Supplemental Material for

The Misperception of Racial Economic Inequality

Michael W. Kraus¹, Ivuoma N. Onyeador², Natalie M. Daumeyer², Julian M. Rucker², & Jennifer A. Richeson^{2,3}

¹Yale University, School of Management

²Yale University, Department of Psychology

³Yale University, Institution for Social and Policy Studies

Materials and Methods

Experimental Design

The objective of the present study was to collect estimates of racial wealth equality from a large, nationally representative, sample of Americans and to compare these estimates to available federal data on actual median racial wealth equality. In the study, we recruited 1,008 people through Forthright panels to take part in a study of "perceptions of society" in March 2018. Study participant characteristics were broadly consistent with census demographics for region, income, gender, and race of the adult US population (Table S1). Participants first read a brief definition of wealth and annual family income as in prior research (Norton & Ariely, 2011). In the first set of questions, participants took a moment to think of \$100 US in wealth accumulated by an average White family, and to indicate in each of the years listed, how much wealth has been accumulated by the average Black family on a \$0 US to \$200 US scale, where \$100 US would mean equality. Participants answered this question at twelve time points in random order, with order of presentation having no influence on the results. The twelve time points occurred between 1963 and 2016 (inclusive) and were chosen based on the availability of federal median wealth data from the Survey of Consumer Finances (Bricker et al., 2017), which was used as a basis for comparison between participant perceptions of the Black-White wealth gap and the actual gap.

The next set of questions examined current wealth equality perceptions for White and Black families at similar levels of education and income, based on the year 2013, the year for which the most recent federal data were available at the time the study was fielded. Participants considered

a White family at one of five income quintiles or head of family education levels and then were asked to estimate the wealth of a similarly situated Black family if the White family had \$100 in wealth. Participants were next asked about the current wealth of Asian American and Latinx/Hispanic American families using the same methodology with White families as the reference.

Following these questions, respondents entered their guesses about the hypotheses of the study, and were quizzed about their own definition of wealth. Finally, participants were given the opportunity to indicate if they did or did not complete the survey carefully. Analyses with or without careless respondents (N = 10) are identical.

Upon survey completion demographic data with respect to gender, race, census region, income, and education were appended to the responses from an unrelated data collection conducted by the panel provider. For analyses, gender was coded as "1" for men and "0" for women, and race was coded as "1" for White and "0" for non-White.

To create comparisons representing perceptual accuracy of the wealth gap between White and Black families, we subtracted the actual median wealth gap estimated based on the Survey of Consumer Finances from the survey respondent's perceived wealth gap such that higher numbers indicated that respondents thought Black families were wealthier relative to White families (i.e., a lower Black-White wealth gap). Overall, perceptions of the wealth gap were interrelated across the twelve time points (M = 58.95, SD = 31.73, $\alpha = .97$). For the comparisons between perceptions of wealth equality at levels of education and income and comparisons between Asian American and Latinx American families, we used the same accuracy scoring system but used estimates of wealth equality from the Survey of Income and Program Participation (Darity et al.., 2018). We used a different source for wealth estimates for these latter subgroup comparisons

because, while the SIPP has fewer years of data collection it has larger numbers of respondents [over 30,000] from which to create actual median wealth estimates that allow for calculation of subgroups by income, education, and racial minority group (Darity et al., 2018). SIPP median White wealth was calculated using non-Hispanic White families and median Latinx wealth was calculated using data from Hispanic families of any race.

Statistical Analysis

To test the accuracy of survey respondent perceptions of the racial wealth gap we employed the same statistical analysis procedure across all analyses: We took accuracy scores and we computed one-sample t-tests against a score of 0 indicating perfect accuracy of wealth gap estimates.

To assess patterns of estimation consistent with trends in increasing or decreasing errors across time we computed linear contrasts wherein time was the within-subjects factor in an Analysis of Variance. For the analyses examining trends in estimates and accuracy across levels of education and income we used a similar linear contrast analysis where level of education or income quintile was the within-subjects factor. For these latter analyses, we examined both the linear shape of perceptions of the Black-White wealth gap as well as the linear shape of the accuracy of those perceptions in separate analyses.

We used a linear regression analysis to determine if beliefs in societal fairness predict overall estimates of Black-White wealth equality while controlling for relevant confounding factors. We also computed raw correlations between each predictor in our regression model and overall Black-White wealth equality estimates.

Supplemental Text

The results of our series of one-sample t-tests assessing accuracy of perceptions of the Black-White wealth gap are displayed in Table S2. Respondents significantly underestimated the Black-White wealth gap at all twelve time points.

Using the same series of one-sample t-tests we examined respondent accuracy of perception of the Black-White wealth gap for levels of education (Table S3) and income (Table S4).

Respondents underestimated the Black-White wealth gap for every level of education and income.

In Table S5 we present results from our analysis of the Asian-White and Latinx-White wealth gap using the same series of one-sample t-tests. Again, respondents significantly underestimated the Asian-White and Latinx-White wealth gaps, although the magnitude of the overestimates was vastly smaller for the Asian-White estimates.

