

**Benchmark Report  
for the 2008 American National Election Studies Time Series and Panel Study**

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*Summary*

This report compares estimates from the 2008 ANES studies to authoritative population statistics to reveal accuracies and inaccuracies in weighted, post-stratified ANES estimates. The report examines descriptive statistics for November 2008.

With poststratification weights, the Time Series data estimate 84 percent (36 of 43) of population proportions examined here accurately to within 5 percentage points or less of the corresponding benchmark, including presidential vote choice and many demographic characteristics. The Time Series data over-estimate voter turnout by 15 points and miss population benchmarks by more than 5 percentage points for the percentage of the population identifying as white, homeowners, home renters, the percentage of people living in a one-person household, and the percentage of people living in households with incomes of \$14,999 or less or \$100,000 or more. Excluding turnout, the average absolute error across all proportions examined was 1.9 percentage points.

The internet Panel Study cross-sectional estimates (with poststratification weights) are accurate within 5 points of the benchmark for 84 percent of statistics examined (36 of 43). The Panel Study over-estimates voter turnout by 22 points and also differs from benchmarks by more than 5 points for the proportion of those renting or having “other” home tenure status, households of one person, those who are married, and those in households with incomes of \$30,000 to \$49,999 or \$100,000 or more. Excluding turnout, the average absolute error across all proportions examined was 2.1 percentage points.

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This report compares selected estimates from the 2008 ANES studies to statistics from other authoritative data sources. Such comparisons show how accurately the ANES samples represent the population they are intended to represent.

The comparisons presented here include variables for which authoritative statistics are readily available for comparison to ANES estimates and which are likely to be relevant to ANES data analysis aimed at understanding voter turnout and candidate choice in the 2008 Presidential election. The report is limited to descriptive statistics for November 2008.

### *2008 ANES Studies*

ANES conducted two major studies of the 2008 election: the *ANES 2008 Time Series Study* and the *ANES 2008-2009 Panel Study*.

The ANES 2008 Time Series Study is a nationally representative survey of U.S. citizens age 18 or older as of Election Day (November 4) in 2008. The survey was conducted by interviewers meeting face-to-face with sampled respondents and using Computer-Aided Personal Interviewing (CAPI). Interviews lasting over an hour, on average, were conducted with the same respondents before and after the 2008 election.

The study is called the “Time Series” because it is conducted in every presidential election year and each study repeats many questions asked on prior surveys, adding to a time series that stretches back as far as 1948. For more information about the ANES 2008 Time Series study, see Lupia et al. (2010).

The ANES 2008-2009 Panel Study is also a nationally representative survey of U.S. citizens age 18 or older as of Election Day in 2008. Unlike the Time Series, the Panel Study consists of respondents who were recruited on the telephone using Random Digit Dialing (RDD) sampling methods (limited to landline telephones, excluding mobile phones) and who subsequently enrolled in a panel to complete surveys on the Internet once each month for 21 consecutive months. Sampled individuals who did not already have a computer and Internet access were given a free Internet appliance called MSN TV 2 and free dial-up Internet service. To minimize panel conditioning and attrition, a majority of these monthly surveys were not about politics. After telephone recruitment and an initial profile and training survey online, the regular monthly surveys began in January 2008. A second cohort of panelists was recruited to begin in September 2008. The Panel Study ended in September 2009 having completed a total of 21 monthly surveys. For more information about the Panel Study, see DeBell, Krosnick, & Lupia (2010).

### *Benchmark Statistics*

Both the Times Series and Panel Study are designed to represent the population of U.S. citizens age 18 or older on November 4, 2008. Characteristics of this population that can be known with a high degree of certainty and compared to ANES studies are called population benchmarks. Benchmarks for demographic characteristics come from the Current Population Survey (CPS), conducted by the U.S. Census Bureau in collaboration with the Bureau of Labor Statistics. The CPS is a large, nationally representative survey with a very high response rate. Its most widely appreciated use is estimation of the

nation's unemployment rate, but the large sample size and high response rate of the CPS make it a common reference point for survey statisticians to assess the quality of samples.

We calculated benchmark statistics from the November 2008 CPS for age, sex, race/ethnicity, educational attainment, household size, and marital status. Benchmarks for home tenure and household income were not available from the November 2008 CPS, so we used the March 2008 CPS for these statistics. All CPS statistics are for the subset of the population that was 18 years old or older and held U.S. citizenship.

We also obtained benchmarks for presidential popular vote percentages and for turnout. The popular vote percentages are from official vote tallies compiled by Federal Election Commission.<sup>1</sup> The benchmark voter turnout rate is based on United States Elections Project 2008 turnout estimates of the total ballots counted and the voting eligible population.<sup>2</sup> This rate differs from rates based on the voting age population and from the total ballots counted for any specific office. For more information about how these and other statistics were calculated, see the Methodological Notes at the end of this report.

### *Weights in ANES Studies*

Both the Time Series and Panel Study use complex sample designs. In order for these data to be representative of their target populations, *the data must be weighted* to account for the complex sample designs. Unweighted statistics from these studies will differ from the population benchmarks by design. For example, the Time Series survey design incorporates an oversample of blacks and Hispanics. As a result, the sample's unweighted race/ethnicity distribution is intended to, and does, differ substantially from the race/ethnicity distribution in the population. It is only when the data are weighted to adjust for this design that they become representative. For more information about weights in ANES studies, see DeBell (2010) and DeBell & Krosnick (2009).

The "design weights" or base weights for the ANES 2008 Time Series account for probability of household selection and probability of respondent selection and are post-stratified<sup>3</sup> to match population statistics for the metropolitan/non-metropolitan status of household locations and for household race/ethnicity. The "poststratified" weights are additionally post-stratified at the individual level to match population statistics for race/ethnicity, age, and educational attainment from the March 2008 Current Population Survey.

The design weights for the ANES 2008-2009 Panel Study account for the probability of household selection and probability of respondent selection within the household, and post-stratified weights are also adjusted to match population statistics for sex, census region, metropolitan status, age, race/ethnicity, and educational attainment.

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<sup>1</sup> These vote percentages are available at <http://www.fec.gov/pubrec/fe2008/2008presgeresults.pdf>

<sup>2</sup> See [http://elections.gmu.edu/Turnout\\_2008G.html](http://elections.gmu.edu/Turnout_2008G.html)

<sup>3</sup> Poststratification is a weighting adjustment intended to make the data more representative of the target population by specified measures, such as age, educational attainment, and race/ethnicity. Respondents belonging to population subgroups that are underrepresented in the sample have their weights increased so that the sample matches known population benchmarks, while respondents belonging to overrepresented groups have their weights reduced. Poststratification is a standard procedure in nationally representative surveys.

The design weights for the Time Series data were derived by ANES staff from data provided by the firm that collected the 2008 Time Series data, RTI International. The poststratified weights for the Time Series data were computed by RTI. The weights for the Panel Study weights were computed by the firm that collected the Panel Study data, Knowledge Networks.

