Revolving Ambiguities in Single-Race Research on Racial Bias:

Understanding the Reasons for Racial Bias against Juvenile Offenders*

Abstract

<u>Objective</u>. Research had indicated that whites offer more support for a harsh punishment when primed to think of a black juvenile offender than when primed to think of a white juvenile offender. This study investigates whether this racial bias is due to an association of race with criminality or due to ingroup bias. <u>Methods</u>. Responses from a survey experiment were analyzed. <u>Results</u>. Blacks and whites both offered less support for a harsh punishment when primed to think of a juvenile of their own race, suggesting that the observed racial bias reflects an ingroup bias rather than stereotypic associations. <u>Conclusions</u>. Including more than one racial group in racial bias research can help identify reasons for the bias and suggest policies to mitigate the bias.

Designing optimal policies to mitigate racial bias often depends on the ability of social science to produce generalizable inferences about the reasons for particular manifestations of racial bias. But the ability of social science to produce such generalizable inferences is limited if social science examines only whites' attitudes about and behaviors toward blacks. This study illustrates how observations from whites can be compared with observations from blacks to produce a stronger inference about the reasons for racial bias and thus to provide better direction for the design of policies to mitigate this bias.

Ambiguity in Single-Race Racial Bias Research

Rattan et al. (2012) reported results from an experiment in which respondents were questioned after receiving a description of a 14-year-old male convicted rapist named Joe Sullivan who had 17 prior convictions and was sentenced to life in prison without the possibility of parole: compared to non-Hispanic whites who received the description of a white juvenile Joe Sullivan, non-Hispanic whites who received a description of a black juvenile Joe Sullivan (a) offered more support for the idea that juveniles who commit such crimes should be considered as blameworthy as adults who commit such crimes and (b) offered more support for sentences of life in prison without the possibility of parole for juveniles who commit serious violent but non-lethal crimes. Rattan et al. (2012) suggested that this racial bias might have resulted from a generalized association of blacks with criminality:

> ...the present study augments this previous literature by examining people's views of the distinction between juveniles and adults and by showing that this distinction is undermined in the context of even a single Black (vs. White) example case. The results also ex-

tend the established literature in social psychology examining the

cognitive association between the social category "Black" and

criminality, and raise the possibility that this race-crime associa-

tion may be at odds with lay people's typical notions about the in-

nocence of juveniles (p. 4, reference citation omitted, emphases

added).

There is reason to suspect that a race/crime association might have caused the racial bias detect-

ed in the experiment, given the race/crime association in crime statistics and in media coverage

of crime, and given evidence that this race/crime association drives certain manifestations of ra-

cial bias: blacks are more likely than whites or Hispanics to be incarcerated (Bonczar 2003), lo-

cal television news in some areas has overrepresented blacks as criminals compared to the black

crime rate (Dixon and Linz 2000), and studies measuring (Correll et al. 2002) and manipulating

(Correll et al. 2007) the stereotypic association of blacks with danger suggest that this associa-

tion causes the shooter game bias in which both blacks and whites playing a videogame are more

quick to shoot armed black targets than to shoot armed white targets but are less quick to shoot

unarmed white targets than to shoot unarmed black targets. Local television news in some areas

has also overrepresented black juveniles as criminals (Dixon and Azocar 2006), so the associa-

tion of blacks with danger that appears to explain racial bias in the shooter game might also ex-

plain racial bias in the juvenile Joe Sullivan experiment.

But the anti-black bias detected among non-Hispanic whites in the juvenile Joe Sullivan

experiment is also consistent with ingroup favoritism that has been observed in three-month-old

infants (Bar-Haim et al. 2006), baseball umpires (Parsons et al. 2008), professional basketball

coaches (Schroffel and Magee 2012), Arab and Jewish judges (Gazal-Ayal and Sulitzeanu-

Kenan 2009), and the criminal justice field that formed the background for the juvenile Joe Sullivan experiment: Mitchell et al. (2005) reported a small mock juror bias that favored same-race defendants in 46 statistical tests across 34 studies of racial bias in mock juror guilt judgments. Therefore, bias against members of another race can occur both because of a stereotypic association and because of ingroup favoritism, so research on a sample drawn from one race might not permit researchers to make generalizable inferences about the reasons for any detected racial bias.

