

Supplementary/Online Appendix for “Presidential  
Campaigns and the Fundamentals Reconsidered”

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# 1 Appendix 1: Election Forecasts versus Campaign Polls

This section provides the details for how we generated the election forecasts on page 1. Table A-1 compares the accuracy of a forecast model based on the economy and presidential approval with actual vote intentions expressed in opinion polls at the same time. The results indicate that the simple forecast model correctly predicts the election winner about twice as often and predicts the popular vote percentage more closely than vote intentions from the same period.

The second column indicates the percent of the two party vote that the incumbent party candidate received. The third column reports the prediction based on the forecast model. This forecast is based on the following regression model. The dependent variable in this model is the incumbent share of the two party vote.<sup>1</sup> The model includes two predictors, a measure of the economy and presidential approval. The economic measure is a weighted sum of the index of leading economic indicators for the first 13 quarters of the previous presidency. This measure only includes economic information through March of the election year (see Erikson & Wlezien (2008*b*) for a complete discussion of this measure). Presidential approval represents the average approval rating of all Gallup polls in June of the election year. The number of polls asking the presidential approval question in June of each election year ranged from one to three.<sup>2</sup> The parameters from this regression model are used to generate a forecast. Importantly, forecasts are based only on information from previous elections. That is, the 1968 forecast is based on the parameters from a regression of the 5 previous elections (1952 through 1964). The estimate for 1972 is based on the previous 6 elections, the estimate for 1976 is based on the previous 7 elections, and so on.

The June poll results (Column 5) reflect the percentage supporting the incumbent party among those who expressed support for the Democratic or Republican candidate. All Gallup polls that asked about vote intentions during June of the election year are used.<sup>3</sup> Survey marginals were combined with a weighted average based on the number of respondents in each survey. The number of surveys in each month ranged from one to five. The fact that the number of surveys was equal to or more than the number of surveys asking the presidential approval question is important. This implies that any difference in sampling error is biased against the forecast model.<sup>4</sup>

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<sup>1</sup>Election Results data from Table 385 of the U.S. Census Bureau 2010 Statistical Abstract (<http://www.census.gov/compendia/statab/cats/elections/presidential.html>).

<sup>2</sup>The specific question asks, “Do you approve or disapprove of the way [the President] is handling his job as president?” The percent approving includes “Don’t Know” responses.

<sup>3</sup>2004 stands as the only exception. July polls were used in 2004, because Gallup did not ask the vote intention question in June of 2004. If anything, relying on July data would generate a bias against the forecast model, because July is closer to the election.

<sup>4</sup>Questions follow the format of, “(Suppose the (2008 presidential) election were being held today. If Barack Obama were the Democratic Party’s candidate and John McCain were the Republican Party’s candidate, who would you be more likely to vote for—Barack Obama, the Democrat, or John McCain, the

Table A-1: A Comparison of Presidential Election Forecasts to Vote Intentions

Election	Incumbent Party Vote Share	Forecast	Correct Forecast?	June Polls	Correct Poll Prediction?
1968	49.4	49.1	Yes	53.9	No
1972	61.8	54.2	Yes	57.6	Yes
1976	49.0	45.1	Yes	37.0	Yes
1980	44.8	34.7	Yes	51.1	No
1984	59.1	55.6	Yes	56.8	Yes
1988	53.8	54.2	Yes	44.9	No
1992	46.4	48.8	Yes	53.8	No
1996	54.7	53.7	Yes	59.1	Yes
2000	50.3	55.2	Yes	45.2	No
2004	51.2	55.4	Yes	47.6	No
2008	46.3	44.0	Yes	46.4	Yes

## 2 Appendix 2: Estimate of “Correctly” Weighted Fundamentals

Following, Gelman & King (1993), the measure of whether respondents expressed a vote intention that corresponds with the “correctly” weighted fundamentals is based on a regression using survey responses from the final week of the campaign. We report the full results of this regression here. Although we focus on 12 distinct fundamentals, the model includes 15 predictors because we control for three racial/ethnic categories, and we include a binary variable to account for “don’t know” and “unavailable” responses to the income question (about 11 percent of respondents did not offer their income). Because our dependent variable is binary (1 = Gore vote intention, 0 = Bush vote intention), we use logistic regression to estimate the relationships between the fundamentals and vote intention.<sup>5</sup> The estimated relationship between the fundamental variables and vote intentions from the final week of the campaign reflect our estimates of the correctly weighted fundamentals. Partisanship, presidential approval, and the policy variables have been coded so higher values correspond with more liberal positions. Thus, we expect positive correlations between the

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Republican?) (If Undecided, ask:) As of today, do you lean more toward—Obama, the Democrat, or McCain, the Republican?” However, prior to 1992, the Gallup question asked “who would you like to see win” as opposed to “who would you be more likely to vote for.” or “who would you vote for.”

<sup>5</sup>The NAES uses a standard vote intention question that asks, if you voted today, who would you vote for? Following previous research, we only analyze respondents who expressed vote support for the Democratic or Republican candidate (Box-Steffensmeier, Darmofal & Farrell 2009, Erikson & Wlezien 2008a, Gelman & King 1993, Peterson 2009). This ensures that any evidence in support of our hypothesis does not result because we measured expressed vote choice differently than previous research.

political variables and vote intentions for Gore. To facilitate comparison of the magnitude of the effects, all non-binary variables have been rescaled to have a standard deviation of 0.5 (Gelman 2008, Gelman, Jakulin, Pittau & Su 2008).<sup>6</sup> Figure A-1 reports the results for this fundamentals analysis. The fundamental variables appear on the left vertical axis. The dots indicate the regression coefficients and the lines correspond with the 95 percent confidence intervals. Not surprisingly, we see evidence that most of the fundamentals relate to vote intentions during the week prior to the election and the model fits the data well. It is also not a surprise that partisanship and presidential approval are the strongest predictors of vote intentions.<sup>7</sup> We do not, however, find evidence that economic evaluations influenced vote choice. This null result is consistent with Johnston, Hagen & Jamieson's (2004, Ch.5) conclusion that Gore did not claim credit for the economy. The null result may also reflect the fact that, as noted in the text, the leading economic indicators were quite middling.<sup>8</sup> Regardless of the specific reason for this result, like Gelman & King (1993), we take these coefficients as indicators of the fully informed fundamental weights.

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<sup>6</sup>This standardization offers a reasonable comparison to the binary predictors in the model because an evenly distributed binary variable will have a standard deviation of 0.5 (Gelman et al. 2008).

<sup>7</sup>Coefficients can be compared because predictors have been standardized to have an equal variance.

<sup>8</sup>The null result is also consistent with Kramer's (1983) argument that cross-sectional data are not well suited to evaluate the relationship between economic conditions and vote choice. Alternatively, because presidential approval and partisanship are endogenous to economic evaluations (Erikson, MacKuen & Stimson 2002), these coefficients may incorporate the influence of economic evaluations. This conclusion is also consistent with evidence that the relationship between partisanship and economic evaluations can run the other way (Enns, Kellstedt & McAvoy 2012, Evans & Andersen 2006, Wlezien, Franklin & Twigg 1997).

