Article



Disrupting Beliefs in Racial Progress: Reminders of Persistent Racism Alter Perceptions of Past, But Not Current, **Racial Economic Equality**

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Abstract

Although there has been limited progress toward economic equality between Americans over the past half-century, many Americans are largely unaware of the persistence of economic racial disparities. One intervention for this widespread ignorance is to inform White Americans of the impact of racism on the outcomes of Black Americans. In two studies, we attempted to improve the accuracy of Whites' perceptions of racial progress and estimates of contemporary racial economic equality. Reminding White Americans about the persistence of racial disparities produced smaller overestimates of how much progress had been made toward racial economic equality between 1963 and 2016. Rather than modifying overestimates of contemporary racial economic equality, participants who read about disparities assessed the past as more equitable than participants who did not. We discuss implications of these findings for efforts to address Whites' misperceptions of racial economic equality and to challenge narratives of American racial progress.

Keywords

racism, racial economic inequality, racial progress, reminders of racism

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Economic inequality between Black and White Americans is and has been a feature of American society since before the nation's founding. One of the starkest disparities is in the domain of wealth. According to the most recent Federal statistics, the median wealth held by Black families is one tenth of the median wealth held by White families (Bricker et al., 2017). Despite the shocking magnitude of this disparity, many, if not most, Americans are largely oblivious to the size of this racial wealth gap (Kraus et al., 2017, 2019) and, perhaps not surprisingly, policy proposals aimed directly at reducing it fall well short of generating the momentum needed for implementation (Darity et al., 2018). One reason for this general ignorance of the racial wealth gap and lack of momentum for policies that could reduce it may be a tendency, particularly among White Americans, to overestimate the degree to which society has made progress toward racial equality more broadly (Brodish et al., 2008; Eibach & Keegan, 2006) and specifically toward racial economic equality (Kraus et al., 2017). The primary goal of this work was to test whether reminding Whites that racism continues to shape the opportunities and outcomes of racial minorities in contemporary U.S. society might temper their perceptions of societal racial progress, in turn, improving the accuracy of their perceptions of contemporary Black-White racial economic equality.

Narratives of justice, meritocracy, and equality make up a prominent portion of American national discourse (Kraus & Tan, 2015; McLean & Syed, 2015), and this is perhaps most evident in our narratives of racial progress (Eibach & Keegan, 2006). It is common for racial discourse in the United States to draw a linear path from chattel slavery, to the Emancipation Proclamation, through segregation, to the Civil Rights Movement, and finally to the election of Barack Obama, the first Black President, as evidence of the steady march toward racial justice (Bonilla-Silva, 2017; Kraus et al., 2019). Given that this discourse envisions racial

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progress unfolding in one direction, linearly, naturally, and, perhaps, automatically (Hur & Ruttan, unpublished manuscript), it may actually serve to undermine, rather than propel, robust efforts to eradicate racism and its resultant racial disparities (Seamster & Ray, 2018).

Recent research suggests that this dominant narrative of racial progress may keep Americans fairly ignorant, albeit perhaps somewhat willingly, to the current state of racial economic inequality in the nation. When asked about Black— White economic equality in the 1960s and again in the 2010s, for instance, Americans tended to perceive progress toward racial economic equality where little exists (Kraus et al., 2017; see also Kraus et al., 2019). Specifically, participants underestimated racial income equality in the past, albeit only modestly, but vastly overestimated it in the present. Estimates of racial wealth equality in both the past and the present were also vastly overestimated (Kraus et al., 2017, 2019). These findings suggest that Americans hold unwarranted optimism regarding how much progress has been made toward closing economic gaps between Black and White Americans and, thus, hold wildly inaccurate views of the current state of racial economic equality. Perhaps, by challenging the racial progress narrative, it may be possible to correct these profound misperceptions.

Some recent research has examined correlates and potential causes of these vast inaccuracies in the perception of current racial economic equality. Individuals' societal status, for instance, is one such correlate; White Americans (especially high-income White Americans) tend to overestimate current racial economic equality and progress thereto compared with Black Americans (Kraus et al., 2017). One reason why White Americans may be less accurate is because, on average, they perceive American society as fairer and more equal than do Black Americans (DeBell, 2017; Kraus et al., 2017). Indeed, White Americans are considerably less likely to perceive, or perhaps acknowledge, the current state of societal racial disparities in any number of domains (On views of race and inequality, 2016), including treatment in the criminal justice system (Rucker et al., 2019), and, they believe less change is required to achieve equality (DeBell, 2017).

A central component of the racial progress narrative is a profound ignorance regarding the enduring presence of societal racial bias. The role of ignorance regarding racial inequality has been investigated most directly in research on the "Marley hypothesis," which suggests that ignorance of present-day racial disparities may in part be due to ignorance regarding the prevalence and reach of past societal racial bias, especially how systemic, structural barriers shape contemporary racial outcomes (Bonam et al., 2018; Nelson et al., 2013). Consistent with this work, White Americans who conceptualize racism in terms of its historical and structural components more than its interpersonal components also tend to perceive more racism (O'Brien et al., 2009) and are more likely to perceive and acknowledge racial disparities (Rucker et al., 2019) in the present.

Together, this research suggests that it may be possible to encourage White Americans to acknowledge the current magnitude of racial disparities by reminding or informing them of the role that racism plays in people's current opportunities and outcomes. To the extent that contemporary racism is connected to past racism, such an intervention may also serve to challenge individuals' overly optimistic perceptions of societal racial progress. That is, informing people of the systemic barriers to attaining racial equality that continue to exist might attenuate their belief in the extent of societal racial progress that has been achieved and, thus, lead them to generate more accurate estimates of current racial economic equality.

Indeed, prior research finds that exposure to information about discriminatory housing policies in the past can engender more realistic perceptions of racially disparate outcomes in the present (Bonam et al., 2018). In Bonam and colleagues work, White participants listened to an audio clip featuring either a historian discussing the government's role in fostering systemic inequality through segregating Black people into ghettos or a control clip about a race-neutral topic. Participants who listened to the passage outlining the history of racial discrimination were more likely to acknowledge systemic racism (e.g., they reported more certainty that the portrayal of Black people in U.S. media was racist) than participants in the control condition. Consistent with this work, Kraus and colleagues (2017) found that participants made more accurate estimates of the current state of racial economic equality if they were first asked to consider an "alternate United States" in which discrimination based on race still exists. As participants made their estimates for this "alternate United States" after having already generated estimates of the current state of racial economic equality in the United States, it is possible that these new responses were unduly anchored by the prior ones. The primary goal of the present work, therefore, was to test whether reminding Whites about the persistence of racism in society disrupts their general belief in societal racial progress and produces smaller overestimates of the current state of Black-White economic equality.

To that end, we conducted two studies that manipulated exposure to the persistence of racism in U.S. society since the 1960s and solicited participants' subjective perceptions of societal racial progress, as well as estimates of racial income and wealth equality in the past (1963) and the present (2016), in line with best practices for assessing participants' beliefs about racial progress (DeBell, 2017). In the first study, we examined the effect of reminding participants of racism due to explicit, overt forms of racial discrimination on estimates of racial equality in the domains of income and wealth. In the second study, we tested whether framing current discrimination as implicit, rather than explicit, would differentially affect perceptions of racial progress and estimates of current income and/or wealth equality, compared with the influence of describing current (and past) discrimination as explicit and

overt. The present work had two primary hypotheses. First, across all conditions, we expected participants to overestimate the extent of progress achieved toward racial income and wealth equality, largely because they overestimate the extent of racial economic equality in the present, replicating Kraus et al. (2017, 2019). Second, we predicted that participants who were reminded of the persistence of racism would estimate less progress toward economic equality between Black and White Americans during the past 50 years compared to those who were not reminded (i.e., control condition participants). Again, this effect was expected to occur because participants who were reminded of persistent racism were expected to estimate less Black—White economic equality in the present, compared with their control condition counterparts.

