>	<i>p</i>	<i>n</i> ^a	β	95% CI	<i>Z</i>	<i>p</i>
<i>Black=Low status</i>															
Concurrent validity															
Pro-White/anti-Black	6	.32***	[.29, .36]	19.11	.000	6	-.04*	[-.08, -.00]	-2.04	.040	5	.08**	[.03, .14]	3.15	.002
SDO	6	.28***	[.24, .33]	12.31	.000	6	-.15***	[-.19, -.11]	-7.63	.000	5	-.03	[-.08, .03]	-0.97	.330
Conservatism	6	.23***	[.20, .27]	13.70	.000	6	-.19***	[-.23, -.16]	-10.05	.000	5	-.16***	[-.21, -.11]	-5.94	.000
Meritocracy beliefs	4	.21***	[.17, .25]	10.65	.000	4	-.33***	[-.38, -.29]	-15.18	.000	3	-.14***	[-.22, -.06]	-3.48	.001
DWP	3	.17***	[.13, .21]	8.50	.000	3	-.28***	[-.32, -.24]	-12.76	.000	2	-.19***	[-.27, -.10]	-4.50	.000
Low-status jobs	2	-.05	[-.14, .03]	-1.29	.196	2	.00	[-.10, .10]	0.10	.918	2	-.14**	[-.25, -.04]	-2.62	.009
High-status jobs	2	.03	[-.05, .12]	0.77	.439	2	-.10*	[-.21, -.00]	-1.96	.050	2	.09†	[-.01, .20]	1.73	.084
Black applicants	4	-.19***	[-.25, -.14]	-6.97	.000	4	-.03	[-.09, .03]	-0.99	.320	3	-.03	[-.12, .05]	-0.76	.450
White applicants	4	-.05†	[-.10, .00]	-1.79	.074	4	.01	[-.05, .07]	0.38	.704	3	-.04	[-.12, .04]	-0.91	.364
Incremental validity ^b															
Low-status jobs	2	-.06	[-.15, .03]	-1.36	.174	2	-.00	[-.11, .10]	-0.00	.997	2	-.14**	[-.25, -.04]	-2.64	.008
High-status jobs	2	.03	[-.06, .12]	0.63	.532	2	-.11*	[-.21, -.00]	-1.98	.048	2	.09†	[-.02, .19]	1.65	.099
Black applicants	4	-.16***	[-.21, -.10]	-5.56	.000	4	-.04	[-.10, .02]	-1.34	.179	3	-.04	[-.12, .05]	-0.84	.398
White applicants	4	-.01	[-.06, .04]	-0.45	.649	4	-.01	[-.06, .05]	-0.23	.822	3	-.04	[-.12, .04]	-0.97	.331
<i>White=High status</i>															
Concurrent validity															
Pro-White/anti-Black	6	.11***	[.08, .14]	6.51	.000	6	-.06**	[-.09, -.02]	-2.98	.003	5	-.01	[-.06, .04]	-0.43	.663
SDO	6	.04*	[.01, .07]	2.26	.024	6	-.08***	[-.12, -.04]	-4.12	.000	5	-.16***	[-.21, -.11]	-6.12	.000
Conservatism	6	.10***	[.07, .14]	5.91	.000	6	-.16***	[-.19, -.12]	-8.08	.000	5	-.11***	[-.16, -.06]	-4.14	.000
Meritocracy beliefs	4	.10***	[.06, .14]	5.05	.000	4	-.12***	[-.16, -.08]	-5.57	.000	3	-.13***	[-.20, -.03]	-3.50	.001
DWP	3	.02	[-.02, .06]	1.18	.239	3	-.30***	[-.35, -.26]	-14.17	.000	2	-.27***	[-.35, -.19]	-6.91	.000
Low-status jobs	2	-.11**	[-.19, -.03]	-2.68	.007	2	.04	[-.06, .13]	0.70	.481	2	.01	[-.09, .10]	0.09	.929
High-status jobs	2	.12**	[.04, .20]	2.83	.005	2	.01	[-.09, .11]	0.14	.890	2	.09†	[-.01, .19]	1.71	.087
Black applicants	4	-.03	[-.09, .02]	-1.23	.220	4	.05	[-.01, .10]	1.64	.101	3	.09*	[.01, .17]	2.19	.028
White applicants	4	.13***	[.09, .19]	5.03	.000	4	.05†	[-.00, .11]	1.80	.071	3	.13***	[.06, .21]	3.39	.001
Incremental validity ^b															
Low-status jobs	2	-.12**	[-.20, -.03]	-2.69	.007	2	.04	[-.06, .14]	0.82	.413	2	.00	[-.10, .10]	0.61	.951
High-status jobs	2	.11**	[.03, .20]	2.62	.009	2	.00	[-.10, .10]	0.00	.998	2	.09†	[-.01, .19]	1.67	.094
Black applicants	4	-.03	[-.09, .02]	-1.29	.197	4	.05	[-.01, .10]	1.58	.114	3	.07	[-.01, .15]	1.60	.109
White applicants	4	.14***	[.07, .20]	4.12	.000	4	.06†	[-.00, .11]	1.90	.057	3	.10**	[.02, .18]	2.59	.010

Note. SDO = Social Dominance Orientation. DWP = Denial of White Privilege. Results for fixed effects models shown. All continuous variables were standardized.

† $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$.

^a Indicates the number of samples included in the meta-analysis.

^b Indicates results controlling for pro-White/anti-Black bias and social dominance orientation.

1   **Job-Based Race-Status Associations.** We address two kinds.

2   ***Black=Low Status.*** White perceivers higher in Job-based *Black=low status* RSAs—that
3 is, those who assigned more low-status jobs (and, necessarily, fewer high-status jobs) to Black
4 targets—were significantly higher in bias, social dominance orientation, conservatism,
5 meritocracy beliefs, and denial of White privilege. Job-based *Black=low status* RSAs also
6 predicted increased rejection of Black job applicants seeking a high-status position and increased
7 opposition to policies that eliminate racial inequality—beyond bias or social dominance
8 orientation.

9   ***White=high status.*** Holding Job-based *White=high status* RSAs—that is, assigning more
10 high-status jobs (and, necessarily, fewer low-status jobs) to White targets—was less predictive of
11 hierarchy-maintaining attitudes, beliefs, and preferences. While Job-based *White=high status*
12 RSAs significantly predicted more outgroup bias, social dominance orientation, conservatism,
13 and meritocracy beliefs—and more rejection of low-status jobs—these effect sizes were weaker
14 than the comparable *Black=low status* RSA measure. There was one exception: White perceivers
15 who assigned more high-status jobs to White targets reported an increased preference for high
16 status jobs and were more likely to prefer White job applicants.

17   **Rank-Based Race-Status Associations.**

18   ***Black=Low Status.*** Holding Rank-based *Black=low status* RSAs—that is, ranking Black
19 Americans as lower in the racial status hierarchy—was negatively associated with outgroup bias,
20 social dominance orientation, conservatism, outgroup bias, meritocracy beliefs, and denial of
21 White privilege among White perceivers.

22   ***White=High Status.*** Holding Rank-based *White=high status* RSAs—that is, ranking
23 White Americans as higher in the racial status hierarchy—was also associated with reduced

1 hierarchy-maintaining attitudes and beliefs among White perceivers, though these effects were
2 weaker. White Americans higher in this measure were lower in outgroup bias, social dominance
3 orientation, conservatism, meritocracy beliefs, and denial of White privilege. However, neither
4 rank-based single-category RSA measure significantly predicted own job preferences or hiring
5 preferences.

6 **Attribute-Based Race-Status Associations.**

7 ***Black=Low Status.*** Much like Rank-based RSAs, holding Attribute-based *Black=low*
8 *status* RSAs—that is, rating Black Americans as lower in status-relevant attributes—was
9 associated with lower hierarchy-maintaining beliefs, specifically, conservatism, meritocracy
10 beliefs, and denial of White privilege. However, White perceivers higher in this measure did
11 report increased pro-White/anti-Black bias and a reduced preference for low-status jobs.

12 ***White=High Status.*** Holding Attribute-based *White=high status* RSAs—that is, rating
13 White Americans as higher in status-relevant attributes—was also associated with lower
14 hierarchy-maintaining beliefs, including social dominance orientation, conservatism, meritocracy
15 beliefs and denial of White privilege. However, this measure significantly predicted increased
16 preferences for White job applicants, controlling for bias and social dominance orientation.

17 **Race-Status Associations: Black Participants**

18 We next explored whether RSAs are associated with hierarchy-relevant attitudes, beliefs,
19 and preferences among Black perceivers. For Black Americans, relative RSAs link the ingroup
20 with low-status and an outgroup with high-status. Relative *White=high status/Black=low status*
21 associations may not, then, predict increased hierarchy-maintaining attitudes, beliefs, or
22 preferences—as was predicted for White perceivers. Rather, holding such stereotypical

1 associations may predict reduced hierarchy-maintaining attitudes and beliefs such as social
2 dominance orientation and meritocracy beliefs (H3).

