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DETERMINANTS OF TURNOUT AND CANDIDATE CHOICE IN THE 2008 U.S. PRESIDENTIAL ELECTION
ILLUMINATING THE IMPACT OF RACIAL PREJUDICE AND OTHER CONSIDERATIONS

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Abstract The presence of an African-American candidate on the ballot running for President in 2008 raises the possibility that the election outcome might have been influenced by anti-African-American racism among voters. This paper uses data from the Associated Press-Yahoo! News-Stanford University survey to explore this possibility, using measures of both explicit racism (symbolic racism) and implicit racism (the Affect Misattribution Procedure). The parameters of multinomial logistic regression equations were estimated to test the hypotheses that racism might have behaved differently on election day than they would have had racism been eliminated. The findings suggest that racism's impact on the election outcome could have been substantial, by causing (1) people

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Table 1. Forecasting Model Predictions of the 2008 U.S. Presidential Election Outcome

Forecaster	Date of forecast in days before the election	Predicted two-party popular vote for Obama	Probability of an Obama victory
Norpoth (2008)	294	50.1%	50%
Lockerbie (2008)	127	58.2%	92%
Klarner (2008)	99	53.0%	86%
Cuzán and Bundrick (2008)	94	52.0%	80%
Abramowicz (2008)	69	54.3%	90%
Erikson and Wlezien (2008)	68	52.2%	72%
Lewis-Beck and Tien (2008)[1]	68	56.6%	>93%
Holbrook (2008)	60	55.7%	92%
Campbell (2008b)	57	47.3%	17%
Mean		53.3%	75%
Median		53.0%	86%

NOTE.—This figure is adapted from Campbell, 2008a.

[1]Lewis-Beck and Tien (2008) introduced a correction for the presumed effect of racism in their preferred prediction. We show their results before the correction. Their chance of victory was imputed from their statement that the Jobs model gave McCain "less than 1 in 14 chance" without the correction.

> who would otherwise have voted for Obama to vote for McCain, for a nonmajor party candidate, or not to vote at all, (2) people who would not have voted to vote for McCain instead, and (3) people who would have voted for a nonmajor party candidate to vote for McCain instead.

Long before election day 2008, long before the country even knew who the major parties' nominees for President would be, forecasting models predicted a win by the Democratic Party's candidate (e.g., Abramowitz 2008; Erikson and Wlezien 2008; Holbrook 2008; see table 1). These predictions were based upon a common set of indicators, including the health of the national economy and approval of the incumbent President. The average predicted vote share for Barack Obama across the 9 models shown in table 1 was 53.3 percent, a little smaller than the 53.7 percent that President Obama eventually earned. The average predicted probability that Obama would win was 75 percent, with only 1 of the 9 polls putting that percentage below 50 percent, certainly plenty of reason for optimism in the Obama camp during the campaign.

But during the summer of 2008, the numerous polls being reported by the news media did not find an Obama lead. For example, as shown in figure 1, the ABC News/Washington Post tracking poll documented essentially no difference between the candidates' share of the vote among likely voters until late September. Why was this? Even during the summer, the national

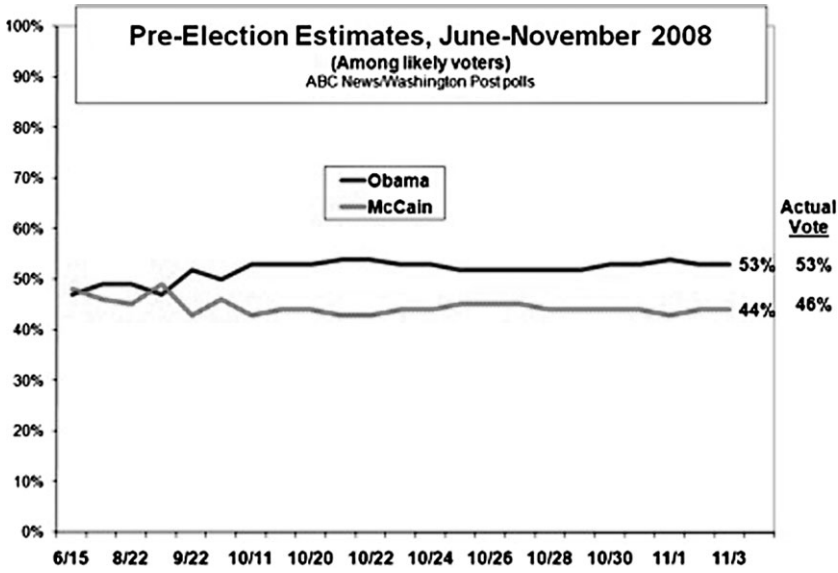

Figure 1. Pre-election Poll Results from ABC News/Washington Post Tracking Poll.

economy was doing badly and in serious decline, the United States was involved in two wars that were not obviously succeeding at achieving their goals, and approval of President Bush was remarkably low. Furthermore, the proportion of the nation that called itself Republicans had been declining steadily over the prior months. These and other key factors that are thought to influence election outcomes pointed toward a greater Obama lead than was being observed.

Faced with this puzzle, a team of researchers at Stanford University and the Associated Press worked together to generate a series of hypotheses about what might explain Mr. Obama's lagging performance and to test those hypotheses with data from a new survey. These hypotheses built upon the huge and growing literature on the causes of voting behavior. We explored the impact of party affiliation, liberal/conservative ideology, retrospective assessments of the health of the nation, approval of Presidential performance, desires for divided government, voter personality (authoritarianism in particular), perceptions of the candidates' personalities and their wives, perceptions of the candidates' styles of governing, perceptions of the candidates' issue priorities, and many other potentially consequential factors.

Building on this foundation, we explored the impact of anti-African-American racism in particular depth. Our survey included a wide array of measures of racism, including many traditional survey self-report measures. But in addition, for perhaps the first time, this survey of a probability sample of American adults included a measure of implicit racism. Implicit racism

measures are built on the philosophy that people might be unable or unwilling to report anti-African-American attitudes if asked to do so directly in a survey. Therefore, psychologists have constructed measures to tap underlying, unconscious racism, and these measures do not rely on people to honestly and accurately report their positive or negative evaluations of African-Americans.

Implicit measures have been the focus of research by psychologists for many years, and scholars have collected large amounts of data from college students and general public samples who have voluntarily visited data-collection websites after hearing about implicit measures (and often wanting to find out if they themselves manifest implicit racism). Our survey compliments that work by exploring the presence and effects of implicit racism in a representative national sample and an obviously consequential context (the election for President of the United States). Armed with these measures, we assessed not only the impact that racism might have had on Americans' evaluations of the 2008 Presidential candidates but also conducted a statistical simulation of what the election results might have been without racism.

In doing so, we took an analytic approach that departed from many past studies of voting. For decades, investigators exploring the causes of vote choice have treated the decision about whether to turn out as separate from the decision about for whom to vote. This approach is quite reasonable in light of many reigning theories of the causes of turnout and candidate choice and evidence supporting them. For example, age and education are both reliable predictors of turnout (see Rosenstone and Hansen 1993), presumably at least partly because education instills civic skills and a motivation to participate in governance, and with aging comes more connections to civic institutions, more skills at understanding politics, and more experience at implementing the act of voting (for a review, see Harder and Krosnick 2008). Regardless of the mechanisms, the effects of such variables in inspiring turnout have been presumed to operate generally, regardless of the candidates running in a particular election. So many scholars have assumed that individual citizens are inclined either to vote or not to vote by one set of forces, and selections among candidates are driven by a largely separate set of forces specific to the candidates running, the health of the nation, and more.

We took a different approach, one that presumes the decision to turn out and the selection among candidates might be intimately intertwined (cf. Lacy and Burden 1999; Martinez and Gill 2005; Sanders 1998; 2001). This notion is not new: for example, Holbrook et al. (2001) found that the greater a citizen's preference for one major party candidate over the other, the more likely the citizen is to vote in an election, even when controlling for a wide array of more generic predictors of turnout, as long as the citizen dislikes as least one of the candidates. This is, of course, evidence that general candidate evaluations influence decisions to turn out. In the research reported here, we explored whether a wide range of candidate-specific evaluations might do so, in addition to factors not explicitly involving the candidates (e.g., the health of the nation

economically). And in doing so, we explored whether racism might have caused some people to decide not to vote at all while inspiring others to vote.

We begin below by outlining our hypotheses and describing the survey data collected in late August/early September and in November, 2008. Then, we use pre-election measures to predict turnout and candidate choice on election day.

Possible Determinants of Candidate Preferences and Turnout

RACISM

Although overtly expressed anti-African-American racism has declined dramatically during the last half-century, a variety of surveys continue to suggest that African-American presidential candidates may nonetheless have a nonzero disadvantage because of racism. The proportion of Americans who say that they would not vote for an African-American candidate is currently in the mid-single digits. For example, the Gallup Organization has asked respondents whether they would vote for a candidate if the person was African-American, was "generally qualified," and was nominated by the respondent's political party. Averaging across surveys since 1997, the percent of Americans who answered negatively was 4.8 percent (among registered voters, the proportion averaged 5 percent in CBS News/New York Times surveys in 2008). Across surveys in 2006 and 2007, the proportion of Americans who said that a candidate for President being African-American would make them *less likely* to vote for that person averaged 5 percent. Finally, the proportion of people who in 2007 and 2008 said they were "very uncomfortable" about the fact that Barack Obama would be the first African-American President averaged 6 percent. These surveys are surprisingly convergent in suggesting a mid-single digits number of people for whom Obama's race might have been a barrier.

But there is reason to hesitate before accepting these numbers as valid. First, questions asking respondents how they would vote in a hypothetical election or how a candidate's race influences their candidate choice require that people know how they make decisions and what influences those decisions. But fifty years of research in psychology raises grave doubts about the validity of such self-descriptions (for a review, see, e.g., Nisbett and Wilson 1978). When people make statements about how they make decisions, they are usually wrong, and when they are right, they are usually right by coincidence only, not due to true self-insight. A principal reason is that most decisions are made automatically, outside of consciousness, and gradually over a period of time (e.g., during the months of a Presidential election campaign). Even if a person knows for sure that she prefers John McCain over Barack Obama, remembering the specific events and other considerations that shaped her preference is very difficult indeed.

In contrast, people are usually quite accurate at describing their current mental states and preferences, so a question asking whether respondents feel

uncomfortable when thinking about the fact that Barack Obama might be the first African-American President has more potential to be informative. But social scientists have long worried that answers to such questions may be distorted not by lack of self-insight but rather by an unwillingness to admit holding a socially sanctioned opinion (for reviews, see Krosnick 1999; Tourangeau and Yan 2007; see also Berinsky 1999), especially during the telephone interviews that generated the data we have discussed so far (e.g., Holbrook, Green, and Krosnick 2003; Holbrook and Krosnick 2009, forthcoming). Specifically, a great deal of research has explored the notion of social desirability response bias: that people may sometimes intentionally or unintentionally distort their self-descriptions so as to present themselves in more socially admirable ways. In the present study, the growing social norm against expressing racism in America might have led some respondents who held racist views to deny them when asked about Mr. Obama's race. Thus, answers to explicit questions about willingness to vote for an African-American Presidential candidate might understate people's reluctance.[1]

Social scientists have explored two solutions to this potential problem. The first is to ask indirect questions that allow people to express racist views without appearing to be racists. For example, questions measuring symbolic racism (Kinder and Sears 1981) and racial resentment (Kinder and Sanders 1996) ask people whether they agree or disagree with statements like this: "Irish, Italians, Jewish, and other minorities overcame prejudice and worked their way up, Blacks should do the same without special favors." Agreeing with this statement might appear to constitute an anti-racism point of view, asserting that all racial groups should be treated the same. But when aggregated, responses to such questions have been said to tap a unique version of racism, blending anti-African-American affect and the belief that African-Americans violate traditional American values (Kinder and Sears 1981; Kinder and Sanders 1996).

