

Changes in Candidate Evaluations over the Campaign Season:
A Comparison of House, Senate, and Presidential Races

Abstract

How do citizens' preferences for candidates change during a campaign season? For the first time, this panel study examines how citizens' preferences for candidates change during the general election campaign season for House, Senate, and presidential elections, which vary widely in their salience and contestedness. House races exhibit the greatest mean change in candidate evaluations and presidential races exhibit the least. At the individual level, there is considerable variation across the three types of contest in the presence of a candidate preference and in change over the campaign season. We investigate differences across the three types of races in initial familiarity with candidates and estimate transition models to evaluate the effect of race contestedness, partisanship, presidential approval, political sophistication and knowledge on change in candidate preferences in each type of race. Change in knowledge of the candidates during the campaign season has the greatest effect in House contests, where initial familiarity with the candidates is the most limited.

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Changes in Candidate Evaluations over the Campaign Season: A Comparison of House, Senate, and Presidential Races

The political science of campaigns shows that citizens' evaluations of candidates, turnout, attitudes about politics, and even issue positions can change over a campaign season. The "campaign effect," as it is often called, is conditional on citizens' attentiveness to politics, partisanship, pre-campaign familiarity with the candidates, and, of course, is dependent on the nature of the campaigns. Campaigns vary widely in their salience due to wide variation in competitiveness, in candidate, party, third-party spending and effort, in media coverage, and in the occurrence of scandals and other newsworthy events. These variable conditions produce variation among campaigns in their potential to change citizens' views of issues and the candidates.

Our primary contributions are to (1) provide a direct comparison of change in candidate evaluations in House, Senate, and presidential campaign races, which vary systematically in average salience and contestedness, and (2) measure change in candidate evaluations for all three types of races for the same set of citizens in a panel study. Understandably, previous *observational* studies have focused on presidential contests, but, consequently, have been biased by a context in which voters exhibit great familiarity with the candidates before the general election campaign begins. In contrast, previous *experimental* studies have focused on local elections in which initial familiarity with the candidates is very limited and exposure to a campaign may have a large impact. In this observational study, we examine House, Senate, and presidential contests that vary widely in the salience of the races.

We exploit a panel survey from the 2014 and 2016 election cycles that measures candidate evaluations and vote before and after the general election campaign. For the first time,

we find systematic differences in the evolution of candidate evaluation over the campaign season between House, Senate, and presidential races. We confirm that citizens' responses to the campaign season are conditioned by information about the race, which is influenced by the contestedness of the race and by individuals' partisanship and sophistication. These results lead us to caution against the one-size-fits-all approaches to studying campaign effects.

The Campaign Effects Debate

A consensus about the presence of campaign effects emerged from observational studies of presidential campaigns in the late 1990s and 2000s. These studies overturned what they treated as a conventional view that partisanship, incumbency, and political fundamentals (the state of economy, presidential popularity) left campaigns to have only minimal effects on candidate evaluations.¹ At least partly motivated by the observation of weakening partisanship, studies of the 1990s and 2000s reconsidered campaign effects and often found factors that condition campaign effects. This early shift has been reinforced by studies that demonstrate some of the political and cognitive processes by which campaigns affect candidate evaluations, including the effects of elite cues, conventions and debates, candidate appearances, field operations, advertising and news exposure, reducing uncertainty about the candidates, improving the accessibility of party identifications, and adopting the issue positions of preferred

¹ The "minimal effects" literature is large (Wlezien and Erikson 2001). It usually includes Bartels (1993); Bartels and Zaller (2001); Berelson et al. (1954); Campbell et al. (1960); Finkel (1993); Gelman and King (1993); Levitt (1994); Lewis-Beck and Rice (1992). There were important exceptions, such as Goldenberg and Traugott (1987), which showed campaign effects in congressional campaigns.

candidates.² Presidential campaigns also have been shown to affect turnout, which may have important asymmetric partisan effects.³

The most notable study in support of campaign effects in presidential races is offered by the Hillygus and Jackman (2003) analysis of the 2000 presidential contest. A large panel permitted the investigation of individual-level change in candidate preference associated with two intervening events, the national party conventions and presidential debates. The central theme of the Hillygus-Jackman study is that voters vary in their responses to campaign events and they found evidence for activation and persuasion in the 2000 campaign. Those most likely to change candidate preference were partisans who initially preferred the opposite-party candidate, independents, and the initially undecideds, who accounted for most changes by election day. The study confirmed that campaign effects involve multiple processes and exhibit substantial but systematic variation across voters in presidential elections, but its findings were limited to campaign effects on candidate preferences. It did not provide any analysis of campaign effects on knowledge about the candidates or evaluations of the candidates.