3   Meta-analytic results (Table 8) were consistent with this logic: relative Rank- or
4 Attribute-based RSAs predicted reduced pro-White/anti-Black bias, social dominance
5 orientation, conservatism, and meritocracy beliefs. Further, Black perceivers higher in Rank- or
6 Attribute-based RSAs were more likely to believe in perceived discrimination against Black
7 Americans. In contrast to White perceivers' results, relative Job-based RSAs did not significantly
8 predict hierarchy-maintaining attitudes, beliefs, or preferences among Black perceivers, with
9 one exception: relative Jobs-based RSAs positively predicted meritocracy beliefs among Black
10 perceivers.

Table 8

Internal Meta-Analyses: Relative (White=High Status/Black=Low Status) Race-Status Associations (Black Participants)

Analyses and criteria	n ^a	Job				Rank				Attribute			
		β	95% CI	Z	p	β	95% CI	Z	p	β	95% CI	Z	p
Concurrent validity													
Pro-Black/anti-White	2	-.06	[-.18, .06]	-0.96	.337	.16*	[.02, .29]	2.24	.025	-.10	[-.24, .04]	-1.38	.169
Social dominance orientation	2	.10†	[-.02, .21]	1.67	.094	-.27***	[-.40, -.14]	-4.19	.000	-.17*	[-.30, .07]	-2.50	.012
Conservatism	2	.05	[-.07, .17]	0.84	.402	-.21**	[-.35, -.08]	-3.10	.002	.04	[-.09, .18]	0.62	.532
Meritocracy beliefs	2	.12*	[.00, .23]	1.97	.049	-.04	[-.17, .08]	-0.71	.477	-.18**	[-.32, -.05]	-2.73	.006
Perceived discrimination	2	-.06	[-.18, .05]	-1.06	.287	.26***	[.13, .39]	3.91	.000	.05	[-.09, .18]	0.67	.500
Low-status jobs	2	.03	[-.09, .15]	0.50	.614	-.21**	[-.34, -.08]	-3.18	.002	-.12†	[-.26, .01]	-1.79	.074
High-status jobs	2	.01	[-.11, .13]	0.20	.845	-.09	[-.22, .05]	-1.28	.201	-.10	[-.24, .04]	-1.42	.155
Incremental validity ^b													
Low-status jobs	2	.01	[-.10, .13]	0.24	.810	-.17*	[-.30, -.03]	-2.41	.016	-.12†	[-.25, .02]	-1.67	.094
High-status jobs	2	.02	[-.10, .14]	0.30	.761	-.11	[-.25, .04]	-1.46	.144	-.11	[-.25, .03]	-1.51	.132

Note. Results for fixed effects models shown. All continuous variables were standardized. † $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$.

^a Indicates the number of samples included in the meta-analysis.

^b Indicates results controlling for pro-White/anti-Black bias and social dominance orientation.

1   Finally, examination of single-category status associations (Table 9) revealed that, as
2   with White perceivers, Black perceivers' *Black=low status* associations were stronger predictors
3   of the above criterion variables than *White= high status* associations, with one exception: Rank-
4   based *White=high status* associations more strongly predicted reduced social dominance
5   orientation and conservatism among Black perceivers than did Rank-based *Black=low status*
6   associations.

Table 9

Internal Meta-Analyses: Single-category (Black=Low Status; White=High Status) Race-Status Associations (Black Participants)

Analyses and criteria	n ^a	Job				Rank				Attribute			
		β	95% CI	Z	p	β	95% CI	Z	p	β	95% CI	Z	p
<i>Black=Low status</i>													
Concurrent validity													
Pro-Black/anti-White	2	-.04	[-.17, .09]	-0.64	.525	.10	[-.05, .25]	1.29	.195	.05	[-.21, .11]	-0.62	.536
Social dominance orientation	2	.10	[-.02, .22]	1.61	.109	-.16*	[-.30, -.02]	-2.28	.023	-.08	[-.23, .06]	-1.11	.266
Conservatism	2	.01	[-.11, .14]	0.23	.820	-.16*	[-.30, -.01]	-2.16	.031	.07	[-.08, .21]	0.88	.377
Meritocracy beliefs	2	.09	[-.03, .21]	1.52	.129	-.20**	[-.34, -.06]	-2.79	.005	-.20**	[-.34, -.05]	-2.64	.008
Perceived discrimination	2	-.10	[-.22, .03]	-1.54	.125	.13†	[-.01, .27]	1.80	.071	.03	[-.12, .18]	0.35	.726
Low-status jobs	2	-.06	[-.18, .06]	-0.91	.363	-.23**	[-.37, -.09]	-3.20	.001	-.05	[-.20, .10]	-0.63	.527
High-status jobs	2	.10	[-.02, .22]	1.63	.102	-.28***	[-.41, -.13]	-3.71	.000	-.07	[-.22, .07]	-.098	.326
Incremental validity ^b													
Low-status jobs	2	.09	[-.04, .21]	1.39	.165	-.24**	[-.38, -.10]	-3.29	.001	-.07	[-.22, .08]	-0.95	.343
High-status jobs	2	-.05	[-.17, .07]	-0.78	.438	-.24**	[-.39, -.10]	-3.26	.001	-.05	[-.21, .10]	-0.69	.490
<i>White=High status</i>													
Concurrent validity													
Pro-Black/anti-White	2	-.06	[-.18, .07]	-0.91	.363	.10	[-.03, .23]	1.45	.148	-.07	[-.21, .07]	-1.01	.313
Social dominance orientation	2	.03	[-.08, .15]	0.60	.551	-.21***	[-.33, -.09]	-3.36	.001	-.20**	[-.33, -.08]	-3.12	.002
Conservatism	2	.06	[-.06, .18]	1.00	.317	-.17*	[-.29, -.04]	-2.56	.011	-.02	[-.15, .10]	-0.37	.710
Meritocracy beliefs	2	.10†	[-.02, .21]	1.70	.091	-.09	[-.21, .04]	-1.40	.165	-.06	[-.19, .07]	-0.91	.361
Perceived discrimination	2	.03	[-.09, .14]	0.44	.657	.22***	[.09, .34]	3.41	.001	.11	[-.03, .24]	1.58	.113
Low-status jobs	2	.11†	[-.00, .23]	1.91	.057	.08	[-.05, .21]	1.24	.214	-.04	[-.17, .09]	-0.57	.565
High-status jobs	2	-.03	[-.15, .08]	-0.56	.574	-.04	[-.16, .08]	-0.64	.522	-.08	[-.21, .05]	-1.16	.248
Incremental validity ^b													
Low-status jobs	2	-.04	[-.16, .08]	-0.69	.492	-.01	[-.13, .12]	-0.11	.914	-.06	[-.20, .07]	-0.88	.377
High-status jobs	2	.11†	[-.00, .23]	1.90	.058	.07	[-.06, .20]	1.08	.281	-.04	[-.17, .11]	-0.52	.602

Note. Results for fixed effects models shown. All continuous variables were standardized. † $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$.

^a Indicates the number of samples included in the meta-analysis.

^b Indicates results controlling for pro-Black/anti-White bias and social dominance orientation.

Supplemental Study

As suggested in the introduction, Job-based RSAs likely tap into more spontaneous, personal beliefs about targets—“who belongs where”—and may be partly based on observation. In contrast, Whites’ societal-ranking and attribute-based RSA scores likely elicit more deliberate, objective societal descriptions—acknowledgment of structural status disparities between groups—and may be partly based on a willingness to educate oneself about racial inequality and express it. This difference in spontaneity may explain why Jobs-based RSAs (but not Rank- or Attribute-based) predict increased hierarchy-maintaining outcomes. Seeking empirical evidence to this effect, we conducted a preregistered study (<https://aspredicted.org/blind.php?x=db496x>), wherein participants completed the RSA measures after a time delay, under time pressure, or with no time-related constructions. We predicted that Jobs-based RSAs would be lowest when participants are forced to deliberate, speaking to their relative spontaneity.

Method

Participants

We recruited 1230 participants (49.1% women, $M_{\text{age}} = 35.65$, $SD_{\text{age}} = 12.27$) from Prolific Academic to complete an online study ostensibly about jobs and occupations.

Procedure

Participants completed RSA measures after a time delay, under time pressure, or with no time-related constructions. For the time delay condition, participants were instructed to complete each item of the Jobs-, Rank-, or Attribute-based RSA after waiting at least 10 seconds. Each item appeared on a separate screen, with a timer that counted up from 0 seconds. For the time pressure condition, participants were instructed to complete each item of each RSA measure in

under 10 seconds. Each item appeared on a separate screen, with a timer that counted down from 10 seconds. Finally, in a control condition, participants were given no time-related instructions.

Results

We separately examined relative *White=high status/Black=low status* RSA scores, single-category *White=high status* scores, and single-category *Black=low status* scores for each measure. A one-way ANOVA revealed a significant main effect of condition on Jobs-based *Black=low status* associations, $F(2, 1227) = 3.04, p = .047$. A planned contrast further revealed that, as expected, White perceivers who were given time to deliberate ($M = 4.74, SD = 2.25$) assigned significantly fewer low-status jobs to Black targets than those who completed the task under time pressure ($M = 5.13, SD = 2.31$) or those who received no time-related instructions ($M = 4.96, SD = 2.27$), $F(1, 1227) = 4.10, p = .043$. There were no significant effects of condition on any other relative or single-category race-status associations, $F_s < 1^8$.