### *Assessing Accuracy in the ANES 2008 Time Series Sample*

Table 1 presents benchmark statistics along with weighted and unweighted estimates from the post-election survey of the ANES 2008 Time Series. Benchmark statistics are from the CPS, from official vote tallies compiled by the Federal Election Commission, and from turnout estimates from the United States Elections Project. The table also shows differences between the Time Series estimates and benchmarks, and, in the case of weighted estimates, significance tests for the differences. Statistics are presented for age, sex, race/ethnicity, educational attainment, home tenure, household size, marital status, household income, presidential vote choice, and voter turnout.<sup>4</sup>

The unweighted estimates in Table 1 are not evidence of sample quality because the sample was intended by design to diverge from benchmarks, a fact illustrated by the magnitude of some of the displayed differences.

Estimates using the base weight account for the complex sample design of the survey. In the absence of any survey error, the expected value of estimates weighted using the base weight equals the population benchmark. To adjust for some observed differences between the base-weighted estimates and the benchmarks, poststratified estimates are often preferred. Comparisons presented below are between benchmarks and poststratified weighted estimates.

Table 1 displays 45 rows of statistics. Of these, a few pairs are functions of each other and therefore contain redundant information that is presented for convenience. For example, the percentage of the population that is male is a function of the female percentage, and vice versa. The same is true for the voter turnout statistics. Setting aside the redundant items, the table contains statistics on 43 unique characteristics.

The post-stratified survey estimates show no statistically significant error in 67 percent of these statistics: no significant difference between the benchmark and the poststratified estimate is detected for 29 of these 43 estimates.

Of the 14 estimates for which a statistically significant difference from the benchmark exists, three are less than 3 percentage points, four are in the 3–5 point range, six are in the 5–10 point range, and one exceeds 10 points.

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<sup>4</sup> This report presents errors measured in percentage points. It can also be informative to examine errors as proportions of estimates. For example, if a population parameter is 4 percent and the estimate is 6 percent, and another parameter of 40 percent has an estimate of 42 percent, each error is 2 percentage points, but the first can also be described as an error of 50 percent  $((6-4)/4 = .5)$ , while the second is an error of 5 percent  $((42-40)/40 = .05)$ . Thus, not all errors of an equal percentage point value are of equal proportional magnitude. For some analytical questions, proportional errors could be more informative than percentage point errors. Readers who wish to consider proportional errors can easily calculate them using the tables in this report.

The average absolute value of the errors is 2.2 percentage points. Excluding turnout, the average error was 1.9 points; for the poststratification factors alone, the average error was 0.7 points, and for the factors not used in weighting, the average error was 3.1 points.

We present each statistically significant difference below.

Age estimates all correspond closely to the benchmarks. This is to be expected because age is one of the poststratification factors used to construct the weights. The slight differences shown (none statistically significant and none greater than half a percentage point) probably result from using November 2008 CPS data for the benchmark comparison, while the poststratification weights were computed to make the estimates match the March 2008 CPS benchmarks.

The proportion of males and females in the sample differs from the benchmarks by 3.1 percentage points.

Race/ethnicity estimates are largely accurate except for whites. Comparisons are presented for the six race/ethnicity indicator categories recorded on the Time Series survey: white, black, Hispanic, Asian, Native American, and other. Respondents could identify with any number of these categories, which are not mutually exclusive. “Other” is not available as a CPS category, but CPS records Pacific Islander separately, so the benchmark for “other” reflects Pacific Islanders. All differences between benchmarks and the ANES estimates in these categories are less than one percentage point except for white, which undershoots the benchmark by 6.9 points.

The under-representation of whites probably results from a difference between the CPS and ANES questionnaires. On the CPS, data for race are reported for all respondents, and 94 percent of Hispanic adult citizens are white. On the ANES 2008 Time Series, a single race/ethnicity question was asked and most people who answered “Hispanic” reported no additional race/ethnicity. Only 2 percent of Hispanic ANES respondents also identified as white. If 94 percent of Hispanic ANES respondents were white, reflecting the population, then the ANES estimate of whites would differ from the benchmark by less than two points. Therefore the difference between the ANES estimate and the benchmark is consistent with the difference that could be expected due to the difference between the question formats.

Poststratification for race/ethnicity was performed using mutually exclusive categories of Hispanic, Black non-Hispanic, and non-Black non-Hispanic. Therefore no weighting adjustments were made to correct for the distribution within the non-Black non-Hispanic category, which includes non-Hispanic whites, people of multiple races, and others. Estimates match benchmarks in the categories of Hispanic, Black non-Hispanic, and non-Black non-Hispanic by virtue of poststratification, though these estimates are not shown in the table.

Education was measured accurately to within one percentage point of the benchmarks. No significant differences between the survey and the benchmark are observed. Education was a poststratification factor in the weighting, so this accuracy merely indicates the weighting worked as intended.

Homeowners are under-represented and renters are over-represented. The proportion of homeowners in the weighted sample is lower than the benchmark by 7.6 percentage points, while the proportion of renters exceeds it by 7.3 percentage points.

Household size estimates over-estimate the proportion of people living in 1-person households (by 5.3 percentage points) and under-estimate the proportion living in 3- and 4-person households (by 3.4 and 3.0 percentage points, respectively).

Marital status estimates show that the survey under-estimates the proportion of adult citizens who are married by 4.3 points and slightly over-estimates the proportion who are separated or divorced (0.9 and 2.2 points, respectively).

Household income is skewed. The survey over-estimates the proportion of adult citizens who live in households with annual incomes of \$14,999 or less (by 5.9 points). It under-estimates the proportion who live in households with incomes of \$75,000-\$99,999 (2.6 points) and \$100,000 or more (8.7 points).

Presidential vote estimates based on retrospective reports reflect the official percentages. The official tally is 52.9 percent for Obama, 45.7 percent for McCain, and 1.4 percent for other candidates. The ANES estimates are 53.8 percent for Obama, 44.2 percent for McCain, and 2.0 percent for other candidates. The ANES differences from official statistics are not statistically significant.

Consistent with decades of prior results in election studies (e.g. Clausen 1968; Belli, Traugott, and Beckmann 2001; McDonald 2003), Time Series data over-estimate voter turnout by a substantial margin. Actual turnout (calculated as the number of ballots counted divided by the estimated vote-eligible population) was 62.3 percent. The ANES estimate of turnout is 77.4 percent, for a difference of 15.1 points.