Studies of congressional campaign outcomes more consistently show campaign effects than presidential studies. Although not exclusively focused on campaign spending, congressional election studies have exploited the fact that competitiveness, campaign spending, and campaign visibility vary widely across candidates, districts, and states (Franklin 1991; Herrnson 1989, 1995; Jacobson 1989, 2006; Jacobson and Kernell 1983; Lau and Pomper 2004). A seemingly

² These include Ansolabehere and Iyengar 1995; Box-Steffensmeier et al. 2009; Campbell et al. 1992; Claassen 2011; Dilliplane 2014; Fridkin et al. 2007; Geer 1988; Grant et al. 2010; Hill et al. 2010; Holbrook 1996; Lenz 2009; Masket 2009; Shaw 1999a, 1999b; Vavreck 2009.

³ Ansolabehere and Iyengar 1995; Brady, Johnson, and Sides 2006; Cox and Munger 1989; Gilliam 1985; Gimpel et al. 2007; Hillygus 2005; Holbrook and McClurg 2005; McGhee and Sides 2011; Peterson 2009; Stimson 2004; Masket 2009.

contrary perspective is the view that the quality of the candidates is fixed after congressional primary elections and the quality of the candidates determines the outcomes of general election campaigns (Jacobson and Kernell 1983), but even that perspective is consistent with the view that quality candidates mount quality campaigns that that advantage them.

Contrary to the consensus among observational studies of campaign effects, field experiments that examine the effects of campaign advertising and contact with campaigners show small or no campaign effects. In their meta-analysis of field experiments, Kalla and Broockman (2018) conclude that campaigns can be shown to have an effect under unusual circumstances (candidates take very unpopular positions and there is unusually heavy investment in identifying persuadable voters). In their own field experiments, Kalla and Broockman report some effect of early campaign contact with voters by canvassers, but they find that the effect decays rapidly.

Although field experiments provide indispensable insight into the effects of singular campaign tactics and strategies, they may be limited in their ability to explain individual-level change across multiple contexts in a general election. Most obviously, while many kinds of campaigns are included in the field experiments, the most visible campaigns like U.S. Senate and presidential campaigns are not. Furthermore, the forms of campaign contact manipulated in the experiments are very limited. They do not test the effects of the wider array of campaign strategies, media coverage, social networking, or incumbents' activities that may generate change in candidate evaluations during a campaign season. Moreover, most experimental studies ignore the behavior of the initially undecided citizens and yet we know from observational studies that most campaign effects take the form of moving undecided voters to choose a

candidate, which is far more common than moving voters to switch support from one candidate to another.

We elaborate on past observational studies by comparing campaign season change in candidate evaluations in House, Senate, and presidential contests. Moreover, we extend the analysis beyond candidate choice to knowledge of and attitudes about the candidates. We examine, for the first time, whether the changes in knowledge about candidates and evaluations of issue positions vary across House, Senate, and presidential campaigns. If campaigns inform and crystallize opinion, then, over the course of a campaign, the number of people able to express a view about a candidates' policy views should increase and their evaluations of candidates should evolve. By examining these dimensions of campaign effects, we gain a more nuanced view of variation in campaign effects across individuals and campaign contexts.

The Sources and Limits of Change in Candidate Evaluations

No single theory of campaign effects has emerged. It is well understood that election campaign seasons are extended, complex events that vary in widely in ways that may alter voters' candidate evaluations. Consequently, political science offers multiple theories about the nature of campaigns and candidate behavior and how individuals respond to the political environment. These factors—campaign context and voters' characteristics—interact with candidates' strategies to produce variation in campaign effects. Campaigns vary in competitiveness and visibility, while individuals vary in their attentiveness to and sophistication about politics, their partisan dispositions, and experience. For individuals, context and personal characteristics influence responses to campaigns. In the aggregate, context, candidates' campaign activities, and voter responses determine outcomes.