Resolving Ambiguities in Racial Bias Research

Ambiguity about the reason for racial bias among whites as a result of experimental primes can be reduced by analyzing how members of other racial groups respond to the same primes: for instance, more black support for a harsh punishment when primed to think of a black (vs. white) juvenile offender would be consistent with racial bias driven by a stereotype associating blacks with criminality, but more black support for a harsh punishment when primed to think of a white (vs. black) juvenile offender would be consistent with racial bias driven by ingroup favoritism.

Research on black mock jurors suggests that blacks in the juvenile Joe Sullivan experiment might exhibit same-race favoritism. Skolnick and Shaw (1997) studied 106 white and 107 black undergraduate mock jurors in an experiment that varied the defendant's race: no racial bias was detected among white mock jurors at a statistically significant level, but black mock jurors were more likely to return a guilty verdict when the defendant was described as white than when the defendant was described as black. Sommers and Ellsworth (2000) studied the reaction of 33 white and 29 black fraternity and sorority members to five mock trials in which the victim and the defendant were of different races: black mock jurors issued higher guilt ratings on a 1-to-7 scale for white defendants than for black defendants at a statistically significant level, but white

mock jurors did not issue guilt ratings that differed by defendant race at a statistically significant level. Abwender and Hough (2001) uncovered a similar dynamic among 89 black and 63 white college students: black mock jurors issued higher guilt ratings on a 1-to-7 scale for white defendants than for black defendants at a statistically significant level, but white mock jurors did not issue different guilt ratings for black and white defendants at a statistically significant level. Ugwuegbu (1979) studied 186 black and 244 white undergraduates and found that both black and white mock jurors rated same-race defendants as less culpable than other-race defendants when evidence was ambiguous but not when evidence was weak or strong. Wuensch et al. (2002) studied 161 white and 152 black college students in an experiment that varied the race of the plaintiff and the race of the defendant in a sexual harassment case: white male mock jurors but not white female mock jurors were more likely to issue a guilty verdict when the plaintiff was white or when the defendant was black; black male mock jurors but not black female mock jurors were more likely to issue a guilty verdict when the plaintiff was black; and black male and black female mock jurors were more likely to issue a guilty verdict when the defendant was white.

Research Design

Data collected by the Time-sharing Experiments for the Social Sciences (NSF Grant 0818839, Jeremy Freese and Penny Visser, Principal Investigators) and analyzed in Rattan et al. (2012) contained a sample of black respondents sufficient for producing inferences about the relative influence of the black and white juvenile offender primes: samples for the black and white juvenile offender experimental conditions respectively contained 475 and 471 non-Hispanic white respondents and 47 and 55 non-Hispanic black respondents; observations were not analyzed from the 122 Hispanic respondents, the 35 multiple race non-Hispanic respondents, and the 37

other race non-Hispanic respondents because the study contained no same-race experimental prime for Hispanic, multiple-race, or other-race respondents. The survey was fielded between March 12 and March 18, 2010, with a 68% completion rate. Unless otherwise indicated, p-values are reported for a two-tailed test for which equal variances were assumed.

Respondents were shown several displays about a Supreme Court case on the constitutionality of sentencing juveniles convicted of non-lethal crimes to life in prison without the possibility of parole. Respondents received a description of a juvenile offender that varied the juvenile's race:

> One of the cases currently under review by the Supreme Court is that of Joe Sullivan, a [black/white] male who had 17 prior juvenile convictions on his record when he was convicted of brutally raping an elderly woman at the age of 14 and sentenced to life in prison without the possibility of parole.