As often found in time pressure studies (Rand, 2017), the manipulation's effect was subtle. Moreover, as the rate of compliance was high, we did not exclude noncompliant participants, which often strengthens such manipulations (Bouwmeester et al., 2017; Rand, 2017). Although we examined this question in a relatively large sample ($N = 1229$), because the effects of this time pressure paradigm are small, these conclusions should be considered tentative until future work has replicated the effects with even larger samples. Nonetheless, these results provide initial evidence that, as theorized, Jobs-based RSAs—specifically, *Black=low status* associations—can be attenuated by deliberation, speaking to their relative spontaneity in contrast to the other measures.

General Discussion

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⁸ Due to a programming error, participants did not view the Rank-based RSA measure, completing the Attribute- and Jobs-based RSA measures only.

Using nine large U.S. adult samples, the current work developed and validated three measures of race-status associations—one based on assigning targets to occupations, one based on ranking racial groups, and one based on rating racial groups on status-relevant stereotypical attributes—testing the concurrent validity of each. With this, the current work provides new measures that specify RSAs across operationalizations and advances theory by determining their distinct predictive power, above and beyond related constructs.

All RSA measures—Job-based, Rank-based, and Attribute-based—showed individual variability. However, the direction in which (and the degree with which) they predicted hierarchy-maintaining attitudes, beliefs, and preferences varied. Drawing on theories exploring how stereotypes can reinforce group boundaries and hierarchies (Eagly & Steffen, 1984; Fiske, 1993; Jost & Banaji, 1994; Pratto et al., 1994) and prior work exploring the expression of race-status associations (Brown-Iannuzzi et al., 2019; Lei & Bodenhausen, 2017), we predicted that race-status associations—especially Jobs-based—would positively predict hierarchy-maintaining attitudes, beliefs, and preferences among White perceivers.

As predicted, White Americans' Job-based RSA scores correlated positively with attitudes, beliefs, and preferences that maintain the racial status quo inequality, including pro-White/anti-Black bias, social dominance orientation, conservatism, meritocracy beliefs, rejection of hierarchy-reducing policies, and rejection of Black status-seeking job applicants. These results persisted above and beyond related controls, suggesting that RSA effects are not reducible to established components of socio-political ideology, including interracial prejudice or social dominance orientation. In contrast, Rank- and Attribute-based RSA scores correlated negatively with such hierarchy-maintaining responses.

1 All RSA measures explore the same construct—stereotypic associations between race
2 and status—without assessing notions of fairness. However, this finding suggests that not all
3 race-status associations are equal; Jobs-based RSAs predicted *increased* hierarchy maintenance,
4 while Rank- and Attribute-based RSAs predicted *reduced* hierarchy maintenance. There are a
5 number of explanations for the differential impact of Jobs-based versus Rank- and Attribute-
6 based RSAs. We review three here. The first possible explanation concerns the domain.
7 Occupational status perceptions may be uniquely tied to ideas about meritocracy in ways that
8 rank- or attribute-based status perceptions are not. Future work that controls for domain could
9 therefore prove illuminating. One way to do so would be by testing whether there is a differential
10 impact of occupation-based RSAs as assessed via rank or attributes, versus face-job pairing task.

11 A second explanation concerns the nature of the task. The Jobs-based RSA measure
12 tested reactions to individual group members, while the Rank- and Attribute-based measures
13 assessed reactions to racial groups, which may be more abstract. Prior research suggests that
14 thinking in abstract (versus concrete) mind-sets can prompt hierarchy-maintaining outcomes
15 (Napier, Luguri, Dovidio & Oltman, 2018). If group-based race-status associations are more
16 abstract than individual-based race-status associations, then we would expect such associations
17 (i.e., Rank- and Attribute-based RSAs) to correspond to increased hierarchy maintenance.
18 Results do not support this notion. Rather, our findings suggest the opposite; the individual-
19 based RSA measure was most predictive of hierarchy-maintaining outcomes. More work,
20 however, is needed to fully disentangle the role of individual- versus group-based RSAs.

21 A final explanation also concerns the nature of the task. As suggested, Jobs-based RSAs
22 may rely on patterns observed in the world, making them relatively unexamined and
23 spontaneous. In contrast, Rank- and Attribute-based RSAs may rely on acknowledgement of

1 racial inequality, making them more examined and deliberate. Results from the Supplemental
2 Study support this explanation, finding that people show lower Jobs-based *Black=low status*
3 RSAs under a time delay versus under time pressure or when given no time-related
4 instructions—speaking to their relative spontaneity. This is only one study (the results of which
5 must be replicated), but it provides initial evidence for why the more spontaneous Jobs-based
6 RSAs may uniquely correspond to hierarchy-enhancing (versus hierarchy-attenuating) outcomes.
7 We hope that future researchers will further probe the impact of spontaneous versus deliberative
8 processing on race-status associations.

9   It is worth situating Jobs-, Rank-, and Attribute-based race-status associations with both
10 “old school” and “new school” measures of racist ideology (see Bobo, Kluegel, & Smith, Smith,
11 1997; Bonilla-Silva, 2017; Gaertner & Dovidio, 1986; Katz & Hass, 1988; McConahay, 1986;
12 Pettigrew & Meertens, 1995; Sears, 1988). Rank- and Attribute-based measures are more direct;
13 they involve directly stating that Black Americans are lower in social status than White
14 Americans. In that sense, they align with “old school” measures of perceived racial inferiority,
15 which involved direct, concrete statements of Black Americans’ inferiority (as commonly found
16 in the Jim Crow era) and traditionally predicted anti-Black preferences. However, that is where
17 the similarity ends. White perceivers higher in Rank- and Attribute-based RSA measures directly
18 report that Black Americans are disadvantaged relative to White Americans, but they are less
19 likely to endorse this inequity—or the beliefs and policies that reinforce it.

20   In contrast, the Jobs-based RSA measure is more indirect; it involves suggesting that
21 Black Americans are lower-status than White Americans based on responses to a face-job
22 pairing task, rather than direct statements of Black inferiority. In that sense, it is more aligned
23 with the more indirect, “new school” measures, which involve the abstract suggestion of racial

inferiority based on morality, values, or cultural and, in a post-Civil rights era, has been found to predict anti-Black preferences. The abstraction of the Jobs-based RSA measure and its correspondence to hierarchy-maintaining beliefs and outcomes makes it more closely aligned with new school measures of racist ideology. We now live in a society that condemns direct expressions of anti-Blackness. This subtle, choice-based measure may therefore constitute an indirect way of assessing “a new racism” (Henry & Sears, 2000, p. 254)—beliefs that Black Americans fail to progress compared to White Americans, which can ultimately predict attitudes, beliefs, and policy references that maintain racial inequality.

Finally, it is possible to discuss the accuracy of responses to RSA measures. We largely avoid such language due to our interest in the *variability* of race-status associations. However, racial economic inequality is historical and current fact; economic data estimates that the net worth of the average Black American family is one tenth that of the average White American family (Dettling, Hsu, Jacobs, Moore, & Thompson, 2017). Americans tend to grossly underestimate this racial wealth gap, likely due to a motivated preference to believe narratives of racial progress (Kraus, Onyeador, Daumeyer, Rucker, & Richeson, 2019; Kraus, Rucker, & Richeson, 2017). However, because Black Americans as a racialized disadvantaged group are lower in socioeconomic status than White Americans as a racialized advantaged group, those who directly report such group-based inequity via Rank- and Attribute-based RSA measures are indeed approaching accuracy. In contrast, perceivers who report that Black Americans are equal to (or, rarely, greater than) White Americans’ socioeconomic status are approaching inaccuracy. In this way, the current research reveals meaningful correlates with more accurate perceptions of racial economic inequality among White and Black perceivers.

Overall, the development and validation of Jobs-, Rank-, and Attribute-based race-status association measures contributes to social psychology, sociology, and political science, adding nuance to literatures that have lacked novel, validated measures of racist ideology since the onset of the 21st century. More specifically, it also contributes to a body of work that rarely differentiated RSAs by operationalization, largely tying RSAs to hierarchy maintenance rather than hierarchy attenuation. We hope this paves the way for future research that further explores the differential impact of race-status perceptions based on occupation, societal rank, or status-relevant attributes.

Rank- Versus Attribute-Based Race-Status Associations

Consistent with theorizing, Rank- and Attribute-based RSA scores were closely related, while Job-based RSAs were more distinctive. Rank- and Attribute-based RSA items factored together, and these relative RSA measures were strongly correlated with each other. This in and of itself is illuminating; mere ranking of racial groups' standing on the social ladder corresponds highly with stereotype content (i.e., rating these racial groups on stereotypical attributes that relate to status). However, the implications for future work that utilizes these measures to assess status perceptions are also worth noting. In simultaneous regression models that included all RSA measures, White Americans' Rank-based RSA scores more strongly predicted reduced hierarchy-maintaining attitudes, beliefs, and preferences among most criterion variables. For Black Americans, the Rank-based RSA scale also outperformed the other RSA measures on many criteria. Thus, this work provides some validation for the shorter of the two RSA measures. We would encourage researchers to utilize the Rank-based RSA measure over the Attribute-based measure in predicting deliberate acknowledgement of status disparities between groups, as

the brevity of this single-item RSA scale reduces participant demands and allows for use in more rigorous research designs (Clark & Watson, 1995; Robins, Hendin, & Trzesniewski, 2001)⁹.