Table 1. Percentage distribution of selected characteristics in 2008 ANES Time Series survey compared to population benchmarks: 2008 post-election survey

Characteristic	Benchmark	Time Series Post-election						
		Unweighted		Weighted (base weight)		Weighted (poststratified)		
		Percent	Difference from benchmark	Percent	Difference from benchmark	Percent	Difference from benchmark	
<b>Age</b>								
18-29	21.3	17.6	-3.7	15.6	-5.7 ***	20.9	-0.4	
30-39	16.4	18.9	2.5	18.5	2.1 *	16.6	0.2	
40-49	19.3	18.7	-0.6	18.1	-1.2	19.4	0.1	
50-59	18.3	20.1	1.8	20.5	2.2	18.6	0.3	
60-69	12.6	13.6	1.0	14.5	1.9	12.1	-0.5	
70 or older	12.2	11.0	-1.2	12.8	0.6	12.4	0.2	
<b>Sex</b>								
Male	48.0	43.0	-5.0	44.2	-3.8 **	44.9	-3.1 *	
Female	52.0	57.0	5.0	55.8	3.8 **	55.1	3.1 *	
<b>Race/ethnicity</b>								
White	83.4	53.6	-29.8	73.5	-9.9 ***	76.5	-6.9 **	
Black	12.5	25.4	12.9	16.1	3.6	12.4	-0.1	
Asian	3.7	2.1	-1.6	2.7	-1.0	3.0	-0.7	
Native American	1.8	1.7	-0.1	2.0	0.2	1.8	0.0	
Hispanic	9.5	20.6	11.1	8.7	-0.8	9.5	0.0	
Other	0.3	0.6	0.3	0.6	0.3	0.6	0.3	
<b>Educational attainment</b>								
Less than high school credential	11.2	14.2	3.0	11.1	-0.1	11.8	0.6	
High school diploma/equiv.	31.7	32.7	1.0	32.5	0.8	31.4	-0.3	
Some college	29.6	31.4	1.8	31.7	2.1	28.8	-0.8	
Bachelor's degree	18.5	15.2	-3.3	16.5	-2.0	19.0	0.5	
Graduate degree	9.0	6.5	-2.5	8.1	-0.9	9.0	0.0	
<b>Home tenure</b>								
Own	74.4	62.4	-12.0	65.3	-9.1 ***	66.8	-7.6 **	
Rent	24.3	36.0	11.7	33.2	8.9 ***	31.6	7.3 **	
Other	1.2	1.6	0.4	1.5	0.3	1.6	0.4	
<b>Household size</b>								
1 person	15.2	27.7	12.5	29.9	14.7 ***	20.5	5.3 ***	
2 people	35.0	32.4	-2.6	34.5	-0.5	37.7	2.7	
3 people	19.1	15.3	-3.8	14.1	-5.0 ***	15.7	-3.4 ***	
4 people	17.1	12.7	-4.4	11.6	-5.5 ***	14.1	-3.0 **	
5 people	8.2	6.8	-1.4	5.9	-2.3 **	7.0	-1.2	
6 people	3.1	3.1	0.0	2.6	-0.5	3.3	0.2	
7 or more	2.2	2.1	-0.1	1.4	-0.8 **	1.7	-0.5	
<b>Marital status</b>								
Married	55.1	43.0	-12.1	45.2	-9.9 ***	50.8	-4.3 *	
Separated	2.0	4.4	2.4	3.3	1.3 **	2.9	0.9 *	
Divorced	10.7	16.2	5.5	16.1	5.4 ***	12.9	2.2 *	
Widowed	6.6	9.4	2.8	10.4	3.8 ***	7.8	1.2	
Never married	25.6	26.9	1.3	25.0	-0.6	25.6	0.0	
<b>Household income, annual</b>								
\$14,999 or less	8.9	19.5	10.6	16.8	7.9 ***	14.8	5.9 ***	
\$15,000-\$29,999	13.6	19.0	5.4	17.5	3.9 **	16.3	2.7	
\$30,000-\$49,999	18.0	22.1	4.1	21.1	3.1 **	20.3	2.3	
\$50,000-\$74,999	19.2	17.1	-2.1	18.5	-0.7	19.3	0.1	
\$75,000-\$99,999	14.4	9.7	-4.7	10.8	-3.6 ***	11.8	-2.6 *	
\$100,000 or more	26.1	12.6	-13.5	15.3	-10.8 ***	17.4	-8.7 ***	
<b>Presidential vote choice</b>								
Obama	52.9	65.5	12.6	55.9	3.0	53.8	0.9	
McCain	45.7	32.9	-12.8	42.0	-3.7	44.2	-1.5	
Other	1.4	1.6	0.2	2.1	0.7	2.0	0.6	
<b>Turnout</b>								
Voted	62.3	76.3	14.0	78.0	15.7 ***	77.4	15.1 ***	
Did not vote	37.7	23.7	-14.0	22.0	-15.7 ***	22.6	-15.1 ***	

\* p<.05; \*\* p<.01; \*\*\* p<.001

Notes: Turnout is the total ballots counted divided by the voting eligible population. This differs from turnout rates based on the voting age population or the total ballots cast for president. Race/ethnicity categories are indicator variables. Respondents may identify with more than one race/ethnicity, so race/ethnicity percentages do not sum to 100 percent. n = 2,102.

Sources: Vote choice data compiled by Federal Election Commission, available at <http://www.fec.gov/pubrec/fe2008/2008presgeresults.pdf>. Turnout: United States Elections Project estimates at [http://elections.gmu.edu/Turnout\\_2008G.html](http://elections.gmu.edu/Turnout_2008G.html). Income and home tenure benchmarks: U.S. Census Bureau, Current Population Survey, March 2008. Other benchmarks: CPS, November 2008. ANES estimates: 2008 Time Series, post-election data.

## *Assessing Accuracy in the ANES 2008-2009 Panel Study Sample*

Table 2 presents comparisons of Panel Study estimates to benchmarks. The benchmarks are the same as those presented for the Time Series, except for the addition of a Pacific Islander identity category.

The Panel Study's post-stratified weights were designed to make the Panel Study estimates match March 2008 CPS estimates by age, sex, race/ethnicity, and educational attainment. The benchmarks presented here for these characteristics are from November 2008, and population changes between March and November 2008 may contribute slightly to the differences shown.

The Panel Study estimates are from the November (post-election) wave of the panel. Five sets of estimates are presented.

- Unweighted estimates present raw data that are not intended for analysis and are not designed to be representative of the population. These numbers are based on all 2,665 respondents to the November 2008 wave of the Panel Study.
- The “Design weight, Cross-section” estimates use weights that adjust for probability of selection but are not poststratified. These estimates use data from all of the 2,665 respondents to the November 2008 wave of the Panel Study.
- The Post-stratified Cross-section estimates use weights that are post-stratified to match March 2008 CPS estimates for sex, census region, metropolitan status, age, race/ethnicity, and educational attainment. These estimates use all of the 2,665 respondents to the November 2008 survey.
- The Post-stratified Cumulative, cohort 1 estimates are poststratified as described above and use the 1,058 respondents from the first recruitment cohort (recruited to begin panel participation in January 2008) who completed the ANES panel surveys in January, February, June, September, October, and November 2008.
- The Post-stratified Late Cumulative estimates are poststratified as described above and use the 2,312 respondents who completed the ANES panel surveys in September, October, and November 2008. This includes respondents from both recruitment cohorts.