We next used a linear regression analysis to examine predictors of overall perceptions of the Black-White wealth gap, aggregated across the twelve time points. Correlations between predictors and overall wealth perceptions are shown in Table S6. Regression coefficients and statistical tests are shown in Table S7. Only just world beliefs, financial literacy, and participant race significantly predicted underestimates of the Black-White wealth gap in the full regression model. Gender, income, education, age, and conservatism did not emerge as significant predictors of perceptions of the Black-White wealth gap.

We found no significant evidence of order of presentation effects in our analysis of participant Black-White wealth equality estimates across years. Participants who estimated the most recent year first (M = 87.84, SD = 41.86) provided similar estimates to those who saw the most recent year last (M = 97.77, SD = 38.29), t(163) = -1.58, p = .117.

Census Division	East North Central		Middle Atlantic	Mountain	New England	Pacific	South Atlantic	West North Central	West South Central
N	153	55	146	55	51	168	218	66	93
Family Income	< \$25,000	\$25,000- \$34,999	\$35,000 \$49,999),000- 9,999	\$150,000- \$199,999	>\$200,000
N	263	102	115	150	93	1	40	76	40
Race	White	Bla	Black		Asian/Pacific Islander		Iispanic	Another Race	
N	730	12	24		49		167		63
Education	< High scho	nool High school		Some colleg	ge Bachelor's			Advanced degree	
N	32	198	3	390		252		133	
Gender	Men			Women					
N		532					473		

Table S1.

Demographic characteristics of the nationally representative panel sample. The numbers for race exceed the total sample size because some respondents identified with more than one racial category.

Year	T-Value	DF	P-Value	Mean Gap Between Perceived
				and Actual Wealth Equality (\$
				US)
1963	33.91	1007	< .001	41.74
1983	39.87	1007	< .001	47.21
1989	48.92	1007	< .001	57.17
1992	38.56	1007	< .001	45.66
1995	47.93	1007	< .001	53.55
1998	46.80	1007	< .001	52.81
2001	49.59	1007	< .001	57.78
2004	53.14	1007	< .001	60.97
2007	57.72	1007	< .001	66.32
2010	59.45	1007	< .001	69.46
2013	63.97	1007	< .001	75.08
2016	63.94	1007	< .001	79.62

Table S2.Mean gap between perceived and actual Black-White wealth equality where higher scores indicated greater underestimates of the Black-White wealth gap.

Education	T-Value	DF	P-Value	Mean Gap Between Perceived and Actual Wealth Equality (\$ US)
< High school	46.19	1007	< .001	56.17
High school	56.58	1007	< .001	65.76
Some college	58.85	1007	< .001	67.37
College	62.88	1007	< .001	74.48
Postgrad	51.49	1007	< .001	64.67

Table S3.

Mean gap between perceived and actual Black-White wealth equality at matched levels of head of family education where higher scores indicated greater underestimates of the Black-White wealth gap.

Income Quintile	T-Value	DF	P-Value Pe	Mean Gap Between received and Actual Wealth Equality (\$ US)
Bottom	52.38	1007	< .001	64.35
$2^{\rm nd}$	57.60	1007	< .001	62.59
Middle	58.22	1007	< .001	60.77
4^{th}	46.30	1007	< .001	52.13
Тор	33.33	1007	< .001	44.86

Table S4.Mean gap between perceived and actual Black-White wealth equality at each income quintile where higher scores indicated greater underestimates of the Black-White wealth gap.

			_
T-Value	DF	P-Value	Mean Gap Between
		Per	ceived and Actual Wealth
			Equality (\$ US)
8.69	1007	< .001	9.95
59.54	1007	< .001	65.33
	8.69	8.69 1007	8.69 1007 < .001

Table S5.

Mean gap between perceived and actual Asian-White and Latinx-White wealth equality where higher scores indicated greater underestimates of the wealth gap.

	Racial Wealth	Just World	White	Education	General Wealth	Age	Financial Literacy	Gender	Income
	Perception	Beliefs			Perception				
Racial Wealth	_								
Perception									
Just World Beliefs	.19*								
White	.07*	.02							
Education	09*	05	.06						
General	.19*	.20*	.06	14*					
Wealth Perception									
Age	03	10*	.20*	.07*	.06				
Financial Literacy	20*	24*	.13*	.24*	22*	.23*			
Gender	01	.07*	.04	.13*	20*	04	.17*		
Income	06*	.04	.04	.47*	09*	07*	.18*	.10*	
Conservatism	.13*	.40*	.14*	03	.20*	.03	09*	.04	.07*

Table S6.

Correlations between the tendency to underestimate the Black-White wealth gap, demographic variables, individual differences in conservatism, just world beliefs, and financial literacy, and general wealth estimate accuracy. An "*"indicates that the correlation P-value is < .05.