Our primary concern are the differences between House, Senate, and presidential campaigns. The perceived importance of the office at stake, competitiveness of the race, and the information generated by the media, candidates' campaigns, and other political actors may influence turnout, familiarity with the candidates, the relevance of partisan dispositions, and candidate choice.⁴ Because House, Senate, and presidential races vary widely in these features, we expect that the systematic differences between these types of races in importance of the office, contestedness, and media coverage generate differences in the average frequency of changing candidate evaluations across the three settings (Fenno 1982; Abramowitz and Segal 1993; Clarke and Evans 1983).

The implications of these differences for change in candidate evaluations during a campaign season are not straightforward. The simple expectation is that the potential change in candidate evaluations is greater when more voters are exposed to information about the campaign and candidates. Thus, presidential races have greater potential campaign effects than Senate or House races, and Senate races generally have greater potential campaign effects than House races. Yet, potential campaign effects are limited by the presence of voters with strong dispositions about the candidates at the start of a campaign. It is reasonable to expect initial preferences to be most durable in contests that involve important offices and candidates who are

⁴ See footnotes 2 and 3. On competitiveness and turnout, also see Blais (2006), Coleman and Manna (2000), Cox and Munger (1989), Gershtenson (2009), Goldstein and Freedman (2002), Highton (2010), Lachat (2011), Timpone (1998), Westlye (1991), and Wolak (2006). On competitiveness and candidate familiarity, see Huckfeldt et al. (2007) and Niemi et al. (1986). On media coverage of congressional campaigns, see Freedman, Franz, and Goldstein (2004), Goldenberg and Traugott (1987), Prinz (1995), and Stewart and Reynolds (1990). On issues, campaigns, and voting, see Abbe, et al. (2003), Ansolabehere et al. (2008), Erikson and Wright (1989), Herrnson and Curry (2011), and Page and Jones (1979).

well known at the start of a campaign season, the same contests in which campaign signals are sufficiently strong to expect sizable campaign effects.

Of course, as previous observational research has emphasized, we must account for the possibility that individuals vary in the effect of a campaign season on their candidate evaluations. Most findings support the argument that partisanship and sophistication or interest in politics interact to shape the timing and stability of attitudes about candidates (Bartels et al. 2011; Green and Yoon 2002; Hillygus and Jackman 2003; Shively 1979; Zaller 1992). Attentive partisans have early and stable candidate preferences and should exhibit weak campaign effects. Attentive independents are affected by new information but commit early support less often and should demonstrate the greatest campaign effects. Between interested partisans and interested non-partisans are less well-informed partisans and non-partisans who are less likely to have strong candidate preferences at the start of the campaign season than well informed and partisan citizens. Experience with politics—or simply age—has been shown to be more strongly associated with candidate familiarity and stable political preferences.

The mechanisms of campaign effects are of secondary interest to us in this report, but it bears notice that the changes in candidate evaluations during a campaign season are likely to involve a variety of processes. There are many sources of information—the candidates, political parties, interest groups and PACs, social and occupational networks, and the media—and many of them are biased. Citizens' responses to the campaign environment may include a change in the decision to vote, the stimulation of partisanship (usually labeled “partisan activation”), a recalibration of candidates' views on the issues, a change in the relative importance of issues in candidate choice, an increase or decrease in uncertainty about candidates' issue positions, or

change in citizens' issue positions to conform to those of their favorite candidates.⁵ The political science of campaigns persuades us that all of these processes may be involved when a campaign is salient.

For this study, we examine the net effect of the campaign season by examining candidate evaluations before and after the general election campaigns in House, Senate, and presidential contests. We postulate that contest characteristics (salience, contestedness) interact with individual characteristics (partisanship, sophistication) to produce a probability of changing initial candidate evaluations during a campaign season. Because House, Senate, and presidential contests vary in average salience and contestedness, they will vary in their mean change in candidate evaluations over a campaign season. Specifically,

(H1) House races will exhibit the greatest mean change in candidate evaluations and presidential races will exhibit the least, with Senate races showing change in candidate evaluations that, on average falls between the House and presidential races.

Moreover,

(H2) among House and Senate races, greater contestedness will generate more change in candidate evaluations.

While our primary interest is in comparing races of the three kinds, we also can exploit the panel structure of the data on candidate evaluations to determine whether the effects of partisanship and sophistication are as expected. That is,

⁵ Aldrich 1993, Alvarez 1998, Bartels 2002, Downs 1957, Carson et al. 2010, Canes-Wrone et al. 2002, Jesse 2009, 2010, 2012, Enelow and Hinich 1984, Lenz 2009, 2011, Tomz and Van Houweling 2009, Rogowski and Tucker 2018, Cahill and Stone 2018, Gelman and King 1993, Henderson 2014, 2015.