Table 2 presents 46 rows of statistics, of which a few are functions of each other, leaving statistics for 44 unique characteristics. We also exclude the “other” race category from these comparisons because there is no CPS question comparable to the Panel Study question that gathered this information. This leaves 43 categories for comparison.

For the Cross-sectional post-stratified estimates, no statistically significant difference between the benchmark and the estimate is detected for 26 of these 43 statistics. Of the 18 statistics for which a statistically significant difference is detected, seven are less than 3 percentage points. Three are between 3 and 4.9 percentage points, six are between 5 and 10 percentage points, and two exceed 10 percentage points.



Table 2. Percentage distribution of selected characteristics in 2008 ANES Panel Study compared to population benchmarks: November 2008

Characteristic	Unweighted		Design weight		Cross-section		Post-stratified weights		Late cumulative		
	Cross-section		Cross-section		Cross-section		Cumulative, cohort 1		Late cumulative		
	Benchmark	Percent	Difference from benchmark	Percent	Difference from benchmark	Percent	Difference from benchmark	Percent	Difference from benchmark	Percent	Difference from benchmark
<b>Age</b>											
18-29	21.3	8.3	-13.0	10.0	-11.3 ***	18.5	-2.8 *	18.0	-3.3	18.0	-3.3 *
30-39	16.4	15.3	-1.1	15.2	-1.2	17.1	0.7	16.8	0.4	17.1	0.7
40-49	19.3	21.6	2.3	22.5	3.2 ***	20.3	1.0	20.4	1.1	20.4	1.1
50-59	18.3	25.2	6.9	25.4	7.1 ***	19.0	0.7	19.4	1.1	19.1	0.8
60-69	12.6	19.0	6.4	18.1	5.5 ***	12.7	0.1	12.7	0.1	12.7	0.1
70 or older	12.2	10.6	-1.6	8.8	-3.4 ***	12.4	0.2	12.7	0.5	12.6	0.4
<b>Sex</b>											
Male	48.0	42.1	-5.9	43.8	-4.2 ***	47.3	-0.7	48.4	0.4	47.5	-0.5
Female	52.0	57.9	5.9	56.2	4.2 ***	52.7	0.7	51.6	-0.4	52.5	0.5
<b>Race/ethnicity</b>											
White	83.4	87.6	4.2	89.5	6.1 ***	83.4	0.0	83.2	-0.2	83.7	0.3
Black	12.5	9.2	-3.3	6.7	-5.8 ***	12.2	-0.3	11.5	-1.0	12.0	-0.5
Asian	3.7	3.9	0.2	4.3	0.6	4.0	0.3	4.1	0.4	4.0	0.3
Native American or Alaska Native	1.8	1.9	0.1	1.9	0.1	2.1	0.3	3.2	1.4	2.3	0.5
Pacific Islander	0.3	0.9	0.6	1.0	0.7 **	1.1	0.8 **	1.3	1.0 *	1.2	0.9 **
Hispanic	9.5	4.9	-4.6	4.6	-4.9 ***	7.9	-1.6	7.9	-1.6	7.5	-2.0 *
Other	0.0	6.5	6.5	6.3	6.3 ***	8.7	8.7 ***	10.1	10.1 ***	8.4	8.4 ***
<b>Educational attainment</b>											
Less than high school credential	11.2	3.3	-7.9	3.4	-7.8 ***	9.8	-1.4	9.4	-1.8	9.6	-1.6
High school diploma/equiv.	31.7	15.6	-16.1	15.4	-16.3 ***	31.1	-0.6	30.6	-1.1	30.9	-0.8
Some college	29.6	36.9	7.3	37.7	8.1 ***	30.5	0.9	31.2	1.6	30.7	1.1
Bachelor's degree	18.5	24.6	6.1	24.6	6.1 ***	19.0	0.5	19.2	0.7	19.3	0.8
Graduate degree	9.0	19.6	10.6	18.9	9.9 ***	9.6	0.6	9.8	0.8	9.6	0.6
<b>Home tenure</b>											
Own	74.4	81.5	7.1	82.7	8.3 ***	76.3	1.9	78.3	3.9	77.3	2.9 *
Rent	24.3	13.7	-10.6	11.4	-12.9 ***	15.0	-9.3 ***	13.8	-10.5 ***	14.2	-10.1 ***
Other	1.2	4.8	3.6	5.9	4.7 ***	8.7	7.5 ***	7.9	6.7 ***	8.5	7.3 ***
<b>Household size</b>											
1 person	15.2	17.4	2.2	9.9	-5.3 ***	9.8	-5.4 ***	10.5	-4.7 ***	9.6	-5.6 ***
2 people	35.0	38.4	3.4	37.3	2.3 *	34.7	-0.3	36.4	1.4	35.2	0.2
3 people	19.1	17.1	-2.0	19.2	0.1	19.6	0.5	19.1	0.0	19.4	0.3
4 people	17.1	15.9	-1.2	19.0	1.9 *	19.2	2.1	17.0	-0.1	18.9	1.8
5 people	8.2	17.6	9.4	9.8	1.6 *	11.3	3.1 **	12.3	4.1 *	11.5	3.3 **
6 people	3.1	2.4	-0.7	3.0	-0.1	3.6	0.5	2.5	-0.6	3.6	0.5
7 or more	2.2	1.3	-0.9	1.8	-0.4	1.9	-0.3	2.2	0.0	1.9	-0.3
<b>Marital status</b>											
Married	55.1	64.4	9.3	71.9	16.8 ***	65.3	10.2 ***	67.7	12.6 ***	66.7	11.6 ***
Separated	2.0	1.3	-0.7	1.0	-1.0 ***	1.5	-0.5	1.6	-0.4	1.5	-0.5
Divorced	10.7	13.5	2.8	9.7	-1.0	8.7	-2.0 **	7.0	-3.7 ***	8.2	-2.5 ***
Widowed	6.6	5.3	-1.3	3.3	-3.3 ***	3.9	-2.7 ***	3.7	-2.9 ***	3.7	-2.9 ***
Never married	25.6	15.5	-10.1	14.1	-11.5 ***	20.6	-5.0 ***	20.0	-5.6 **	19.9	-5.7 ***
<b>Household income, annual</b>											
\$14,999 or less	8.9	5.5	-3.4	4.1	-4.8 ***	6.7	-2.2 **	7.1	-1.8	5.9	-3.0 ***
\$15,000-\$29,999	13.6	10.7	-2.9	9.4	-4.2 ***	13.4	-0.2	13.1	-0.5	12.9	-0.7
\$30,000-\$49,999	18.0	21.7	3.7	20.6	2.6 **	23.2	5.2 ***	22.1	4.1 *	22.7	4.7 ***
\$50,000-\$74,999	19.2	22.5	3.3	22.8	3.6 ***	22.9	3.7 **	22.9	3.7 *	24.1	4.9 ***
\$75,000-\$99,999	14.4	15.3	1.0	16.7	2.4 **	14.2	-0.2	16.5	2.2	14.8	0.5
\$100,000 or more	26.1	24.3	-1.8	26.4	0.3	19.5	-6.6 ***	18.3	-7.8 ***	19.7	-6.4 ***
<b>Presidential vote choice</b>											
Obama	52.9	51.8	-1.1	48.5	-4.4 ***	49.4	-3.5 *	45.8	-7.1 **	48.4	-4.5 **
McCain	45.7	45.7	0.0	48.7	3.0 **	47.1	1.4	49.8	4.1	47.6	1.9
Other	1.4	2.5	1.1	2.8	1.4 ***	3.5	2.1 ***	4.4	3.0 *	3.9	2.5 ***
<b>Turnout</b>											
Voted	62.3	89.5	27.2	89.0	26.7 ***	84.5	22.2 ***	84.0	21.7 ***	85.1	22.8 ***
Did not vote	37.7	10.5	-27.2	11.0	-26.7 ***	15.5	-22.2 ***	16.0	-21.7 ***	14.9	-22.8 ***