Respondents were then asked to respond to four items on a 1-to-6 scale:

1. To what extent do you support life sentences with no possibility of parole for juveniles when they have been convicted of serious violent crimes (in which no one was killed)? [1 = not at all, 6 = extremely]

2. To what degree do you believe that this kind of sentence constitutes cruel and unusual punishment? [1 = not at all, 6 = extremely]

3. To what extent do you believe that juveniles who commit crimes such as these are capable of reform? [1 = Not at all capable of reform, 6 = Extremely capable of reform]

4. How much do you believe that juveniles who commit crimes such as these should be considered less blameworthy than an adult who committed the same crime? [1 = Juveniles are less blameworthy than adults, 6 = Juveniles and adults are equally blameworthy]

Respondents were also asked about prior criminal convictions, prior knowledge about the Supreme Court case, the intended purpose of the research, feelings about white Americans measured on a 0-to-100 feeling thermometer, feelings about black Americans measured on a 0-to-100 feeling thermometer, and manipulation checks for the race, age, and crime of juvenile Joe Sullivan. The dataset contained demographic information for the respondents.

Results

The experimental prime did not induce at a statistically significant level a difference in responses to the second or third item among the sample of non-Hispanic whites or non-Hispanic blacks, suggesting that racial bias had at most a small influence on respondent judgments about whether life in prison without parole is cruel and unusual punishment and about whether juvenile recidivists who commit serious violent but non-lethal crimes are capable of reform; however, it is possible that an effect might be found in an experiment with a larger sample size or a stronger prime.

Table 1 presents results for the first and fourth items across four specifications. The first and fifth numeric rows present results for the full non-Hispanic white and non-Hispanic black samples with no weights applied. For the first item, the mean response of 4.26 from the 468 non-Hispanic whites in the white juvenile offender condition did not differ at a statistically significant level from the mean response of 4.36 from the 474 non-Hispanic whites in the black juvenile offender condition (p=0.27); but the mean response of 2.96 for the 46 non-Hispanic blacks in the

black juvenile offender condition did differ at a statistically significant level from the mean response of 3.59 for the 54 non-Hispanic blacks in the white juvenile offender condition (p=0.04). Figure 1 illustrates the magnitude of racial bias detected in unweighted responses to the first item.

[Table 1 about here]

[Figure 1 about here]

Comparison of the left and right sides of Figure 1 suggests that the racial bias detected in the juvenile Joe Sullivan experiment was not caused by a stereotype associating blacks with danger or criminality, because a negative association about blacks cannot explain higher levels of support for a harsh punishment among non-Hispanic black respondents primed to think of a white juvenile offender than among non-Hispanic black respondents primed to think of a black juvenile offender; the bias in responses is instead consistent with ingroup favoritism: non-Hispanic whites and non-Hispanic blacks offered less support for a harsh punishment when primed to think of a juvenile offender of their own race.

Post-hoc tests indicated that the 0.55-unit difference between the 0.65-unit pro-black bias among non-Hispanic blacks and the 0.10-unit pro-white bias among non-Hispanic whites fell close to conventional levels of statistical significance (p=0.079), which is consistent with research indicating that the race of a defendant is more influential for black mock jurors than for white mock jurors (Sommers and Ellsworth 2003: 1018; Mitchell et al. 2005). Moreover, lack of a detected ingroup favoritism among whites is not unprecedented and might mask variation in responses from whites. Research has suggested that the overall level of same-race favoritism among white mock jurors might be diluted by white mock jurors who exhibit anti-white bias in an attempt to "bend over backwards" (Gaertner and Dovidio 1981: 209) to appear non-prejudiced: Kemmelmeier (2005) studied 70 white or European American undergraduates and found that

mock jurors high in social dominance orientation perceived a black defendant to be more guilty on a 1-to-9 scale than a white defendant, but mock jurors low in social dominance orientation perceived a black defendant to be less guilty than a white defendant. There is evidence that this type of dilution might have occurred in the juvenile Joe Sullivan experiment: post-hoc tests on the first item revealed a 1.7-unit anti-white bias among the 26 non-Hispanic whites who rated blacks higher than whites on the feeling thermometers (p=0.01), a 0.20-unit pro-white bias among the 453 non-Hispanic whites who rated whites higher than blacks on the feeling thermometers (p=0.12), and a 0.05-unit pro-white bias among the 463 non-Hispanic whites who rated whites equal to blacks on the feeling thermometers (p=0.72).