Such measures have been the focus of considerable controversy, for good reason (e.g., Sniderman and Carmines 1997; Sniderman and Tetlock 1986). A primary concern has been that measures of symbolic racism (and measures like it) may confound the constructs they are intended to tap with general political conservatism. So any associations of symbolic racism measures with other variables might be attributable to conservatism rather than to anti-African-American affect and the belief that African-Americans violate traditional American values. Recent research suggests that associations of symbolic racism with posited attitudinal consequences of it are not reduced notably by controlling for conservatism and an array of other potential confounds

1. There is another reason to believe that the Gallup question ("If your party nominated a generally well-qualified person for President who happened to be . . . Black, would you vote for that person?") might understate opposition: the question itself presumes that the respondent has a political party (which might is not true for many people) and asserts that the Black candidate is "generally well-qualified," a hypothetical premise that many racists might consider impossible. Thus, for many respondents, this question might entail an unimaginable hypothetical.

(e.g., Rabinowitz, Sears, Sidanius, and Krosnick in press). Nonetheless, any analyses done with measures of symbolic racism should be done controlling for political conservatism in order to minimize the likelihood of spurious associations being misdiagnosed as effects of racism.

A second solution to the potential problem with explicit measures of racism involves bypassing self-reports completely and employing what are called "implicit measures" instead (see, e.g., Greenwald and Krieger 2006; Payne et al. 2005), which allow researchers to tap into attitudes that might be either intentionally or unintentionally misreported. Implicit measures of attitudes stand on the assumption that an attitude object will trigger behaviors that are not dependent upon conscience awareness or willingness to report. For this purpose, researchers have monitored brain activity (Phelps et al. 2000), subtle muscle movements (Cacioppo et al. 1986), and other assumedly automatic physiological phenomena following exposure to stimuli. In addition, the length of time it takes people to make a judgment (which is referred to as "response latency") can be measured and may be an indicator of attitudes. The Implicit Association Test (IAT; Sriram and Greenwald 2009) is a procedure that uses this approach.

The Affect Misattribution Procedure (AMP; Payne et al. 2005) is another such measure, which relies on the misattribution of affect (Murphy and Zajonc 1993). Respondents look at a series of Chinese ideographs and sort them into those that are more pleasant and those that are less pleasant. Preceding each ideograph is a very fast flash of a photograph of the face of an African-American or White person, which respondents are told to ignore. When an ideograph is preceded by a face, people's affective reactions to the face spill over onto their assessments of the ideograph. People who have favorable feelings toward the face are more likely to label the ideograph as more pleasant, and people who have unfavorable feelings toward the face are more likely to label the ideograph as less pleasant. A summary score subtracting pleasantness judgments of ideographs following African-American faces from pleasantness judgments of ideographs following White faces yields a measure of anti-African-American affect that has manifested reliability and validity as a measure of racism in studies of convenience samples of participants (Payne et al. 2005). In the study reported here, we used symbolic racism measures and the AMP to explore whether anti-African-American racism may have inhibited Barack Obama's success on election day.

We saw three possible ways that racism might have cost Mr. Obama votes in 2008. First, voters who were otherwise strongly inclined to vote for him but not necessarily strongly inclined to turn out might have chosen to not vote, because voting for McCain would have been distasteful. Second, voters who were only weakly inclined to vote for Obama but were strongly inclined to turn out might have voted for McCain. Third, voters who were weakly inclined to not vote might have decided to vote for McCain instead of abstaining. Our analyses sought to ascertain the magnitude of each of these processes and to estimate

how many more net votes Obama might have gained if anti-African-American racism hadn't existed.

McCAIN'S ADVANTAGES

A number of other factors besides racism might have worked to McCain's advantage, as we describe next.

Experience in government. John McCain was a more seasoned politician than Barack Obama. McCain had served in the United States Senate for 23 years, compared to only four for Obama. And McCain had been a far more prolific lawmaker, sponsoring 1,667 bills during his tenure, compared to only 136 bills sponsored by Obama. Political experience may therefore have advantaged McCain.

Military experience. McCain's experience as a naval aviator left him widely regarded as a national hero. He had been a prisoner of war in Vietnam and refused an early release so that prisoners would be returned in the order they were captured. During his 22 years of service, McCain attained the rank of Captain and left the service with both a Bronze Star and a Navy Commendation Medal. In contrast, Obama had never served in any branch of the military.

Familiarity. McCain was much more of a household name than Obama. McCain first appeared in the New York Times in 1969, while still a prisoner in Vietnam, and was often in the news as a war hero, Congressman, and Senator in the ensuing years. He became especially visible while running for President in 2000, gaining copious media coverage. In contrast, Obama's first mention in the New York Times was in 1990, where he appeared infrequently until his speech at the Democratic National Convention in 2004. Prospective voters may have been more familiar with McCain as a result, and familiarity might have enhanced liking.

Bipartisanship. Some voters may have been attracted to McCain because of his bipartisan track record. Among the bills Obama sponsored in the Senate between 2005 and 2008, only 9 percent were co-sponsored by any Republicans, and only 13 percent of all his co-sponsors were Republicans. In contrast, 61 percent of McCain's bills during the same period were co-sponsored with Democrats, who represented 55 percent of all of his co-sponsors. This discrepancy may have led many voters to believe that McCain would be more a cooperative, moderate president. Citizens who preferred a moderate president, therefore, might have been attracted to McCain as a result.

Divided government. Fiorina (1992), Bean and Wattenberg (1998), and others have argued that some Americans prefer a divided government, were no

single party has control of the executive and legislative branches. With Democrats in control of the House and Senate—and likely to retain that control—strategic voters could have been attracted to McCain in the hopes of keeping government out of the hands of a single party.

OBAMA'S DISADVANTAGES

Obama's religion. During the 2008 campaign, a rumor spread that Obama was Muslim. Details in various news stories and email campaigns emphasized his middle name (Hussein), described a secular Muslim school he briefly attended as a "Madrassa" or "Wahabi" school, and claimed that he swore his Senate oath on the Koran (Tumulty 2008). Individuals who believed that Obama was indeed Muslim and who believed that this was a significant liability may have been less inclined to vote for him as a result.

Reverend Wright. During the campaign, Mr. Obama's pastor, Reverend Jeremiah Wright, made widely publicized comments criticizing the U.S. government. In one particular sermon, he reiterated the refrain "God damn America" in place of "God Bless America." As a result, the association with Reverend Wright might have hurt Mr. Obama's appeal and might have made him seem unpatriotic.

CANDIDATE PERSONALITY TRAITS

A great deal of research suggests that voters develop impressions of candidates' personalities and evaluate them partly on that basis (e.g., Funk 1999; Kinder 1986). In 2008, both campaigns tried to portray their opponent as elitist and out of touch. Obama was criticized for his professorial status and Harvard education. McCain was ridiculed for the many houses his family owned. The more elitist voters perceived each candidate to be, the less likely people might have been to vote for him. Overall evaluations of candidates might also be driven by perceptions of their intelligence, integrity, patriotism, ethicality, stubbornness, consistency, independence, and temper.

ISSUE PRIORITIES

A great deal of research suggests that voters evaluate candidates partly based upon their stands on policy issues. We explored the possibility that voters seek a match between themselves and candidates in terms of the priorities they attach to specific issues. While in Congress, both candidates devoted effort to legislation on global warming, but most of their cosponsored bills focused on different issues: McCain on campaign finance reform, immigration, preventing tax increases, gambling, and torture, Obama on ethics and lobbying reform,

nuclear terrorism, alternative energy, and care for veterans. Voters who attached importance to one or more issues on which a candidate also placed priority may have been attracted to him for that reason.

SPOUSES

Many first ladies have been visible during campaigns, and some work suggests that citizens' evaluations of candidates' spouses can have impact on evaluations of the candidates themselves (e.g., Burden and Mughan 1999). In 2008, the news media paid regular attention to the candidates' spouses, who made regular appearances on the campaign trail and appeared at the party conventions. Public attitudes toward these women might have influenced citizen behavior.

INSTIGATOR OF CHANGE

A major 2008 campaign theme was social change. "Change we can believe in" was one of the rallying slogans of the Obama campaign, and a McCain mantra was "change is coming." Given the widespread perception that the country and its leadership were in bad shape, a candidate might have benefited from the perception that he would be more likely to bring about change in Washington.

HILLARY CLINTON

For many months, it seemed a foregone conclusion that Hillary Clinton would be the Democratic Party's nominee in 2008, and breaking the gender barrier in this way would have been an historic event. During the hard-fought nomination campaign, many Clinton supporters may have come to believe that the criticisms often made of Mr. Obama were valid reasons that he was not qualified to be President. When Mr. Obama was eventually nominated, some ardent Clinton supporters may have felt profound disappointment and resentment. If those reactions were sufficiently strong, they may have created a difficult challenge for these citizens: they may have been strongly inclined to vote for a Democrat, but they may have had significant hesitations about Obama. As a result, some of these voters may have decided to abstain rather than vote for a candidate they considered distasteful (see, e.g., Pierce 2003; Southwell 1986).

AUTHORITARIANISM

Authoritarian personality theories (Adorno et al. 1950) may also lend insight into Obama's deficit. In late 2008, the national economy was in shambles, America was mired in two wars, and global warming was perceived to threaten the planet's future. In such insecure times, authoritarians might have been especially likely to discriminate against out-groups (Feldman and Stenner 1997;

Stenner 2005) and to oppose policies that Mr. Obama supported (e.g., homosexual rights, immigration reform, abortion; Stenner 2005). Hence, Obama may have represented a threat to people with authoritarian personalities, which may have inclined these people against him.

Method

DATA

Data for this study came from the 2007–2008 Associated Press-Yahoo! News-Stanford University Survey. Data were collected by Knowledge Networks (KN), who conducted random digit dialing telephone calls to recruit a nationally representative panel of American adults to complete surveys regularly via the Internet.[2] This survey was a special supplement to the larger Associated Press-Yahoo! News election panel study. For this larger panel study, respondents were given the opportunity to complete eleven questionnaires between November, 2007, and November, 2008. The supplemental study reported here was the sixth wave of the survey, in late August and early September, 2008. Respondents to Wave 6 were also invited to complete the Affect Misattribution Procedure (AMP) during a separate survey session. This paper uses data from these two parts of Wave 6, as well as from Wave 10, which was implemented after the election and measured turnout and candidate choice.

A total of 2,779 individuals were invited to complete the Wave 6 questionnaire (August 27 to September 6, 2008), and 2,012 individuals did so (completion rate = 72.4 percent; cumulative response rate CUMRR1 = 10.4 percent; see Callegaro and DiSagra 2008). 2,698 individuals were invited to complete the Affect Misattribution Procedure (August 27 to September 6, 2008), and 1,688 of them did so (completion rate = 62.6 percent; CUMRR1 = 9.2 percent). A total of 2,742 individuals were invited to complete Wave 10 (November 4 to 18, 2008), and 1,989 did so (completion rate = 72.5 percent, CUMRR1 = 10.4 percent). 1,762 individuals who completed Wave 6 also reported turnout and candidate choice postelection.

Following guidelines developed by the American National Election Studies for optimal weight construction (DeBell and Krosnick 2009), we created weights for all individuals, raking to match the March 2008 Current Population Survey (CPS) in terms of age, gender, race, education, and region. Weights ranged from .38 to 3.46. The sample resembled the CPS figures closely before weighting and even more closely afterward (see table 2).

2. Computers and/or home Internet access were given to all recruited respondents who lacked them at no cost.

Table 2. Demographics of the Unweighted and Weighted Samples Compared to the Current Population Survey

	Unweighted survey sample	Current Population Survey	Weighted survey sample
Gender			
Male	46.65%	48.40%	48.41%
Female	53.35%	51.60%	51.59%
Total	100.00%	100.00%	100.00%
Age			
18–24	9.93%	12.63%	12.63%
25–34	19.92%	17.86%	17.86%
35–44	18.27%	18.75%	18.75%
45–54	19.35%	19.56%	19.56%
55–64	18.39%	14.82%	14.82%
65 or Older	14.13%	16.37%	16.37%
Total	100.00%	100.00%	100.00%
Education			
Less than High School	8.89%	14.25%	14.25%
High School Graduate	23.16%	30.92%	30.92%
Some College	35.47%	19.66%	19.66%
College Graduate	32.52%	35.18%	35.18%
Total	100.00%	100.00%	100.00%
Race			
White Non-Hispanic	78.09%	68.80%	68.80%
African-American Non-Hispanic	7.38%	11.34%	11.34%
Hispanic	7.66%	13.48%	13.48%
Other—Non-Hispanic	6.87%	6.38%	6.38%
Total	100.00%	100.00%	100.00%
Region			
Northeast	17.65%	18.48%	18.48%
Midwest	22.70%	21.93%	21.92%
South	35.98%	36.49%	36.49%
West	23.67%	23.10%	23.11%
Total	100.00%	100.00%	100.00%
N	1,762	155,060	1,762

NOTE.—*N* for the Current Population Survey is the unweighted number of respondents in the March 2008 sample who were age 18 or older.