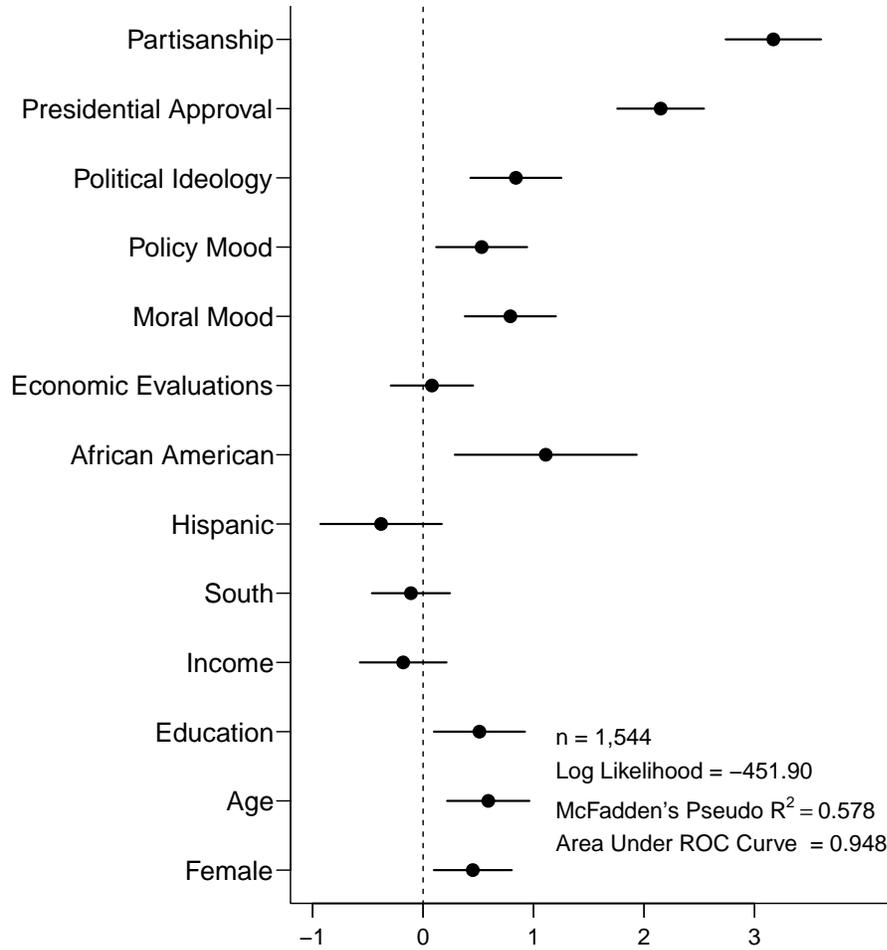


Figure A-1: “Enlightened” Fundamental Weights: The Relationship between the Fundamentals and 2000 Presidential Vote Intentions During the Final Week of the Campaign

*Notes:* Vote intention (Gore = 1, Bush = 0) is the dependent variable. The analysis is based on NAES data from the final week of the campaign. Controls for “other race” and “don’t know income” are not shown to save space. To facilitate the comparison of coefficients, non-binary variables have been standardized to a standard deviation of 0.5.

### 3 Appendix 3: Panel Data Analysis

The text reports the results of a panel data analysis. The panel data analysis uses respondent fixed effects in order to hold unmeasured individual-level characteristics constant. Additionally, we use the panel data to address the concern that caring about the election may correlate with unmeasured exposure to campaign information. Specifically, because increased concern for the election may reflect increased campaign information, we omit observations when individuals’ concern for the election outcome increased. Thus, our variation in concern for the election (and presumably motivation to engage the vote intention question) comes

entirely from *decreases* in concern. This analytic strategy assumes that decreased concern does *not* reflect unlearning campaign information. Thus, this analysis is compromised if the decreased concern for the election outcome results because respondents have stopped paying attention to the campaign and have *unlearned* relevant campaign information. This scenario, however, seems unlikely. Because campaign information becomes increasingly prominent as the campaign unfolds, it is hard to imagine how someone would have relevant information about how to link the fundamentals to vote choice and then lose this information. Indeed, no discernable relationship exists between decreases in concern for the election and shifts in knowledge about the candidates ( $b=-0.004$ ,  $s.e.=0.010$ ). Nevertheless, to guard against this concern, our panel analysis uses two different measures of “correct” vote intentions. The first follows the previous analysis and relies on twelve different fundamentals. The second relies on just two fundamentals, partisanship and presidential approval. As noted in the text (footnote 6), the two fundamental model predicts vote intentions during the final week of the campaign almost as well as the full model. The previous analysis, however, relied on the full model because, by virtue of including respondent policy preferences and multiple demographic considerations, this measure offered a more challenging test of our hypothesis. In this analysis, by contrast, our aim is to ensure that *loss* of information is not driving our results. Thus, the two fundamental model offers a more conservative test. It is hard to imagine that during a presidential election individuals would become worse at connecting their partisanship and presidential approval to their vote intentions due to a loss of information. If caring less about the election outcome corresponds with a decreased probability of expressing a vote intention in line with the “correctly” weighted fundamentals, this result is unlikely to reflect variation in campaign information.<sup>9</sup>

Table A-2, below, reports the complete results from this panel data analysis. We report the results with and without controls for the day of the survey, campaign knowledge, and campaign exposure.<sup>10</sup> All variables have been scaled to range from 0 to 1. Our variable of interest (Don’t Care About Outcome) is coded so 1 corresponds with not caring, so we expect a negative relationship between this variable and the probability of expressing a vote intention in line with the correctly weighted fundamentals. The results unequivocally support expectations. Across all specifications, when a respondent’s reported concern about the election declines, the respondent is less likely to report a vote intention that corresponds

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<sup>9</sup>We make one additional change from the previous analysis. Instead of treating correct vote intentions as a dichotomous indicator, we use the actual predicted values of the fundamentals regression to code this as a continuous measure that reflects the probability of a correct vote intention. Because vote intentions reflect a binary choice, in the previous analysis it was useful to think of whether or not respondents’ vote intentions matched the vote we would predict based on the fundamentals. This binary measurement is problematic, however, for the current analysis because, not surprisingly, we observe minimal *within* respondent changes in “correct” vote intentions (i.e., 90 percent stability). While this stability is consistent with our argument that the fundamentals are easy (leading most respondents to consistently express correct vote intentions), the binary variable conceals considerable within person variance in the predicted probability of expressing a correct vote intention. Using this continuous measure with the previous analyses does not alter the results.

<sup>10</sup>We cannot control for education level because this variable is completely redundant with the respondent fixed effects. We do not include a measure of campaign ad exposure because the multi-interview panel did not include the same questions about television viewership as the general survey.

with the correctly weighted fundamentals.<sup>11</sup>

Table A-2: The Relationship between *Within* Person Changes in Caring about the Election Outcome and the Probability of Expressing a Vote Intention based on the “Correctly” Weighted Fundamentals

	Full Fundamentals Model		Parsimonious Fundamentals Model	
Don't Care About Outcome	-0.032*	-0.033*	-0.041*	-0.042*
	(0.011)	(0.011)	(0.011)	(0.011)
Campaign Knowledge		0.004		-0.009
		(0.015)		(0.014)
Campaign Exposure		0.020		0.003
		(0.018)		(0.017)
Survey Date		0.018		0.015
		(0.010)		(0.009)
Respondent Fixed Effects	Yes	Yes	Yes	Yes
Constant	0.851*	0.836*	0.830*	0.824*
	(0.003)	(0.009)	(0.003)	(0.008)
Overall R <sup>2</sup>	0.12	0.11	0.12	0.11
Total N	4,980	4,980	5,275	5,275
Respondent N	2,345	2,345	2,403	2,403

*Note:* Data are from the 2000 NAES Panel. \*=p<0.05, two-tailed tests; standard errors in parentheses. All variables scaled to range from 0 to 1. The dependent variable reflects the probability an individual expressed a vote intention based on the “correctly” weighted fundamentals. “Don't Care About Outcome” is coded so 0 equals care a great deal and 1 equals don't care very much.