\* p<.05; \*\* p<.01; \*\*\* p<.001

n = 2,665 for cross-section, 1,058 for Cumulative cohort 1, and 2,312 for Late Cumulative estimates.

Notes: Turnout is the total ballots counted divided by the voting eligible population. This differs from rates based on the voting age population or the total ballots cast for president. Race/ethnicity categories are indicator variables. Respondents may identify with more than one race/ethnicity, so race/ethnicity percentages do not sum to 100 percent. The "other" race/ethnicity category does not exist on the CPS.

Sources: Presidential vote choice benchmarks: data compiled by Federal Election Commission, available at <http://www.fec.gov/pubrec/fe2008/2008presgeresults.pdf>.

Turnout benchmarks: United States Elections Project 2008 turnout estimates at [http://elections.gmu.edu/Turnout\\_2008G.html](http://elections.gmu.edu/Turnout_2008G.html). Home tenure and household income benchmarks: U.S. Census Bureau, Current Population Survey, March 2008. Other benchmarks: U.S. Census Bureau, Current Population Survey, November 2008. ANES estimates: 2008-2009 ANES Panel Study, version released September 3, 2010.

For the cross-sectional estimates, the average absolute error was 2.6 percentage points. Excluding turnout, the average error was 2.1 points; for the poststratification factors alone, the average error was 0.8 points, and for the factors not used in weighting, the average error was 3.8 points.

We discuss the statistically significant differences below, focusing on the cross-sectional estimates. The cumulative estimates are very similar and may be gleaned from Table 2.

Panel Study estimates for age show one statistically significant difference from benchmarks, for those age 18-29. There are no statistically significant differences for sex. Slight differences exist after poststratification because poststratification weights were computed to allow small differences in order to minimize design effects.<sup>5</sup>

Race and ethnicity match the CPS estimates (within 2 percentage points) in all CPS categories. The difference for Pacific Islanders is statistically significant, but very small (0.8 percentage points in the November cross-sectional estimate). The “other” category is not used by CPS, but ANES estimates 8.7 percent of the population would identify this way.

Education estimates are accurate overall. No differences are statistically significant. Education was a poststratification factor, and only slight differences exist after poststratification.

Home tenure estimates show significant inaccuracy. The study slightly over-estimates the proportion of adult citizens who own their own homes while under-estimating renters by about 9 to 11 percentage points. This may be because the greater mobility of renters makes them more difficult to recruit to a long-term panel study. Those living in “other” household arrangements are over-represented by about 7 points.

Household size estimates are not always accurate. For five-person households the post-stratified estimates overshoot the benchmark by 3-4 points, while for 1-person households these estimates are too low (by about 5-6 points).

Married people are over-represented (by 10 to 13 points) and people who are divorced, widowed, or never married are all under-represented (by about 2 to 6 points).

On income, the sample over-represents the middle and under-represents the extremes. For example, in the poststratified cross-sectional estimates, the lowest income category (\$14,999 or less per year) is 6.7 percent of the sample compared to 8.9 percent for the benchmark, and the highest income category (\$100,000 or more) is 19.5 percent compared to 26.1 for the benchmark. In the middle categories (\$30,000 to \$49,999 and \$50,000 to \$74,999), the survey estimates are 4 to 5 points too high.

Presidential vote choice is a variable of special interest in the ANES. No statistically significant difference is detected between the true McCain vote percentage and any poststratified survey estimate. However, estimates for Obama’s vote percentage are consistently too low. The poststratified cross-sectional weight puts Obama and McCain at 49.4 percent and 47.1 percent, respectively, which understates Obama’s percentage, overstates McCain’s percentage, and understates Obama’s margin. Although the cumulative cohort 1 estimate shows McCain ahead by 4 percentage points, the difference

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<sup>5</sup> A “design effect” is the ratio of the variance in a given study design to the variance that would exist in a study using a simple random sample. Poststratification weighting has the potential to increase design effects, reducing the precision of estimates (and, conversely, increasing standard errors). By limiting the extent to which poststratification weights were permitted to inflate the design effect, we also allowed the poststratified weights to produce estimates that differ slightly from their target benchmarks.

between the McCain and Obama estimates is not statistically significant. However, the under-estimate of Obama's vote percentage is statistically significant.

The weights may not be optimal with respect to the vote choice proportion estimates. ANES may review the Panel Study weights in the future to assess the possibility of improving its weighted estimates by releasing revised weights.

Turnout was substantially over-estimated. Compared to the benchmark of 62.3 percent, the Panel Study's weighted estimates are 22 to 23 percentage points too high (at 84.0 to 85.1 percent). ANES is currently undertaking a voter validation study that may show the extent to which this over-estimate is due to mis-reporting or sample bias. Indications are that survey respondents are more likely to vote than the general population.

### *Conclusions*

Overall, 84 percent of the reported estimates for the Time Series and 84 percent of reported estimates for the Panel Study have only small or moderate errors, that is, differences that are five percentage points or less, that are statistically insignificant, or both.

Consistent with prior results from ANES surveys and other sources, the Time Series data over-estimate voter turnout by a large margin (15 points). The Time Series data also miss population benchmarks by more than 5 percentage points for the percentage of the population identifying as white, homeowners, home renters, the percentage of people living in a one-person household, and people living in households with incomes of \$14,999 or less or \$100,000 or more.

The internet Panel Study over-estimates voter turnout by 22 points and differs from benchmarks by more than 5 percentage points for the proportion of the population self-identifying as an "other" race (although the CPS and Panel Study questionnaires are not comparable on this statistic, so this difference is not tallied in the summary reporting that 84 percent of estimates have only small or moderate errors), those renting or having "other" home tenure status, households of one person, those who are married, and those in households with incomes of \$30,000 to \$49,999 or \$100,000 or more.