MEASURES AND CODING

The question wordings and coding of variables are described in Appendix A.

ANALYSIS

We conducted multinomial logistic regressions predicting four outcome categories: voting for Obama, voting for McCain, voting for a nonmajor party

candidate, or not voting at all. Multinomial probit is sometimes used for this purpose in voting research, but multinomial logit is preferable here for many reasons (see Dow and Endersby 2004).[3] Multinomial logit is most commonly criticized on the grounds that it assumes independence of irrelevant alternatives (IIA), which multinomial probit does not. However, this is only advantageous to multinomial probit when sufficient data are available to distinguish between the two approaches. As Dow and Endersby (2004) noted, "[o]ne likely cannot do this with a sample of 1500 observations on voter choice among a few candidates or parties"—which is close to the sample size we have here.

Multinomial logit is much simpler in terms of both theory and estimation. Maximum likelihood estimation of multinomial logit is generally straightforward but tends to be much more difficult with multinomial probit. Weak identification is often a problem with multinomial probit and can lead to invalid inferences. Multinomial logit models also tend to be easier to interpret. Finally, multinomial logit is often more reliable, even when IIA is violated severely (Kropko 2008).

Our analytic approach assumes that the probability of being in one of the four outcome categories (voting for Obama, voting for McCain, voting for a nonmajor party candidate, not voting) is:

$$P(v_i = j) = \frac{e^{X_i\beta_j + Z_{ij}\gamma}}{\sum_{k=1}^{J} e^{X_i\beta_k + Z_{ik}\gamma}} \tag{1.1}$$

where v_i is the outcome for respondent i, X_{i} represents data specific to each respondent, Z_{ij} represents data specific to each outcome as well as each respondent, J is the number of outcomes, and β and γ are unknown parameter vectors. As a necessary identifying restriction, β_J is assumed to be zero. This defines voting for Obama as the outcome reference category.[4]

MODELS

We estimated six multinomial logit regressions. The two baseline models included demographics (gender, age, education, income, region, race, and ethnicity) and predictors of turnout (how often the respondent had voted in past election, whether the respondent knew where to vote, and whether the respondent was registered to vote) as independent variables, plus either the AMP alone or the AMP and symbolic racism. These models were meant to assess the maximum possible influence of racism. These two models were estimated again, adding predictors of electoral behavior not specific to the particular candidates running: party identification, liberal-conservative ideology, perceptions of the economy and direction of the country, approval of President Bush, desire for

3. Dow and Endersby (2004) offered a more detailed comparison of the two approaches and offered reasons for preferring multinomial logit in situations such as the present one.

4. Estimation was done using the VGAM library in R (Yee 2003).

a moderate president, and authoritarianism. These two models were estimated one more time, adding campaign-specific factors as predictors.

CONSTRAINT

Our models assume that the coefficient for each candidate-specific variable, such as opinions about the personality traits of each candidate, is the same for both candidates. This constraint makes the model much more parsimonious and is common in conditional logit models. These traits are also constrained only to influence whether individuals select the candidate of relevance, versus all other behavioral options and are not posited to predict behavior among the other options. Thus, the coefficients for the candidate-specific traits can be interpreted as the probability that voters would choose any candidate with each specific trait. For this reason, coefficients presented in the tables for Obama and McCain traits are equivalent to one another and are only relevant to comparisons including the referenced candidate.[5]

The three predictors of turnout were specified only to influence respondents' probability of being nonvoters vs. all other outcomes.

ITEM NONRESPONSE

A total of 6.2 percent of responses to questions included in our analyses were missing, because respondents did not answer the questions. At least one value was missing for 35.4 percent of the respondents. Because listwise deletion can substantially reduce effective sample size and can introduce bias unless nonresponse is uncorrelated with other variables (Anderson, Basilevsky, and Hum 1983; King et al. 2001), we implemented multiple imputation, then deletion (MID) to replace missing values. Multiple imputation replaces each missing value with multiple values that capture a distribution of possible values for the response (Rubin 1976; Little and Rubin 1987; King et al. 2001), an approach particularly suitable for survey item nonresponse (Rubin 1987). MID is a variant of multiple imputation, in which the imputed variables for the dependent variable are dropped before analysis, usually resulting in greater efficiency (von Hippel 2007). We used the bootstrap-based algorithm in Amelia II (Honaker et al. 2007) to generate twenty imputed datasets and the mitools package (Lumley 2004) to combine results across datasets.

BEHAVIOR CHANGE DUE TO RACISM

Using the results of the multinomial logits, we simulated what would have occurred on election day if all anti-African-American racism had been

5. To assess the plausibility of this assumption, we carried out tests against an alternative model in which these constraints were not made and found the constraints did not significantly compromise model fit (all p's greater than .20).

eliminated. Predicted probabilities of the various outcomes in the two states of the world (with racism as it existed and without any racism) are not sufficient to accomplish this simulation, because these probabilities do not take into account other individual characteristics, which determine whether each respondent's behavior would have changed. We therefore set out to simulate what each respondent who had a nonzero level of anti-African-American racism would have done if his or her anti-African-American racism were set to zero (meaning no anti-African-American prejudice and no pro-African-American prejudice).

To this end, we implemented a latent utility interpretation of the multinomial logits. Each respondent has a utility function from each outcome that is a function of observable characteristics plus an unobserved error term:

$$U_{ij} = X_i\beta_j + Z_{ij}\gamma + \varepsilon_{ij}, \tag{1.2}$$

where U_{ij} is the utility of voter i from performing outcome j, ε_{ij} is an unobserved error term specific to each voter and outcome, and X_i, Z_{ij}, β and γ are the same as in Equation 1.1 above. Each error term, ε_{ij}, is assumed to be drawn identically and independently from a standard Gumbel (or type-I extreme value) distribution. Each voter is assumed to perform the behavior for which his utility function is largest. Thus, the probability of voter i performing behavior j is $U_{ij} = X_i\beta_j + Z_{ij}\gamma + \varepsilon_{ij}$.[6]

$$P(v_i = j) = P\left(\arg\max_x X_i\beta_k + Z_{ik}\gamma + \varepsilon_{ik}\right). \tag{1.3}$$

Under these assumptions, the probability of performing each behavior is precisely the same as the multinomial logit model given in Equation 1.1.

In our one deviation from traditional multinomial logit models, we assumed that each unobserved error term, ε_{ij}, is the same for each respondent regardless of whether racism is posited to exist or to be eliminated. That is, although we cannot observe these error terms, we hold them constant, along with all observed variables other than racism for each individual. This approach has sensible implications. For example, respondents with neutral values for racism are posited to behave the same way in the counterfactual condition—with racism neutralized—as they actually behaved, with probability one. We then aggregated the predicted probabilities of each possible change across all respondents.

The predicted probabilities of individuals' behaviors can be thought of as being generated by the following process. For a given respondent, suppose we simulated the error terms in his or her utility by taking a random draw from the error distribution for each behavior. Using these error terms, we could generate new values for his or her simulated utilities by adding these error terms to his

6. This ignores the possibility of ties in probabilities of two or more outcomes. However, under these assumptions, ties occur with probability zero.

or her expected utility based on other observed predictors. This would allow us to identify the behavior with the highest utility for each respondent and assign that behavior to him or her. For respondents who had a nonzero level of anti-African-American racism, we could then generate a simulated utility of each behavior without racism by calculating his or her expected utility after setting his or her anti-African-American racism level to zero (keeping the error terms unchanged) and determine his or her simulated behavior under those conditions. Thus, we would have produced a simulated pair of behaviors indicating a sample of how the model predicts this respondent might behave in two possible worlds—one with a nonzero level of anti-African-American racism, and one with no anti-African-American racism.

Instead of running only one simulation, we could repeatedly generate pairs of simulated behaviors in this fashion and produce a distribution showing the likelihood that each respondent would behave in each possible way with his or her actual level of Anti-African-American racism and with that level set to zero. With four possible behavioral outcomes, this would create a distribution over sixteen possible pairs of behaviors under the two scenarios (which could be displayed in a matrix of behaviors with anti-African-American racism labeling the rows and behaviors without racism labeling the columns). We could then repeat this process for all respondents and combine the results to create a distribution indicating the expected percentage of respondents for each of the sixteen possible pairs of behaviors. This is precisely what we did calculate, although we did so efficiently by bypassing the need to implement the simulations and instead using a closed-form expression (which is equivalent to generating an infinite number of simulations; for the method of calculating the changes in vote choice, see Appendix B).

MULTIPLE PREDICTORS AND MULTICOLLINEARITY

Some of the regressions estimated in this paper included many predictors, which can introduce inferential problems due to multicollinearity. To understand the degree to which our results were affected by multicollinearity, we calculated generalized variance inflation factors (Fox and Monette 1992), which measure the degree to which the variance of a parameter estimate is increased by collinearity with other independent variables. Generalized variance inflation factors measure the degree to which the volume of the confidence region for a set of parameters is increased.[7] Variance inflation parameters are a special case of generalized variance inflation factors, in which only one factor is considered. Generalized variance inflation factors are generally not comparable across factors based on differing numbers of parameters. The transformation $\mathrm{GVIF}^{1/(2d)}$,

7. In particular, they are the square of the factor by which this region increases. The factor by which this region increases is known as the generalized standard-error inflation factor.

where d is the number of parameters of interest, preserves comparability. In the case of a single parameter, it is the factor by which the standard error increases due to collinearity.

We produced generalized variance inflation factors for each set of coefficients that relate to the same independent variable. All dummy variables that relate to a single categorical variable were grouped together. In the few cases where we employed an interaction term, we grouped the main effects and interaction terms together. For those variables that did not vary by candidate, we also produce generalized inflation factors for the estimated difference in the coefficient between Obama and McCain.

As a rule of thumb, serious collinearity may be indicated when the value of $\text{GVIF}^{1/(2d)}$ is greater than two (Fox and Monette 1992).[8] For our equations, all values were below two, almost always well below. These results suggest that multicollinearity did not pose a significant problem.

Results

Of the total sample, 43.9 percent of people reported voting for Obama, 37.9 percent reported voting for McCain, 2.7 percent reported voting for someone else, and 16.5 percent said they did not vote. Of the two-party vote, 53.1 percent said they voted for Obama, closely matching the actual election results (53.7 percent; Liep 2008).

The proportions of people whose AMP and symbolic racism scores were pro-African-American, neutral, and anti-African-American are shown in table 3 for all respondents, for people who voted for Obama, for people who voted for McCain, for people who voted for someone else, and for people who did not vote.[9] According to these figures, almost half of American adults (about 48 percent) revealed anti-African American sentiments on each measure of prejudice.

When considered only controlling for demographics and purported causes of turnout, racism explained some variance in electoral behavior as expected (see table 4, which displays coefficient estimates from multinomial logistic regressions treating people who voted for Obama as the omitted category). In equations omitting symbolic racism, people who voted for Obama were significantly lower in implicit racism than were people who voted for McCain

8. In terms of variance inflation factors, this corresponds to a value greater that four. Other common rules of thumb tend to be less conservative. Thresholds of 5 and 10 are the most common.

9. The absence of anti-African-American prejudice is indicated by a score of .5 on the AMP (when it is coded to range from 0 to 1). To identify the symbolic racism score corresponding to the absence of pro- and anti-African American sentiment, we calculated the mean and median symbolic racism score for people who had neutral AMP scores and found it to be .5. Similarly, among people who had the neutral score of .5 on Attitude Toward African Americans (described in Appendix A), the mean symbolic racism score was .51 and the median was .5. We therefore treated .5 as the neutral value of symbolic racism.