## 4 Appendix 4: NAES Question Wording

The data for Analysis 1 and 2 come from the 2000 National Annenberg Election Survey. Specific question wording follows.

Vote Intention (cR23): Thinking about the general election in November, if you voted today in the general election for president and the candidates were George W. Bush, the Republican, and Al Gore, the Democrat, who would you vote for? (12/14/1999–11/6/2000)

<sup>11</sup>We also entered survey date squared, to allow for a non-linear relationship. The results for concern for the election outcome were unchanged.

Respondent Motivation (ck04): Generally speaking, do you care a good deal which party wins the 2000 presidential election, or don't/didn't you care very much?

## 4.1 Fundamentals

1. Party Identification (cv01, cv02, cv03): Generally speaking, do you usually think of yourself as a Republican, a Democrat, an independent, or something else? Do you consider yourself a strong or not a very strong (Republican/Democrat/Independent)? Do you think of yourself as closer to the Republican or Democratic party?

2. Presidential Approval (ca52): On a scale of zero to 100, how would you rate Bill Clinton? Zero means very unfavorable, and 100 means very favorable. Fifty means you do not feel favorable or unfavorable. If you do not know enough about the person to rate him or her, just tell me.

3. Ideology (cv04): Generally speaking, would you describe your political views as very conservative, conservative, moderate, liberal or very liberal?

4. Race (cw03): What is your race? White, black, Asian or some other race? (In the model, other race includes Asians (1.68 percent of the sample) those who identified an another race but who did not identify as Hispanic (2.94 percent of the sample), and those who did not answer or responded don't know to the race question (1.51 percent of the sample)).

5. Hispanic (cw04): Are you of Spanish or Hispanic origin or descent?

6. Region: cw21. Coded so south (south atlantic, east south central, and west south central=1), 0 otherwise.

7. Gender (cw01): Male or Female?

8. Income (cw28): Last year, what was your total household income before taxes? Just stop me when I get to the right category. Less Less than \$10,000; \$10,000 to less than \$15,000; \$15,000 to less than \$25,000; \$25,000 to less than \$35,000; \$35,000 to less than \$50,000; \$50,000 to less than \$75,000; \$75,000 to less than \$100,000; \$100,000 to less than \$150,000; or \$150,000 or more? Respondents are assigned the median income for their category. Those in the highest income group are assigned a value of \$200,000. A separate dummy variable is included in the model to control for those who responded don't know and for not available values.

9. Education (cw06): What is the last grade or class you completed in school? Grade eight or lower; Some high school, no diploma; High school diploma or equivalent; Technical or vocational school after high school; Some college, no degree; Associate's or two-year college degree; Four-year college degree; Graduate or professional school after college, no degree; Graduate or professional degree.

10. Age (cw02): What is your age? (range 18-97)

11. Economy: (cba01): How would you rate economic conditions in this country today? Would you say they are excellent, good, only fair, or poor?

12. Policy Mood (cbc01, cbd09, cbe02, cbe04, cbe21, cbh07, cbp03, cbs01, cbj03, cbj07): The policy mood measure includes 10 questions that ask about the scope of government. 37.2 percent of respondents were asked all 10 questions. 91.9 percent were asked 3 or more of these questions. For all respondents who answered 3 or more questions, responses are averaged to generate the policy mood measure. Each question identifies a government policy or activity (Social Security Benefits; Providing financial assistance to public elementary and secondary schools; Providing health care for people who do not already have it; Providing health care for elderly people, usually called Medicare; Providing health care for poor people, usually called Medicaid; Using government funds rather than private contributions to pay for presidential campaigns; Providing assistance to poor mothers with young children; Protecting the environment and natural resources; Developing a system that would defend the US against a nuclear missile attack; Maintaining a strong military defense) and then ask, “should the federal government spend more money on this, the same as now, less, or no money at all?”

13. Moral Mood (cbl05, cbf01, cbf02, cbf03): The moral mood measure includes four questions. Not all respondents were asked all questions but 90.8 percent of respondents answered 2 or more questions. Trying to stop job discrimination against homosexuals: should the federal government do more about this, the same as now, less or nothing at all? Do you favor or oppose making it harder for a woman to get an abortion? Make it harder for a woman to get an abortion: should the federal government do this or not? Ban all abortions: Should the federal government do this or not?

## 4.2 Campaign Exposure:

To generate the campaign exposure measure, each of the following variables is rescaled to range from zero to one. An additive index is then created by taking the mean across exposure variables. For each question, “don’t know” is coded as a zero (i.e., no exposure).

1. Network TV News (ce01): How many days in the past week did you watch the national network news on TV by national network news, I mean Peter Jennings on ABC, Dan Rather on CBS, Tom Brokaw on NBC, Fox News or UPN News?

2. Cable News (ce02): How many days in the past week did you watch cable news, such as CNN or MSNBC?

3. Campaign on TV or Cable News (ce03): During the past week, how much attention did you pay to stories on national network or cable TV news about the campaign for president? A great deal of attention, some, not too much or no attention at all?

4. Local TV News (ce06) How many days in the past week did you watch the local TV news, for example, Eyewitness News or Action News?

5. Campaign on Local TV News (ce07): During the past week, how much attention did you pay to stories on local TV news about the campaign for president? A great deal of attention, some, not too much or no attention at all?
6. Newspaper (ce13): How many days in the past week did you read a daily newspaper?
7. Campaign in Newspaper (ce15): During the past week, how much attention did you pay to newspaper articles about the campaign for president? A great deal of attention, some, not too much or no attention at all?
8. Talk Radio (ce18): How many days in the past week did you listen to radio shows that invite listeners to call in to discuss current events, public issues or politics?
9. Online Access (ce20): Do you have access to the Internet or the World Wide Web at home, at work or someplace else?
10. Campaign Online (ce21): How many days in the past week did you see information about the campaign for president online?

### **4.3 Campaign Knowledge:**

Campaign knowledge is an index of the following 17 factual questions about the candidates and the interviewer's rating of the respondent's general political knowledge. Not all questions were asked in each survey, but because respondents were matched by week, indices are comparable. "Don't know" is coded as the minimal knowledge category.