Study I

Study 1 examined whether reading about the persistence of racism during the past 50-some years would produce smaller overestimates of racial economic progress. Again, consistent with past work (Kraus et al., 2017, 2019), we expected that White Americans would overestimate progress toward racial economic equality. Our central hypothesis, however, was that participants who read about the persistence of racism in American society would perceive less progress toward economic equality between Black and White Americans; and, furthermore, this would occur because participants who read about persistent societal racism would perceive less economic equality between Black and White Americans in the present, compared to participants who did not read about persistent racism.

Method

The methods and materials for Study 1 were approved by the Institutional Review Board at Yale University. The study materials, data, and syntax are available at: https://osf.io/7cg4j/.

Participants. We recruited 701 participants living in the United States (431 women, 267 men, 1 person who indicated that their gender was not listed; 667 Whites, 34 non-Whites; $M_{\rm age}=38.80$) through TurkPrime (Litman et al., 2017) and paid them \$1.00 for a 10-minute survey. Those who reported non-White racial identification were excluded from the sample, resulting in a total of 667 White participants (412 women, 255 men; $M_{\rm age}=38.98$). The results do not differ when the analyses are conducted using the full sample of participants.

The final sample size in Study 1 allows us to detect a Cohen's d effect size of .19 with 80% power. The smallest effect of the discriminatory U.S. condition compared to the general racial economic inequality estimate condition by Kraus et al. (2017) was d = .23, and we are adequately powered to detect an effect of that size.

Procedure and Materials

Study 1 had a 2-cell between-subjects design. After providing informed consent, participants were randomly assigned to read about the persistence of racism in the United States (racism condition, n = 331) or left-handedness (control condition, n = 336). We manipulated exposure to the persistence of racism by having participants read an article that was ostensibly from the New York Times. In the discrimination condition, the article was titled "Racism is Alive" and reported research finding that "individuals harbor fairly high levels of racial bias, which contributes substantially to racial disparities in health, wealth, and overall well-being." Furthermore, the article noted that although changes to the law now make explicit forms of discrimination illegal, "compared to the 1960s, neighborhoods and, thus, schools have remained largely racially segregated, as has the work force." The control condition article was titled "Researchers Explore Left Handedness" and reported on research about a gene linked to left-handedness and asymmetry in the human brain (adapted from Craig et al., 2012). We chose the left-handedness article for the control condition because it activates a social group but does not refer to race or discrimination.

Participants next read definitions of income and wealth to ensure they understood the terms (Norton & Ariely, 2011) and then provided their estimates of income and wealth equality between Black and White Americans, using the same scales as by Kraus et al. (2017). Specifically, participants provided estimates of racial equality in family income in the years 1963 and 2016, in that order, with the following item: "For every \$100 earned by an average White family, how much do you think was earned by an average Black family? (100 would mean equality)" on a scale from 0 to 200. Participants provide the same estimates with respect to wealth accumulated by the average Black and White families in 1963 and 2016, again, in that order. The order of completion of the income and wealth estimates, however, was randomized. In line with research regarding best practices to solicit these types of estimates, our measures of racial economic equality use question framings that communicate percentages as whole numbers, reducing the number of mental calculations respondents must complete (Davidai & Gilovich, 2018; Gigerenzer & Hoffrage, 1995).

Next, as a manipulation check, participants reported their perception of societal racial progress (Eibach & Ehrlinger, 2006) with the item "How much progress has been made toward equality for racial minorities since the 1960s?" on a 7-point scale from *very little progress* to a great deal of progress, M = 5.04, SD = 1.61). Participants then completed the Belief in a Just World scale (Lipkus, 1991, M = 3.48, SD = 1.04), reported their social and economic conservatism (M = 3.63, SD = 1.84), and demographic information (including race, age, social network diversity, occupation, income, and socioeconomic status). Last, participants were debriefed, thanked, and paid.

Table 1. Means and Standard Deviations of Participants' Estimates of Progress Toward Income and Wealth Equality and Past and Present Income and Wealth Racial Equality Estimates Compared to Federal Estimates and Collapsing Across Conditions for Studies I and 2.

Measures of economic equality	Federal	Study I	Study 2	
	estimates	M (SD)	M (SD)	
Progress in income equality	7.8	34.33 (25.70)	32.72 (23.84)	
Progress in wealth equality	5.0	33.56 (25.08)	30.29 (25.11)	
Past Black-White income equality	52.9	45.94 (25.86)	43.44 (22.87)	
Present Black-White income equality	60.7	80.26 (25.82)	76.16 (23.54)	
Past Black–White wealth equality	5.2	39.59 (25.71)	38.61 (25.05)	
Present Black-White wealth equality	10.2	73.15 (28.67)	68.91 (27.28)	

Table 2. Bivariate Correlations in Studies I and 2.

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.
I. Just World Beliefs	_	.45*	.38*	.12*	.13*	.15*	.27*	.20*	.31*
2. Conservatism	.47*	_	.34*	.10*	.09*	.17*	.27*	.22*	.29*
3. Subjective perception of racial progress	.36*	.39*	_	.36*	.34*	0 I	.35*	.03	.34*
4. Estimated progress in income equality	.16*	.12*	.30*	_	.72*	49*	.53*	25*	.43*
5. Estimated progress in wealth equality	.16*	.10*	.30*	.69*	_	33*	.41*	41*	.55*
6. Estimate of past income equality	.15*	.13*	.09*	50*	31*	_	.47*	.73*	.37*
7. Estimate of present income equality	.31*	.25*	.39*	.50*	.37*	.51*	_	.46*	.80*
8. Estimate of past wealth equality	.20*	.17*	.13*	29*	36*	.76*	.47*	_	.54*
9. Estimate of present wealth equality	.31*	.23*	.38*	.34*	.55*	.40*	.75*	.58*	_

Note. Correlations for Study 1 are below the diagonal and correlations for Study 2 are above the diagonal.

*p < .05.

Results

Descriptive statistics. Study-wide (i.e., collapsed across conditions) mean estimates of progress toward income and wealth equality and of past and present racial income and wealth equality for both Study 1 and Study 2 are reported in Table 1. Table 1 also includes the federal estimates for each measure of economic equality.

Correlations among just world beliefs, conservatism, and measures of economic equality. We computed bivariate correlations to explore relationships among the study variables and these are provided in Table 2. Just world beliefs and conservatism were positively correlated (Study 1: r=.47, p<.001, Study 2: r=.45, p<.001). Both higher just world beliefs and greater conservatism were positively related to all estimates of Black—White economic equality in both studies (rs=.09-.39, all p values <.05). Neither just world beliefs nor conservatism moderated the effects of the manipulation(s) in either study (all p values >.09-.95) and will not be discussed further.