Single-Category Status Associations

In addition to providing a generative and methodologically rigorous contribution, the current work advances theory by examining both relative and single-category status associations. Little work has examined individual variability in holding race-status associations, much less considered the differential impact of relative RSAs and single-category associations with a single target group (for an exception see Brown-Iannuzzi et al., 2019). As expected, and consistent with prior work (Brown-Iannuzzi et al., 2019), *Black=low status* associations—be they jobs-based, rank-based, or attribute-based—were largely more predictive of explored outcomes among both White and Black perceivers. One explanation may lie in the primacy of perceived morality in ingroup (versus intergroup) evaluations. Stereotypes surrounding morality are thought to have priority for ingroup judgements, rather those related to status (Leach, Ellemers, & Barreto, 2007). If so, then *White=moral* stereotypes may more strongly predict White perceivers' attitudes, beliefs, or preferences than *White=high status* stereotypes. Future work is needed to further explore this potential explanation.

There were a few occasions, however, whereby *White=high status* associations more strongly predicted outcomes than *Black=low status* associations. For example, among White perceivers, Job-based *White=high status* associations more strongly predicted increased preferences for White job applicants, while Rank- and Attribute-based *White=high status*

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⁹ Social desirability (Crowne & Marlowe, 1960) was included and tested in three samples as an exploratory step aimed at investigating the relationship between RSA measures and social desirability concerns. In one sample of White Americans, the Rank-based RSA score was significantly associated with social desirability concerns, $p = .007$. White Americans who reported higher Rank-based *White=high status/Black=low status* associations reported fewer social desirability concerns (see Supplement 5 for details). Controlling for social desirability concerns did not impact concurrent or incremental validity results.

associations more strongly predicted reduced denial of White privilege. Among Black perceivers, Rank-based *White=high status* associations more strongly predicted increased perceptions of discrimination¹⁰. Together, these results suggest the need for specificity in considering RSAs and their consequences; these measures allow for such specificity by enabling the separate computation and analysis of *White=high status* or *Black=low status* associations.

Limitations and Future Directions

Race-Status Associations Toward and Among Racial Minorities

The current work paves the way for several new avenues of research. One important area for future work is further specification of race-status associations among racial minorities. A burgeoning area of social psychological research explores White Americans' perceptions of the interplay of race and socio-economic status and their implications for intergroup dynamics and racial hierarchy. However, these explorations—and the findings produced therein—are incomplete without commensurate study of racial minorities' race-status links and their implications for intergroup dynamics and racial hierarchy. This is not only a theoretical shortcoming, but a moral one; it behooves us to include racial minorities in our research as active perceivers, not just passive targets (Shelton, 2000). A primary goal of the current work was to determine Black Americans' associations between race and status across multiple domains and explore the consequences of holding RSAs as the disadvantaged racial group. Much, however, remains to be known. Below, we expand on three future directions.

Race-Status Associations Toward Different Racial Groups. One next step is to use these RSA measures to further explore status associations toward additional racial minority

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¹⁰ As an exploratory step, a measure of ethnic identification (Luhtanen & Crocker, 1992) was included in both samples featuring Black participants. Results revealed no significant relationships between Jobs-, Rank-, or Attribute-based RSAs and ethnic identification. See Supplement 6 for details and results.

groups, such as Latinx Americans and Asian Americans. In examining overall perceptions of status differences between racial groups, Kahn and colleagues (2009) found high consensus that White Americans have higher status than Asian Americans, who in turn have higher status than both Black Americans and Latinx Americans (who are seen as similarly low in status). Further, Zou and Cheryan (2017) found that Black Americans and Latinx Americans are seen as similarly inferior relative to Asian Americans (though Black Americans are seen as less foreign than both). This status-ordering of minority group status is consistent with the current Rank- and Attribute-based RSA findings, wherein Asian Americans were seen as lower in status than White Americans, but higher in status than Latinx Americans. However, the consequences of individual variability in RSAs featuring Latinx Americans and Asian Americans remains unknown.

Race-Status Associations Held by Racial Minority Groups. Future research should also further explore the impact of holding RSAs among multiple racial minority groups. The current work takes a first step in considering relative and single-category status associations among Black Americans, however, several questions remain. Per our theorizing, all racial minorities, including Asian Americans and Latinx Americans, should be more likely to hold Rank- and Attribute-based RSAs—as they are more motivated to give voice to an unequal status quo—thus corresponding to reduced hierarchy maintenance. This, however, constitutes an unexplored research question. For example, are Asian Americans, as members of a higher-status racialized group, less likely to show deliberate acknowledgement of status inequalities? Furthermore, research on interminority relations suggests that shared discrimination can promote positive relations between racial minorities (Cortland et al., 2017; Craig & Richeson 2012). What are the implications of holding interminority race-status associations for coalition or competition between racial minority groups? For whom, and under what conditions, does perceiving other

1 minority groups as high status prove comforting—possibly encouraging interminority
2 coalition—versus threatening—possibly encouraging interminority competition? We hope
3 researchers will utilize these measures to explore if and how racial minorities hold status
4 associations featuring their own and other racial groups—and the implications that such status
5 associations may have for hierarchy-maintenance and interminority relations.

6 **Race-Status Associations Experienced by Racial Minority Groups.** Lastly, future
7 work should explore the implications of experiencing others' race-status associations. One
8 crucial, and yet relatively unexplored, question is how racial minorities respond physiologically,
9 cognitively, and behaviorally when White Americans express these status associations.
10 Anecdotal and empirical evidence suggests these experiences are commonplace (e.g., being
11 mistaken for a service employee; Sellers & Shelton, 2003; Williams, Phillips, & Hall, 2016).
12 Uncovering how others' expressions of race-status associations influence feelings of threat,
13 cognitive performance and, ultimately, a sense of belonging in the workplace is crucial to our
14 understanding of hierarchy-maintenance within organizations. Ultimately, we hope that future
15 work will center the perspectives and experiences of Black Americans, Asian Americans and
16 Latinx Americans in exploring the consequences of RSAs for racial minorities and inequality.

17 **Practical Applications**

18 Finally, we consider the implications of these findings across contexts, populations, and
19 disciplines. The current work drew exclusively from online platforms, such as Amazon's
20 Mechanical Turk (5 samples), Prolific Academic (4 samples), and Qualtrics panels (1 sample).
21 Overall, results were reliable and robust across survey platforms. Nevertheless, a foremost
22 challenge for future research is to demonstrate empirically that the RSA effects found in online
23 or lab studies translate into consequential real-world effects—such as the rejection of Black

1 candidates in real-world organizational or political contexts. Large-scale, controlled longitudinal
2 investigations can meet this goal by modeling the predictive validity of RSAs for socially-
3 meaningful criteria in contexts where race-status stereotyping is of concern, including schools,
4 hospitals, voting booths, and organizations.

5   Relatedly, we hope future research will draw upon more representative populations by
6 incorporating non-WEIRD (Western, Educated, Industrialized, Rich, & Democratic) participants.
7 Though the samples in this work do not rely exclusively on (often well-educated, liberal-leaning)
8 college students or White Americans, the White and Black perceivers in this work are hardly
9 representative of the global population (Henrich, Heine, & Norenzayan, 2010; Henry, 2008;
10 Sears, 1986). As such, we cannot claim that these findings generalize to the entirety of the
11 human species. Future research in this realm must replicate and extend existing work by
12 recruiting participants from more than one slice of humanity.

13   Researchers across disciplines can use these measures in a variety of ways. Here, we
14 identify concrete examples. Developmental psychologists can use them to pinpoint when status
15 associations develop, along with their durability. Management scholars can use them to
16 investigate when and for whom status associations impede organizations' diversity efforts.
17 Political scientists can use them to determine how voters conceptualize inequality—with what
18 implications for policy or political candidate preferences. Sociologists can explore qualitative
19 interpretations of RSA measures through the use of open-ended questions; linking such
20 qualitative and quantitative data could indeed prove illuminating. More broadly, social scientists
21 across disciplines can utilize these measures to explore the impact of planned interventions or
22 unplanned societal contexts (such as economic scarcity (Krosch & Amodio, 2014), worldwide
23 protest movements against discriminatory policing, or, indeed, a global pandemic) on status

associations. all measures can easily be adapted to assess Jobs-, Rank-, or Attribute-based status perceptions of several disadvantaged social groups, including women (versus men), LGBTQ (versus heterosexual or cisgender individuals) individuals, plus-size (versus straight-size) individuals, disabled (versus abled) individuals, or older (versus younger) individuals.