(H3) partisanship will be negatively related to change in candidate evaluations during the campaign season.

We account for evaluations of the incumbent president (Barack Obama) in the congressional and presidential models. One of the universal themes in studies of voting in congressional elections is that it often is driven by attitudes about the nation's most visible political actor, whose popularity can change over the course of campaign seasons for congressional races or, in the case of a president who is retiring from office, for the presidential races. Therefore,

(H4) presidential approval during the campaign season will have a positive relationship to voting for candidates of the president's party.

The relationship between political sophistication and change in candidate evaluations may be curvilinear if the well-understood logic of Zaller's (1992) analysis applies in this context. It may not. After all, Zaller's emphasis is everyday opinion about public affairs, a context that typically involves more difficulty in acquiring information than is true for intense political campaigns for important elective offices. If it applies, Zaller's argument implies that inattentive, unsophisticated people are unlikely to be aware of developments in campaigns and will show little change in attitudes about the candidates over a campaign season; the most attentive, sophisticated people are locked into their partisan or personal favorites early and will show little change over a campaign season; people with moderate interest and sophistication will exhibit the greatest change in candidate evaluations over a campaign season. Thus,

(H5) the degree of political sophistication will have a curvilinear relationship with change in candidate evaluations during the campaign season.

A “campaign effect” must mean that the acquisition of information about the candidates changes evaluations of the candidates. The competing campaigns and media reports may neutralize the net effect, but at least some campaigns involve an information imbalance at the start of and through the campaign season. Changes in relative knowledge about the candidates, all else equal, should advantage the candidate whose familiarity improves the most with voters. For highly salient campaigns, like presidential campaigns, familiarity with the candidates may be so great at the start of the campaign that little change in knowledge of the candidates occurs during the campaign season and change in relative knowledge of the two candidates has little effect on candidate preferences. Thus,

(H6) gains in knowledge of a candidate should increase the probability of supporting the candidate, an effect that should be conditioned by the salience of the campaign.

Data and Methods

The best observational studies of campaign effects exploit panel surveys (Bartels 1993, 2006; Hillygus and Jackman 2003; Lenz 2009) that allow the observation of variation in campaign effects among individuals. This is accomplished by observing responses to the same or similar survey questions about the candidates from the same individuals before and after (and sometimes during) a campaign. Change in responses, controlling for measurement error, is an indication that the intervening campaign altered perceptions of the candidates.

We exploit *The American Panel Study* (TAPS). TAPS is a monthly online panel that was recruited as a national probability sample with an address-based sampling frame in the fall of 2011 by GfK-Knowledge Networks. Post-stratification weights for this analysis were constructed based on the Current Population Survey population parameters. We treat 2014 and 2016

separately to maximize the number of panelists included for each. In both 2014 and 2016, TAPS panelists were asked questions about their local Senate and House candidates at two points in time.⁶ The first questions were asked in the month immediately following each respondents' congressional primary. The dates of congressional primaries range from March to September so the battery of congressional candidate questions was presented to the corresponding panelists between April and October. Campaign season effects are measured as the change in responses about the candidates between the post-primary wave and the post-general election wave.

To test H1, we measure candidate evaluations before and after the general election campaign, calculate the difference, and compare the differences across House, Senate, and presidential races. We measure the effects of the campaign season for both familiarity with the candidates and candidate preference and relate familiarity to preference. For the 2016 presidential contest, the campaign effect is the change in candidate preference expressed in May 2016, after the nominees were known, to November post-election wave. Variable specifications are provided in Appendix Table A19 and Table A20 provides demographic information regarding the panelists in each election's analysis.

To measure the curvilinear relationship between sophistication and transition of support, we first construct a latent variable using the first-dimension scores from an exploratory factor analysis of scores on a 10-item political knowledge battery, the panelist's education level, and their reported level of interest in politics. We then rescaled values from 0 (the least sophisticated) to 1 (the most sophisticated). Since our hypotheses relate to how those closer to the medium-levels of sophistication will behave over the course of a campaign, we quadratically transform

⁶ Panelists were asked the same battery of questions in October of each campaign year. For ease of analysis, we set aside the October responses to focus on the difference between responses at the start of the general election campaign and responses after a vote choice has been made.