1. Thinking about Republicans George W. Bush and Steve Forbes/John McCain, to the best of your knowledge, who is a state governor? (cd01\_1)
2. Thinking about Republicans George W. Bush and Steve Forbes/John McCain, to the best of your knowledge who is a US Senator? (cd02\_1)
3. Thinking about the Republicans George W. Bush and Steve Forbes/ John McCain, to the best of your knowledge, who is a businessman? (cd03\_1) coded so Bush or Forbes, McCain, none, other, don't know, na wrong
4. Thinking about Republicans George W. Bush and Steve Forbes/ John McCain, to the best of your knowledge, who was a prisoner of war in Vietnam? (cd04\_1)
5. Thinking about Republicans George W. Bush and John McCain, to the best of your knowledge, who gave a speech at Bob Jones University? (cd05\_1)
6. To the best of your knowledge, who was a United States senator? Bill Bradley, Al Gore, both, or neither? (cd06)

7. To the best of your knowledge, who is the son of a former United States senator? Bill Bradley, Al Gore, both, or neither? (cd07)
8. To the best of your knowledge, who was a professional basketball player? Bill Bradley, Al Gore, both, or neither? (cd08)
9. To the best of your knowledge, who served in the military during the Vietnam War? Bill Bradley, All Gore, both or neither? (cd09)
10. Governor: To the best of your knowledge, who is a state governor? George W. Bush, Al Gore, both or neither? (cd10, pre-election interview; rd10, post-election interview)
11. To the best of your knowledge, who was a United States senator? George W. Bush, Al Gore, both or neither? (cd11)
12. Senator son: To the best of your knowledge, who is the son of a former United States senator? George W. Bush, Al Gore, both or neither? (cd12, pre-election interview; rd12, post-election interview)
13. To the best of your knowledge, who is a Vietnam Veteran? George W. Bush, Al Gore, both or neither? (cd13)
14. Bob Jones University: To the best of your knowledge, who gave a speech at Bob Jones University? George W. Bush, Al Gore, both or neither? (cd14, pre-election interview; rd14, post-election interview)
15. Born-Again Christian: To the best of your knowledge, who considers himself a born-again Christian? George W. Bush, Al Gore, both or neither? (cd15, pre-election interview; rd15, post-election interview)
16. To the best of your knowledge, who owned a major league baseball team? George W. Bush, Al Gore, both or neither? (cd16)
17. To the best of your knowledge, who was secretary of defense? Dick Cheney, Joe Lieberman, both or neither? (cd17)
18. Political Knowledge: (Asked of interviewer) What grade would you give for how knowledgeable the respondent is about politics? A, excellent; B, good; C, average; D, poor; F, very poor. (cy06)

## **5 Appendix 5: Validation of the Measure of Satisficing in Analysis 1**

The text reported a strong association between our measure of whether respondents were motivated to offer an optimal response to the vote intention question (whether or not respondents care about the election outcome) and the proportion of “don’t know” responses

offered to demographic questions. This is an important result, because don't know responses are a well known indicator of satisficing (Krosnick 1991). In this section, we report 1.) the question wording for the demographic questions, 2.) the full results of the analysis of the relationship between don't know responses and caring about the election, and 3.) an instrumental variable analysis, which uses don't know responses to instrument our measure of motivation to optimize.

## 5.1 “Don't Know” Responses to Demographic Questions

The following 18 demographic questions were used to measure how often respondents offered a “don't know” response. These questions were selected because they are basic demographic questions that all respondents should be able to answer. In particular, exposure to the campaign should not be correlated with ability to answer these questions. Demographic questions that respondents might not feel comfortable answering, such as citizenship status, education level, income level, and employment status, were not used. We also omit demographic questions used in the fundamentals analysis, for which we used listwise deletion for don't know responses.

1. cw05 (Asked if Hispanic) Which of these best describes your origin? Mexican, Cuban, Puerto Rican or something else?
2. cw08 Are you married, living as married, widowed, divorced, separated, or have you never been married?
3. cw10 As a student are you also working full or part time, or arent you now working for pay?
4. cw11 (Aside from being a student,) in your current job, what kind of work do you do?
5. cw12 (Asked if employed) Do you work for someone else, or are you selfemployed?
6. cw13 (Asked if employed) Are you employed by a federal, state or local government, the military, or arent you employed by government?
7. cw14 How often do you attend religious services, apart from special events like weddings and funerals? More than once a week, once a week, once or twice a month, a few times a year or never?
8. cw15 Regardless of whether you now attend any religious services do you ever think of yourself as part of a particular church or denomination?
9. cw16 Do you (mostly attend a place of worship that is —consider yourself) Protestant, Roman Catholic, Jewish, Mormon, an Orthodox Church, Muslim or some other religion?
10. cw17 Do you consider yourself an evangelical or bornagain Christian?

11.cw18 How many years have you lived at your present address?

12.cw19 Many Americans do not have health insurance. Are you now covered by any form of health insurance, including any private insurance or a government program such as Medicare or Medicaid?

13.cw20 Is your main insurance through an HMO or not?

14.cw27 How many children under age 18 now live in your household?

15.cw29 Does anyone in your household belong to a labor union?

16.cw30 Has anyone in your household ever served in the US military? This includes the National Guard and the Reserves.

17.cw31 How many telephone numbers does your household have that you receive calls on? Please include only numbers that you use for phone calls, not ones you use for computers or fax machines.

18.cw33 What is your zip code?

## **5.2 The Relationship between “Don’t Know” Responses and the Measure of Motivation to Optimize in Analysis 1**

Table A-3 reports the expected change in the probability of caring about the election outcome for a shift in “don’t know” responses to demographic questions. Column 1 reports this expected shift from the minimum to maximum proportion of don’t know responses. Column 2 reports the corresponding value for those who shifted from zero don’t know responses to three don’t know response. Not only are the relationships statistically significant but the magnitudes are substantial.

Table A-3: The Relationship between “Don’t Know” Responses and the Measure of Motivation to Optimize in Analysis 1

	(1)	(2)
DK: Full Range	-0.43*	
	(0.00)	
DK: 0-3		-0.23*
		(0.00)
N	58,238	58,041

*Note:* Cell entries reflect the expected change in the probability of responding care about the election outcome (based on a logistic regression model). Corresponding p-values are reported in parentheses.

### 5.3 Instrumental Variable Analysis

As an additional robustness check, we replicated Analysis 1 using an instrumental variable approach, where we use the percent of “don’t know” responses to demographic questions as an instrument for motivation to optimize. The results of this analysis strongly support the findings in the paper. Below, we discuss the assumptions of instrumental variable analysis and present the results.

Two of the most prominent applications of instrumental variables have been to overcome measurement error in explanatory variables and to overcome omitted variable problems (e.g., Angrist & Krueger 2001, Hausman 2001). As we discuss below, our approach coincides more closely with the former application. We have two measures of optimizing: whether respondents care about the presidential election outcome and the proportion of don’t know responses to demographic questions. The care about the election question is advantageous because its focus on the election and its proximity in the survey to the vote intention question make this question especially likely to measure whether respondents were motivated to optimize on our question of primary interest, the vote intention question. As noted in the text, this expectation is consistent with research on satisficing (Krosnick 2000) and research on the difference between hypothetical and actual vote choices (Ajzen, Brown & Carvajal 2004, Cummings & Taylor 1999). However, if this variable contains measurement error, our estimates will be biased. Thus, we can use our second measure of optimizing, the percent of don’t know responses to demographic questions, as an instrument for the care about the election variable.