Methodologically speaking, researchers need not include potentially related control variables (see incremental validity findings) or, indeed, all RSA measures for investigations. For precision, the current work tested the unique effect to each RSA measure, controlling for other RSA measures, but the effects of each RSA measure on criterion measures largely hold without these controls (see Supplement 7). Moreover, testing the interactive effects of *Black=low status* and *White=high status* associations revealed largely nonsignificant results. Put otherwise, the effects of *Black=low status* associations were not dependent on *White=high status* associations, and vice versa. (Though it should be noted that interactive tests were likely underpowered; see Supplement 8 for meta-analytic results.) While *Black=low status* effects tend to be slightly (though nonsignificantly) stronger for those who also hold higher *White=high status* associations, this suggests that researchers can explore *Black=low status* or *White=high status* associations independently, reducing demand for both researchers and participants.

Conclusion

Many speculate as to whether former President Barack Obama or other Black Americans serving in high-status positions facilitates the association of Black Americans with higher status while dissociating Black Americans from the stereotypic characteristics of incompetence, laziness, criminality, and indeed, low status. However, this may be a moot point if not enough Black Americans occupy positions of power to discourage stereotypes or encourage individuation. Black Americans still encounter difficulty with upward social, economic, or

1 political mobility—with little acknowledgement by the majority of American society (e.g.,
2 Bonilla-Silva, 2017; Kraus et al., 2017). These findings highlight the need to increase awareness
3 of stereotypes that link race and status, and their implications for hierarchy-maintaining attitudes,
4 beliefs, and preferences. Ultimately, individuals vary in linking race and status, and these
5 stratifying stereotypical associations may play a role in reinforcing or dismantling barriers to
6 equality. Although much remains to be understood, this work importantly extends our theoretical
7 and empirical understanding of race-status associations' validity among White and Black
8 perceivers, and introduces powerful new tools for its assessment.

References

- Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy white women. *Health Psychology, 19*(6), 586–592.
- Allport, G. W. (1954). *The nature of prejudice*. Addison–Wesley.
- Anderson, C., Hildreth, J. A. D., & Howland, L. (2015). Is the desire for status a fundamental human motive? A review of the empirical literature. *Psychological Bulletin, 141*(3), 574–601. <https://doi.org/10.1037/a0038781>
- Bai, H. (2018). Evidence that A Large Amount of Low Quality Responses on MTurk Can Be Detected with Repeated GPS Coordinates. Retrieved March 24, 2020, from <https://www.maxhuibai.com/blog/evidence-that-responses-from-repeating-gps-are-random>
- Barkow, J. H. (1975). Prestige and culture: A biosocial interpretation. *Current Anthropology, 16*, 553–562.
- Baron, J. N., & Newman, A. E. (1990). For what It's worth: Organizations, occupations, and the value of work done by women and nonwhites. *American Sociological Review, 55*(2), 155–175.
- Berger, J., Fisek, M. H., Norman, R., & Zelditch, M. (1977). *Status characteristics and social interaction: An expectation-states approach*. New York: Elsevier.
- Berger, J., Rosenholtz, S. J., & Zelditch, M., Jr. (1980). Status organizing processes. *Annual Review of Sociology, 6*, 479–508.

- 1 Berger, J., Wagner, D. G., & Zelditch, M., Jr. (1985). Introduction: Expectation states theory:
2 Review and assessment. In J. Berger & M. Zelditch, Jr. (Eds.), *Status, rewards, and*
3 *influence: How expectations organize behavior* (pp. 1-72). San Francisco: Jossey-Bass.
- 4 Bergmann, B. R. (1974). Occupational segregation, wages and profits when employers
5 discriminate by race or sex. *Eastern Economic Journal*, 1(2), 103–110.
- 6 Bertrand, M., & Mullainathan, S. (2004). Are Emily and Greg more employable than Lakisha
7 and Jamal? A field experiment on labor market discrimination. *American Economic*
8 *Review*, 94(4), 991-1013. DOI: 10.1257/0002828042002561
- 9 Bialik, K., & Cilluffo, A. (2017). Data from Pew Research Center tabulations of the 1968-2016
10 Current Population Survey Annual Social and Economic Supplement (IPUMS).
11 Available at [http://www.pewresearch.org/fact-tank/2017/02/22/6-facts-about-black-](http://www.pewresearch.org/fact-tank/2017/02/22/6-facts-about-black-americans-for-black-history-month/)
12 [americans-for-black-history-month/](http://www.pewresearch.org/fact-tank/2017/02/22/6-facts-about-black-americans-for-black-history-month/)
- 13 Biernat, M., & Kobrynowicz, D. (1997). Gender and race-based standards of competence: lower
14 minimum standards but higher ability standards for devalued groups. *Journal of*
15 *Personality and Social Psychology*, 72(3), 544-557.
- 16 Bertrand, M., & Mullainathan, S. (2004). Are Emily and Greg more employable than Lakisha
17 and Jamal? A field experiment on labor market discrimination. *The American Economic*
18 *Review*, 94, 991–1013.
- 19 Bobo, L., Kluegel, J. R., & Smith, R. A. (1997). Laissel-faire racism: The crystallization of a
20 kinder, gentler, antiblack ideology. In S. A. Tuch & J. K. Martin (Eds.), *Racial attitudes*
21 *in the 1990s: Continuity and change* (pp. 45-75). Westport, CT: Praeger
- 22 Bonam, C. M., Bergsieker, H. B., & Eberhardt, J. L. (2016). Polluting Black space. *Journal of*
23 *Experimental Psychology: General*, 145(11), 1561-1582.

- 1 Bonam, C., Yantis, C., & Taylor, V. J. (2018). Invisible middle-class Black space: Asymmetrical
2 person and space stereotyping at the race–class nexus. *Group Processes & Intergroup*
3 *Relations*, 23(1). <https://doi.org/10.1177/1368430218784189>
- 4 Bonam, C., Yantis, C., & Taylor, V. J. (2020). Invisible middle-class Black space: Asymmetrical
5 person and space stereotyping at the race–class nexus. *Group Processes & Intergroup*
6 *Relations*, 23(1), 24–47.
- 7 Bonilla-Silva, E. (2017). Racism without racists: *Color-blind racism and the persistence of*
8 *racial inequality in the United States* (5th ed.). Lanham, MD: Rowman & Littlefield.
- 9 Bouwmeester, S., Verkkoeijen, P. P. J. L., Aczel, B., Barbosa, F., Bègue, L., Brañas-Garza, P., . .
10 . Wollbrant, C. E. (2017). Registered Replication Report: Rand, Greene, and Nowak
11 (2012). *Perspectives on Psychological Science*, 12, 527-542.
- 12 Brannon, T. N., Higginbotham, G. D., & Henderson, K. (2017). Class advantages and
13 disadvantages are not so Black and White: Intersectionality impacts rank and
14 selves. *Current Opinion in Psychology*, 18, 117-122.
15 <https://doi.org/10.1016/j.copsyc.2017.08.029>
- 16 Brannon, T. N., & Markus, H. R. (2013). Social class and race: Burdens but also some benefits
17 of chronic low rank. *Psychological Inquiry*, 24(2), 97-
18 101. <https://doi.org/10.1080/1047840X.2013.794102>
- 19 Brewer, M. B. (1979). Ingroup bias in the minimal intergroup situation: A cognitive-motivational
20 analysis. *Psychological Bulletin*, 86, 307–324.
- 21 Brown, L. M., & Dobbins, H. (2004). Students' of Color and European American Students'
22 Stigma-Relevant Perceptions of University Instructors. *Journal of Social Issues*, 60(1),
23 157-174.

- 1 Brown-Iannuzzi, J. L., Cooley, E., McKee, S. E., & Hyden, C. (2019). Wealthy Whites and poor
2 Blacks: Implicit associations between racial groups and wealth predict explicit opposition
3 toward helping the poor. *Journal of Experimental Social Psychology*, 82, 26-34.
- 4 Brown-Iannuzzi, J. L., Dotsch, R., Cooley, E., & Payne, B. K. (2017). The relationship between
5 mental representations of welfare recipients and attitudes toward welfare. *Psychological*
6 *Science*, 28(1), 92-103.
- 7 Brown-Iannuzzi, J. L., Lundberg, K. B., Kay, A. C., & Payne, B. K. (2015). Subjective status
8 shapes political preferences. *Psychological Science*, 26(1), 15-26.
- 9 Cheng, J. T., Tracy, J. L., Foulsham, T., Kingstone, A., & Henrich, J. (2013). Two ways to the
10 top: Evidence that dominance and prestige are distinct yet viable avenues to social rank
11 and influence. *Journal of Personality and Social Psychology*, 104(1), 103-125.
- 12 Cole-Frowe, C., & Fausset, R. (2015). Jarring image of police's use of force at Texas pool
13 party. *The New York Times*.
- 14 Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale
15 development. *Psychological Assessment*, 7(3), 309-319.
- 16 Comrey, A., & Lee, H. (1992). Interpretation and application of factor analytic results. In A. L.
17 Comrey & H. B. Lee (Eds.), *A first course in factor analysis* (Vol. 2, pp. 240-262).
18 Hillsdale, NJ: Lawrence Erlbaum.
- 19 Correll, S. J., & Ridgeway, C. L. (2003). Expectation states theory. In J. Delamater (Ed.),
20 *Handbook of social psychology* (pp. 29–51). New York, NY: Springer.
- 21 http://dx.doi.org/10.1007/0-387-36921-X_2
- 22 Cortland, C. I., Craig, M. A., Shapiro, J. R., Richeson, J. A., Neel, R., & Goldstein, N. J. (2017).
23 Solidarity through shared disadvantage: Highlighting shared experiences of

1 discrimination improves relations between stigmatized groups. *Journal of Personality*
2 *and Social Psychology*, 113(4), 547-567.