Table 3. Distributions of Racial Attitude Measures Among Groups of Respondents

	Attitude toward African-Americans				
Measure	Pro-African-American	Neutral	Anti-African-American	Total	*N*
Implicit Racism (AMP)					
All Respondents	37.39%	14.26%	48.35%	100.00%	1375
People who voted for Obama	39.89%	18.38%	41.73%	100.00%	594
People who voted for McCain	36.47%	10.07%	53.46%	100.00%	524
People who voted for a nonmajor party candidate	26.11%	9.11%	64.78%	100.00%	43
People who did not vote	35.01%	14.08%	50.90%	100.00%	214
Explicit Racism (Symbolic Racism)					
All Respondents	46.04%	5.30%	48.66%	100.00%	1738
People who voted for Obama	70.52%	3.94%	25.53%	100.00%	747
People who voted for McCain	21.46%	5.46%	73.09%	100.00%	664
People who voted for a nonmajor party candidate	40.04%	7.39%	52.57%	100.00%	46
People who did not vote	40.00%	8.18%	51.82%	100.00%	281

NOTE.—The data were weighted to generate these distributions.

Table 4. Multinomial Logistic Regressions Predicting Election-Day Behavior Using Racism

	Model including only implicit racism			Model including implicit and explicit racism		
Predictor	Voted for McCain	Did not vote	Voted for nonmajor party candidate	Voted for McCain	Did not vote	Voted for nonmajor party candidate
Implicit Racism (AMP)	1.56*	1.70	3.48*	.52	1.12	2.91*
	(.58)	(1.07)	(1.30)	(.63)	(1.05)	(1.31)
Explicit Racism (Symbolic Racism)				7.19*	4.13*	3.55*
				(.48)	(.71)	(1.06)
Age 25–34	.12	.43	−.79	−.04	.34	−.82
	(.24)	(.35)	(.64)	(.27)	(.35)	(.64)
Age 35–44	.27	.24	−.08	.15	.16	−.13
	(.23)	(.35)	(.57)	(.26)	(.36)	(.57)
Age 45–54	.20	.54	.08	.00	.37	.00
	(.23)	(.34)	(.54)	(.26)	(.35)	(.55)
Age 55–64	.33	.36	−1.24*	.37	.33	−1.22*
	(.24)	(.39)	(.72)	(.26)	(.40)	(.72)
Age 65–74	.30	−.02	−.93	.33	−.09	−.92
	(.25)	(.51)	(.73)	(.27)	(.52)	(.73)
Age 75 or Older	.33	−.26	−.74	.76*	−.04	−.55
	(.30)	(.71)	(.89)	(.34)	(.71)	(.90)
Education—High School Graduate	.29	−.71*	1.37*	.38	−.68*	1.39*
	(.22)	(.30)	(.78)	(.24)	(.31)	(.78)
Education—Some College	.07	−1.11*	1.14	.17	−1.05*	1.20
	(.22)	(.33)	(.78)	(.24)	(.33)	(.78)
Education—College Degree	.13	−1.34*	1.68*	.74*	−1.00*	2.01*
	(.21)	(.34)	(.76)	(.24)	(.35)	(.77)
Income—$15,000 to $34,999	.13	.13	−.84*	−.03	.07	−.91*
	(.24)	(.34)	(.51)	(.26)	(.34)	(.51)

Continued

Table 4. Continued

Predictor	Model including only implicit racism			Model including implicit and explicit racism		
	Voted for McCain	Did not vote	Voted for nonmajor party candidate	Voted for McCain	Did not vote	Voted for nonmajor party candidate
Income—$35,000 to $59,999	.01	−.57*	−.79*	−.22	−.68*	−.87*
	(.22)	(.33)	(.44)	(.24)	(.34)	(.45)
Income—$60,000 to $74,999	.15	−.26	−1.78*	−.01	−.29	−1.82*
	(.26)	(.42)	(.72)	(.28)	(.42)	(.72)
Income—$75,000 to $99,999	−.12	−.48	−2.72*	−.42	−.60	−2.84*
	(.25)	(.42)	(.88)	(.28)	(.43)	(.89)
Income—$100,000 or More	.16	−.66	−1.35*	.00	−.72	−1.39*
	(.26)	(.50)	(.61)	(.29)	(.50)	(.62)
Female	−.27*	−.18	−.45	−.16	−.11	−.39
	(.12)	(.21)	(.31)	(.13)	(.21)	(.31)
African-American	−3.34*	−1.46*	−1.94*	−2.01*	−.69*	−1.37*
	(.40)	(.36)	(.78)	(.41)	(.40)	(.80)
Other Race	−.41	.21	.41	−.37	.24	.46
	(.32)	(.52)	(.64)	(.36)	(.52)	(.64)
Hispanic	−.35*	−.01	−.18	−.18	.05	−.14
	(.19)	(.31)	(.49)	(.21)	(.32)	(.50)
Region—Midwest	−.20	−.40	.11	−.18	−.35	.12
	(.18)	(.33)	(.44)	(.20)	(.34)	(.45)
Region—South	.39*	.08	−.92*	.20	.03	−.99*
	(.17)	(.30)	(.54)	(.19)	(.31)	(.54)
Region—West	.00	−.04	.35	.13	.05	.41
	(.19)	(.34)	(.45)	(.21)	(.35)	(.45)
Registration—Registered at Current Address		−2.04*			−2.08*	
		(.31)			(.31)	

Predictor	Model including only implicit racism			Model including implicit and explicit racism		
	Voted for McCain	Did not vote	Voted for nonmajor party candidate	Voted for McCain	Did not vote	Voted for nonmajor party candidate
Registration—Different Location		−1.34*			−1.39*	
		(.43)			(.43)	
Registration—Unsure		−1.34*			−1.42*	
		(.48)			(.48)	
Voting Frequency—Seldom Votes		−.98*			−.94*	
		(.35)			(.35)	
Voting Frequency—Votes Some of the Time		−1.20*			−1.23*	
		(.36)			(.36)	
Voting Frequency—Votes Nearly Always		−2.51*			−2.51*	
		(.37)			(.37)	
Voting Frequency—Votes Always		−3.17*			−3.16*	
		(.40)			(.40)	
Knows Where to Vote		−.76*			−.76*	
		(.25)			(.25)	
Intercept	−.97*	3.23*	−4.07*	−4.37*	1.41*	−5.61*
	(.42)	(.70)	(1.12)	(.52)	(.77)	(1.24)
N		1762			1762	
Percent Correctly Predicted		61.87%			69.70%	
Adjusted Count Pseudo R^2		.33			.47	
McFadden's Pseudo R^2		.28			.36	

NOTE.—Standard errors are in parentheses. The coefficients estimate the difference between the group identified at the top of the column and respondents who voted for Mr. Obama. Omitted categories are Age 18–24, Education—Less Than High School, Income—Less than $15,000, Male, White, Non-Hispanic, Region—Northeast, Unregistered, and Voting Frequency—Never Votes.

*$p < .05$ one-tailed.

($b = 1.56$, $p = .004$) and people who voted for a nonmajor party candidate ($b = 3.48$, $p = .004$; see the first three columns of table 4). In equations including implicit and explicit racism, people who voted for Obama were significantly lower in terms of symbolic racism than were all other three categories of respondents ($b = 7.19, 4.13, 3.55$, $p < .001$, respectively) and significantly lower in implicit racism than were people who voted for a nonmajor party candidate ($b = 2.91$, $p = .01$; see the last three columns of table 4). These results are consistent with the notion that explicit attitudes might have mediated the influence of implicit attitudes.[10]

These basic effects of racism remained the same when controlling for party identification, ideology, perceptions of the health of the nation, approval of President Bush, desire for a moderate president, and Authoritarianism (see table 5). When omitting explicit racism from the equation, people who voted for Obama were significantly lower in implicit racism than were people who voted for McCain ($b = 1.60$, $p = .04$) and people who voted for someone else ($b = 3.22$, $p = .01$; see the first three columns of table 5). In equations including implicit and explicit racism, people who voted for Obama were significantly lower in terms of symbolic racism than were all other categories of respondents ($b = 5.27, 2.38$, and 2.33, $p < .001$, $p = .001$, and $p = .01$, respectively) and significantly lower in implicit racism than were people who voted for a nonmajor party candidate ($b = 2.90$, $p = .02$; see the last three columns of table 5).

When controlling also for the many candidate-specific predictors of electoral behavior, the apparent effects of implicit racism continued to appear, and the effect of symbolic racism was weaker but still present (see table 6). When omitting explicit racism from the equation, people who voted for Obama were significantly lower in implicit racism than were people who voted for McCain ($b = 1.95$, $p = .028$) and people who voted for someone else ($b = 2.80$, $p = .042$; see the first three columns of table 6). In equations including implicit and explicit racism, people who voted for Obama were significantly lower in terms of symbolic racism than were people who voted for McCain ($b = 3.18$, $p < .001$) and significantly lower in implicit racism than were people who voted for a nonmajor party candidate ($b = 2.86$, $p = .04$; see the last three columns of table 6). Differences between voting for Obama and not voting or voting for someone else were not significantly predicted by symbolic racism, however ($b = .72$, and $.13$, $p = .20$, and $p = .46$, respectively). The weakening of the coefficients for explicit racism is consistent with the notion that the effects of racism on voting behavior were mediated by some of the candidate-specific variables.

Many factors thought to influence candidate choice had significant effects in expected directions in the equations with the full set of predictors (see the fourth column of table 6). For example, as compared to people who voted for Obama,

10. In these regressions, the purported causes of turnout all had significant effects in the expected directions.

Table 5. Multinomial Logit Regressions Predicting Election Day Behaviors Using Racism and Political Predictors Not Specific to the Candidates

	Model with implicit racism predicting outcomes			Model with implicit and explicit racism predicting outcomes		
Predictor	Voted for McCain	Did not vote	Voted for nonmajor party candidate	Voted for McCain	Did not vote	Voted for nonmajor party candidate
Implicit Racism (AMP)	1.60*	1.24	3.22*	.97	1.16	2.90*
	(.91)	(1.18)	(1.40)	(.92)	(1.18)	(1.40)
Explicit Racism (Symbolic Racism)				5.27*	2.38*	2.33*
				(.65)	(.79)	(1.07)
Democrat	−1.46*	−1.96*	−2.12*	−1.55*	−1.97*	−2.20*
	(.31)	(.41)	(.53)	(.33)	(.42)	(.54)
Republican	.37	−.23	−1.15*	.24	−.26	−1.26*
	(.34)	(.48)	(.65)	(.36)	(.49)	(.66)
Liberal	−.84*	−.51	−.03	−.68*	−.42	.08
	(.26)	(.32)	(.47)	(.27)	(.32)	(.47)
Conservative	.92*	.10	1.12*	.78*	.07	1.08*
	(.24)	(.32)	(.47)	(.25)	(.32)	(.48)
Country in Right Direction	−.38	−.63*	−1.26*	−.31	−.59*	−1.23*
	(.24)	(.31)	(.69)	(.25)	(.31)	(.69)
Perception of the Economy	1.04*	1.23*	−.63	1.06*	1.13*	−.72
	(.50)	(.63)	(1.10)	(.51)	(.63)	(1.10)
Bush Approval	3.50*	2.31*	.01	3.33*	2.20*	−.15
	(.39)	(.50)	(.93)	(.40)	(.51)	(.93)

Continued

Table 5. Continued

Predictor	Model with implicit racism predicting outcomes			Model with implicit and explicit racism predicting outcomes		
	Voted for McCain	Did not vote	Voted for nonmajor party candidate	Voted for McCain	Did not vote	Voted for nonmajor party candidate
Desire for a Moderate President	.04	−.19	.29	.01	−.21	.23
	(.20)	(.26)	(.39)	(.20)	(.26)	(.39)
Authoritarianism	.27	−.02	.73	.02	−.17	.58
	(.30)	(.38)	(.56)	(.31)	(.38)	(.56)
Age 25–34	.20	.58	−.90	.10	.54	−.90
	(.34)	(.39)	(.68)	(.35)	(.40)	(.68)
Age 35–44	.42	.38	−.20	.31	.34	−.25
	(.34)	(.40)	(.61)	(.34)	(.40)	(.61)
Age 45–54	.62*	.86*	−.09	.53	.80*	−.14
	(.33)	(.39)	(.60)	(.34)	(.39)	(.60)
Age 55–64	.85*	.73*	−1.27*	.89*	.72	−1.28*
	(.34)	(.44)	(.75)	(.35)	(.44)	(.75)
Age 65–74	.70*	.47	−.96	.82*	.45	−.92
	(.36)	(.54)	(.78)	(.37)	(.55)	(.79)
Age 75 or Older	.96*	.40	−.91	1.31*	.53	−.76
	(.45)	(.77)	(.97)	(.46)	(.77)	(.98)
Education—High School Graduate	−.01	−.69*	1.35*	.13	−.67*	1.37*
	(.30)	(.34)	(.78)	(.30)	(.34)	(.78)
Education—Some College	−.26	−1.13*	.95	−.11	−1.06*	1.00
	(.31)	(.37)	(.79)	(.32)	(.37)	(.79)
Education—College Degree	−.06	−1.29*	1.62*	.38	−1.09*	1.82*
	(.30)	(.39)	(.78)	(.32)	(.39)	(.78)
Income—$15,000 to $34,999	.11	.03	−1.20*	−.06	−.02	−1.22*
	(.33)	(.38)	(.55)	(.34)	(.38)	(.55)