Rattan et al. (2012) presented results from a weighted sample that excluded respondents who failed to correctly answer the manipulation check for the race of juvenile Joe Sullivan; combinations of these restrictions are reflected in results presented in the second to fourth and sixth to eighth rows of Table 1. Ingroup favoritism among non-Hispanic blacks in response to the first item was detected at conventional levels of statistical significance for two of these three alternate specifications, but the p-value fell to 0.13 when observations were not weighted and the sample excluded the 16 non-Hispanic black respondents who failed to correctly answer the racial manipulation check. Ingroup favoritism among non-Hispanic whites in response to the first item was not detected at conventional levels of statistical significance for any of the four sample specifications, but the p-value fell close to 0.05 when data were weighted and the sample excluded respondents who failed to correctly answer the racial manipulation check.

There was evidence that the racial prime influenced non-Hispanic white responses to the fourth item: for the weighted sample of all non-Hispanic whites, the mean response was 4.11 for non-Hispanic whites who received the white juvenile prime and 4.37 for non-Hispanic whites

who received the black juvenile prime (p-value for the difference of 0.026); for the weighted sample of non-Hispanic whites who correctly answered the racial manipulation check, the mean response was 4.11 for non-Hispanic whites who received the white juvenile prime and 4.37 for non-Hispanic whites who received the black juvenile prime (p-value for the difference of 0.046).

Results in Table 1 reflect analyses conducted on a dataset obtained from correspondence with TESS. Personal communication with Aneeta Rattan indicated that results presented in Rattan et al. (2012) were from an analysis on a sample restricted to only those respondents who met participation criteria, provided complete data, and finished the survey in at least one minute; Table 2 presents results from this restricted sample. Note that, in Table 2 results, the weight variable for the sample of non-Hispanic whites was constructed for the restricted non-Hispanic white sample; all other weight variables used in the analysis were constructed based on the full sample.

[Table 2 about here]

Results presented in Tables 1 and 2 were based on an analysis using probability weights in Stata. Aneeta Rattan indicated in personal correspondence that the Rattan et al. (2012) analysis was conducted in SPSS. Table 2 p-values differ from p-values presented for non-Hispanic whites in Rattan et al. (2012) because the Rattan et al. (2012) analysis appeared to use the WEIGHT option in the base module of SPSS, which does not properly adjust for sampling weights. I attempted to replicate the basic Rattan et al. (2012) results for the two items reported in Rattan et al. (2012) for non-Hispanic white respondents who correctly answered the race manipulation check, using SPSS and the weighting variable that weighted observations for only white respondents; for Item 1, regarding support for life in prison without parole, the mean response for non-Hispanic whites was 4.40 in the black Joe Sullivan condition and 4.16 in the white Joe Sullivan condition, with a two-tailed p-value of 0.03 (t=2.12), equal variances not assumed; for Item 4,

regarding blameworthiness, the mean response for non-Hispanic whites was 4.42 in the black Joe Sullivan condition and 4.14 in the white Joe Sullivan condition, with a two-tailed p-value of 0.02 (t=2.32), equal variances not assumed. These two results were nearly the same as the results produced in Stata with the importance weight option and were nearly the same as results reported in Rattan (2012).