3 Cox, W. T., & Devine, P. G. (2015). Stereotypes possess heterogeneous directionality: A
4 theoretical and empirical exploration of stereotype structure and content. *PloS*
5 *One*, 10(3), e0122292.

6 Craig, M. A., & Richeson, J. A. (2012). Coalition or derogation? How perceived discrimination
7 influences intraminority intergroup relations. *Journal of Personality and Social*
8 *Psychology*, 102(4), 759-777.

9 Critcher, C. R., & Risen, J. L. (2014). If he can do it, so can they: Exposure to
10 counterstereotypically successful exemplars prompts automatic inferences. *Journal of*
11 *Personality and Social Psychology*, 106(3), 359-379.

12 Crocker, J., & Major, B. (1989). Social stigma and self-esteem: The self-protective properties of
13 stigma. *Psychological Review*, 96(4), 608-630.

14 del Río, C., & Alonso-Villar, O. (2015). The evolution of occupational segregation in the United
15 States, 1940–2010: Gains and losses of gender–race/ethnicity groups. *Demography*,
16 52(3), 967–988.

17 Dettling, L. J., Hsu, J. W., Jacobs, L., Moore, K., & Thompson, J. (2017). *Recent trends in*
18 *wealth-holding by race and ethnicity: Evidence from the Survey of Consumer Finances.*
19 *Board of Governors of the Federal Reserve System.* Available at:
20 [https://www.federalreserve.gov/econres/notes/feds-notes/recent-trends-in-wealth-](https://www.federalreserve.gov/econres/notes/feds-notes/recent-trends-in-wealth-holding-by-race-and-ethnicity-evidence-from-the-survey-of-consumer-finances-20170927.htm)
21 [holding-by-race-and-ethnicity-evidence-from-the-survey-of-consumer-finances-](https://www.federalreserve.gov/econres/notes/feds-notes/recent-trends-in-wealth-holding-by-race-and-ethnicity-evidence-from-the-survey-of-consumer-finances-20170927.htm)
22 [20170927.htm](https://www.federalreserve.gov/econres/notes/feds-notes/recent-trends-in-wealth-holding-by-race-and-ethnicity-evidence-from-the-survey-of-consumer-finances-20170927.htm)

- 1 Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled
2 components. *Journal of Personality and Social Psychology*, 56(1), 5-18.
- 3 Devine, P. G., & Elliot, A. J. (1995). Are racial stereotypes really fading? The Princeton trilogy
4 revisited. *Personality and Social Psychology Bulletin*, 21(11), 1139-1150.
- 5 Dovidio, J. F., Kawakami, K., & Gaertner, S. L. (2002). Implicit and explicit prejudice and
6 interracial interaction. *Journal of Personality and Social Psychology*, 82(1), 62-68.
- 7 Durante, F., Fiske, S. T., Kervyn, N., Cuddy, A. J. C., Akande, A. D., Adetoun, B. E., Adewuyi,
8 M. F., Tserere, M. M., Ramiah, A. A., Mastor, K. A., Barlow, F. K., Bonn, G., Tafarodi,
9 R. W., Bosak, J., Cairns, E., Doherty, C., Capozza, D., Chandran, A., Chryssochoou, X.,
10 ... Storari, C. C. (2012). Nations' income inequality predicts ambivalence in stereotype
11 content: How societies mind the gap. *British Journal of Social Psychology*, 1-21.
12 <http://dx.doi.org/10.1111/bjso.12005>.
- 13 Eagly, A. H., & Steffen, V. J. (1984). Gender stereotypes stem from the distribution of women
14 and men into social roles. *Journal of Personality and Social Psychology*, 46(4), 735-754.
- 15 Edwards, J. R. (2001). Ten difference score myths. *Organizational Research Methods*, 4, 265-
16 287.
- 17 Ellemers, N., Spears, R., & Doosje, B. (2002). Self and social identity. *Annual Review of*
18 *Psychology*, 53(1), 161-186.
- 19 Emerson, R. M. (1962). Power- dependence relations. *American Sociological Review*, 27, 31-
20 41. <http://dx.doi.org/10.2307/2089716>
- 21 Fazio, R. H., & Olson, M. A. (2003). Implicit measures in social cognition research: Their
22 meaning and use. *Annual Review of Psychology*, 54(1), 297-327.

- 1 Fiske, S. T. (1993). Controlling other people: The impact of power on stereotyping. *American*
2 *Psychologist*, 48(6), 621-628.
- 3 Fiske, S. T., Bergsieker, H. B., Russell, A. M., & Williams, L. (2009). Images of Black
4 Americans: Then “them”, and now “Obama!”. *Du Bois Review: Social Science Research*
5 *on Race*, 6(01), 83–101.
- 6 Fiske, S. T., Cuddy, A. J. C., Glick, P., and Xu, J. (2002). A model of (often mixed) stereotype
7 content: Competence and warmth respectively follow from perceived status and
8 competition. *Journal of Personality and Social Psychology*, 82(6), 878–902.
- 9 Fiske, S. T., & Dupree, C. (2014). Gaining trust as well as respect in communicating to
10 motivated audiences about science topics. *Proceedings of the National Academy of*
11 *Sciences of the United States of America*, 111(Suppl 4), 13593-13597.
- 12 Freeman, J. B., Penner, A. M., Saperstein, A., Scheutz, M., & Ambady, N. (2011). Looking the
13 part: Social status cues shape race perception. *PloS One*, 6(9), e25107.
- 14 Furr, R. M. (2011). *The SAGE library of methods in social and personality psychology. Scale*
15 *construction and psychometrics for social and personality psychology*. Sage Publications
16 Ltd.
- 17 Gaertner, S. L., & Dovidio, J. F. (1986). The aversive form of racism. In J. F. Dovidio & S. L.
18 Gaertner (Eds.), *Prejudice, discrimination, and racism* (pp. 61-89). New York: Academic
19 Press.
- 20 Galinsky, A. D., Rucker, D. D., & Magee, J. C. (2015). Power: Past findings, present consid-
21 erations, and future directions. In M. Mikulincer, & P. R. Shaver (Eds.), *APA Handbook*
22 *of Personality and Social Psychology*, (Vol. 3: Interpersonal Relationships, pp. 421–460).
23 Washington, DC: American Psychological Association.

- 1 Gaucher, D., Friesen, J., & Kay, A. C. (2011). Evidence that gendered wording in job
2 advertisements exists and sustains gender inequality. *Journal of Personality and Social*
3 *Psychology, 101*(1), 109-128.
- 4 Gawronski, B., Morrison, M., Phillips, C. E., & Galdi, S. (2017). Temporal stability of implicit and
5 explicit measures: A longitudinal analysis. *Personality and Social Psychology*
6 *Bulletin, 43*(3), 300-312.
- 7 Gilens, M. (1996). Race and poverty in America: Public misperceptions and the American news
8 media. *Public Opinion Quarterly, 60*(4), 515-541.
- 9 Goldhamer, H., & Shils, E. A. (1939). Types of power and status. *American Journal of*
10 *Sociology, 45*(2), 171-182.
- 11 Hair, J.F., Black, W.C., Babin, B.J. & Anderson, R.E. (2010) *Multivariate Data Analysis: A*
12 *global perspective*. (7th ed.). Pearson.
- 13 Henrich, J., & Gil-White, F. J. (2001). The evolution of prestige: Freely conferred deference as a
14 mechanism for enhancing the benefits of cultural transmission. *Evolution and Human*
15 *Behavior, 22*(3), 165-196.
- 16 Henry, P. J., & Sears, D. O. (2002). The symbolic racism 2000 scale. *Political Psychology, 23*,
17 253–283. <http://dx.doi.org/10.1111/0162->
- 18 Hetey, R. C., & Eberhardt, J. L. (2014). Racial disparities in incarceration increase acceptance of
19 punitive policies. *Psychological Science, 25*(10), 1949-1954.
- 20 Ho, A. K., Sidanius, J., Kteily, N., Sheehy-Skeffington, J., Pratto, F., Henkel, K. E., Foels, R., ...
21 Stewart, A. L. (2015). The nature of social dominance orientation: Theorizing and
22 measuring preferences for intergroup inequality using the new SDO7 scale. *Journal of*
23 *Personality and Social Psychology, 109*, 1003–1028.