Overall estimates of progress toward racial economic equality. Next, we examined our hypothesis that participants, on average, would overestimate progress toward racial economic equality. To test this hypothesis, we first calculated each participant's estimate of the progress made in closing each racial economic gap (i.e., income and wealth) by subtracting their estimates of each racial economic gap in the past (1963) from their estimates of each gap in the present (2016). We then calculated the accuracy of participants' estimates at each time point and of their estimate of progress by comparing each to national data regarding average family/household income (Economic Policy Institute, 2017) and median family/household wealth (Bricker et al., 2017). Positive accuracy scores reflect overestimates of progress and/or economic equality, whereas negative accuracy scores reflect underestimates of progress and/or economic equality.

As predicted, and consistent with Kraus et al. (2017), Study 1 participants overestimated the amount of progress that has been achieved toward racial equality in both income, t(666) = 26.66, p < .001, d = 1.03, M = 26.53, 95% confidence interval (CI) [24.57, 28.48], and wealth, t(666) = 29.41, p < .001, d = 1.14, M = 28.56, 95% CI [26.65, 30.47]. We then examined if participants' overestimates of racial progress were driven by overestimates in the past or the present. Consistent with predictions, and replicating Kraus et al. (2017), participants underestimated racial income equality in the past, t(666) = -6.95, p < .001, d = 0.27,

M = -6.96, 95% CI [-8.93, -5.00], but overestimated it in the present, t(666) = 19.57, p < .001, d = 0.76, M = 19.56, 95% CI [17.60, 21.53]. Also consistent with past work (Kraus et al., 2017, 2019), participants overestimated racial wealth equality in both the past, t(666) = 34.55, p < .001, d = 1.34, M = 34.39, 95% CI [32.44, 36.35], and the present, t(666) = 56.71, p < .001, d = 2.20, M = 62.95, 95% CI [60.77, 65.13].

Effect of reminders of persistent racism on estimates of progress toward racial economic equality. As a manipulation check, we first examined whether the racism article disrupted participants' subjective perceptions of progress toward racial equality in society as expected. Consistent with this prediction, participants in the racism condition (M = 4.66, SD = 1.67) reported that there had been less racial progress in society than participants in the control condition (M = 5.41, SD = 1.45), t(649.212) = 6.21, p < .001, d = 0.48, 95% CI [.51, .99].

We then tested our central hypothesis that reminders of the persistence of societal racism would temper participants' estimates of progress toward racial economic equality. Consistent with predictions, participants who read about persistent racism produced smaller overestimates of progress toward racial income equality (M = 23.66, SD = 23.64) than participants who read about left-handedness (M = 29.35, SD= 27.32), t(665) = 2.88, p = .004, d = .22, 95% CI [1.81, 9.59]. Similarly, participants who read about persistent racism produced smaller overestimates of progress toward racial wealth equality (M = 25.46, SD = 23.11) than those who read about left-handedness (M = 31.61, SD = 26.55), t(665) = 3.19, p = .002, d = .28, 95% CI [2.36, 9.93]. Inother words, participants' estimates of progress toward income and wealth equality between Black and White Americans were more accurate after reading about persistent racism faced by Black Americans.

Effects of reminders of persistent racism on estimates of racial economic equality in the past and present. Recall that the estimates of progress toward racial economic equality that we analyzed in the previous section were calculated by subtracting participants' estimates of racial economic equality in the past from their estimates of racial economic equality in the present. Thus, it was important to examine whether the aforementioned effects of reading about persistent societal racism on estimates of progress were due to the effect of the manipulation on their estimates of past equality, present equality, or, perhaps, both. Based on our previous work (Kraus et al., 2017), we expected that reminders of persistent racism would lead people to perceive less progress because they generate more accurate estimates of the current state of racial economic equality between Black and White Americans (i.e., they would overestimate present levels of Black-White equality less than control participants). Contrary to our predictions, however, reading about persistent racism had no effect on participants' estimates of current racial Black–White racial equality, present racial income equality, t(665) = .22, p = .83 d = .02, 95% CI [-3.49, 4.37], present racial wealth equality, t(665) = .07, p = .94, d = .01, 95% CI [-4.20, 4.52].

Instead, and surprisingly, the manipulation shifted participants' perceptions of how unequal racial economic outcomes were in 1963. As a reminder, in general, participants underestimated the actual degree of equality between Black and White Americans in 1963. In other words, they were not optimistic enough about the past. Participants who read about persistent racism were more optimistic about racial income inequality in the past—that is, they underestimated racial income equality in the past less (M = -4.31, SD =(26.55)—than participants in the control condition (M =-9.57, SD = 24.93), t(665) = -2.64, p = .009, d = .20, 95% CI [-9.17, -1.34]. Analyses of the effect of the manipulation on past and present wealth equality estimates revealed a similar pattern. Participants who read about persistent racism were also more optimistic about racial wealth equality in the past compared to participants in the control condition. Because participants vastly overestimate wealth equality between Black and White Americans in general, greater optimism here is reflected in larger overestimates of equality. Specifically, participants in the persistent racism condition (M = 37.41, SD = 27.25) produced larger *over*estimates of racial wealth equality in the past compared to participants in the control condition (M = 31.42, SD = 23.76), t(665) =-3.03, p = .003, d = .23, 95% CI [-9.87, -2.10].

Discussion

Study 1 replicated Kraus and colleagues' (2017) findings that White Americans overestimate progress toward Black—White economic equality, underestimate racial income equality in the past, overestimate racial wealth equality in the past, and overestimate the extent of current (i.e., present) racial equality on both economic markers.

The primary aim of this study was to extend this past work by considering the effect of challenging narratives about how much racial progress U.S. society has achieved by reminding participants of the role that racism has played and continues to play in shaping Black people's opportunities and outcomes. Indeed, consistent with predictions, this intervention was effective in reducing participants' subjective perceptions of societal racial progress and their judgments of racial economic progress as calculated by comparing their estimates of current and past racial income and wealth equality. That is, as predicted, the reminder of persistent racism led to more accurate estimates of progress toward racial economic equality. What was unpredicted and quite astonishing, however, is that participants in the racism condition generated more accurate progress estimates because their judgments of racial economic equality in the past were more optimistic compared to participants in the control condition. For both income and wealth, participants who read about

persistent racism estimated that there was greater equality between Black and White Americans on these economic markers in the past than participants who read about left-handedness. Furthermore, and contrary to predictions, participants who were reminded of persistent racism did not estimate *less* income and wealth equality between Black and White Americans in the present; their estimates of the current state of racial income and wealth equality were not affected by the manipulation.

In other words, reading about persistent racism seems to have led participants to adjust their perceptions of the past as perhaps not being so unequal, rather than leading them to adjust their perceptions of the present as being more unequal than they realized. Although surprising, adjusting an assessment of the past allows participants to continue to believe that contemporary society is largely fair and just. Indeed, one possibility is that the increased optimism regarding how unequal the past actually was that we observed among participants in the racism condition reflect the need to reconcile the information they read about the persistence of societal racism over time with their belief in the relative fairness of contemporary society. In other words, the logic appears to be: if there has not been too much progress and contemporary society is largely fair, then the past must not have been as bad as I thought. As this result was not predicted, however, we sought to replicate it prior to speculating further about its potential sources or implications.