The don’t know question has several desirable properties as an instrument. First, the

don't know variable is a strong instrument. Regressing the care about the election variable on the don't know variable and the other predictors in the model yields an F-statistic of 15 for the don't know variable. As Table A-3, above, indicates, more don't know responses correspond with less respondent motivation (i.e., respondents are less likely to care about the election outcome). Second, the don't know instrument satisfies the monotonicity assumption. Monotonicity would be violated if for some individuals more "don't know" responses actually corresponded with *optimizing*. This runs counter to the satisficing literature (Krosnick 1991, Krosnick 2000) and is unlikely to be a problem. The exclusion restriction is an additional assumption of IV analysis. The exclusion restriction states that the instrument can have no effect on the outcome except through the treatment. Although it is unlikely that don't know responses to demographic questions would relate to responses to the vote intention question through any mechanism besides satisficing, technically, don't know responses are a *measure* of satisficing, not a variable that *causes* satisficing. It is for this reason that we refer to our use of instrumental variables as following the measurement error tradition: we have two distinct measures of the concept of interest. This strategy offers a particularly stringent test of our hypothesis.

Because our outcome variable and our instrumented variable are both dichotomous, we estimate a bivariate probit model (Chiburis, Das & Lokshin 2011, Evans & Schwab 1995, Neal 1997). The results in Table A-4 indicate that the effect of the instrumented care about the election variable is statistically significant and about double the estimated effect of campaign knowledge. The results of this analysis strongly support the findings in the text.

Table A-4: IV Analysis: The Relationship between Respondent Motivation (Care about the Election), Campaign Information, and the Probability of Expressing a Vote Intention in line with the Correctly Weighted Fundamentals

Respondent Motivation (IV)	0.64*
	(0.12)
Campaign Knowledge	0.36*
	(0.02)
Campaign Exposure	0.007
	(0.019)
Education Level	0.18*
	(0.02)
Presidential Ads	0.034
	(0.017)
Minor Media Market	-0.014
	(0.020)
Constant	0.70*
	(0.09)
N	38,990

*Note:* Coefficients are from a Bivariate Probit Model where respondent motivation is modeled as a function of the proportion of “don’t know” responses to demographic questions. Standard errors are in parentheses. \*=p<0.05.

## 6 Appendix 6: Measuring Exposure to Presidential Campaign Advertisements

To measure individuals’ exposure to campaign advertisements, we need information on the frequency with which campaign advertisements are broadcast in each respondent’s media market and the frequency of television viewing by each respondent (Freedman, Franz & Goldstein 2004). The advertisement data come from the Wisconsin Advertising Project, which uses data originally collected by the Campaign Media Analysis Group (CMAG). We divided the ad data into seven program types (local news, network news, morning news, late-night comedy, daytime television, game shows, and other). For each program type, we generated a measure of the total number of minutes of presidential campaign ads each respondent could have encountered on that day and the previous 10 days. However, because the effect

of campaign ads is relatively short lived (Hill, Lo, Vavreck & Zaller 2007, Mitchell 2012), we weight earlier days less heavily. Specifically, following Hill et al. (2007), we assume an exponential decay of 0.65. We then match these measures of available presidential campaign ads with the NAES respondents according to the day of interview and respondent media market.

We do not, however, assume that all respondents encountered all ads. Following Freedman, Franz & Goldstein (2004) and Ridout, Shaha, Goldstein & Franz (2004) we multiply how much respondents reported viewing each type of television program by the total number of ads aired on these programs in the respondents' media market during the previous 10 days. For example, in 2000, approximately 45 percent of presidential campaign ads aired during local news broadcasts (Freedman, Franz & Goldstein 2004). We multiply the measure of available presidential ads times how much local news respondents watched based on the NAES question that asks "How many days in the past week did you watch the local TV news?"<sup>12</sup> Thus, our estimates of exposure to presidential ads used information on program specific television viewing habits for each respondent and the number of ads aired on each type of program in each respondent's media market.<sup>13</sup>

Although our measurement of exposure to presidential ads follows best practices in the literature, (e.g., Freedman, Franz & Goldstein 2004, Ridout et al. 2004), we evaluate the face validity of this measure by regressing our measure of candidate knowledge on presidential ad exposure and education level. We also control for age, income, race, region, and whether a respondent lived in a minor media market (because we do not have presidential ad data for these markets). All variables have been scaled to range from 0 to 1. The results in Table A-5 indicate that a shift in the range of presidential ad exposure predicts a .19 shift in political knowledge, which is about one-fifth of the total range. This effect is of substantial magnitude, and more than 60 percent of the expected shift that would occur from a shift in from the lowest to highest education level. These results suggest that our measure indeed has face validity.

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<sup>12</sup>For programs broadcast simultaneously on the three major networks, we followed Ridout et al. (2004) and divided the total ad minutes by three.

<sup>13</sup>The NAES also asked about frequency of viewing network news and late-night comedy. Although the NAES did not ask about the other categories, the 2000 ANES did ask about viewership of these program types. For these program types, we used Two-Stage Auxiliary Instrumental Variables (Franklin 1989) to estimate viewership for NAES respondents.

Table A-5: The Relationship between Exposure to Presidential Advertisements and Campaign Knowledge

	(1)
Pres. Ad. Exposure	0.188* (0.014)
Minor Media Market	0.002 (0.003)
Education Level	0.295* (0.004)
Constant	0.318* (0.004)
R <sup>2</sup>	0.25
N	49,186

*Note:* OLS coefficients with standard errors in parentheses. \*=p<0.05. All variables have been standardized to range from 0 to 1. Controls for gender, age, income, race, and region not shown

## 7 Appendix 7: Analysis Part 1, Evaluation of Coarsened Exact Matching

For the analyses in this paper, we use Coarsened Exact Matching (CEM) to preprocess the data (Iacus, King & Porro 2011). Matching reduces bias and model dependence by more closely replicating an experimental framework (Ho, Imai, King & Stuart 2007). In an experiment, random assignment of the treatment ensures that (in expectation), no differences exist between the control group and the treatment group—the groups are “balanced.” Matching offers a way to produce balance across our two groups. We match “treated” and “untreated” respondents (i.e., those who care a good deal and those who do not care a good deal about the election outcome) on our measures of campaign knowledge, education level, campaign exposure, and presidential ad exposure. To ensure that the measures of campaign information are comparable, we also match on each week of the campaign.<sup>14</sup> We then drop individuals who lack matches. As a result, differences in the probability of relying on the fundamentals between treated and untreated individuals in the matched sample are more likely to result

<sup>14</sup>Matching on the week is important because a highly educated respondent early in the campaign has likely encountered less campaign information than a highly educated respondent near the end of the campaign.

from the treatment itself, not from differences across the two groups.<sup>15</sup>

In contrast to one-to-one matching, CEM allows that substantively similar variable values can be grouped, much like variable values are grouped when plotting a histogram. The matching then occurs between these substantively meaningful groups (or bins). The results reported in the text relied on CEM’s automated bin size selection based on Sturges’ rule (Sturges 1926). Bin size selection presents a tradeoff between improving balance via smaller bin sizes (which lead to more fine-grained matching) and reducing the number of observations available to match. In this section we report relevant balance statistics that result from matching and we show that our estimates are not sensitive to the selection of bin size (or to the decision to match).