- 1 Hoffman, C., & Hurst, N. (1990). Gender stereotypes: Perception or rationalization? *Journal of*
2 *Personality and Social Psychology*, 58(2), 197 – 208.
- 3 Hu, L., & Bentler, P.M. (1999). Cut-off criteria for fit indexes in covariance structure analysis:
4 Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1-55.
- 5 Jaccard, J., Weber, J., & Lundmark, J. (1975). A multitrait-multimethod analysis of four attitude
6 assessment procedures. *Journal of Experimental Social Psychology*, 11(2), 149-154.
- 7 Jackson, D. L., Gillaspay Jr, J. A., & Purc-Stephenson, R. (2009). Reporting practices in
8 confirmatory factor analysis: An overview and some recommendations. *Psychological*
9 *Methods*, 14(1), 6-23.
- 10 John, O.P., & Benet-Martinez, V. (2000). Measurement: Reliability, construct validation, and
11 scale construction. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in*
12 *social and personality psychology* (pp. 339–369). Cambridge University Press.
- 13 Jost, J. T., & Banaji, M. R. (1994). The role of stereotyping in system-justification and the
14 production of false consciousness. *British Journal of Social Psychology*, 33(1), 1-27.
- 15 Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. J. (2003). Political conservatism as
16 motivated social cognition. *Psychological Bulletin*, 129(3), 339-375.
- 17 Jost, J. T., & Kay, A. C. (2005). Exposure to benevolent sexism and complementary gender
18 stereotypes: Consequences for specific and diffuse forms of system justification. *Journal*
19 *of Personality and Social Psychology*, 88, 498 – 509.
- 20 Kaiser, H. F. (1970). A second generation little jiffy. *Psychometrika*, 35, 401– 415.
21 <http://dx.doi.org/10.1007/BF02291817>
- 22 Kaiser, C. R., Drury, B. J., Spalding, K. E., Cheryan, S., & O'Brien, L. T. (2009). The ironic
23 consequences of Obama's election: Decreased support for social justice. *Journal of*

- 1   *Experimental Social Psychology*, 45(3), 556-559.
- 2   Katz, D., & Braly, K. (1933). Racial stereotypes of one hundred college students. *Journal of*
3   *Abnormal and Social Psychology*, 28(3), 280–290.
- 4   Kahn, K., Ho, A. K., Sidanius, J., & Pratto, F. (2009). The space between us and them:
5   Perceptions of status differences. *Group Processes & Intergroup Relations*, 12(5), 591-
6   604.
- 7   Kaplan, B. H. (1965). Social issues and poverty research: A commentary. *Journal of Social*
8   *Issues*, 21(1), 1–10.
- 9   Karpinski, A., & Steinman, R. B. (2006). The single category implicit association test as a
10   measure of implicit social cognition. *Journal of Personality and Social*
11   *Psychology*, 91(1), 16-32.
- 12   Katz, I., & Hass, R. G. (1988). Racial ambivalence and American value conflict: Correlational
13   and priming studies of dual cognitive structures. *Journal of Personality and Social*
14   *Psychology*, 55, 893-905.
- 15   Kay, A. C., Jost, J. T., Mandisodza, A. N., Sherman, S. J., Petrocelli, J. V., & Johnson, A. L.
16   (2007). Panglossian ideology in the service of system justification: How complementary
17   stereotypes help us to rationalize inequality. In M. Zanna (Ed.), *Advances in*
18   *Experimental Social Psychology* (pp. 305 – 358). Academic Press/Elsevier.
- 19   Kay, A. C., Gaucher, D., Peach, J. M., Laurin, K., Friesen, J., Zanna, M. P., & Spencer, S. J.
20   (2009). Inequality, discrimination, and the power of the status quo: Direct evidence for a
21   motivation to see is the way things are as the way they should be. *Journal of Personality*
22   *and Social Psychology*, 97(3), 421 – 434.

- 1 Keltner, D., Gruenfeld, D. H., & Anderson, C. (2003). Power, approach, and
2 inhibition. *Psychological Review*, 110(2), 265-284.
- 3 Kinder, D. R., & Kalmoe, N. P. (2017). *Neither Liberal nor Conservative: Ideological Innocence*
4 *in the American Public*. The University of Chicago Press.
- 5 Kraus, M. W., & Keltner, D. (2009). Signs of socioeconomic status: A thin-slicing approach.
6 *Psychological Science*, 20(1), 99–106.
- 7 Kraus, M. W., Onyeador, I. N., Daumeyer, N. M., Rucker, J. M., & Richeson, J. A. (2019). The
8 misperception of racial economic inequality. *Perspectives on Psychological*
9 *Science*, 14(6), 899-921.
- 10 Kraus, M. W., Park, J. W., & Tan, J. J. (2017). Signs of social class: The experience of economic
11 inequality in everyday life. *Perspectives on Psychological Science*, 12(3), 422-435.
- 12 Kraus, M. W., Rucker, J. M., & Richeson, J. A. (2017). Americans misperceive racial economic
13 equality. *Proceedings of the National Academy of Sciences*, 114(39), 10324-10331.
- 14 Krosch, A. R., & Amodio, D. M. (2014). Economic scarcity alters the perception of race.
15 *Proceedings of the National Academy of Sciences, USA*, 111, 9079–9084.
- 16 Krueger, J. (1996). Personal beliefs and cultural stereotypes about racial characteristics. *Journal*
17 *of Personality and Social Psychology*, 71(3), 536-538.
- 18 Kunstman, J. W., Plant, E. A., & Deska, J. C. (2016). White ≠ poor: Whites distance, derogate,
19 and deny low-status ingroup members. *Personality and Social Psychology*
20 *Bulletin*, 42(2), 230-243.
- 21 Leach, C. W., Ellemers, N., & Barreto, M. (2007). Group virtue: The importance of morality (vs.
22 competence and sociability) in the positive evaluation of in-groups. *Journal of*
23 *Personality and Social Psychology*, 93, 234–249

- 1   Lei, R. F., & Bodenhausen, G. V. (2017). Racial assumptions color the mental representation of
2   social class. *Frontiers in Psychology*, 8, Article 519.
- 3   Levin, S., Sidanius, J., Rabinowitz, J. L., & Federico, C. (1998). Ethnic identity, legitimizing
4   ideologies, and social status: A matter of ideological asymmetry. *Political*
5   *Psychology*, 19(2), 373-404.
- 6   Lott, B., & Bullock, H. E. (2001). Who are the poor? *Journal of Social Issues*, 57(2), 189–206.
- 7   Magee, J. C., & Galinsky, A. D. (2008). Social hierarchy: The self-reinforcing nature of power
8   and status. *Academy of Management Annals*, 2(1), 351–398.
- 9   Major, B., Gramzow, R. H., McCoy, S. K., Levin, S., Schmader, T., & Sidanius, J. (2002).
10   Perceiving personal discrimination: the role of group status and legitimizing
11   ideology. *Journal of Personality and Social Psychology*, 82(3), 269-282.
- 12   Major, B., Kaiser, C. R., O'Brien, L. T., & McCoy, S. K. (2007). Perceived discrimination as
13   worldview threat or worldview confirmation: Implications for self-esteem. *Journal of*
14   *Personality and Social Psychology*, 92(6), 1068-1086.
- 15   Massey, D. S., & Denton, N. A. (1993). *American apartheid: Segregation and the making of the*
16   *underclass*. Harvard University Press.
- 17   Mattan, B. D., Kubota, J. T., & Cloutier, J. (2017). How social status shapes person perception
18   and evaluation: A social neuroscience perspective. *Perspectives on Psychological*
19   *Science*, 12(3), 468-507.
- 20   Mattan, B. D., Kubota, J. T., Li, T., Dang, T. P., & Cloutier, J. (2018). Motivation Modulates
21   Brain Networks in Response to Faces Varying in Race and Status: A Multivariate
22   Approach. *ENeuro*, 5(4).

- 1 Mattan, B. D., Kubota, J. T., Li, T., Venezia, S. A., & Cloutier, J. (2019). Implicit Evaluative
2 Biases Toward Targets Varying in Race and Socioeconomic Status. *Personality and*
3 *Social Psychology Bulletin*, 45(10), 1512–1527.
- 4 Maume, D. J. (1999). Glass ceilings and glass escalators. *Work and Occupations*, 26(4), 483–
5 509.
- 6 McConahay, J. B. (1986). Modern racism, ambivalence, and the modern racism scale. In J. F.
7 Dovidio & S. L. Gaertner (Eds.), *Prejudice, discrimination, and racism* (pp. 91-126).
8 New York: Academic Press.
- 9 McCoy, S. K., & Major, B. (2007). Priming meritocracy and the psychological justification of
10 inequality. *Journal of Experimental Social Psychology*, 43(3), 341-351.
- 11 Moore-Berg, S. L., & Karpinski, A. (2019). An intersectional approach to understanding how
12 race and social class affect intergroup processes. *Social and Personality Psychology*
13 *Compass*, 13(1), e12426.
- 14 Moss-Racusin, C., Dovidio, J.F., Brescoll, V.L., Graham, M.J., & Handelsman, J. (2012).
15 Science faculty's subtle gender biases favor male students. *Proceedings of the National*
16 *Academy of Sciences of the United States of America*, 109(41), 16474–16479.
- 17 Moya, M., & Fiske, S. T. (2017). The social psychology of the Great Recession and social class
18 divides. *Journal of Social Issues*, 73(1), 1-15.
- 19 Napier, J. L., Luguri, J. B., Dovidio, J. F., & Oltman, K. A. (2018). Construing the Essence: The
20 Effects of Construal Level on Genetic Attributions for Individual and Social Group
21 Differences. *Personality and Social Psychology Bulletin*, 44(9), 1395-1407.
- 22 Nosek, B. A. (2005). Moderators of the relationship between implicit and explicit
23 evaluation. *Journal of Experimental Psychology: General*, 134(4), 565-584.