Study 2

The results from Study 1 indicate that, as expected, reading about the persistence of societal racism led White Americans to produce smaller overestimates of progress toward racial economic equality than not reading about the persistence of societal racism. The purpose of Study 2 was to replicate the unexpected finding that Whites overestimated progress less, not because they tempered their perceptions of the current state of racial economic equality, but, rather, because they shifted their perceptions of how equal economic outcomes were in the past. Compared with control condition participants, that is, participants who read about persistent racism generated estimates of past racial economic equality that were more optimistic, but reading about persistent racism had no effect on Whites' estimates of contemporary economic equality between Black and White Americans. In this study, we also explored whether this pattern of results might have occurred because the racism article connected the persistence of racial disparities in the present to the continuing role of *explicit* forms of racial bias in the lives of racial minorities. If participants are motivated to believe that racial equality has largely been achieved in contemporary society, they may perceive that the past must not have been as bad as they thought if explicit bias from the past extends to the present, and is reflected in current race-based societal outcomes.

To examine this possibility, we added a second racism exposure condition, but rather than describing explicit bias, the article referred to implicit, subtle forms of bias that continue to affect the opportunities and outcomes of racial minorities in contemporary society. Whereas both articles should disrupt the extent to which participants believe that societal racial progress has been achieved, it is possible that the implicit version may encourage them to reconsider the current state of racial economic equality more than the explicit version seems to have in Study 1. That is, participants may be more willing to accept that implicit racial bias currently shapes the lives of racial minorities and, thus, may accept the article's intended overall message—that racial bias historically and presently negatively impacts racial minorities. In turn, they may adjust their overestimates of present-day economic equality between Black and White Americans, so as to be less optimistic and more accurate. If, however, participants are truly committed to perceiving contemporary society as largely equal and fair, at least in terms of race, then the effects of reminders of societal racism on judgments of racial economic progress should not differ based on whether the racism is said to be explicit or largely implicit. Instead, as found in Study 1, any reduction in perceptions of societal racial progress due to being reminded of racism (either implicit or explicit), compared with the control condition, should be observed in adjustments of perceptions regarding how (un) equal the past was, leaving perceptions of the present state of racial economic equality unaffected.

To examine these possibilities, Study 2 compared the effects of reminders of the persistence of racial inequality rooted in explicit bias to the effects of reminders of the persistence of racial inequality rooted in implicit bias, and compared the effects of both to those engendered by a no-article control condition in which participants simply provided estimates of Black—White racial income and wealth equality in the past (1963) and present (2016). We used a no-article control in this study to examine whether the effects of reading about explicit racism in Study 1 would replicate without any potential artifacts associated with having read about left-handedness (e.g., brain asymmetries and information processing).

We had four predictions for Study 2:

- 1. Overall, participants will overestimate progress toward Black–White economic equality.
- Participants who read about persistent racism (due to either explicit or implicit bias) will estimate less progress toward racial economic equality than participants in the control condition.
- 3. Replicating Study 1, participants who read about persistent racism due to explicit bias will report that Black–White economic equality in the past was more equal than participants in the control condition. The estimates of present Black–White economic equality made by participants in the explicit bias condition will not differ from participants in the control condition.

4. We had competing hypotheses regarding the past and present estimates that participants who read about implicit bias would make. Either,

- (a) The estimates made by participants in the implicit condition will mirror those made by participants in the explicit condition, or,
- (b) Participants in the implicit condition will generate smaller overestimates of contemporary Black— White economic equality compared to participants in the control and explicit conditions. Participants in the implicit condition will also generate smaller overestimates of past Black— White economic equality compared to participants in the explicit condition. Estimates of past Black—White economic equality made by participants in the implicit and control conditions will not differ.

Method

The methods and materials for Study 2 were approved by the Institutional Review Board at Yale University. The study materials, data, and syntax are available at: https://osf.io/7cg4j/.

Participants. We recruited 903 participants who indicated that they lived in the United States (513 women, 389 men, 1 person who indicated that their gender was not listed; 847 Whites, 55 non-Whites, 1 person who did not report their race; $M_{\rm age}=39.25$) through TurkPrime (Litman et al., 2017) and paid them \$1.00. Three participants who reported that they did not complete the study accurately and those who reported non-White racial identification were excluded from the sample, leaving a total of 845 White participants (488 women, 356 men, 1 person who indicated that their gender was not listed; $M_{\rm age}=39.25$). This sample allowed us to detect a Cohen's d effect size of .21 with 80% power. We used the same benchmark of d=.23 from Kraus et al. (2017) and, thus, were adequately powered by that standard.

Procedure and Materials

Study 2 had a three-cell between-subjects design. After providing their informed consent, participants were randomly assigned to read one of two articles about the persistence of racism in which discrimination was attributed to either explicit bias (n = 278) or implicit bias (n = 286) or, instead, were not assigned to read an article (control condition, n = 281). As in Study 1, we manipulated exposure to the persistence of racism by having participants read an ostensible *New York Times* article. The article in the explicit bias condition was identical to that used for the discrimination condition in Study 1. In the implicit bias condition, the article was revised with the title "Implicit Racism is Alive" and reported on research finding that "individuals harbor fairly high levels

of implicit racial bias, that is, bias at unconscious levels of awareness, which contributes substantially to racial disparities in health, wealth, and overall well-being." The article also noted that although changes to the law now make explicit forms of discrimination illegal, "implicit racial bias still continues to seep into these domains and allows racial inequality to persist. Consequently, compared to the 1960s, neighborhoods and, thus, schools have remained largely racially segregated, as has the work force." After reading the article, participants completed the same income and wealth estimates as in Study 1.

To assess the efficacy of racism manipulations, as in Study 1, participants reported their perception of societal racial progress (Eibach & Ehrlinger, 2006; M = 4.76, SD =1.66). To check if participants recalled the type of bias featured in the article, we asked, "In the article you read today, what type of bias did you read about?" and they selected either: "implicit/unconscious racial bias," "conscious/ endorsed racial bias," or "I did not read about bias." Some participants misremembered which form of bias they read about and misremembering differed across conditions. Only about half of the participants (52%) in the explicit condition accurately recalled the condition they were in, compared to 78% in the control condition and 96% in the implicit condition. A large proportion of those who were incorrect reported being in the implicit bias condition. Consistent with best practices (Montgomery et al., 2016), we report results using the full sample of White participants in the main text; however, the pattern of results holds if the analyses are conducted only using data from participants who passed the manipulation check. Please see the Supplemental File for additional details.

Last, participants reported demographic information including their social and economic conservatism (M = 3.59, SD = 1.92), belief in a just world (Lipkus, 1991; M = 3.47, SD = 1.04), and other relevant information (i.e., race, age, social network diversity, occupation, income, and socioeconomic status), prior to being debriefed, thanked, and paid.

Results

Correlations among just world beliefs, conservatism, and measures of economic equality. As reported in Table 2, just world beliefs and conservatism were positively correlated and both just world beliefs and conservatism were positively related to all estimates of Black—White economic equality.

Overall estimates of progress and racial economic equality. Participants' mean estimates of past and present racial equality for income and wealth, as well as their progress estimates for each marker—calculated as before—are again reported in Table 1. Consistent with our predictions and replicating Kraus et al. (2017) as well as Study 1, participants overestimated the amount of progress that has been achieved toward racial equality for both income, t(843) = 30.37, p < .001,

d=1.05, M=24.92, 95% CI [23.31, 26.53], and wealth, t(843)=29.26, p<.001, d=1.01, M=25.29, 95% CI [23.59, 26.99]. We then tested if this was driven by participants' tendency to overestimate current racial economic equality (Kraus et al., 2017). Indeed, as in Study 1, participants, on average, underestimated racial income equality in the past, t(843)=-12.01, p<.001, d=0.41, M=-9.46, 95% CI [-11.00, -7.91], but overestimated it in the present, t(843)=19.08, p<.001, d=0.66, M=15.46, 95% CI [13.87, 17.05]. Also as in Study 1, participants overestimated racial wealth equality in both the past, t(843)=38.75, p<.001, d=1.33, M=33.41, 95% CI [31.72, 35.11], and the present, t(843)=62.51, p<.001, d=2.15, M=58.71, 95% CI [56.86, 60.55].