## References

- Belli, Robert F., Santa Traugott, and Steven J. Rosenstone. 1994. "Reducing Over-Reporting of Voter Turnout: An Experiment Using a Source Monitoring Framework." NES Technical Reports Number 35. Available online at <ftp://ftp.electionstudies.org/ftp/nes/bibliography/documents/nes010153.pdf>
- Clausen, Aage R. 1968. "Response Validity: Vote Report." *Public Opinion Quarterly*, 32, 588-606.
- DeBell, Matthew. 2010. *How to Analyze ANES Survey Data*. ANES Technical Report Series no. nes012492. Palo Alto, CA, and Ann Arbor, MI: Stanford University and the University of Michigan. Available online at <http://www.electionstudies.org/resources/papers/nes012492.pdf>
- DeBell, Matthew, and Jon A. Krosnick. 2009. *Computing Weights for American National Election Study Survey Data*. ANES Technical Report Series, No. nes012427. Available online at <http://www.electionstudies.org/resources/papers/nes012427.pdf>
- DeBell, Matthew, Jon A. Krosnick, and Arthur Lupia. 2010. *Methodology Report and User's Guide for the 2008-2009 ANES Panel Study*. Palo Alto, CA and Ann Arbor, MI: Stanford University and the University of Michigan. Available online at [http://www.electionstudies.org/studypages/2008\\_2009panel/anes2008\\_2009panel\\_MethodologyRpt.pdf](http://www.electionstudies.org/studypages/2008_2009panel/anes2008_2009panel_MethodologyRpt.pdf)
- Lupia, Arthur, Jon A. Krosnick, Pat Luevano, Matthew DeBell, and Darrell Donakowski. 2010. *User's Guide to the ANES 2008 Time Series Study*. Ann Arbor, MI, and Palo Alto, CA: The University of Michigan and Stanford University. Available online at <http://www.electionstudies.org/studypages/2008prepost/2008prepost.htm>
- McDonald, Michael P. 2003. "On the Over-Report Bias of the National Election Studies." *Political Analysis*, 11, 180-186.

## *Methodological Notes*

*Causes of differences.* Differences between the ANES estimates and the population benchmarks may result from sampling error, nonsampling error, and differences in populations being compared. All ANES estimates, like all survey estimates, are subject to all of these kinds of errors.

Sampling error is random error of a magnitude indicated by the standard errors listed in this report. Sampling error is the only type of error that is readily quantifiable using established statistical methods.

Nonsampling error includes measurement error, coverage error, data entry error, data processing error, and other sources of error. Measurement error exists when survey questions do not elicit accurate answers from survey respondents or when questions on two surveys that are intended to measure the same thing do not do so. Measurement error can be a substantial component of overall survey error. Coverage error exists when the survey's sample does not properly draw respondents from the target population. ANES surveys are household surveys, so they have coverage error for members of the target population who do not live in households, such as the homeless population. The ANES Panel Study's sample was drawn by landline telephones, so it has coverage error for people who do not live in households with landline telephones, including the homeless, non-telephone households, and cell-phone-only households. Coverage error also exists because ANES participants were recruited before the November data reported here were collected, potentially leading to some small differences between the sample and the population due to immigration, emigration, and other changes in the population. Data entry and data processing errors occur when the interviewer (in the Time Series) or the respondent (in the Internet Panel Study) makes a typographical error when entering data or when staff at the data collection firm or at ANES make an error in formatting or calculating variables being prepared for the public-use file. ANES strives to minimize all types of errors, but they cannot be eliminated.

Differences in populations being compared exist when benchmark statistics do not describe exactly the same population as the target population for the ANES. Population differences exist in these comparisons because some benchmark statistics are from the November 2008 CPS while others are from the March 2008 CPS, and the population parameters will have changed slightly between March and November 2008.

*Missing data.* Missing data due to item nonresponse were excluded. For the Panel Study, the number of cases so excluded was none for age after imputation (see below), none for sex, none for race, 1 for Hispanic ethnicity, 23 for education, 241 for home tenure, 230 for household size, 27 for marital status, 23 for income, 19 for vote choice, and none for turnout. These numbers are for the cross-sectional estimates. Missing data numbers for the cumulative estimates are smaller because those are subsets of the full cross-section.

For the Time Series study, the number of cases so excluded was 5 for age (by combining respondent and household informant reports), none for sex, 15 for race/ethnicity, 13 for education, 8 for home tenure, 6 for household size, 14 for marital status after partial imputation (see below), 159 for income, 29 for vote choice, and none for voter turnout.

The CPS estimates used as benchmarks in this report include imputed data. This imputation was done by the Census Bureau. CPS estimates are weighted using the person weight variable, *pwswgt*, and are for the subset of CPS cases that were U.S. citizens age 18 or older.

*Age imputation on the Panel Study.* Age as of Election Day in 2008 was calculated based on the respondent's date of birth. For some respondents, age in years on a particular interview date was reported, but date of birth was not reported, creating the possibility of a 1 year difference between age on election day in 2008 and age on the day that age was reported. To compute age on election day, a month and day of birth were imputed using a random uniform distribution. This

imputation was done for 133 of the November 2008 respondents prior to the poststratification stage of weighting.

*Marital status imputation on the Time Series.* On the Time Series marital status question, respondents who volunteered that they were living with a partner had the volunteered response recorded. Recording volunteered responses does not permit valid population inferences of the incidence of the volunteered characteristics, nor does CPS include a partnered category for comparison. Under the assumption that all of the 38 respondents who volunteered that they live with a partner would be accurately described as widowed, divorced, separated, or never married, we imputed partnered respondents to one of these categories. (31 of these respondents completed the Post-election survey.) Imputation percentages were based on the marital status of persons living with a partner as reported in the Adult Education survey of the 2005 National Household Education Surveys Program, a nationally representative RDD telephone survey sponsored by the National Center for Education Statistics with a sample size of about 6,900 and an estimated unit response rate of 48 percent. Differences between results using imputed data and treating the volunteered responses as missing and deleting the cases listwise are 1 percentage point or less.

*Race/ethnicity.* On the CPS, race is measured by asking respondents to report all races that apply and coding categories of white, black, Asian, American Indian or Alaska Native, and Hawaiian or other Pacific Islander. Hispanic ethnicity is measured with a separate question by asking respondents whether or not they are Hispanic or Latino. Hispanics may be of any race. The ANES Panel Study used the same two-question approach to race and ethnicity as CPS, though question format was not identical. The ANES Time Series asked “What racial or ethnic group or groups best describes you?,” and up to five mentions were recorded in categories of white, black, Hispanic, Asian, Native American, or other. Respondents who did not mention that they were Hispanic or Latino were asked if they were Hispanic, but those who said they were Hispanic were not probed for a racial identity.