- 1 Oliver, M., & Shapiro, T. (2006). *Black wealth, White wealth: A new perspective on racial*
2 *inequality*. Routledge.
- 3 Payne, B. K., Vuletich, H. A., & Lundberg, K. B. (2017). The bias of crowds: How implicit bias
4 bridges personal and systemic prejudice. *Psychological Inquiry*, 28(4), 233-248.
- 5 Peer, E., Brandimarte, L., Samat, S., & Acquisti, A. (2017). Beyond the Turk: Alternative
6 platforms for crowdsourcing behavioral research. *Journal of Experimental Social*
7 *Psychology*, 70, 153-163.
- 8 Penner, A. M., & Saperstein, A. (2008). How social status shapes race. *Proceedings of the*
9 *National Academy of Sciences*, 105(50), 19628–19630.
- 10 Pettigrew, T. F., & Meertens, R. W. (1995). Subtle and blatant prejudice in western Europe.
11 *European Journal of Social Psychology*, 25, 57-75.
- 12 Pratto, F., Sidanius, J., Stallworth, L. M., & Malle, B. F. (1994). Social dominance orientation: A
13 personality variable predicting social and political attitudes. *Journal of Personality and*
14 *Social Psychology*, 67(4), 741-763.
- 15 Rand, D. G. (2017). Reflections on the Time-Pressure Cooperation Registered Replication
16 Report. *Perspectives on Psychological Science*, 12(3), 543–547.
- 17 Raftery, A. E. (1995). Bayesian model selection in social research. *Sociological*
18 *Methodology*, 25, 111-164.
- 19 Richeson, J. A., & Sommers, S. R. (2016). Toward a social psychology of race and race relations
20 for the twenty-first century. *Annual Review of Psychology*, 67, 439-463.
- 21 Ridgeway, C. L., & Erickson, K. G. (2000). Creating and spreading status beliefs. *American*
22 *Journal of Sociology*, 106, 579–615.

- 1 Robins, R. W., Hendin, H. M., & Trzesniewski, K. H. (2001). Measuring global self-esteem:
2 Construct validation of a single-item measure and the Rosenberg Self-Esteem
3 Scale. *Personality and Social Psychology Bulletin*, 27(2), 151-161.
- 4 Rosseel, Y. (2012). Lavaan: An R package for structural equation modeling and more. Version
5 0.5–12 (BETA). *Journal of Statistical Software*, 48(2), 1-36.
- 6 Rubin, M., & Hewstone, M. (2004). Social identity, system justification, and social dominance:
7 Commentary on Reicher, Jost et al., and Sidanius et al. *Political Psychology*, 25, 947–
8 967.
- 9 Rudman, L. A., & Glick, P. (2001). Prescriptive gender stereotypes and backlash toward agentic
10 women. *Journal of Social Issues*, 57(4), 743-762.
- 11 Sears, D. O. (1988). Symbolic racism. In P. A. Katz & D. A. Taylor (Eds.), *Eliminating racism:*
12 *Profiles in controversy* (pp. 53-84). New York: Plenum.
- 13 Sellers, R. M., & Shelton, J. N. (2003). The role of racial identity in perceived racial
14 discrimination. *Journal of Personality and Social Psychology*, 84(5), 1079-1092.
- 15 Shedd, C. (2015) *Unequal city: Race, schools, and perceptions of injustice*. Russell Sage
16 Foundation.
- 17 Shelton, J. N. (2000). A reconceptualization of how we study issues of racial
18 prejudice. *Personality and Social Psychology Review*, 4(4), 374-390.
- 19 Sidanius, J., & Pratto, F. (1999). *Social dominance: An intergroup theory of social hierarchy and*
20 *oppression*. Cambridge University Press.
- 21 Sidanius, J., Pratto, F., van Laar, C., & Levin, S. (2004). Social dominance theory: Its agenda
22 and method. *Political Psychology*, 25, 845–880.
- 23 Sigelman, L., & Tuch, S. A. (1997). Metastereotypes: Blacks' perceptions of Whites' stereotypes

- of Blacks. *Public Opinion Quarterly*, 61(1), 87-101.
- Smith, J. A., McPherson, M., & Smith-Lovin, L. (2014). Social distance in the United States: Sex, race, religion, age, and education homophily among confidants, 1985 to 2004. *American Sociological Review*, 79(3), 432-456.
- Snyder, M., & Miene, P. K. (1994). On the functions of stereotypes and prejudice. In M. P. Zanna (Ed.), *The psychology of prejudice: The Ontario Symposium* (Vol. 7, pp. 33-54). Hillsdale, NJ: Erlbaum.
- Steele, C. M. (1992). Race and the schooling of Black Americans. *The Atlantic Monthly*, 269(4), 68-78.
- Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist*, 52(6), 613-629.
- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, 69(5), 797-811.
- Steele, C. M., Spencer, S. J., & Aronson, J. (2002). Contending with group image: The psychology of stereotype and social identity threat. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 34, pp. 379-440). Academic Press.
- Sullivan, L., Meschede, T., Dietrich, L., Shapiro, T., Traub, A., Ruetschlin, C., & Draut, T. (2015). *The racial wealth gap: Why policy matters*. New York and Waltham, MA: Demos and The Institute on Assets and Social Policy, Brandeis University.
- Swim, J. K., & Miller, D. L. (1999). White guilt: Its antecedents and consequences for attitudes toward affirmative action. *Personality and Social Psychology Bulletin*, 25(4), 500-514.
- Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). *Using multivariate statistics* (Vol. 5). Pearson.

- 1 Tablante, C. B., & Fiske, S. T. (2015). Teaching social class. *Teaching of Psychology*, 42(2),
2 184-190.
- 3 Thibaut, J. W., & Kelley, H. H. (1959). *The social psychology of groups*. John Wiley.
- 4 Thompson, N., & Magnay, D. (2013, August 09). *Oprah Winfrey racism row over Switzerland*
5 *shop incident*. CNN World. [www.cnn.com/2013/08/09/world/oprah-winfreyracism-](http://www.cnn.com/2013/08/09/world/oprah-winfreyracism-switzerland)
6 [switzerland](http://www.cnn.com/2013/08/09/world/oprah-winfreyracism-switzerland)
- 7 Tomaskovic-Devey, D., Zimmer, C., Stainback, K., Robinson, C., Taylor, T., & McTague, T.
8 (2006). Documenting desegregation: Segregation in American workplaces by race,
9 ethnicity, and sex, 1966–2003. *American Sociological Review*, 71(4), 565-588.
- 10 Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin
11 & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47).
12 Monterey, CA: Brooks/Cole.
- 13 Turner, J. C. (1975). Social comparison and social identity: Some prospects for intergroup
14 behaviour. *European Journal of Social Psychology*, 5, 5–34.
- 15 Turner, J. (1978). Social comparison, similarity and ingroup favouritism. In H. Tajfel (Ed.),
16 *Differentiation between social groups: Studies in the social psychology of intergroup*
17 *relations* (pp. 235–250). London: Academic Press.
- 18 Walton, G. M., & Cohen, G. L. (2007). A question of belonging: Race, social fit, and
19 achievement. *Journal of Personality and Social Psychology*, 92(1), 82-96.
- 20 Webster, M., & Foschi, M. (1988). *Status generalization: New theory and research*. Stanford,
21 CA: Stanford University.

- 1 Westfall, S. S. (2014, December 17). *The Obamas: How We Deal with Our Own Racist*
2 *Experiences*. People. [https://people.com/celebrity/the-obamas-how-we-deal-with-our-](https://people.com/celebrity/the-obamas-how-we-deal-with-our-own-racist-experiences)
3 [own-racist-experiences](https://people.com/celebrity/the-obamas-how-we-deal-with-our-own-racist-experiences)
- 4 Williams, M. J., & Eberhardt, J. L. (2008). Biological conceptions of race and the motivation to
5 cross racial boundaries. *Journal of Personality and Social Psychology*, 94(6), 1033-1047.
- 6 Williams, J. C., Phillips, K. W., & Hall, E. V. (2016). Tools for change: Boosting the retention of
7 women in the STEM pipeline. *Journal of Research in Gender Studies*, 6, 11–75.
- 8 Yzerbyt, V. (2016). Intergroup stereotyping. *Current Opinion in Psychology*, 11, 90–95.
- 9 Yzerbyt, V. Y., Rocher, S. J., & Schadron, G. (1997). Stereotypes as explanations: A subjective
10 essentialistic view of group perception. In R. Spears, P. Oakes, N. Ellemers, & A. Haslam
11 (Eds.), *The psychology of stereotyping and group life* (pp. 20 – 50). Oxford: Basil
12 Blackwell.
- 13 Zou, L. X., & Cheryan, S. (2017). Two axes of subordination: A new model of racial
14 position. *Journal of Personality and Social Psychology*, 112(5), 696-717.
- 15