Effect of reminders of persistent racism on estimates of progress toward racial economic equality. As in Study 1, the manipulation was effective. Reading about persistent disparities significantly affected participants' subjective perceptions of progress toward racial equality in society, F(2, 842) = 21.47, p < .001, $\eta_p^2 = .049$. Compared to the control condition (M = 5.27, SD = 1.43), participants reported that there had been less racial progress in society after reading about persistent disparities attributed to either explicit (M = 4.58, SD = 1.67), t(842)=5.01, p < .001, d = .44, 95% CI [.42, .96], or implicit (M = 4.43, SD = 1.75) bias, t(842)=6.17, p < .001, d = .53, 95% CI [.57, 1.11]). There was no difference in reports of racial progress between participants in the explicit and implicit bias conditions, t(842)=1.12, p = .26, d = .09, 95% CI [-.12, .42].

We again tested our central hypothesis that reminders of persistent racism would produce smaller overestimates of progress using one-way analyses of variance (ANOVAs), with contrasts to test the significance of differences between the condition means. We calculated estimates of progress by subtracting their estimates of each past racial economic gap from their estimates of each present gap. We compared estimates at each time point and their estimate of progress to federal data regarding average family/household income (Economic Policy Institute, 2017) and median family/household wealth (Bricker et al., 2017). Again, positive accuracy scores reflect overestimates of progress and/or economic equality, whereas negative accuracy scores reflect underestimates of progress and/or economic equality. Replicating Study 1, reading about persistent racism significantly affected participants' estimates of progress toward racial income equality, $F(2, 841) = 9.82, p < .001, \eta_p^2 = .023$. As depicted in Figure 1, compared to participants in the no-article control condition (M = 29.98, SD = 23.92), participants who read about persistent racism produced smaller overestimates of progress toward racial income equality, irrespective of whether the disparities they read about were attributed to explicit (M = 22.88, SD = 23.13), t(841) = 3.56, p < .001, d = .30, 95% CI [3.18, 11.03], or implicit (M = 21.92,

SD = 23.70), t(841) = 4.07, p < .001, d = .34, 95% CI [4.17, 11.95] bias. Estimates of progress toward racial income equality did not differ between participants in the explicit and implicit bias conditions, t(841) = .48., p = .63, d = .04, 95% CI [-2.95, 4.86].

Similarly, reading about persistent racism affected participants' estimates of progress toward racial wealth equality, $F(2, 841) = 5.33, p = .005, \eta_p^2 = .013$. Both participants in the explicit bias condition (M = 24.16, SD = 23.53), t(841)= 2.37, p = .018, d = .20, 95% CI [.83, 9.16], and those in the implicit bias condition (M = 22.59, SD = 23.85), t(841)= 3.13, p = .002, d = .26, 95% CI [2.45, 10.69], produced smaller overestimates of progress toward racial wealth equality than participants in the control condition (M = 29.16, SD = 27.38). There was no difference in estimates of progress toward racial wealth equality between participants in the two bias conditions, t(841) = .74, p = .46, d = .07, 95% CI [-2.57, 5.70]. After reading about persistent racism faced by Black Americans, whether due to explicit or implicit bias, participants' estimates of progress toward income and wealth equality between Black and White Americans were more accurate.

Effects of reminders of persistent racism on estimates of racial economic equality in the past and present. We then tested whether, as in Study 1, reminders of persistent societal racism affected participants' estimates of inequality in the past, but not the present. The means and standard deviations for each measure of economic equality are reported in Table 3. Replicating Study 1, reading about persistent racism did not affect participants' estimates of either racial income equality, $F(2, 841) = 2.08, p = .13 \, \eta_p^2 = .005$ or racial wealth equality, $F(2, 841) = 0.54, p = .58, \eta_p^2 = .001$, in the present (i.e., 2016).

Reading about persistent racism significantly affected participants' estimates of racial income equality in 1963, $F(2, 841) = 4.37, p = .013, \eta_p^2 = .010$. Interestingly, and consistent with the surprising result from Study 1, participants who read about persistent disparities attributed to implicit bias underestimated past income equality less than participants who read nothing, t(841) = -2.93, p = .003, d = .003.25, 95% CI [-9.41, -1.90]. The estimates of past income equality of participants who read about persistent disparities attributed to explicit bias were in the expected direction relative to the control condition but did not reach conventional levels of statistical significance, t(841) = -1.60, p = .11, d = .14,95% CI [-6.86, .71]. Participants' estimates of past income equality in the explicit bias condition were also not significantly different from those generated by participants in the implicit bias condition, t(841) = -1.34, p = .18, d = .18.11, 95% CI [-6.35, 1.19].

Reading about persistent racism had a similar effect on participants' estimates of racial wealth equality in the past, F(2, 841) = 5.06, p = .007, $\eta_p^2 = .02$. Participants in the implicit bias condition generated larger overestimates of

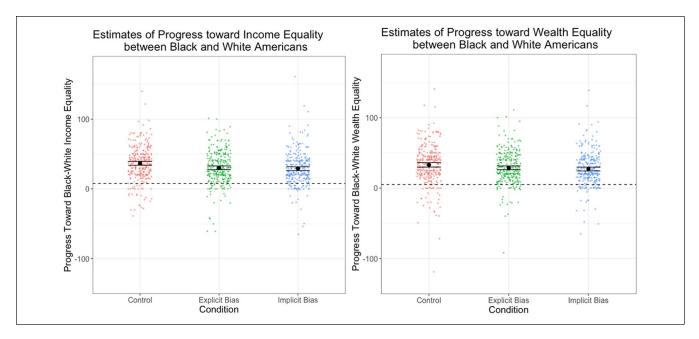


Figure 1. The effect of reminders of persistent racism on participants' estimates of progress toward income and wealth equality in Study 2.

Note. Error bars indicate 95% confidence intervals. The dashed line indicates the actual estimate of the progress made toward equality between Black and White economic equality based on federal estimates. For income, the gap between Blacks and Whites has closed by 7.8 (from 52.9 Black dollars for 100 White dollars to 60.7 Black dollars for 100 White dollars). For wealth, the gap has closed by 5 (from 5.2 Black dollars for 100 White dollars to 10.2 Black dollars for 100 White dollars).

Table 3. The Effect of Reminders of Persistent Discrimination on Participants' Estimates of Past (1963) and Present (2016) Equality in Income and Wealth Between Black and White Americans Compared to Federal Estimates in Study 2.

Measure of economic equality	Federal	Control	Explicit bias	Implicit bias	
	estimates	M (SD)	M (SD)	M (SD)	
Past Black–White income equality	52.9	40.52 (21.19)	43.60 (22.68)	46.17 (24.34)	
Present Black-White income equality	60.7	78.30 (23.84)	74.27 (22.52)	75.89 (24.11)	
Past Black-White wealth equality	5.2	35.39 (24.66)	38.35 (24.02)	42.04 (26.05)	
Present Black-White wealth equality	10.2	69.55 (28.75)	67.51 (24.88)	69.63 (28.05)	

racial wealth equality in the past than participants in the control condition, t(841) = -3.18, p = .002, d = .26, 95% CI [-10.76, -2.54]. Again, the magnitude of the overestimates of racial wealth equality generated by participants who read about persistent disparities attributed to explicit bias did not differ from either control participants, t(841) = -1.41, p = .16, d = .12, 95% CI [-7.11, 1.18], or participants who read about disparities attributed to implicit bias, t(841) = -1.75, p = .08, d = .15, 95% CI [-7.81, .44].