Discussion

Rattan et al. (2012) presented evidence that non-Hispanic whites primed to think of a black (vs. white) juvenile offender offer more support for life in prison without the possibility of parole for juvenile offenders. But limiting the analysis to non-Hispanic whites did not permit a clear inference regarding the reason for this bias because such bias is consistent with bias due to stereotypic associations and with bias due to ingroup favoritism. Inclusion of results for non-Hispanic blacks suggested that the racial bias that Rattan et al. (2012) detected against black juvenile offenders is not consistent with a bias rooted in stereotypes that creates unique disadvantages for black juvenile offenders but is instead consistent with an ingroup favoritism that can disadvantage juvenile offenders of any race, to the extent that respondents in the experiment are representative of persons who interact with juveniles in the justice system. This ingroup favoritism interpretation is consistent with much past research on mock juror bias and suggests that some interventions to mitigate the observed racial bias might be more successful than other interventions.

Police officers made more errors favoring whites over blacks in early trials of the shooter game but did not exhibit racially-biased errors in later trials (Plant and Peruche 2005); this reduction in racial bias appeared to result from repeated trials of the game reducing stereotypic associations, given that the race of a potential target in the game was not correlated with the probability

that the potential target held a weapon (Plant et al. 2005). However, the bias in the juvenile Joe Sullivan experiment does not appear to result from a stereotype, so unlearning a stereotype might not produce the desired reduction in racial bias.

A better policy for reducing the racial bias detected in the juvenile Joe Sullivan experiment might be racially-mixed juries, since the pro-black favoritism of black jurors can help offset the pro-white favoritism of white jurors. Felony jury trial data from two Florida counties indicated that all-white juries convicted black defendants at a higher rate than white defendants but that this racial bias was not detected when at least one member of the jury pool was black (Anwar et al. 2012); moreover, studies have suggested that racially-mixed juries produce more thoughtful deliberations (Sommers and Ellsworth 2003: 1028, describing Sommers 2002) and that convictions from a racially-mixed jury are perceived to be more fair than convictions from an all-white jury (Ellis and Diamond 2003: 1045-1048).

Research on racial bias often excludes blacks, but including blacks in the study of racial bias permits social science to produce a fuller understanding of racial attitudes and behavior, which can then provide better direction for policymakers designing interventions to lessen the impact of racial bias. Moreover, including observations from blacks in social science avoids the impression that "Black people don't matter" (Harris-Lacewell 2003, p. 222, emphasis removed), and − given the trend toward increased racial and ethnic diversity in the United States − social scientists should also strive to include other groups in studies of bias.

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Table 1
Racial Bias in the Juvenile Joe Sullivan Experiment

	Item 1		Item 4	
	Support for life in prison without parole for juveniles convicted of serious violent non-lethal crimes		Juveniles who commit such crimes should be considered as blameworthy as adults	
	White Juvenile Prime	Black Juvenile Prime	White Juvenile Prime	Black Juvenile Prime
All non-Hispanic white respondents, non-weighted	4.26	4.36	4.23	4.37
	diff=0.10, n=942, p=0.27		diff=0.14, n=942, p=0.15	
Non-Hispanic white respondents correctly answering the racial manipulation check, non-weighted	4.27	4.38	4.25	4.37
	diff=0.12, n=791, p=0.26		diff=0.11, n=790, p=0.28	
All non-Hispanic white respondents, weighted	4.34	4.15	4.37	4.11
	diff=0.19, n=886, p=0.10		**diff=0.26, n=887, p=0.03**	
Non-Hispanic white respondents correctly answering the racial manipulation check, weighted	4.38	4.14	4.37	4.11
	diff=0.24, n=791, p=0.06		**diff=0.26, n=741, p=0.05**	
All non-Hispanic black respondents, non-weighted	3.59	2.96	3.96	3.52
	diff=0.64, n=100, p=0.04		diff=0.44, n=101, p=0.18	
Non-Hispanic black respondents correctly answering the racial manipulation check, non-weighted	3.66	3.15	4.07	3.70
	diff=0.51, n=84, p=0.13		diff=0.37, n=84, p=0.31	
All non-Hispanic black respondents, weighted	3.74	2.86	4.03	3.39
	diff=0.89, n=143, p=0.01		diff=0.65, n=142, p=0.08	
Non-Hispanic black respondents correctly answering the racial manipulation check, weighted	3.78	2.98	4.04	3.52
	diff=0.80, n=123, p=0.04		diff=0.52, n=121, p=0.21	