Predictor	Model with implicit racism predicting outcomes			Model with implicit and explicit racism predicting outcomes		
	Voted for McCain	Did not vote	Voted for nonmajor party candidate	Voted for McCain	Did not vote	Voted for nonmajor party candidate
Income—$35,000 to $59,999	−.38	−.99*	−1.06*	−.60*	−1.11*	−1.11*
	(.32)	(.37)	(.48)	(.33)	(.38)	(.48)
Income—$60,000 to $74,999	.07	−.38	−1.87*	−.19	−.42	−1.88*
	(.38)	(.47)	(.75)	(.39)	(.47)	(.76)
Income—$75,000 to $99,999	−.28	−.67	−3.14*	−.57	−.75	−3.20*
	(.36)	(.46)	(.92)	(.37)	(.46)	(.92)
Income—$100,000 or More	.15	−.79	−1.15*	.01	−.81	−1.12*
	(.39)	(.55)	(.65)	(.40)	(.56)	(.66)
Female	−.26	−.15	−.40	−.16	−.12	−.40
	(.17)	(.23)	(.34)	(.18)	(.23)	(.34)
African-American	−3.05*	−1.06*	−1.68*	−2.02*	−.59	−1.17
	(.53)	(.42)	(.82)	(.56)	(.45)	(.85)
Other Race	−.77	.10	.13	−.59	.19	.15
	(.47)	(.56)	(.69)	(.50)	(.56)	(.71)
Hispanic	−.14	.27	−.01	.06	.33	.03
	(.27)	(.33)	(.52)	(.28)	(.33)	(.53)
Region—Midwest	−.44*	−.46	.18	−.36	−.38	.21
	(.26)	(.37)	(.48)	(.27)	(.37)	(.48)
Region—South	−.07	−.16	−1.09*	−.15	−.17	−1.07*
	(.24)	(.33)	(.57)	(.25)	(.34)	(.57)
Region—West	−.29	−.09	.32	−.15	.02	.39
	(.27)	(.37)	(.48)	(.28)	(.38)	(.49)
Registration—Registered at Current Address		−2.22*			−2.26*	
		(.32)			(.32)	

Continued

Table 5. Continued

Predictor	Model with implicit racism predicting outcomes			Model with implicit and explicit racism predicting outcomes		
	Voted for McCain	Did not vote	Voted for nonmajor party candidate	Voted for McCain	Did not vote	Voted for nonmajor party candidate
Registration—Different Location		−1.69*			−1.68*	
		(.46)			(.47)	
Registration—Unsure		−1.54*			−1.62*	
		(.52)			(.51)	
Voting Frequency—Seldom Votes		−1.07*			−1.04*	
		(.38)			(.38)	
Voting Frequency—Votes Some of the Time		−1.22*			−1.24*	
		(.38)			(.38)	
Voting Frequency—Votes Nearly Always		−2.51*			−2.51*	
		(.40)			(.40)	
Voting Frequency—Votes Always		−3.13*			−3.11*	
		(.42)			(.42)	
Knows Where to Vote		−.82*			−.82*	
		(.26)			(.26)	
Intercept	−1.41*	4.53*	−2.28*	−3.87*	3.39*	−3.22*
	(.72)	(.92)	(1.33)	(.79)	(.96)	(1.42)
N		1762			1762	
Percent Correctly Predicted		79.75%			80.71%	
Adjusted Count Pseudo R^2		.65			.66	
McFadden's Pseudo R^2		.52			.54	

NOTE.—Standard errors are in parentheses. The coefficients estimate the difference between the group identified at the top of the column and respondents who voted for Mr. Obama. Omitted categories are Age 18–24, Education—Less Than High School, Income—Less than $15,000, Male, White, Non-Hispanic, Region—Northeast, Unregistered, and Voting Frequency—Never Votes.

*$p < .05$ one-tailed.

Table 6. Multinomial Logit Regressions Predicting Election Day Behaviors Using Racism and All Other Predictors

	Model with implicit racism predicting outcomes			Model with implicit and explicit racism predicting outcomes		
Predictor	Voted for McCain	Did not vote	Voted for nonmajor party candidate	Voted for McCain	Did not vote	Voted for nonmajor party candidate
Implicit Racism (AMP)	1.95*	1.03	2.80*	1.51	1.17	2.86*
	(1.02)	(1.39)	(1.62)	(1.04)	(1.39)	(1.61)
Explicit Racism (Symbolic Racism)				3.18*	.72	.13
				(.80)	(.87)	(1.18)
Democrat	−1.51*	−1.62*	−1.82*	−1.57*	−1.65*	−1.87*
	(.44)	(.51)	(.78)	(.46)	(.52)	(.78)
Republican	−.02	−.47	−1.23*	−.08	−.44	−1.23*
	(.41)	(.47)	(.73)	(.42)	(.48)	(.73)
Liberal	−.33	−.40	.24	−.30	−.39	.19
	(.31)	(.36)	(.50)	(.31)	(.36)	(.51)
Conservative	.70*	−.03	.95*	.62*	−.01	1.00*
	(.29)	(.36)	(.54)	(.29)	(.36)	(.53)
Country in Right Direction	−.30	−.46	−1.13	−.25	−.44	−1.17
	(.28)	(.35)	(.74)	(.29)	(.35)	(.73)
Perception of the Economy	.56	1.02	−.60	.62	1.03	−.65
	(.60)	(.70)	(1.17)	(.60)	(.71)	(1.18)
Bush Approval	1.76*	1.62*	−.77	1.78*	1.66*	−.78
	(.48)	(.57)	(1.04)	(.49)	(.57)	(1.03)
Obama is Experienced	−.35	−.35	−.35	−.28	−.28	−.28
	(.29)	(.29)	(.29)	(.29)	(.29)	(.29)

Continued

Table 6. Continued

Predictor	Model with implicit racism predicting outcomes			Model with implicit and explicit racism predicting outcomes		
	Voted for McCain	Did not vote	Voted for nonmajor party candidate	Voted for McCain	Did not vote	Voted for nonmajor party candidate
McCain is Experienced	.35			.28		
	(.29)			(.29)		
Obama is a Strong Military Leader	−.08	−.08	−.08	−.08	−.08	−.08
	(.20)	(.20)	(.20)	(.20)	(.20)	(.20)
McCain is a Strong Military Leader	.08			.08		
	(.20)			(.20)		
R Knows about Obama	−.90*	−.90*	−.90*	−.99*	−.99*	−.99*
	(.43)	(.43)	(.43)	(.43)	(.43)	(.43)
R Knows about McCain	.90*			.99*		
	(.43)			(.43)		
Obama Will Cooperate With Congress to the Extent R Wants Him To	−.66*	−.66*	−.66*	−.74*	−.74*	−.74*
	(.34)	(.34)	(.34)	(.35)	(.35)	(.35)
McCain Will Cooperate With Congress to the Extent R Wants Him To	.66*			.74*		
	(.34)			(.35)		
Desire a Moderate President	.08	−.90*	.41	.06	−.94*	.35
	(.51)	(.51)	(.86)	(.51)	(.52)	(.86)
McCain is More Moderate Than Obama	.93	−1.37*	.94	.91	−1.33*	.93
	(.71)	(.75)	(1.08)	(.71)	(.75)	(1.09)
Desire a Moderate President × McCain is More Moderate than Obama	−.01	1.60*	−.60	.01	1.66*	−.57
	(.89)	(.95)	(1.51)	(.89)	(.96)	(1.51)

Predictor	Model with implicit racism predicting outcomes			Model with implicit and explicit racism predicting outcomes		
	Voted for McCain	Did not vote	Voted for nonmajor party candidate	Voted for McCain	Did not vote	Voted for nonmajor party candidate
Preference for Divided Government	−.37	.65	1.40	−.56	.56	1.33
	(.79)	(1.03)	(1.25)	(.80)	(1.02)	(1.24)
Probability of a Democratic Congress	−.33	1.30	1.24	−.19	1.30	1.17
	(.69)	(.79)	(1.18)	(.71)	(.80)	(1.18)
Preference for Divided Government × Probability of a Democratic Congress	.40	−1.37	−1.94	.69	−1.23	−1.74
	(1.21)	(1.57)	(1.87)	(1.23)	(1.56)	(1.86)
Obama is Christian	.30	.30	.30	.31*	.31*	.31*
	(.18)	(.18)	(.18)	(.19)	(.19)	(.19)
McCain is Christian	−.30			−.31*		
	(.18)			(.19)		
Obama is Patriotic	−.83*	−.83*	−.83*	−.79*	−.79*	−.79*
	(.33)	(.33)	(.33)	(.33)	(.33)	(.33)
McCain is Patriotic	.83*			.79*		
	(.33)			(.33)		
Obama is Muslim	−.20	−.20	−.20	−.23	−.23	−.23
	(.30)	(.30)	(.30)	(.30)	(.30)	(.30)
Reverend Wright Will Make Obama A Worse President	1.04*	1.04*	1.04*	.90	.90	.90
	(.62)	(.62)	(.62)	(.62)	(.62)	(.62)
Obama is Intelligent	−.49*	−.49*	−.49*	−.51*	−.51*	−.51*
	(.18)	(.18)	(.18)	(.18)	(.18)	(.18)

Continued

Table 6. Continued

Predictor	Model with implicit racism predicting outcomes			Model with implicit and explicit racism predicting outcomes		
	Voted for McCain	Did not vote	Voted for nonmajor party candidate	Voted for McCain	Did not vote	Voted for nonmajor party candidate
McCain is Intelligent	.49*			.51*		
	(.18)			(.18)		
Obama is Inconsistent	.46*	.46*	.46*	.46*	.46*	.46*
	(.23)	(.23)	(.23)	(.23)	(.23)	(.23)
McCain is Inconsistent	−.46*			−.46*		
	(.23)			(.23)		
Obama is Courageous	.30*	.30*	.30*	.33*	.33*	.33*
	(.17)	(.17)	(.17)	(.18)	(.18)	(.18)
McCain is Courageous	−.30*			−.33*		
	(.17)			(.18)		
Obama is Past His Prime	.42*	.42*	.42*	.49*	.49*	.49*
	(.24)	(.24)	(.24)	(.24)	(.24)	(.24)
McCain is Past His Prime	−.42*			−.49*		
	(.24)			(.24)		
Obama is Independent	.02	.02	.02	.05	.05	.05
	(.21)	(.21)	(.21)	(.21)	(.21)	(.21)
McCain is Independent	−.02			−.05		
	(.21)			(.21)		
Obama is Unifying	−.13	−.13	−.13	−.08	−.08	−.08
	(.21)	(.21)	(.21)	(.22)	(.22)	(.22)