Table A-6 reports three sets of balance statistics. Recall that respondents who indicated that they care a good deal about which party wins the presidential election are considered the “treatment” group and those who reported they did not care a good deal are in the “control” group. The first column reports balance between these two groups for the *unmatched* data. The first five rows report the difference in means for each variable. The sixth row reports Iacus, King & Porro’s (2011) multivariate balance statistic,  $\mathcal{L}$ . This statistic ranges from 0 to 1. A value of 1 indicates the distributions of the two groups are completely separated and a value of 0 would indicate the distributions of the two groups completely overlap (as we would expect if groups were randomly assigned). In the unmatched data, the difference in means is statistically different for each variable and the multivariate balance statistic is 0.96. The second column reports the balance statistics for the matched data analyzed in the text.<sup>16</sup> Here, we used Sturges’ rule to generate matching categories. These results indicate that we have significantly improved balance. None of the difference in means is even close to statistically different and the multivariate balance statistic has dropped to 0.78. In the final column, we used more fine-grained matching categories. This improves balance at a cost of a further reduction in sample size. Here, we used the Freedman-Diaconis Rule to generate matching categories. With the more fine-grained bin sizes,  $\mathcal{L}$  drops to 0.04.

As noted above, increased balance comes at a cost of a reduction in sample size (because balance is improved by pruning observations that do not match). Table A-7 evaluates whether our results are sensitive to the choice of bin size. The results indicate that our conclusions are very robust. The first column reports results on unmatched data. The second column reports results using the matched data analyzed in the text. Notice, the sample size drops approximately in half. The final column analyzes the fine-grained matched data discussed above. The effect of respondent motivation is almost equal across models. Furthermore, the magnitude of this effect, relative to the other variables, is quite substantial.

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<sup>15</sup>Given the advantages for causal inference, not surprisingly, matching to preprocess data is becoming increasingly popular in political science research (e.g., Kam & Palmer 2008, Ladd & Lenz 2009, Levendusky 2011).

<sup>16</sup>Specifically, these balance statistics correspond with the results reported in Figure 2 of the text. To save space, we do not report the balance statistics for the 28 separate regressions analyzed in the text. These tell a very similar story and are available on request.

Table A-6: Balance Statistics Before and After Matching

	Unmatched Data	Matched Sturges' Rule	Matched Freedman-Diaconis Rule (Smaller Bins)
Campaign Knowledge	0.229*	0.002	0.0000
Campaign Exposure	0.213*	0.001	0.0001
Education	0.085*	0.000	0.0000
Pres. Ad. Exposure	0.043*	0.001	0.0001
Minor Media Market	0.014*	0.000	0.0000
Campaign Week	1.003*	0.019	0.0000
Overall Imbalance ( $\mathcal{L}$ )	0.962	0.779	0.041

*Note:* The first five rows represent the difference in means between the “treatment” and “control” groups ( $*=p<0.05$ ).  $\mathcal{L}$  (row 6) is Iacus, King & Porro’s (2011) measure of multivariate imbalance. This statistic ranges from 0 (the distributions of the two groups completely overlap) to 1 (the distributions of the two groups are completely separated).

Table A-7: The Influence of Respondent Motivation on the Probability of Expressing a Vote Intention that Corresponds with “Enlightened” Fundamentals

	Unmatched Data	Matched (Sturges' Rule)	Matched (Smaller Bins)
Respondent Motivation	1.15* (0.03)	1.17* (0.05)	1.08* (0.16)
Campaign Knowledge	0.65* (0.04)	0.52* (0.06)	0.30 (0.22)
Pres. Ad. Exposure	0.064 (0.035)	0.12 (0.11)	-0.44 (0.46)
Minor Media Market	-0.02 (0.04)	-0.09 (0.06)	-0.13 (0.18)
Campaign Exposure	0.01 (0.04)	0.08 (0.06)	0.31 (0.22)
Education	0.32* (0.03)	0.30* (0.06)	0.37 (0.21)
Constant	1.15* (0.02)	1.12* (0.04)	1.06* (0.15)
Pseudo R <sup>2</sup>	0.08	0.07	0.06
N	38,990	16,403	1,253

*Note:*  $*=p<0.05$ , two-tailed tests; standard errors in parentheses

## 8 Appendix 8: Placebo Regressions for California Analysis

We show in the text that during the 19 day period when registered voters in California received the Voter Information Guide, registered Californians were more likely to connect their vote intentions to the “correctly” weighted fundamentals than registered voters in other states. We also investigated how often would we obtain these results if we chose another state (Abadie, Diamond & Hainmueller 2010). To answer this question we repeated the analysis, each time replacing the California dummy variable with another state. We did this for each of the 21 states with a sample size of more than 1,000.<sup>17</sup> In total, we estimated 105 placebo regressions (21 placebo states at 5 different periods of the election). For each regression, we then calculated the t-value for the coefficient on each state dummy variable. Figure A-2 plots these values in grey and the values for California in black. The dashed horizontal lines correspond with 1.96 and -1.96. Values above the top dashed line or below the bottom dashed line indicate coefficients that are statistically different from zero. We would expect 5 significant coefficients due to chance. We observe seven. The placebo analysis reinforces our conclusions about the California voter guide.

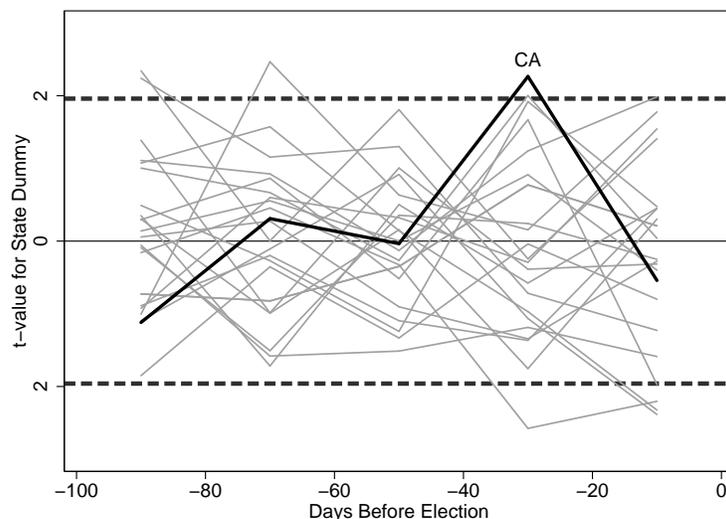


Figure A-2: Placebo Test: The Estimated Effect of The California Voter Guide on Voting with the Fundamentals (Registered Voters Only)

<sup>17</sup>The states were, NY, FL, PA, OH, IL, MI, NC, VA, GA, NJ, TN, WI, MA, IN, WA, MO, MN, MD, AZ, AL, and TX. To avoid confounding the treatment and control, in these placebo regressions, we omitted California (the treatment variable) from the matched control group.

## 9 Appendix 9: ANES Survey Mode Experiment

Because respondents are less likely to satisfice in face-to-face surveys (Holbrook, Green & Krosnick 2003), the survey mode experiment (face-to-face and telephone surveys) in the 2000 ANES offered an additional test of the relationship between respondent motivation and relying on the fundamentals. Holbrook, Green & Krosnick (2003), however, show that some demographic groups might be represented more in one survey type than the other. Table A-8 confirms this expectation. We estimate the probability of being in the face-to-face survey (relative to being in the telephone survey) as a function of the date of the survey and numerous demographic characteristics. Based on these results, in order to isolate the effect of survey mode, we use Coarsened Exact Matching to pre-process the data on the variables that are statistically significant in Table A-8.