Discussion

In Study 2, we once again replicated Kraus and colleagues' (2017) findings that White Americans overestimate progress toward Black—White economic equality. Study 2 also provides additional evidence that reminders of persistent racism can reduce this tendency. Replicating the surprising result

observed in Study 1, however, reminders of persistent societal racism seemingly lead people to adjust their perceptions of racial economic equality in the past, perceiving it as more equal, which allows them to leave their estimates of the current state of racial economic equality unchanged.

Although reading about persistent disparities attributed to implicit bias produced smaller overestimates of progress relative to the control condition, the differences between the explicit bias and control conditions for past estimates of racial income and wealth equality did not reach conventional levels of statistical significance. Importantly though, the condition means were consistently in the predicted direction, and the estimates generated by participants in the two discrimination conditions did not differ. Furthermore, supplementary analyses that excluded participants who failed the manipulation check revealed significant differences between the estimates of past racial economic equality in the explicit

discrimination condition and those in the control condition (see, again, footnotes 1 and 2). Moreover, exploratory analyses to probe the effect of reminders of racism (i.e., combining the estimates generated by participants in the two bias conditions) in the full sample of participants revealed a significant difference in the estimates of past income, F(1, 842) = 6.94, p = .009, and wealth, F(1, 842) = 7.04, p = .008, equality but not present income, F(1, 842) = 3.49, p = .062, or wealth, F(1, 842) = .23, p = .63, equality, replicating the results of Study 1. In other words, the findings of the present work suggest that reading about the persistence of societal racism produces smaller overestimates of racial economic progress by leading participants to reconsider how unequal the past was, rather than increasing their skepticism regarding inequality in the present.

General Discussion

Black peoples in the United States have faced persistent legal, social, and cultural barriers to economic progress from slavery to the present (Rothstein, 2017). Previous research suggests, however, that most Americans hold overly optimistic perceptions of the extent to which racial equality has been achieved in society and, furthermore, that dominant cultural narratives of American racial progress have engendered widespread ignorance of the degree to which racial disparities continue to persist in contemporary society (Kraus et al., 2019; Seamster & Ray, 2018). Much like past work examining perceptions of racial economic equality (Kraus et al., 2017, 2019), participants in this work vastly overestimated present-day levels of economic equality between Black and White Americans. While, according to Federal statistics, the income of the average Black household was 60% of the income of the average White household in 2016, White Americans overestimated average Black-White income equality by almost 20 percentage points. Although the wealth of the average Black household was only 10% of the wealth of the average White household in 2016, White respondents overestimated average Black-White wealth equality by about 60 percentage points.

In addition to examining the robustness of this past research, the primary objective of the present work was to discern whether reminding White Americans about persistent racism might improve the accuracy of their estimates of progress toward economic equality between Blacks and Whites. Although such reminders did indeed lead to smaller overestimates of racial economic progress, this was largely due to participants adjusting their estimates of past levels of racial economic equality. Estimates of racial economic equality in the present were not affected by the discrimination reminders. Taken together, the present findings indicate that, while White Americans' belief in racial progress may be disrupted, at least somewhat and temporarily, their belief in the equality of Black and White Americans' current economic circumstances appears to be more unflappable.

Disrupting Perceived Progress, But Not Beliefs About the Present?

We based the intervention used in this work on the previous research finding that White Americans temper their perceptions of societal racial progress when they reflect on how far "we have to go" rather than on "how far we have come" toward the achievement of societal racial equality (Eibach & Ehrlinger, 2006). In addition, the intervention used here drew upon research on the *Marley hypothesis* (Bonam et al., 2018; Nelson et al., 2013), finding that reminders of and/or exposure to relevant history regarding racism can improve the accuracy with which White Americans perceive racial disparities in the present (see also Kraus et al., 2017). Specifically, we exposed participants to information regarding the effects of racism on the opportunities and, thus, life outcomes of racial minorities, and how these disparate outcomes have persisted for decades. As predicted, this information attenuated estimates of progress toward racial economic equality. What we did not expect, however, was for the discrimination reminder to lead participants to attenuate their judgments of how unequal the past was, rather than shift their perceptions of the present.

The present findings demonstrate that evidence that society has not progressed as much as one thought, or as much as suggested by our national narratives (Eibach & Ehrlinger, 2006; Kraus et al., 2019), is likely to be distressing for many White Americans (and perhaps, also racial minorities), and, thus, triggers psychological processes to discount the information or resolve the discrepancy. Here, we believe participants resolved it by misremembering the past as more equal so as to retain their perception that the current state of racial equality is largely fair and just. Although we were surprised by this result, it is consistent with research noting White Americans' largely defensive responses to evidence of racial inequality. For instance, Phillips and Lowery (2015) found that White Americans who were exposed to information about the role of racial group privilege (i.e., White privilege) in creating and maintaining current societal racial disparities reported having experienced a greater number of personal hardships, compared to White Americans who did not learn about group privilege. It is possible that a similar process is operative in the present work. In response to information about the ongoing hardships faced by racial minorities due to racial discrimination, the White American participants in the present studies were perhaps motivated to recall past hardships that members of their ethnic and/or racial group have faced, thereby minimizing the differences between the economic circumstances of Whites and Blacks in the past. For instance, the discrimination articles may have unwittingly led participants to recall past familial stories of immigration and/or financial hardship, much like the personal hardships activated in Phillips and Lowery's (2015) work. Participants who had activated examples of such hardships would reasonably estimate the past economic circumstances of Black and

White Americans as being more equal than participants in the control condition. Future research is required to test this possibility. The present results do not differ with the inclusion of non-White participants; however, the number of non-White participants was small. Additional research should explore whether information about a lack of racial progress is also threatening for racial minorities.

Interestingly, considered in tandem with related work, the present studies suggest that White Americans, at least on some occasions, can respond defensively to both information about a lack of racial progress as well as to information about increasing racial progress (Wilkins et al., 2017; Wilkins & Kaiser, 2014). Indeed, Wilkins and colleagues have found that exposure to information reporting increasing racial progress can be interpreted by Whites as indicating that their racial group is losing status in the U.S. racial hierarchy, resulting in a host of racial in-group protection and enhancement processes, including perceiving more anti-White bias, as well as the expression of greater animus (see Craig et al., 2018 for a review). Presumably, the threat triggered by a lack of racial progress is quite different. Specifically, information about a lack of progress for racial minorities due to racism suggests that American society has been unable to rid itself of discrimination and live up to its highest ideals of justice, meritocracy, and equality, thereby threatening participants moral self-image as Americans (Branscombe et al., 1999) or, perhaps, their meritocratic values and principles as members of an advantaged racial group (Knowles et al., 2014; Phillips & Lowery, 2015). Future work is necessary to directly compare the effects of these two very different types of information—that is, increasing progress toward racial equality versus limited or sluggish progress toward racial equality on perceptions of racial economic equality in the present and, of course, in the past.