Note: The diff-value in each cell indicates the difference in mean responses due to the white juvenile prime and the black juvenile prime. The n-value in each cell indicates the total number of observations used in non-weighted t-tests or the weighted population size in weighted t-tests; weighting was conducted with Stata's svy prefix command and the subpop command option. The p-value in each cell indicates the p-value for a two-tailed test for whether there was sufficient evidence that the racial bias was different than zero; bold type indicates p≤0.05. The data source was the full dataset of all observations.

Figure 1
Racial Bias in Support for Life in Prison without Parole for
Juvenile Offenders Convicted of Serious Violent but Non-Lethal Crimes
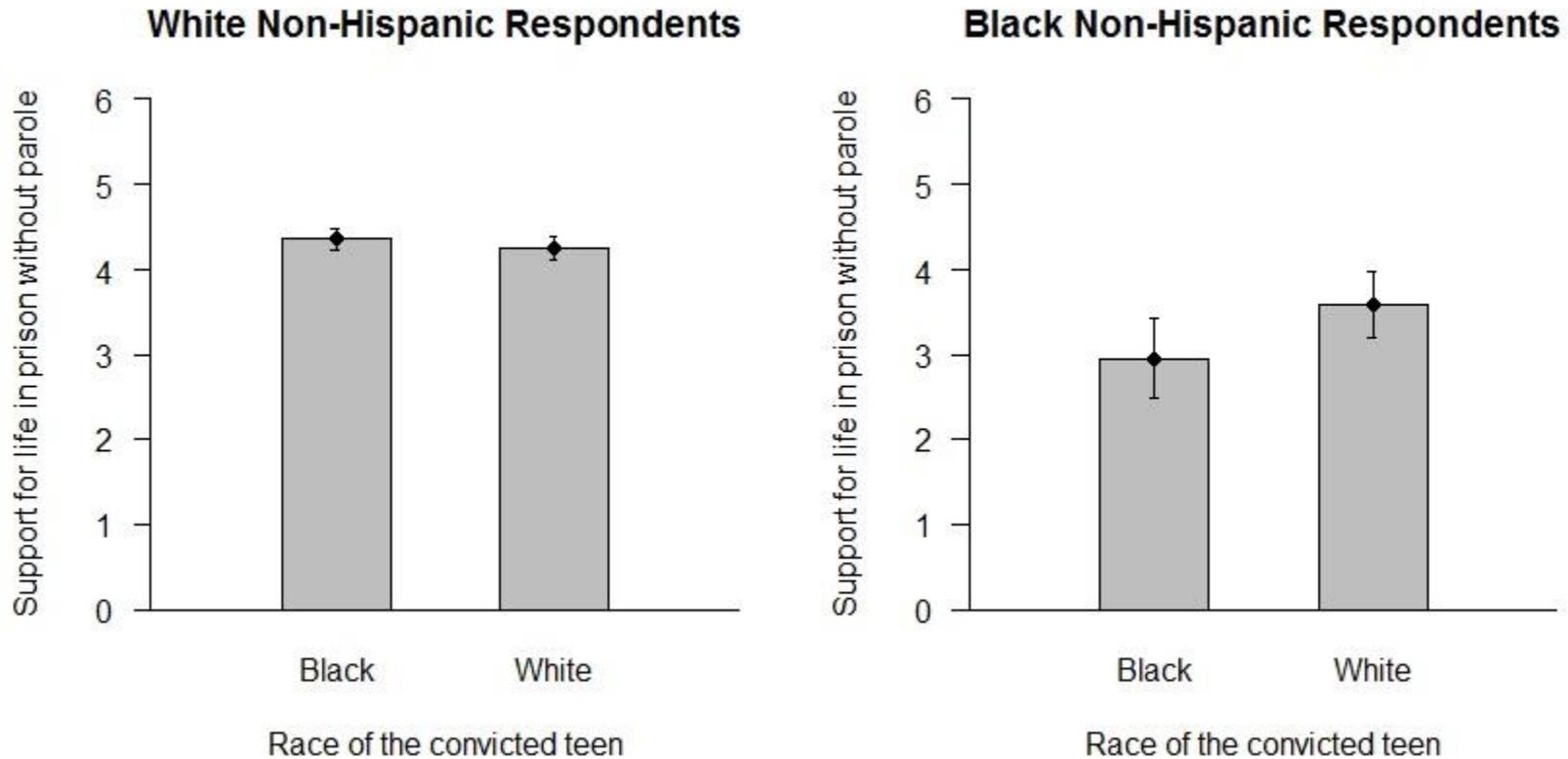
Note: Figures indicate the mean and standard error of responses to the item measuring support for life sentences with no possibility of parole for juveniles convicted of serious violent but non-lethal crimes. Higher values indicate more support for that punishment. Data were not weighted, and restrictions were not applied based on manipulation checks.