Predictor	Model with implicit racism predicting outcomes			Model with implicit and explicit racism predicting outcomes		
	Voted for McCain	Did not vote	Voted for nonmajor party candidate	Voted for McCain	Did not vote	Voted for nonmajor party candidate
McCain is Unifying	.13			.08		
	(.21)			(.22)		
Obama Understands the Issues	−.13	−.13	−.13	−.13	−.13	−.13
	(.52)	(.52)	(.52)	(.52)	(.52)	(.52)
McCain Understands the Issues	.13			.13		
	(.52)			(.52)		
Obama is Honest	−.41	−.41	−.41	−.38	−.38	−.38
	(.35)	(.35)	(.35)	(.36)	(.36)	(.36)
McCain is Honest	.41			.38		
	(.35)			(.36)		
Obama is Elitist	.78*	.78*	.78*	.78*	.78*	.78*
	(.37)	(.37)	(.37)	(.37)	(.37)	(.37)
McCain is Elitist	−.78*			−.78*		
	(.37)			(.37)		
Obama Has a Bad Temper	.34	.34	.34	.35	.35	.35
	(.28)	(.28)	(.28)	(.28)	(.28)	(.28)
McCain Has a Bad Temper	−.34			−.35		
	(.28)			(.28)		
Obama Will Work on R's Issues	−1.22*	−1.22*	−1.22*	−1.21*	−1.21*	−1.21*
	(.42)	(.42)	(.42)	(.43)	(.43)	(.43)

Continued

Table 6. Continued

Predictor	Model with implicit racism predicting outcomes			Model with implicit and explicit racism predicting outcomes		
	Voted for McCain	Did not vote	Voted for nonmajor party candidate	Voted for McCain	Did not vote	Voted for nonmajor party candidate
McCain Will Work on R's Issues	1.22*			1.21*		
	(.42)			(.43)		
R Likes Michelle Obama	−.53*	−.53*	−.53*	−.44	−.44	−.44
	(.32)	(.32)	(.32)	(.32)	(.32)	(.32)
R Likes Cindy McCain	.53*			.44		
	(.32)			(.32)		
Obama Will Bring About Change	−.06	−.06	−.06	−.03	−.03	−.03
	(.18)	(.18)	(.18)	(.18)	(.18)	(.18)
McCain Will Bring About Change	.06			.03		
	(.18)			(.18)		
Democrats Who Think Hillary Clinton Should Have Been the Democratic Party Nominee	.34	−.25	−.08	.33	−.26	−.03
	(.35)	(.38)	(.58)	(.36)	(.38)	(.58)
Authoritarianism	.31	−.14	.58	.20	−.22	.52
	(.37)	(.43)	(.61)	(.38)	(.43)	(.61)
Age 25–34	−.32	.44	−1.09	−.39	.43	−1.10
	(.41)	(.42)	(.74)	(.41)	(.42)	(.74)
Age 35–44	−.29	.02	−.52	−.38	.04	−.49
	(.40)	(.43)	(.66)	(.41)	(.43)	(.66)
Age 45–54	.11	.78*	−.22	.10	.78*	−.20
	(.39)	(.41)	(.66)	(.40)	(.42)	(.66)
Age 55–64	.46	.78	−1.22	.48	.77	−1.26
	(.43)	(.49)	(.83)	(.43)	(.49)	(.83)

Predictor	Model with implicit racism predicting outcomes			Model with implicit and explicit racism predicting outcomes		
	Voted for McCain	Did not vote	Voted for nonmajor party candidate	Voted for McCain	Did not vote	Voted for nonmajor party candidate
Age 65–74	.34	.70	−.86	.42	.70	−.87
	(.46)	(.60)	(.88)	(.47)	(.61)	(.88)
Age 75 or Older	1.18*	.82	−1.04	1.38*	.84	−1.01
	(.60)	(.88)	(1.15)	(.62)	(.89)	(1.14)
Education—High School Graduate	.07	−.67*	1.42*	.21	−.66*	1.35*
	(.37)	(.39)	(.81)	(.38)	(.39)	(.82)
Education—Some College	−.05	−1.12*	.87	.03	−1.11*	.85
	(.38)	(.41)	(.84)	(.39)	(.41)	(.83)
Education—College Degree	.47	−1.00*	1.72*	.75*	−.94*	1.70*
	(.38)	(.44)	(.82)	(.39)	(.44)	(.83)
Income—$15,000 to $34,999	.05	−.05	−1.02*	.00	−.03	−1.02*
	(.41)	(.41)	(.61)	(.41)	(.41)	(.61)
Income—$35,000 to $59,999	−.64	−1.14*	−.90	−.73*	−1.14*	−.90*
	(.40)	(.41)	(.55)	(.40)	(.41)	(.54)
Income—$60,000 to $74,999	−.35	−.50	−1.55*	−.50	−.51	−1.58*
	(.46)	(.51)	(.81)	(.46)	(.51)	(.80)
Income—$75,000 to $99,999	−.75*	−.80	−3.15*	−.91*	−.82	−3.24*
	(.45)	(.50)	(1.01)	(.45)	(.51)	(1.03)
Income—$100,000 or More	−.14	−.86	−.85	−.24	−.86	−.82
	(.47)	(.60)	(.72)	(.48)	(.60)	(.71)

Continued

Table 6. Continued

Predictor	Model with implicit racism predicting outcomes			Model with implicit and explicit racism predicting outcomes		
	Voted for McCain	Did not vote	Voted for nonmajor party candidate	Voted for McCain	Did not vote	Voted for nonmajor party candidate
Female	−.37*	−.21	−.34	−.30	−.21	−.38
	(.22)	(.25)	(.38)	(.22)	(.25)	(.37)
African-American	−1.83*	−.28	−.76	−1.30*	−.25	−.83
	(.58)	(.44)	(.89)	(.61)	(.47)	(.91)
Other Race	−.97*	−.12	−.39	−.95*	−.10	−.39
	(.52)	(.53)	(.86)	(.54)	(.53)	(.86)
Hispanic	−.17	.33	.08	−.03	.35	.03
	(.31)	(.36)	(.56)	(.32)	(.36)	(.57)
Region—Midwest	−.04	−.34	.17	−.02	−.33	.12
	(.33)	(.40)	(.52)	(.33)	(.41)	(.52)
Region—South	.28	−.09	−1.12*	.21	−.09	−1.10*
	(.31)	(.38)	(.60)	(.32)	(.38)	(.60)
Region—West	.31	.12	.37	.37	.15	.35
	(.34)	(.42)	(.54)	(.35)	(.42)	(.54)
Registration—Registered at Current Address		−2.32*			−2.34*	
		(.35)			(.35)	
Registration—Different Location		−1.74*			−1.71*	
		(.52)			(.52)	
Registration—Unsure		−1.95*			−1.98*	
		(.55)			(.55)	
Voting Frequency—Seldom Votes		−1.17*			−1.12*	
		(.40)			(.41)	

Predictor	Model with implicit racism predicting outcomes			Model with implicit and explicit racism predicting outcomes		
	Voted for McCain	Did not vote	Voted for nonmajor party candidate	Voted for McCain	Did not vote	Voted for nonmajor party candidate
Voting Frequency—Votes Some of the Time		−1.26*			−1.24*	
		(.41)			(.41)	
Voting Frequency—Votes Nearly Always		−2.78*			−2.77*	
		(.44)			(.44)	
Voting Frequency—Votes Always		−3.41*			−3.38*	
		(.47)			(.47)	
Knows Where to Vote		−.77*			−.78*	
		(.28)			(.28)	
Intercept	−1.48	7.04*	−1.27	−2.87*	6.61*	−1.12
	(1.02)	(1.33)	(1.81)	(1.09)	(1.38)	(1.90)
N		1762			1762	
Percent Correctly Predicted		85.14%			85.20%	
Adjusted Count Pseudo R^2		.74			.74	
McFadden's Pseudo R^2		.62			.62	

NOTE.—Standard errors are in parentheses. The effects of candidate-specific predictors were constrained to be equal across the three behavioral outcomes, meaning that a perception of a candidate would increase or reduce voting for him and spread voters equally across the remaining behavioral outcome categories. Hence, there is only a single coefficient for variables like "is experienced," which applies to both candidates. Coefficients for the McCain-specific measures are only shown in the equations predicting voting for McCain because these coefficients are constrained to equal zero in all other equations. Coefficients for frequency of turnout and registration were only used to predict the likelihood of non-voting versus all other outcomes and were constrained to zero for all other comparisons. The coefficients estimate the difference between the group identified at the top of the column and respondents who voted for Mr. Obama. Omitted categories are Age 18–24, Education—Less Than High School, Income—Less than $15,000, Male, White, Non-Hispanic, Region—Northeast, Unregistered, and Voting Frequency—Never Votes.

*$p < .05$ one-tailed.

people who voted for McCain were significantly less likely to be Democrats, more likely to be conservative, more likely to approve of President Bush's performance, less informed about Obama, more informed about McCain, less likely to think Obama would cooperate optimally with Congress, more likely to think McCain would cooperate optimally with Congress, less likely to think Obama was patriotic, more likely to think McCain was patriotic, less likely to think Obama was intelligent, more likely to think McCain was intelligent, more likely to think Obama was inconsistent, less likely to think McCain was inconsistent, more likely to think Obama was past his prime, less likely to think McCain was past his prime, more likely to think Obama was elitist, less likely to think McCain was elitist, less likely to think Obama will work on the respondent's important issues, and more likely to think McCain will work on the respondent's important issues.

The only seemingly surprising significant effect here is evidence that, as compared to people who voted for Obama, people who voted for McCain were more likely to think Obama was courageous and less likely to think McCain was courageous. This suggests that after President Bush, Americans might have been looking for a less courageous President, rather than a more courageous leader.

Interestingly, many plausible predictors did not have significant effects in this equation, suggesting that they did not influence the choice between Obama and McCain, including perceptions of the health of the nation and the economy in particular, perceptions of the candidates' experience, military leadership strength, desiring a moderate president, preference for divided government, Obama is a Muslim, Reverend Wright, the candidates' independence, unifyingness, understanding of the issues, honesty, temper, or likelihood to bring about change, the first ladies, loyalty to Hillary Clinton among Democrats, and authoritarianism.

As expected, the three purported causes of turnout had significant effects in the expected directions in the equation including the full set of predictors and treating not voting as the dependent variable (see column 5 of table 6). Many other predictors had effects in the equations predicting not voting and predicting voting for a nonmajor party candidate, but we had no special expectations about the signs or significance of these coefficients, so we do not interpret them here.

Using the coefficients in tables 4, 5, and 6, we generated the predicted changes in electoral behavior shown in table 7. The first row shows the percent of individuals who would have voted for Obama instead of not voting if all anti-African-American racism were eliminated. The second row shows the percent of individuals who would have voted for Obama instead of voting for a nonmajor party candidate if all anti-African-American racism were eliminated. The third row shows the percent of individuals who would have voted for Obama instead of voting for McCain if all anti-African-American racism were eliminated. The remaining rows display the percentages for the remaining possible transitions.

Table 7. Shifts in Predicted Election Behaviors Due to Racism

Predicted behavior with observed racism		Predicted behavior with no anti-African-American racism (counterfactual)	Percent of people whose behavior would change		
			Using racism (%)	Using racism and political predictors not specific to the candidates (%)	Using racism and all other predictors (%)
Not vote	–	Vote for Obama	.83*	.51*	.26
Vote for a nonmajor party candidate	–	Vote for Obama	.38*	.37*	.20
Vote for McCain	–	Vote for Obama	9.10*	3.26*	1.38*
Vote for a nonmajor party candidate	–	Not vote	.02	.03	.03
Vote for McCain	–	Not vote	.75*	.85*	.88*
Vote for McCain	–	Vote for a nonmajor party candidate	.23*	.15*	.22*
Vote for a nonmajor party candidate	–	Vote for McCain	.06	.04	.02
Total Movement			11.37	5.21	2.99
Change in a Candidate's Two-Party Vote Share Due to Anti-African-American Racism			12.50	5.17	2.70
Change in a Candidate's Two-Party Vote Share Due to Pro-African-American Attitudes			−7.92	−2.71	−1.22
Net Change in Two-Party Vote Share			4.58	2.46	1.48

NOTE.—All numbers shown are percentages of all individuals expected to make each change between categories due to changing racism scores above neutral to be neutral instead.

*$p < .05$.

The ninth row of numbers in table 7 shows the predicted shifts in Obama's two-party vote share that would have occurred if anti-African-American racism were eliminated. These numbers vary depending upon how much variance is permitted to be accounted for by racism. When allocating the most possible variance to racism, eliminating racism is predicted to increase Obama's share of the vote by 12.50 points (see column 1 of table 7). When allocating the least possible variance to racism, eliminating racism increases Obama's two-party vote share by 2.70 points. We suspect that the most reasonable assessment might be in the middle of these two extremes: 5.17 points, generated without controlling for the many candidate-specific measures that might mediate the impact of racism on electoral behavior.