Our results may also reflect the potential role of anchoring-and-adjustment processes (Tversky & Kahneman, 1974). The fact that reminders of persistent racism shifted past, but not current, estimates of racial economic inequality may indicate that respondents anchor their judgments of racial inequality in the present—a present that they believe is already quite equal in terms of race. Once anchored in this version of the present, the only way to accommodate information suggesting that less progress has been achieved over time is to adjust estimates of the past, exactly the pattern of results we observed. It is entirely possible, further, that the articles we used in the racism conditions might facilitate this very anchoring and adjustment process by bringing to mind participants' general perceptions of contemporary race relations just before asking for estimates of equality in the past and present. Future research is needed to examine the role of anchoring and adjustment in the pattern of results we observed. The fact that participants potentially anchored their estimates on a desired version of the present, rather than on the actual present, suggests that disrupting beliefs about societal progress toward racial equality may be insufficient

to create more accurate understanding of contemporary racial inequality. Instead, perhaps interventions that focus directly on communicating the extent of present racial economic inequality are warranted. Given that providing such information can lead people to justify and rationalize these inequalities (Hetey & Eberhardt, 2014, 2018); however, even these approaches must be developed with care.

One somewhat surprising aspect of the present findings is the general lack of moderation of the effects of the racism information by political ideology and/or belief in a just world. Research suggests that individuals who endorse status legitimizing beliefs, for example, that the world is just, and, those who prefer hierarchy, evaluate w=Whites who claim discrimination more positively, perceive more anti-White bias, endorse more zero-sum beliefs, and support affirmative action less (Unzueta et al., 2014; Wellman et al., 2016; Wilkins et al., 2013). Given that our manipulation essentially sought to disrupt perceptions of societal progress due to the continued presence of racism, it is reasonable to expect that participants with higher levels of just world beliefs would react more strongly to the manipulation and those higher in preference for hierarchy (SDO; Pratto et al., 1994) might react less strongly. Although neither just world beliefs nor political ideology-which, interestingly is correlated with both just world beliefs and with SDO—moderated the effects we report here, both had positive relationships with the tendency to over-estimate racial economic equality between Black and White Americans. Future research is needed, however, to examine more directly the role of these ideological orientations in shaping responses to information suggesting that the American narrative of racial progress may be overly optimistic.

Implications and Future Directions

One implication of this work is that we better understand how difficult it is to correct these profound misperceptions of racial economic equality. Even though our manipulation tempered estimates of progress, participants were still quite inaccurate. And, while participants exposed to reminders of racism were more accurate in their judgments, this greater accuracy came from adjustments to estimates of racial economic equality in the past rather than adjustments of current levels. In other words, the intervention used in this work might not be a viable route for correcting the profound misperceptions of contemporary racial economic equality. The big unanswered question of this work, of course, is why reminders of the persistent role of racism in the lives and outcomes of Black Americans did not lead participants to perceive less Black-White racial economic equality in contemporary society. Rather, these reminders seem to have shifted judgments of how much progress was required to achieve societal equity (see e.g., DeBell, 2017). Future research is needed to uncover the precise mechanism(s) through which the intervention in this work resulted in shifts in past, but not present, estimates of equality and, of course,

to examine alternative ways to increase the accuracy with which current economic gaps and other racial disparities are observed. Given how pervasive narratives of racial progress and, perhaps more importantly, of achieved racial equality, are in U.S. society, it is clear that challenging these narratives and beliefs may be difficult, and attempts to do so might have unforeseen consequences. Examining these questions is of paramount importance.

The futility of the intervention examined in this work is all the more troubling insofar as underestimates of the magnitude of the Black-White wealth gap are likely to make it difficult to garner support for the types of largescale societal initiatives and interventions necessary to reduce these racial economic gaps in any appreciable way. In Boston, for instance, among families that have been in the United States for three or more generations, Black families have a median household wealth of \$8, whereas White families have a median household wealth of \$247,500 (Muñoz et al., 2015). But, if reminders of racial inequality are threatening for White Americans, or simply fail to increase their skepticism about the extent to which contemporary society is indeed fair and just, even modest reforms that could reduce these disparities are likely to be rejected. Future research should directly explore the downstream consequences of these misperceptions of racial economic equality for relevant policy support and, perhaps, compare these dynamics in the racial equality domain to those in other domains of societal equality, including gender (see Hideg & Wilson, 2020).

In conclusion, the present findings add to the evidence that Americans are deeply committed to the belief that society is currently fair and that Black and White Americans are on equal economic footing (e.g., Kraus et al., 2017, 2019). This profound ignorance of the current reality regarding racial economic inequality begs for serious theoretical and empirical work designed to disrupt this ignorance and unearth the psychology that underlies it, including the potential role of narratives of racial progress.

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Supplemental Material

Supplemental material is available online with this article.

Notes

- 1. Among participants who remembered which type of bias they read about, participants who read about explicit bias estimated more income equality in the past than those in the control condition, t(620) = 1.96, p = .050, d = .23, 95% CI [-9.25, .00].
- 2. Among participants who remembered which type of bias they read about, participants who read about explicit bias estimated more wealth equality in the past than those in the control condition, t(620) = 2.52, p = .012, d = .28, 95% CI [-11.49, -1.42].

References

- Bonam, C. M., Nair Das, V., Coleman, B. R., & Salter, P. (2018). Ignoring history, denying racism: Mounting evidence for the Marley Hypothesis and epistemologies of ignorance. *Social Psychological and Personality Science*, 10, 257–265. https://doi.org/10.1177/1948550617751583
- Bonilla-Silva, E. (2017). Racism without racists: Color-blind racism and the persistence of racial inequality in America. Rowman & Littlefield.
- Branscombe, N. R., Ellemers, N., Spears, R., & Doosje, B. (1999).
 The context and content of social identity threat. In N. Ellemers,
 R. Spears, & B. Doosje (Eds.), Social identity: Context, commitment, content (pp. 35–58). Blackwell Science.
- Bricker, J., Dettling, L. J., Henriques, A., Hsu, J. W., Jacobs, L.,
 Moore, K. B., Pack, S., Sabelhaus, J., Thompson, J., & Windle,
 R. A. (2017). Changes in U.S. family finances from 2013
 to 2016: Evidence from the Survey of Consumer Finances.
 Federal Reserve Bulletin, 103(3), 1–42. https://www.federal-reserve.gov/econres/scfindex.htm
- Brodish, A. B., Brazy, P. C., & Devine, P. G. (2008). More eyes on the prize: Variability in white Americans' perceptions of progress toward racial equality. *Personality and Social Psychology Bulletin*, 34(4), 513–527. https://doi.org/10.1177/0146167207311337
- Craig, M. A., DeHart, T., Richeson, J. A., & Fiedorowicz, L. (2012).
 Do unto others as others have done unto you? Perceiving sexism influences women's evaluations of stigmatized racial groups.
 Personality and Social Psychology Bulletin, 38(9), 1107–1119.
- Craig, M. A., Rucker, J. M., & Richeson, J. A. (2018). The pitfalls and promise of increasing racial diversity: Threat, contact, and race relations in the 21st century. *Current Directions in Psychological Science*, 27(3), 188–193.
- Darity, W., Jr., Hamilton, D., Paul, M., Aja, A., Price, A., Moore, A., & Chiopris, C. (2018). What we get wrong about closing the racial wealth gap. https://socialequity.duke.edu/sites/socialequity.duke.edu/files/site-images/FINAL%20COMPLETE%20 REPORT_.pdf
- Davidai, S., & Gilovich, T. (2018). How should we think about Americans' beliefs about economic mobility? *Judgment and Decision Making*, 13(3), 297–304.
- DeBell, M. (2017). Polarized opinions on racial progress and inequality: Measurement and application to affirmative action preferences. *Political Psychology*, 38(3), 481–498. https://doi. org/10.1111/pops.12342
- Economic Policy Institute. (2017). Data from State of Working America Data Library, compensation, wages, and benefits. www.epi.org/data