There are many ways to summarize the responses to these race and ethnicity questions. Poststratification for race/ethnicity on the Panel Study was based on a “race/ethnicity” summary variable with four mutually exclusive categories: White non-Hispanic, Black non-Hispanic, Hispanic, and other non-Hispanic. All respondents who chose more than one race are “other non-Hispanic.” All Hispanics, regardless of race, were coded Hispanic. The Time Series poststratification was performed with a three-category race/ethnicity summary: Hispanic, non-Hispanic Black, and other (non-Black and non-Hispanic). Race/ethnicity is summarized in this report using indicator variables that show whether the respondent identified as a member of each group independently. Respondents may identify with any number of these groups, so the percentages for all groups do not sum to 100 percent.

*Generalized variance estimation for CPS.* Sampling errors for CPS benchmarks were calculated using generalized variance estimation procedures recommended by the Census Bureau for use with the public-use CPS files. Standard errors of estimated percentages are the square root of  $((b/x)*p(100-p))$ , where  $b$  is a parameter specified in Census documentation that approximates the sampling interval for the population subgroup being estimated,  $x$  is the total number of people in the population the denominator of the percentage, and  $p$  is the percentage. The standard errors of estimated differences are calculated as the square root of the sum of the squared standard errors of the estimates. SEs were calculated using a  $b$  of 3068 for home tenure, 1140 for household income, and 2131 for other variables. For more information about CPS, see *Current Population Survey, 2008 ASEC Technical Documentation and Current Population Survey, November 2008: Voting and Registration Supplement Technical Documentation* and <http://www.census.gov>.

*Sampling errors for poststratified estimates.* Standard errors (also called sampling errors) measure expected variability in data due to random effects in sampling. Poststratification

removes such variability by forcing estimates to match benchmarks. Therefore standard errors do not retain their conventional meaning for poststratified estimates. We report standard errors for such estimates in this report, but they do not indicate true sampling errors. Instead, they indicate what the sampling error would be if a given estimate were obtained in non-poststratified data.

*Sampling errors for ANES estimates.* ANES sampling errors were estimated using Taylor Series survey procedures in Stata to account for the sample designs of the ANES studies.

*Voter turnout.* Voter turnout benchmarks are based on the estimates developed by the United States Elections Project (<http://elections.gmu.edu/>), called the “VEP Total Ballots Counted Turnout Rate.” The estimate is described as follows:

“**VEP Total Ballots Counted Turnout Rate** is the total ballots counted divided by the voting-eligible population. The total ballots cast includes blank and other such ballots, but does not include rejected absentee and provisional ballots. This would be the preferred turnout rate statistic, but all states do not report total ballots cast. To estimate the total ballots cast nationally, the national vote for president is multiplied by 1.0098%, which is the ratio of votes for highest office to the total ballots cast for the states that report both numbers. I expect more states to report their total ballots cast and will update this estimate when more information is available.”

Source: [http://elections.gmu.edu/Turnout\\_2008G.html](http://elections.gmu.edu/Turnout_2008G.html)

The denominator in the turnout estimate is an estimate of the number of people eligible to vote, which excludes noncitizens, prisoners, and other ineligible felons. The ANES sample excludes noncitizens but does not screen out ineligible felons. The denominator includes eligible voters living outside the United States. The ANES sample is limited to people living in the United States.

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Table 1A. Standard errors for Table 1

Characteristic	Time Series Post-election							
	S.E. for benchmark	Unweighted		Weighted (base weight)		Weighted (poststratified)		
		S.E. for percent	S.E. for difference from benchmark	S.E. for percent	S.E. for difference from benchmark	S.E. for percent	S.E. for difference from benchmark	
Age								
18-29	0.13	—	—	1.07	1.08	1.34	1.35	
30-39	0.12	—	—	0.92	0.93	0.87	0.88	
40-49	0.13	—	—	1.02	1.03	1.11	1.12	
50-59	0.12	—	—	1.18	1.19	1.16	1.17	
60-69	0.11	—	—	0.99	1.00	0.81	0.81	
70 or older	0.11	—	—	0.93	0.94	0.93	0.94	
Sex								
Male	0.16	—	—	1.25	1.26	1.36	1.36	
Female	0.16	—	—	1.25	1.26	1.36	1.36	
Race/ethnicity								
White	0.12	—	—	2.69	2.69	2.62	2.62	
Black	0.11	—	—	2.14	2.14	1.89	1.89	
Asian	0.06	—	—	0.55	0.55	0.61	0.61	
Native American	0.04	—	—	0.52	0.52	0.47	0.47	
Hispanic	0.00	—	—	1.36	1.36	1.67	1.67	
Other	0.02	—	—	0.19	0.19	0.23	0.23	
Educational attainment								
Less than high school credential	0.10	—	—	1.26	1.26	1.45	1.45	
High school diploma/equiv.	0.15	—	—	2.24	2.24	2.20	2.21	
Some college	0.15	—	—	1.62	1.63	1.60	1.61	
Bachelor's degree	0.12	—	—	1.61	1.61	1.79	1.79	
Graduate degree	0.09	—	—	1.25	1.25	1.50	1.50	
Home tenure								
Own	0.17	—	—	2.51	2.52	2.49	2.49	
Rent	0.17	—	—	2.56	2.57	2.51	2.52	
Other	0.04	—	—	0.27	0.27	0.29	0.30	
Household size								
1 person	0.12	—	—	1.58	1.58	1.24	1.25	
2 people	0.15	—	—	1.31	1.32	1.48	1.49	
3 people	0.13	—	—	0.85	0.86	0.99	1.00	
4 people	0.12	—	—	0.87	0.88	0.97	0.98	
5 people	0.09	—	—	0.70	0.71	0.82	0.82	
6 people	0.06	—	—	0.41	0.41	0.52	0.52	
7 or more	0.05	—	—	0.27	0.27	0.31	0.31	
Marital status								
Married	0.16	—	—	2.01	2.02	2.07	2.08	
Separated	0.05	—	—	0.41	0.41	0.35	0.35	
Divorced	0.10	—	—	1.13	1.13	1.00	1.00	
Widowed	0.08	—	—	0.87	0.87	0.65	0.65	
Never married	0.14	—	—	1.58	1.59	1.61	1.62	
Household income, annual								
\$14,999 or less	0.07	—	—	1.42	1.42	1.33	1.33	
\$15,000-\$29,999	0.08	—	—	1.32	1.32	1.42	1.42	
\$30,000-\$49,999	0.09	—	—	1.10	1.10	1.19	1.19	
\$50,000-\$74,999	0.09	—	—	1.35	1.35	1.41	1.41	
\$75,000-\$99,999	0.08	—	—	1.06	1.06	1.20	1.20	
\$100,000 or more	0.10	—	—	1.69	1.69	1.99	1.99	
Presidential vote choice								
Obama	0.00	—	—	2.92	2.92	2.99	2.99	
McCain	0.00	—	—	2.81	2.81	2.91	2.91	
Other	0.00	—	—	0.47	0.47	0.46	0.46	
Turnout								
Voted	0.00	—	—	1.44	1.44	1.45	1.45	
Did not vote	0.00	—	—	1.44	1.44	1.45	1.45	

Notes: Notes: S.E. is standard error. — means not applicable. S.E.s are not meaningful for unweighted estimates. See Table 1 for additional notes. See main text for information about generalized variance estimation for CPS. Standard errors do not have their conventional meaning for CPS estimates of age, sex, and race/ethnicity because these statistics are raked to population benchmarks estimated from the decennial census. Standard errors do not apply to the presidential vote choice and turnout benchmarks because these are not survey estimates.