The largest share of this change is attributable to people who would switch from voting for McCain to voting for Obama (see row 3 of table 7) if they had neutral racial attitudes. The next largest share of the change is attributable to people who would switch from voting for McCain to not voting (see row 5 of table 7) in the counterfactual condition of no racism. Smaller but nonetheless significant change is predicted to have occurred due to all the other possible shifts as well. Thus, these results are consistent with the conclusion that racism caused some people to become McCain voters, some people to become nonmajor party voters, and some people to drop out of the electorate altogether. Taken together, according to the middle ground analytic approach, eliminating anti-African-American racism would have increased a projected 53.1–46.9 Obama victory with racism to a projected 58.3–41.7 Obama victory without it.

Two additional rows of figures at the bottom of table 7 were generated using comparable methods to estimate how much Obama's share of the two-party vote was increased as the result of pro-African-American sentiment registered by the racism measures. The net changes range from 4.58 points to 1.48 points and show that eliminating the entire impact of Obama's race (both positive and negative) on his electoral outcome would still have left a net negative, but one that is considerably smaller than that due to anti-African-American prejudice alone. In this case, the middle ground model predicts a net shift of approximately 2.5 percent of the two-party vote away from Obama due to racism.

Discussion

Taken together, these results suggest that anti-African-American racism may have played a substantial role in affecting the outcome of the 2008 election. Using measures of both implicit and explicit racism, we found evidence that the Obama victory might have been considerably larger if anti-African-American racism had been eliminated in the electorate.

In this light, it is interesting to return to the point of our departure: the forecasts shown in table 1. The average forecast there of Obama's share of the vote (53.3 percent) is extraordinarily close to the share that he in fact received on election day (53.7 percent). Yet none of these models took into

account the sizable and novel electoral influence of anti-African-American racism. So in order for the forecasts to be as accurate as they were, other forces would need to have cancelled out the impact of racism on election day. One possibility is the economic meltdown that occurred between when our survey data collection ended (in early September) and election day. A second possibility is the nomination of Sarah Palin as John McCain's running mate, since her popularity was quite low by the end of the campaign (Johnston and Thorson 2009). Thus, although the forecasting models were remarkably accurate, that accuracy may have been a fortuitous result of the impact of anti-African-American racism being cancelled out by other major forces that were also not included in the models' calculation procedures.

It is very interesting that some purported predictors of candidate choice in the 2008 election seem not to have had any such impact. For example, it appears that candidate choice was not influenced by perceptions of the amount of experience the candidates had in government, by their perceived strength as military leaders, by their understanding of the issues, or by their honestly. An ideal vision of democratic citizens might have them emphasizing just such factors when choosing their leaders, especially in times of war and economic difficulties. So perhaps this should be considered suboptimal citizen behavior. On the other hand, it might be reassuring that candidate choice was based partly on perceptions of the candidates' intelligence, their likely level of cooperation with Congress, and their likely focus when working on issues. We look forward to seeing other analyses of behavior in this election to gauge whether they reach similar conclusions about the factors that did and did not influence the election outcome.

BEHAVIORAL CHANGES CAUSED BY RACISM

Among individuals who are identified as having changed their election day behaviors because of racism, switching candidates was much more common than moving into or out of the participating electorate. Few individuals seem to have left the electorate due to prejudice, and few seem to have joined the electorate as the result of prejudice. When individuals predisposed to vote for Obama decided to do something else due to prejudice, they frequently supported McCain or a nonmajor party candidate. Thus, racism appears to have increased the size of the voting public very slightly, rather than decreasing it, and more often changed the candidate for whom voters voted. This is consistent with the notion that people's inclination to either vote or abstain was not easily overcome by their racist feelings toward one of the candidates.

LIMITATIONS

One might imagine that our analytic approach is risky because including so many predictors of electoral behavior might lead to unstable and illusory results. Computing many tests of statistical significance might seem likely to

lead to some effects being significant by chance alone. And multicollinearity among the predictors might make it difficult for an estimation procedure to reliably separate predictors that have real partial associations with electoral behavior from predictors without such associations. In our case, however, we explicitly tested for multicollinearity and found no indications of danger in this regard. Furthermore, we found many more significant coefficients than would be expected by chance alone, and their p-values were sufficiently smaller than .05 to be robust even with correction for multiple hypothesis tests. And the R^2s in table 6 indicate that even our very large list of predictors leaves a considerable amount of variance in electoral behavior unexplained. Therefore, multiple hypothesis testing and multicollinearity seem not to be substantial concerns.

Another limitation of this study is the measurement of purported causes of vote choice long before election day. It seems especially likely that some perceptions of the candidates and of the country changed between early September (when our pre-election data were collected) and early November. For example, the nation's economic health clearly declined dramatically, and President Obama's performance in the debates increased the public's esteem for him in various specific ways. Therefore, the analytic approach we took is likely to underestimate the impact of the considerations we examined on election day behavior. If we had measured the predictors in early November, they might have had considerably stronger associations with voting behavior. Therefore, the associations we do see here seem likely to be real, and any absence or weakness of associations may be attributable to the time lag, so should be taken with a grain of salt. This may partly explain the amount of unexplained variance in behavior.

Conclusion

Anti-African-American racism appears to have been an important component of the 2008 election, perhaps considerably reducing Obama's share of the vote. Because our investigation involved but one of many possible methods for assessing the potential impact of racism and other factors on electoral behavior in 2008, we look forward to more such studies to converge upon a final verdict about the extent to which Barack Obama's fortunes were altered by anti-African-American feelings in the American public.

Appendix A

QUESTION WORDING, RESPONSE OPTIONS, AND CODING

Implicit Racism (*AMP*). When completing the Affect Misattribution Procedure (AMP), respondents saw a series of Chinese ideographs on their computer screen, one at a time, and were told to sort the ideographs into two categories, pleasant and unpleasant, placing approximately half of the ideographs in each. After some practice trials, respondents continued the task, but each ideograph

was preceded by a brief flash of a photograph of either a face of an African-American male or of a White male, which respondents were told to ignore. Researchers have found that when a face precedes an ideograph, people's affective reactions to the face influence their assessments of the ideograph. People who have favorable feelings toward the face are more likely to label the ideograph as more pleasant, and people who have unfavorable feelings toward the face are more likely to label the ideograph as less pleasant.

Respondents were given two scores: the proportion of trials with African-American faces on which they rated the ideograph as pleasant, and the proportion of trials with White faces on which they rates the ideograph as pleasant. We subtracted the score for trials with African-American faces from the score for trials with White faces and then recoded the result to range from 0 (meaning all ideographs preceded by African-American faces were rated as pleasant and all ideographs preceded by White faces were rated as unpleasant) to 1 (meaning all ideographs preceded by African-American faces were rated as pleasant and all ideographs preceded by White faces were rated as unpleasant).

Explicit Racism (*Symbolic Racism*). "Irish, Italians, Jewish, and other minorities overcame prejudice and worked their way up. Blacks should do the same without special favors." (Coding: Strongly disagree = 0, Somewhat disagree = .25, Neither agree nor disagree = .50, Somewhat agree = .75, Strongly agree = 1).

"Generations of slavery have created conditions that make it difficult for Blacks to work their way out of the lower class." (Coding: Strongly agree = 0, Somewhat agree = .25, Neither agree nor disagree = .50, Somewhat disagree = .75, Strongly disagree = 1).

"It's really a matter of some people just not trying hard enough; if Blacks would only try harder, they could be just as well off as whites." (Coding: Strongly disagree = 0, Somewhat disagree = .25, Neither agree nor disagree = .50, Somewhat agree = .75, Strongly agree = 1).

"Over the past few years, Blacks have gotten less than they deserve." (Coding: Strongly agree = 0, Somewhat agree = .25, Neither agree nor disagree = .50, Somewhat disagree = .75, Strongly disagree = 1).

"Over the past few years, Blacks have gotten more economically than they deserve." (Coding: Strongly disagree = 0, Somewhat disagree = .25, Neither agree nor disagree = .50, Somewhat agree = .75, Strongly agree = 1).

"Some people say that Black leaders have been trying to push too fast. Others feel that they haven't pushed fast enough. What do you think?" (Coding: Haven't pushed fast enough = 0, Pushing at about the right speed = .50, Trying to push too fast = 1).

"How much of the racial tension that exists in the United States today do you think Blacks are responsible for creating?" (Coding: Not much at all = 0, Some = .33, Most = .67, All of it = 1).

"How much discrimination against Blacks do you feel there is in the United States today, limiting their chances to get ahead?" (Coding: A lot = 0, Some = .33, A little = .67, None at all = 1).

Responses were averaged to create an index.

Age. Was coded using a set of dummy variables representing six different age levels: 25–34, 35–44, 45–54, 55–64, 65–74, and 75 or older. Respondents aged 18–24 constituted the omitted, comparison category.

Education. Respondents were asked: "What is the highest degree or level of education that you have completed?" Education was coded using a set of dummy variables representing three levels: high school graduate, some college, and bachelors degree or higher. Respondents without a high school diploma constituted the omitted, comparison category.

Income. Was coded using a set of dummy variables representing five different annual income levels: $15,000–$34,999, $35,000–$59,999, $60,000–$74,999, $75,000–$99,999, and $100,000 or more. Respondents with incomes under $15,000 constituted the omitted, comparison category.

Region. Was coded using a set of dummy variables representing three different census regions in the United States: Midwest, South, and West. Respondents living in the Northeast region constituted the omitted, comparison category.

Female. Respondents were asked: "Please enter whether you are male or female." Female was coded 1 for females and 0 for males.

Race. Respondents were asked to "check one or more categories" from a list and were told to select what race(s) they considered themselves to be. An African-American dummy variable was coded for 1 for individuals who selected "Black or African-American" and 0 for others. An Other Race dummy variable was coded 1 for people who selected neither "White" nor "Black or African-American" and 0 for others.

Hispanic Ethnicity. Respondents were asked: "Are you of Spanish, Hispanic, or Latino descent?" A Hispanic dummy variable was coded 1 for individuals reporting Hispanic ethnicity and 0 for others.

For the purposes of weighting and for table 2, Race and Hispanic Ethnicity categories were combined to produce a mutually exclusive set of outcomes for individuals: (1) White non-Hispanic only, (2) African-American non-Hispanic only, (3) Hispanic, or (4) other/multiple non-Hispanic.

Registration. Respondents were asked: "Are you registered to vote?" Registration was coded using a set of dummy variables representing three different possible registration statuses: "Yes, at my current address," "Yes, but at a different address," and "Unsure." Respondents who reported that they were not registered ("No") constituted the omitted, comparison category.

Knows Where to Vote. Respondents were asked: "Do you happen to know where people in your neighborhood go to vote, or not?" (Coding: Yes = 1, No = 0).

Voting Frequency. Respondents were asked: "How often would you say you vote?" Voting Frequency was coded using a set of dummy variables representing different frequencies: Always, Nearly always, Part of the time, and Seldom. Respondents who reported that they never voted constituted the omitted, comparison category.

Turnout and Candidate Choice. During interviews in September and October, respondents were asked: "Have you already voted in the upcoming November general election by going to an early voting location, or by mailing in an early voting or absentee ballot, or not?" Respondents who said "Yes, have voted" were treated as voters. Respondents who said they would not vote at all were treated as nonvoters.

People who did not indicate in September or October that they had voted early were asked in the their postelection interviews: "In talking to people about elections, we often find that people are not able to vote because they weren't registered, they were sick or just didn't have time. Which of the following statements best describes you?"

Respondents who chose "I voted in today's (the November 4) general election" were treated as voters. Respondents who chose "I did not vote in today's (the November 4) general election," "I thought about voting in today's (the November 4) general election, but didn't," or "I usually vote, but didn't in today's (the November 4) general election" were treated as nonvoters.

Respondents who said they voted were asked postelection: "In the election for President, for whom did you vote? Barack Obama and Joe Biden, the Democrats, John McCain and Sarah Palin, the Republicans, Bob Barr and Wayne Allyn Root, the Libertarians, Ralph Nader and Matt Gonzales, the Independents, Someone Else (Please Specify), or "Did not vote."

Using answers to these questions, respondents were assigned to one of four categories: People who voted for Obama, People who voted for McCain, People who voted for a nonmajor party Candidate, or People who did not vote.