Eibach, R. P., & Ehrlinger, J. (2006). "Keep your eyes on the prize": Reference points and racial differences in assessing progress toward equality. *Personality and Social Psychology Bulletin*, 32(1), 66–77. https://doi.org/10.1177/0146167205279585

- Eibach, R. P., & Keegan, T. (2006). Free at last? Social dominance, loss aversion, and white and black Americans' differing assessments of racial progress. *Journal of Personality and Social Psychology*, 90(3), 453–467. https://doi.org/10.1037/0022-3514.90.3.453
- Gigerenzer, G., & Hoffrage, U. (1995). How to improve Bayesian reasoning without instruction: Frequency formats. *Psychological Review*, *102*(4), 684–704.
- Hetey, R. C., & Eberhardt, J. L. (2014). Racial disparities in incarceration increase acceptance of punitive policies. *Psychological Science*, 25(10), 1949–1954. https://doi. org/10.1177/0956797614540307
- Hetey, R. C., & Eberhardt, J. L. (2018). The numbers don't speak for themselves: Racial disparities and the persistence of inequality in the criminal justice system. *Current Directions in Psychological Science*, 27(3), 183–187. https://doi.org/10.1177/0963721418763931
- Hideg, I., & Wilson, A. E. (2020). History backfires: Reminders of past injustices against women undermine support for workplace policies promoting women. *Organizational Behavior* and Human Decision Processes, 156, 176–189. https://doi. org/10.1016/j.obhdp.2019.10.001
- Hur, J. D., & Ruttan, R. L. (unpublished manuscript). *The illusion of linear social progress*.
- Knowles, E. D., Lowery, B. S., Chow, R. M., & Unzueta, M. M. (2014). Deny, distance, or dismantle? How white Americans manage a privileged identity. *Perspectives on Psychological Science*, 9(6), 594–609.
- Kraus, M. W., Onyeador, I. N., Daumeyer, N. M., Rucker, J. M., & Richeson, J. A. (2019). The social psychology of misperceiving racial economic equality. *Perspectives on Psychological Science*, 14(6), 899–921.
- Kraus, M. W., Rucker, J. M., & Richeson, J. A. (2017). Americans misperceive racial economic equality. *Proceedings of the National Academy of Sciences*, 114(39), 10324–10331. https:// doi.org/10.1073/pnas.1707719114
- Kraus, M. W., & Tan, J. J. X. (2015). Americans overestimate social class mobility. *Journal of Experimental Social Psychology*, *58*, 101–111. https://doi.org/10.1016/j.jesp.2015.01.005
- Lipkus, I. (1991). The construction and preliminary validation of a global belief in a just world scale and the exploratory analysis of the multidimensional belief in a just world scale. *Personality and Individual Differences*, 12(11), 1171–1178. https://doi.org/10.1016/0191-8869(91)90081-L
- Litman, L., Robinson, J., & Abberbock, T. (2017). TurkPrime. com: A versatile crowdsourcing data acquisition platform for the behavioral sciences. *Behavior Research Methods*, 49(2), 433–442. https://doi.org/10.3758/s13428-016-0727-z
- McLean, K. C., & Syed, M. (2015). Personal, master, and alternative narratives: An integrative framework for understanding identity development in context. *Human Development*, 58(6), 318–349.
- Montgomery, J. M., Nyhan, B., & Torres, M. (2016). How conditioning on post-treatment variables can ruin your experiment and what to do about it. *American Journal of Political Science*, 62(3), 760–765.

- Muñoz, A. P., Kim, M., Chang, M., Jackson, R. O., Hamilton, D., & Darity, W. A., Jr. (2015). The color of wealth in Boston. A joint publication of Duke University, the New School, and the Federal Reserve Bank of Boston. https://www.bostonfed.org/ publications/one-time-pubs/color-of-wealth.aspx
- Nelson, J. C., Adams, G., & Salter, P. S. (2013). The Marley hypothesis: Denial of racism reflects ignorance of history. *Psychological Science*, 24(2), 213–218.
- Norton, M. I., & Ariely, D. (2011). Building a better America—One wealth quintile at a time. *Perspectives on Psychological Science*, 6(1), 9–12. https://doi.org/10.1177/1745691610393524
- O'Brien, L. T., Blodorn, A., Alsbrooks, A., Dube, R., Adams, G., & Nelson, J. C. (2009). Understanding white Americans' perceptions of racism in hurricane Katrina-related events. *Group Processes & Intergroup Relations*, 12(4), 431–444.
- On views of race and inequality, Blacks and Whites are worlds apart. (2016, June 27). Pew Research Center. https://www.pewsocialtrends.org/2016/06/27/on-views-of-race-and-inequality-blacks-and-whites-are-worlds-apart/
- Phillips, L. T., & Lowery, B. S. (2015). The hard-knock life? Whites claim hardships in response to racial inequity. *Journal of Experimental Social Psychology*, 61, 12–18. https://doi.org/10.1016/j.jesp.2015.06.008
- Pratto, F., Sidanius, J., Stallworth, L. M., & Malle, B. F. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology*, 67(4), 741–763.
- Rothstein, R. (2017). The color of law: A forgotten history of how our government segregated America. Liveright.
- Rucker, J. M., Duker, A., & Richeson, J. A. (2019). Structurally unjust: How lay beliefs about racism relate to perceptions of and responses to racial inequality in criminal justice. psyarxiv. com/sjkeq
- Seamster, L., & Ray, V. (2018). Against teleology in the study of race: Toward the abolition of the progress paradigm. *Sociological Theory*, 36(4), 315–342. https://doi.org/10.1177/0735275118813614
- Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, *185*(4157), 1124–1131.
- Unzueta, M. M., Everly, B. A., & Gutiérrez, A. S. (2014). Social dominance orientation moderates reactions to black and white discrimination claimants. *Journal of Experimental Social Psychology*, 54, 81–88. https://doi.org/10.1016/j. jesp.2014.04.005
- Wellman, J. D., Liu, X., & Wilkins, C. L. (2016). Priming status-legitimizing beliefs: Examining the impact on perceived anti-white bias, zero-sum beliefs, and support for affirmative action among white people. *British Journal of Social Psychology*, 55(3), 426–437.
- Wilkins, C. L., Hirsch, A. A., Kaiser, C. R., & Inkles, M. P. (2017). The threat of racial progress and the self-protective nature of perceiving anti-white bias. *Group Processes & Intergroup Relations*, 20(6), 801–812. https://doi.org/10.1177/1368430216631030
- Wilkins, C. L., & Kaiser, C. R. (2014). Racial progress as threat to the status hierarchy: Implications for perceptions of anti-white bias. *Psychological Science*, 25(2), 439–446.
- Wilkins, C. L., Wellman, J. D., & Kaiser, C. R. (2013). Status legitimizing beliefs predict positivity toward Whites who claim anti-White bias. *Journal of Experimental Social Psychology*, 49(6), 1114–1119. https://doi.org/10.1016/j.jesp.2013.05.017