Table 2
Racial Bias in the Juvenile Joe Sullivan Experiment: Restricted Dataset Results

	Item 1		Item 4	
	Support for life in prison without parole for juveniles convicted of serious violent non-lethal crimes		Juveniles who commit such crimes should be considered as blameworthy as adults	
	White Juvenile Prime	Black Juvenile Prime	White Juvenile Prime	Black Juvenile Prime
All non-Hispanic white respondents, non-weighted	4.28	4.39	4.25	4.41
	diff=0.11, n=734, p=0.28		diff=0.17, n=733, p=0.13	
Non-Hispanic white respondents correctly answering the racial manipulation check, non-weighted	4.27	4.41	4.25	4.41
	diff=0.14, n=631, p=0.21		diff=0.16, n=630, p=0.19	
All non-Hispanic white respondents, weighted	4.17	4.36	4.15	4.41
	diff=0.19, n=734, p=0.15		diff=0.26, n=733, p=0.06	
Non-Hispanic white respondents correctly answering the racial manipulation check, weighted	4.15	4.40	4.14	4.42
	diff=0.24, n=631, p=0.09		diff=0.28, n=630, p=0.06	
All non-Hispanic black respondents, non-weighted	3.61	2.79	4.02	3.68
	diff=0.81, n=80, p=0.02		diff=0.34, n=81, p=0.37	
Non-Hispanic black respondents correctly answering the racial manipulation check, non-weighted	3.62	3.00	4.10	3.87
	diff=0.62, n=70, p=0.11		diff=0.23, n=70, p=0.57	
All non-Hispanic black respondents, weighted	3.73	2.64	3.97	3.43
	diff=1.10, n=80, p=0.01		diff=0.54, n=81, p=0.22	
Non-Hispanic black respondents correctly answering the racial manipulation check, weighted	3.71	2.79	3.98	3.57
	diff=0.92, n=70, p=0.04		diff=0.41, n=70, p=0.40	

Note: The diff-value in each cell indicates the difference in mean responses due to the white juvenile prime and the black juvenile prime. The n-value in each cell indicates the total number of observations used in non-weighted t-tests or the weighted population size in weighted t-tests; weighting was conducted with Stata's svy prefix command and the subpop command option. The p-value in each cell indicates the p-value for a two-tailed test for whether there was sufficient evidence that the racial bias was different than zero; bold type indicates p≤0.05. The data source was the restricted dataset with the sample restricted to only those respondents who met participation criteria, provided complete data, and finished the survey in one minute or longer.