Table 2A. Standard errors for Table 2

Characteristic	Unweighted		Design weight		Post-stratified weights						
	Cross-section		Cross-section		Cross-section		Cumulative, cohort 1		Late cumulative		
	S.E. for benchmark	S.E. for percent	S.E. for difference from benchmark	S.E. for percent	S.E. for difference from benchmark	S.E. for percent	S.E. for difference from benchmark	S.E. for percent	S.E. for difference from benchmark	S.E. for percent	S.E. for difference from benchmark
Age											
18-29	0.13	—	—	0.71	0.71	1.27	1.28	2.11	2.11	1.39	1.40
30-39	0.12	—	—	0.76	0.76	0.99	1.00	1.66	1.66	1.07	1.08
40-49	0.13	—	—	0.91	0.91	1.00	1.01	1.68	1.68	1.08	1.08
50-59	0.12	—	—	0.96	0.96	0.94	0.95	1.51	1.52	1.02	1.03
60-69	0.11	—	—	0.81	0.81	0.71	0.72	1.18	1.18	0.78	0.79
70 or older	0.11	—	—	0.55	0.55	0.90	0.91	1.43	1.43	0.97	0.98
Sex											
Male	0.16	—	—	1.08	1.08	1.33	1.34	2.19	2.20	1.44	1.44
Female	0.16	—	—	1.08	1.08	1.33	1.34	2.19	2.20	1.44	1.44
Race/ethnicity											
White	0.12	—	—	0.65	0.65	1.09	1.10	1.90	1.90	1.19	1.20
Black	0.11	—	—	0.49	0.48	0.96	0.97	1.59	1.59	1.04	1.05
Asian	0.06	—	—	0.47	0.45	0.54	0.54	1.00	1.00	0.60	0.60
Native American or Alaska Native	0.04	—	—	0.30	0.30	0.41	0.41	0.91	0.91	0.47	0.47
Pacific Islander	0.02	—	—	0.23	0.23	0.29	0.29	0.49	0.49	0.34	0.34
Hispanic	0.00	—	—	0.46	0.46	0.83	0.83	1.39	1.39	0.90	0.90
Other	0.00	—	—	0.53	0.53	0.41	0.41	1.50	1.50	0.90	0.90
Educational attainment											
Less than high school credential	0.10	—	—	0.41	0.41	1.08	1.08	1.63	1.63	1.16	1.16
High school diploma/equiv.	0.15	—	—	0.78	0.78	1.37	1.38	2.27	2.27	1.48	1.49
Some college	0.15	—	—	1.06	1.06	1.11	1.12	1.85	1.86	1.21	1.22
Bachelor's degree or higher	0.12	—	—	0.93	0.93	0.86	0.87	1.48	1.49	0.95	0.96
Graduate degree	0.09	—	—	0.83	0.83	0.51	0.52	0.89	0.89	0.55	0.56
Home tenure											
Own	0.17	—	—	0.83	0.83	1.22	1.23	2.00	2.01	1.32	1.33
Rent	0.17	—	—	0.66	0.66	0.98	0.99	1.62	1.63	1.05	1.06
Other	0.04	—	—	0.57	0.57	0.92	0.92	1.45	1.45	0.99	0.99
Household size											
1 person	0.12	—	—	0.52	0.52	0.63	0.64	1.07	1.08	0.66	0.67
2 people	0.15	—	—	1.07	1.07	1.26	1.27	2.07	2.08	1.37	1.38
3 people	0.13	—	—	0.92	0.92	1.13	1.14	1.81	1.81	1.22	1.23
4 people	0.12	—	—	0.93	0.93	1.16	1.17	1.76	1.76	1.23	1.24
5 people	0.09	—	—	0.75	0.75	1.00	1.00	1.73	1.73	1.09	1.09
6 people	0.06	—	—	0.42	0.42	0.59	0.59	0.81	0.81	0.62	0.62
7 or more	0.05	—	—	0.38	0.38	0.40	0.40	0.78	0.78	0.44	0.44
Marital status											
Married	0.16	—	—	0.94	0.94	1.31	1.32	2.17	2.18	1.42	1.43
Separated	0.05	—	—	0.19	0.19	0.35	0.35	0.68	0.68	0.40	0.40
Divorced	0.10	—	—	0.57	0.57	0.61	0.62	0.86	0.87	0.64	0.65
Widowed	0.08	—	—	0.31	0.31	0.44	0.45	0.60	0.61	0.46	0.47
Never married	0.14	—	—	0.77	0.77	1.25	1.26	2.10	2.10	1.35	1.36
Household income, annual											
\$14,999 or less	0.07	—	—	0.39	0.39	0.71	0.71	1.29	1.29	0.73	0.74
\$15,000-\$29,999	0.08	—	—	0.61	0.61	1.01	1.01	1.59	1.59	1.06	1.06
\$30,000-\$49,999	0.09	—	—	0.87	0.87	1.14	1.14	1.84	1.84	1.23	1.23
\$50,000-\$74,999	0.09	—	—	0.90	0.90	1.13	1.13	1.85	1.85	1.26	1.26
\$75,000-\$99,999	0.08	—	—	0.82	0.82	0.86	0.86	1.58	1.58	0.96	0.96
\$100,000 or more	0.10	—	—	0.98	0.98	0.96	0.97	1.52	1.52	1.03	1.04
Presidential vote choice											
Obama	0.00	—	—	1.14	1.14	1.40	1.40	2.29	2.29	1.52	1.52
McCain	0.00	—	—	1.14	1.14	1.39	1.39	2.30	2.30	1.51	1.51
Other	0.00	—	—	0.39	0.39	0.58	0.58	1.18	1.18	0.69	0.69
Turnout											
Voted	0.00	—	—	0.70	0.70	1.07	1.07	1.83	1.83	1.13	1.13
Did not vote	0.00	—	—	0.70	0.70	1.07	1.07	1.83	1.83	1.13	1.13

Notes: S.E. is standard error. — means not applicable. S.E.s are not meaningful for unweighted estimates. See Table 1A and Table 2 for additional notes.