Party Identification. Respondents were asked: "Do you consider yourself a Democrat, Republican, an Independent, a supporter of some other party, or none of these?" A Democrat dummy variable was coded 1 for Democrats and 0 for all others. A Republican dummy variable was coded 1 for Republicans and 0 for all others.

Ideology. Respondents were asked: "Generally speaking, do you consider yourself Very liberal, Somewhat liberal, Moderate, Somewhat conservative, or Very conservative?" A Liberal dummy variable was coded 1 for "Very Liberal" or "Somewhat Liberal" and 0 for all other responses. A Conservative dummy

variable was coded 1 for "Very Conservative" or "Somewhat Conservative" and 0 for all other responses.

Country Heading in the Right Direction. Respondents were asked: "Generally speaking, would you say things in this country are heading in the right direction, or are they off on the wrong track?" (Coding: Wrong Track = 0, Right Direction = 1).

Perception of the Economy. Respondents were asked: "Now thinking about the economy in the country as a whole, would you say that over the past year, the national economy has gotten better, stayed the same, or gotten worse?" (Coding: Gotten much worse = 0, Gotten a little worse = .25, Stayed about the same = .5, Gotten a little better = .75, Gotten much better = 1).

Bush Approval. Respondents were asked: "Overall, do you approve, disapprove or have mixed feelings about the way George W. Bush is handling his job as President?" (Coding: Strongly disapprove = 0, Somewhat disapprove = .25, Have mixed feelings = .5, Somewhat approve = .75, Strongly approve = 1).

Candidate is Experienced. "Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Inexperienced." (Coding 1 = checked, 0 = not checked). "Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Experienced." (Coding 1 = checked, 0 = not checked). Responses to *Inexperienced* were subtracted from responses to *Experienced*, and the result was rescaled to range from zero to one to create one *Experience* measure for each candidate.

Candidate is a Strong Military Leader. "Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Strong Military Leader." (Coding 1 = checked, 0 = not checked).

R Knows About the Candidate. "How much do you know about [John McCain/Barack Obama]?" (Coding 0 = Nothing at all, .25 = A little, .5 = A moderate amount, .75 = A lot, 1 = A great deal).

Candidate Will Cooperate With Congress to the Extent R Wants Him To. "If Obama is elected president, how much do you think he would cooperate with members of Congress from the Republican party in running the country?" (Coding: 0 = Not at all, .25 = A little, .5 = A moderate amount, .75 = A lot, 1 = A great deal).

"If McCain is elected president, how much do you think he would cooperate with members of Congress from the Democratic party in running the country?" (Coding: 0 = Not at all, .25 = A little, .5 = A moderate amount, .75 = A lot, 1 = A great deal).

"If Obama is elected president, how much do you think he should cooperate with members of Congress from the Republican party in running the country?" (Coding: 0 = Not at all, .25 = A little, .5 = A moderate amount, .75 = A lot, 1 = A great deal).

"If McCain is elected president, how much do you think he should cooperate with members of Congress from the Democratic party in running the country?" (Coding: 0 = Not at all, .25 = A little, .5 = A moderate amount, .75 = A lot, 1 = A great deal).

The final variable was one minus the absolute difference between how much the respondent believed the candidate would and should cooperate with the opposite party in Congress. $(1 - |\textit{Should Cooperate} - \textit{Would Cooperate}|)$. A value of 1 indicated that the respondent believed the candidate would cooperate with Congress to the same extent that he should cooperate. A value of 0 indicated the maximum possible discrepancy between how much the candidate should cooperate and how much the candidate would cooperate.

Desire for a Moderate President. "Would you prefer that the next president be politically conservative, liberal, or moderate?" (Coding: Moderate = 1, Liberal or Conservative = 0).

McCain is More Moderate Than Obama. "How liberal, moderate, or conservative do you think Obama is?" (Coding: Extremely conservative = 1, Moderately Conservative = .66, Slightly Conservative = .33, Moderate = 0, Slightly Liberal = .33, Moderately Liberal = .66, Extremely Liberal = 1).

"How liberal, moderate, or conservative do you think McCain is?" (Coding: Extremely conservative = 1, Moderately Conservative = .66, Slightly Conservative = .33, Moderate = 0, Slightly Liberal = .33, Moderately Liberal = .66, Extremely Liberal = 1)

The final score was computed by subtracting McCain's score from Obama's score and recoded to range from 0 to 1. (Coding: 0 = Obama is more moderate than McCain, 1 = McCain is more moderate than Obama).

Preference for Divided Government. "After the Presidential election in November, which of the following would you prefer?" (Coding: Barack Obama as President and Democrats controlling the Congress = 0, John McCain as President and Republicans controlling the Congress = 0, Barack Obama as President and Republicans controlling the Congress = 1, John McCain as President and Democrats controlling the Congress = 1).

Probability of a Democratic Congress. "What do you think are the chances that the majority of people in the U.S. House of Representatives and the majority of the people in the U.S. Senate after the November election will be Democrats? Please give an answer between 0 percent (meaning this definitely won't happen) and 100 percent (meaning this definitely will happen)." Answers were coded to range from 0 (0 percent) to 1 (100 percent).

Candidate is Christian. "Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Christian." (Coding 1 = checked, 0 = not checked).

Candidate is Patriotic. "Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Un-American." (Coding 1 = checked, 0 = not checked).

"Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Patriotic." (Coding 1 = checked, 0 = not checked).

For each candidate, responses to *un-American* were subtracted from responses to *Patriotic* and recoded to range from zero to one, creating a *Patriotism* measure.

Obama is a Muslim. "Do you happen to know the religion of each of the following candidates? If you don't know, you can mark that too." (Coding: Did not think Obama was a Muslim = 0, Thought Obama was a Muslim = 1).

Reverend Wright Will Make Obama A Worse President. "Does Barack Obama's relationship with Reverend Jeremiah Wright (his former pastor in Chicago) suggest to you that Mr. Obama would be a better President, a worse President, or suggest nothing to you about how good or bad a President he would be?" (Coding: A much better President = 0, A somewhat better President = .25, Suggest nothing to you = .50, A somewhat worse President = .75, A much worse President = 1).

Candidate is Intelligent. "Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Intelligent." (Coding 1 = checked, 0 = not checked).

Candidate is Inconsistent. "Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Inconsistent." (Coding 1 = checked, 0 = not checked).

Candidate is Courageous. "Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Courageous." (Coding 1 = checked, 0 = not checked).

Candidate is Past His Prime. "Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Past His Prime." (Coding 1 = checked, 0 = not checked).

Candidate is Independent. "Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Independent." (Coding 1 = checked, 0 = not checked).

Candidate is Unifying. "Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Unifying." (Coding 1 = checked, 0 = not checked).

Candidate Understands the Issues. "How well do you think [Barack Obama/John McCain] understands the important issues the country will need to focus on during the next four years?" (Coding: Not at all well = 0, Slightly well = .25, Moderately well = .5, Very well = .75, Extremely well = 1).

"How well do you think [Barack Obama/John McCain] understands how the federal government works?" (Coding: Not at all = 0, Slightly well = .25, Moderately Well = .50, Very Well = .75, Extremely Well = 1).

Responses to the two questions were averaged to create an *Understanding* measure for each candidate.

Candidate is Honest. "Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Corrupt." (Coding 1 = checked, 0 = not checked)

"Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Honest." (Coding 1 = checked, 0 = not checked).

"Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Straight-talker." (Coding 1 = checked, 0 = not checked).

"Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Ethical." (Coding 1 = checked, 0 = not checked).

"Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Down-to-earth." (Coding 1 = checked, 0 = not checked).

For each candidate, responses to *Corrupt* were subtracted from the sum of responses to *Honest, Straight-talker, Ethical,* and *Down-to-earth,* and the result was recoded to range from zero to one, creating one *Honesty* measure.

Candidate is Elitist. "Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Out of Touch." (Coding 1 = checked, 0 = not checked).

"Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Elitist." (Coding 1 = checked, 0 = not checked).

For each candidate, responses to the two questions were averaged to create one *Elitist* measure.

Candidate Has a Bad Temper. "Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Stubborn." (Coding 1 = checked, 0 = not checked).

"Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Hot-tempered." (Coding 1 = checked, 0 = not checked).

For each candidate, responses to the two questions were averaged to create one *Bad Temper* measure.

Candidate Will Work on R's Issues. "If [Barack Obama/John McCain] is elected President, how much time and effort do you think he would spend working on the issues you would want him to work on the most?" (Coding: None at all = 0, A little = .25, A moderate amount = .5, A lot = .75, A great deal = 1).

R's Liking of the Candidate's Wife. "For each of the following individuals, please select if you have a favorable or unfavorable impression of that person. If you don't know enough about the person to have an opinion, you can say that too. Michelle Obama . . . Cindy McCain . . ." (Coding: Very unfavorable = 0, Somewhat unfavorable = .25, don't know enough to say = .50, Somewhat favorable = .75, Very favorable = 1).

Candidate Will Bring About Change. "Please mark the words and phrases below that you personally believe describe [Barack Obama/John McCain]. Will Bring About Change." (Coding 1 = checked, 0 = not checked).

Democrats Who Think Hillary Clinton Should Have Been the Democratic Party Nominee. A dummy variable was created to identify respondents who said they were Democrats and selected Hillary Clinton when answering this question: "Who do you think should have been the Democratic Party's candidate for the 2008 presidential election?"

Authoritarianism. "Although all of the things listed below are important for a child to have, which do you think is most important for a child to have?" (Coding: Has good judgment = 0, Is interested in how and why things happen = 0, Is obedient = 1, Has good manners = 1).

"Which is the next most important for a child to have?" (Coding: Has good judgment = 0, Is interested in how and why things happen = 0, Is obedient = 1, Has good manners = 1).

"Which is the next most important for a child to have?" (Coding: Has good judgment = 0, Is interested in how and why things happen = 0, Is obedient = 1, Has good manners = 1).

Authoritarianism was computed as follows: ((3*Most Important + 2*Next Most Important + Third Most Important) −1)/4.

Attitude Toward African-Americans. "How much do you like or dislike each of the following groups? Whites . . . Blacks . . ." (Coding = dislike a great deal = 0, dislike a moderate amount = .17, dislike a little = .33, Neither like nor dislike = .50, like a little amount = .67, like a moderate amount = .83, like a great deal = 1).

Attitude Toward African-Americans was computed as follows: ((like/dislike Whites – like/dislike Blacks)+1)/2. The variable ranged from 0 (meaning most pro-African-American) to 1 (meaning most anti-African-American).

Appendix B

CHANGE IN ELECTION OUTCOME SIMULATIONS

Vote change probabilities were calculated using the following function in R:

```
votechangeprob <- function(util1, util2){
x <- util1[1:4]-min(util1[1:4])
y <- util2[5:8]-x-min(util2[5:8])
q <- order(y)
qi <- rank(y, ties.method = "first")
x <- x[q]
y <- y[q]
z <- diag(exp(x)/
apply(exp(((matrix(y,4,4)t(matrix(y,4,4)))*
lower.tri(matrix(0,4,4)))+x), 2, sum))
z[3,4] <- exp(x[3])/sum(exp(x))-z[3,3]
z[1,2] <- exp(x[2]+y[2])/sum(exp(x+y))-z[2,2]
z[2,3] <- (exp(x[2])/(exp(x[1])+exp(x[2])))*
(exp(x[3]+y[3])/(exp(x[3]+y[3])+exp(x[4]+y[4]))) -
z[2,2]*exp(x[3]+y[3])/(exp(x[3]+y[3])+exp(x[4]+y[4])) –
z[3,3]*exp(x[2])/(exp(x[1])+exp(x[2]))
z[2,4] <- exp(x[2])/sum(exp(x))-z[2,3]-z[2,2]
z[1,3] <- exp(x[3]+y[3])/sum(exp(x+y))-z[2,3]-z[3,3]
z[1,4] <- exp(x[1])/sum(exp(x))-sum(z[1,])
return(z[qi,qi])}
```

where util1 is the expected utility in the first scenario, util2 is the expected utility in the second scenario, and the result, Z, gives the 4×4 matrix where Z_{ij} is the probability of choosing choice i in scenario 1 and choice j in scenario 2. The function was compared to Monte Carlo results to ensure that computations were correct.

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