Table A-8: The Relationship between the 2000 ANES Survey Mode (face-to-face versus telephone) and Demographic Characteristics and Survey Date

# of Days before Election	-0.020*
	(0.003)
African American	0.55*
	(0.16)
Other Race	0.50*
	(0.20)
Hispanic	0.73*
	(0.22)
South	-0.22*
	(0.10)
Education	-0.03
	(0.03)
Age	-0.043*
	(0.016)
Age <sup>2</sup>	0.00042*
	(0.00016)
Female	-0.13
	(0.10)
Household Income	0.022
	(0.016)
Income (DK/NA)	0.05
	(0.17)
Constant	0.62
	(0.41)
Pseudo R <sup>2</sup>	0.04
N	1,792

*Note:* Table entries reflect logistic regression coefficients with standard errors in parentheses; \*=p<0.05, two-tailed tests. The dependent variable is coded 1 if the respondent was interviewed face-to-face and 0 if interviewed via the telephone.

## 9.1 Robustness Checks for ANES Experiment

We performed two types of robustness checks for the analysis of the effect of the 2000 ANES survey mode. First, we evaluated whether our results were sensitive to which post-election survey respondents we included to estimate the “correctly” weighted fundamentals. Relying on the post-election survey to estimate the correctly weighted fundamentals offers two advantages. First, we can focus on those who reported that they did vote. Second, because the election has occurred, we can be confident that these reflect actual votes as opposed to vote intentions. We must make a decision, however, about how many days after the election to include. As more time passes, respondents’ may become less likely to report their actual vote choice (Wright 1993). Yet, as more time passes, the number of respondents that can be included to estimate the fundamentals increases. Thus, a tradeoff exists between including more respondents and the likely accuracy of the responses. For the analysis reported in the text, we relied on responses for the first 30 days after the election. This represents 87.5 percent of all post-election interviews and precedes the Supreme Court’s ruling on *Bush v. Gore*. However, to be sure that our results are not sensitive to this decision, we also estimated the “correct” fundamentals based on the interviews conducted within the first 14 days after the election and within the first 21 days after the election. These results are reported below in Table A-9. The results show that the findings are robust across all three cut-off dates.

Because we are estimating the effect of survey mode on motivation to satisfice, the analysis omits observations from the final week of the campaign. Given the proximity to the election, we expect the difference between survey mode to diminish as motivation to optimize increases. While focusing on the campaign period without the final week is the most appropriate test of survey mode, columns 1 and 5 in Table A-10 show that including the final week of the campaign does not substantively alter the results. The results in Table A-10 also assess our application of Coarsened Exact Matching (CEM). As noted above, CEM presents a tradeoff between matching on more fine-grained categories and reducing the sample size. For the categorical and ordinal variables we matched on, this does not pose a substantial problem. We were able to perform one-to-one matching without a substantial loss in observations. For the continuous variables (number of days before the election, media exposure, and age), however, the number of categories we matched reflects a judgment call. The matching we used to pre-process the data for the analyses reported in the text relied on Sturges’ rule to match on days until the election and we divided media exposure into five equal categories and age into three equal categories. To evaluate whether these decisions influenced the results we obtained, we performed a variety of additional analyses, where we adjusted the number of categories we match on. The results of these additional analyses are reported below in Table A-10. Looking across all columns, we see that the influence of survey mode (row 1) is robust across matching specifications. Columns 2 and 6 match on 4 different age categories, 18-14, 25-44, 45-69, and 60 and above. Columns 3 and 7 match on four equally sized media exposure categories instead of five categories. Columns 4 and 8 do *not* match on age and match on four media exposure categories and 9 equally sized categories for the

Table A-9: The Influence of Survey Mode on the Probability of Expressing a Vote Intention based on the “Correctly” Weighted Fundamentals, using two additional measures of “correct” weights

	14 days	21 days
Face-to-Face	0.71* (0.37)	0.92* (0.36)
Political Knowledge	0.78+ (0.55)	1.12* (0.55)
Campaign Exposure	-0.62 (0.53)	-0.54 (0.51)
Education	1.23* (0.55)	1.05* (0.52)
Days before Election	1.82* (0.58)	1.55* (0.55)
Age	-1.60 (1.89)	-1.08 (1.59)
Age <sup>2</sup>	1.76+ (1.03)	1.43 (0.94)
Constant	1.72* (0.83)	1.28 (0.78)
Pseudo R <sup>2</sup>	0.18	0.19
N	267	267

*Note:* \*=p<0.05, +=p<0.10, one-tailed tests for directional hypotheses; standard errors in parentheses

number of days before the election. Notice, the sample size is substantially larger when we do not attempt to match on age and when we use coarser categories for media exposure and the number of days before the election. Finally, in columns 5 and 10 we do *not* pre-process the data. Although not shown (to save space), these columns also control for respondents’ race, region, and the strength of their partisanship. Unlike the analyses based on matched data, we must control for these characteristics because they are not balanced across survey mode and they correlate with survey mode. Although the findings are robust, we see that the magnitude of the survey mode effect is reduced in column 10 and the magnitude of the effect of survey date has increased. This suggests that when we do not match on survey date, the days before the election variable is picking up some of the effect of satisficing. Such a result is consistent with our argument that as the election approaches, individuals are more likely to care about the election and offer an optimal response to the vote intention question. In other words, without matching on survey date, the date variable appears to

be picking up the effect of motivation to optimize. If this explanation for the unmatched results (column 10) is correct, when we only analyze the early part of the campaign, we should observe significant survey mode effects. This is precisely what we observe. For the 731 respondents interviewed at least five weeks before the election, the p-value on survey mode is  $p=0.024$ . For respondents interviewed at least four weeks before the election, the p-value on survey mode is  $p=0.038$ . For those interviewed at least three weeks before the election, the corresponding p-value is 0.049 and two weeks before the election, the p-value is  $p=0.081$ . This pattern of results supports our assertion that the slight difference between the matched and unmatched results occurs because the matched results ensure that day of the election is not correlated with survey mode.

The multivariate balance statistics reported in the bottom row of Table A-10 also deserve note. At first glance, they seem quite high. Two considerations must, however, be kept in mind. First, *without* matching, the imbalance is,  $\mathcal{L}=0.994$ . The fact that this value is almost equal to one indicates both the importance of pre-processing the data to obtain better balance and that our use of CEM improves balance between survey modes. The other consideration is that the need to match age on just three categories (because of the sample size) accounts for much failure to obtain a lower multivariate balance statistic. In fact, if we chose *not* to balance on age, the multivariate balance statistic reported in columns 1 and 4 would drop to  $\mathcal{L}=0.628$ .

Table A-10: Robustness Checks for the Relationship between Face-to-Face Interviews and the Probability of Responding “Don’t Know” and the Probability of Relying on the Fundamentals

	(1) With Final Week	(2) Age	(3) Media Exposure	(4) Age, Media, Days to Election	(5) No Matching	(6) With Final Week	(7) Age	(8) Media Exposure	(9) Age, Media, Days to Election	(10) No Matching
Face-to-Face	-0.82 <sup>+</sup> (0.55)	-2.00* (1.10)	-1.22* (0.49)	(D.V. = “Don’t Know”) -0.76* (0.37)	-0.80* (0.27)	0.77* (0.32)	0.70 <sup>+</sup> (0.53)	0.65* (0.33)	0.43* (0.24)	0.26 <sup>+</sup> (0.18)
Knowledge	-0.06 (0.72)	-1.66 <sup>+</sup> (1.17)	-0.73 (0.66)	-0.52 (0.49)	-0.29 (0.30)	1.80* (0.52)	0.69 (0.95)	0.82 <sup>+</sup> (0.53)	1.47* (0.35)	0.68* (0.21)
Exposure	-0.10 (0.68)	-1.61 (2.29)	1.05 (1.09)	0.79 (0.42)	0.02 (0.27)	-0.32 (0.43)	-0.45 (0.75)	-0.28 (0.87)	-0.29 (0.29)	-0.11 (0.20)
Education	-0.07 (0.66)	1.15 (1.13)	-0.03 (0.62)	-0.26 (0.46)	-0.19 (0.30)	0.22 (0.43)	0.69 (0.74)	0.87* (0.50)	-0.04 (0.31)	-.24 (0.21)
Days bef. Elec.	-0.03 (0.53)	0.04 (0.03)	0.01 (0.01)	-0.12 (0.48)	-0.05 (0.33)	0.28 (0.32)	0.05* (0.02)	0.03* (0.01)	0.83* (0.33)	0.98* (0.24)
Age	3.91 (2.78)	0.27 (0.21)	0.14 (0.09)	0.79 (1.58)	-0.22 (0.98)	-2.62 (1.94)	-0.29 (0.19)	-0.02 (0.06)	1.05 (0.94)	1.62* (0.68)
Age <sup>2</sup>	-1.57 (1.24)	-0.0021 (0.0018)	-0.0012 (0.0009)	-0.41 (0.68)	0.18 (0.44)	2.30* (1.15)	0.0037 <sup>+</sup> (0.0021)	0.0007 (0.0007)	-0.13 (0.42)	-0.60 <sup>+</sup> (0.30)
Constant	-4.82* (1.49)	-8.05 (5.51)	-6.12* (2.34)	-3.09* (0.87)	-2.43* (0.55)	1.63* (0.78)	8.46 (4.31)	2.35 (1.53)	0.92 <sup>+</sup> (0.48)	0.55 (0.36)
Pseudo R <sup>2</sup>	0.04	0.19	0.08	0.04	0.05	0.15	0.22	0.14	0.09	0.15
N	396	173	383	749	1,438	338	151	320	626	1,209
Imbalance ( $\mathcal{L}$ )	0.919	0.844	0.927	0.726		0.919	0.844	0.927	0.726	

Note: \*= $p < 0.05$ , += $p < 0.10$ , one-tailed tests for directional hypotheses; standard errors in parentheses. Columns 1-5 estimate the probability of offering a “don’t know” response to the vote intention question. Columns 6-10 estimate the probability of expressing a vote intention that corresponds with the “correctly” weighted fundamentals. Additional control variables for columns 5 and 10 are not shown to save space. Column headings in columns 2-4 and 7-9 indicate which variable categories were changed for matching.

## 9.2 ANES Question Wording

The data come from the 2000 American National Election Study. Specific question wording follows.

Vote Intention (V000793, V000795): Who do you think you will vote for in the election for President?

Survey Mode (V000004)

Reported Vote (V001249): This variable was used to estimated the correctly weighted fundamentals. IF R VOTED FOR PRESIDENT: Who did you vote for?

### 9.2.1 Fundamentals

1. Party Identification (V000523): Generally speaking, do you think of yourself as a Republican, a Democrat, an Independent, or what? Would you call yourself a strong Democrat/Republican or a not very strong Democrat/ Republican? Do you think of yourself as closer to the Republican Party or to the Democratic party?
2. Presidential Approval (V000341): Do you approve or disapprove of the way Bill Clinton is handling his job as president? Strongly or not strongly? (Don't know coded as neither approve nor disapprove)
3. Ideology (V000447): When it comes to politics, do you usually think of yourself as extremely liberal, liberal, slightly liberal; moderate or middle of the road, slightly conservative, conservative, extremely conservative, or haven't you thought much about this? (The analysis uses the collapsed 3-point scale. A separate dummy variable was created for those who did not respond.)
4. Race (V001006a, V000066): What racial or ethnic group or groups best describes you? What is the race of R's household?
5. Hispanic (V001006a, V000068): What racial or ethnic group or groups best describes you? Hispanic HH?
6. Region (V000092): Census Region (South: South (AL, AR, DE, DC, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV))
7. Gender (V001029): R gender
8. Income (V000994): I am going to read you a list of income categories. Please tell me which category best describes the. total income of all members of your family living in your house in 1999 before taxes. This figure should include salaries, wages, pensions, dividends, interest, and all other income. Please stop me when I get to your family's income. (A separate dummy variable was generated for don't know and unavailable responses).
9. Education (V000913): What is the highest grade of school or year of college you have completed?
10. Age (V000908): What is the month, day and year of your birth?

11. Economy (V000491): Now thinking about the economy in the country as a whole, would you say that OVER THE PAST YEAR the nation's economy has gotten worse, stayed about the same, or gotten better?
12. Policy Mood (V000675, V000676, V000677, V000678, V000679, V000680, V000681, V000682, V000683, V000684, V000685, V000687): The policy mood measure includes 12 questions that ask about the scope of government. The questions asked, Next I am going to read you a list of federal programs. For each one, I would like you to tell me whether you would like to see spending increased or decreased: building and repairing highways, welfare programs, spending on aids research, foreign aid, food stamps, aid to poor people, Social Security, environmental protection, public schools, dealing with crime, child care, aid to blacks
13. Moral Mood (V000694, V000702, V000705, V000748, V001481): The moral mood measure includes five questions. There has been some discussion about abortion during recent years. Please tell me which one of the opinions best agrees with your view; Would you favor or oppose a law in your state that would require a teenage girl under age 18 to receive her parent's permission before she could obtain an abortion?; There has been discussion recently about a proposed law to ban certain types of late-term abortions, sometimes called partial birth abortions. Do you favor or oppose a law that would make these types of abortions illegal?; Do you think gay or lesbian couples, in other words, homosexual couples, should be legally permitted to adopt children?; Recently there has been a lot of talk about job discrimination. Do you favor or oppose laws to protect homosexuals against job discrimination?

### 9.2.2 Campaign Exposure and Political Knowledge

To generate the campaign exposure measure, each of the following variables is rescaled to range from zero to one. An additive index is then created by taking the mean across exposure variables.

1. National news (V000329): How many days in the past week did you watch the national network news on TV?
2. Local news (V000331): How many days in the past week did you watch the local TV news shows such as "Eyewitness News" or "Action News" in the late afternoon or early-evening?
3. Late news (V000332): How many days in the past week did you watch the local TV news shows in the late evening?
4. Newspaper (V000335): How many days in the past week did you read a daily newspaper?
5. Campaign Advertisements (V000338): Do you recall seeing any ads for political candidates on television this fall?

Political Knowledge (V001033): R's general level of information about politics and public affairs seemed: very low, fairly low, average, fairly high, very high.

## 10 References

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