this variable using the by subtracting its quadratic form from itself. That is: *curvilinear sophistication* = *sophistication* – *sophistication*². Thus, the highest values of this measure, 0.25, represent those panelists who are nearest the median level of sophistication while the lowest values represent those panelists who are at the extremes.⁷

We also include measures for *presidential approval*, on a 5-point scale ranging from -2 (strongly disapprove) to +2 (strongly approve). To measure *race competitiveness*, we use the percent electoral margin for the given race. Thus, lower values indicate closer races. Finally, to measure the change in knowledge, we created a measure that captures the *change in the Democratic candidate's knowledge advantage* over the course of the campaign. In the initial and final waves of this study, panelists were asked to identify the positions of candidates for 10 policy issues. We summed the number of positions for which the panelist provided a “don't know” for each candidate in each wave. For each wave we subtracted the Republican don't knows from the relevant Democrat to create a Democratic knowledge advantage for each panelist. To create the change measure, we subtracted the pre-general election measure from the post-general election measure. Thus, higher values indicate that the Democrat's advantage in knowledge with the panelist increased over the campaign.

To test H2-H5, we estimate individual-level transition models for the effects of race contestedness, partisanship, sophistication, and presidential approval on changes in candidate evaluations. We test H6 by comparing estimates for the House, Senate, presidential transition models. Limiting the analysis to the two major party candidates for an office, change may take four forms: from undecided to candidate A, from undecided to candidate B, from candidate A to

⁷ We also estimated models using the scaled sophistication scores that were not quadratically transformed, as well as three-category ordinal measures of sophistication. Those results may be found in the Appendix.

candidate B, and from candidate B to candidate A. For each office and initial preference, we use a transition model to estimate the effect of the context and individual characteristics. This allows us to test H6 by observing the relative importance of the covariates of change in the three types of races and two election years.

Since we are interested in the dynamics of support rather than the cross-sectional observation of support in an election, we employ a series of transition models for each election year and level in our sample. The transition model resembles those of Diggle, Liang, and Zeger (2000) and used by Hillygus and Jackman (2003) and other studies of attitudinal change (e.g., Hillygus 2005, Baker, *et al.*, 2016). The dependent variable is candidate choice—that is, Democrat ($y_i = 1$) and Republican ($y_i = 0$). The logit transformation is $h(p_i)$ and p_i is the probability that the i th respondent votes for the Democrat. The model is:

$$h(p_i) = \sum_{j=1}^J \mathbf{x}_i \boldsymbol{\beta}_j \cdot D_{ij}$$

where D_{ij} serves as a dummy indicator for each individual i who reports a given preference, j , at the end of the primary season and \mathbf{x}_i represents a vector of covariates for each panelist that we have hypothesized are associated with change and stability over the course of a campaign, and $(\boldsymbol{\beta}_j)$ represents the vector of coefficients. The model conditions on reported support at the beginning of the general election campaign, allowing us to identify differentiate patterns from candidate to candidate or undecideds to the major party candidates. For example, $D_{ij} = 1$ signifies that panelist i supported the Democrat in the initial survey when $j=Democrat$. Thus, $D_{ij} = 0$, for the same panelist when analyzing those subjects who initially indicated they supported the Republican or were undecided. Thus, for each election, we will present the effects

of each covariate on the likelihood of voting for a Democrat among the three possible initial states (i.e. supporting the Democrat, supporting the Republican, being undecided).

Findings

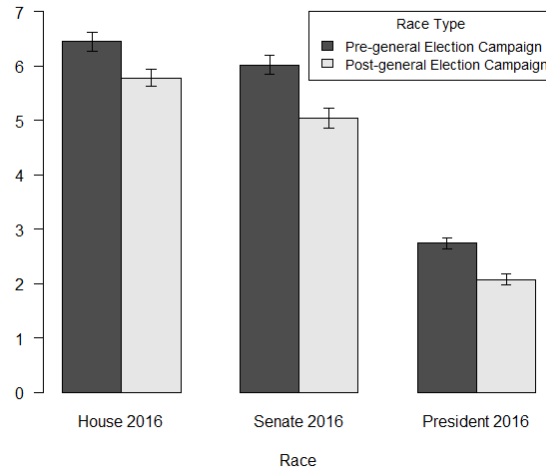
Before examining the effect of the campaign seasons on candidate evaluations, we consider whether the postulated differences in familiarity with candidates for House, Senate, and presidential races is accurate. We exploit two sets of questions that were asked about the candidates before and after the general election campaign. One set asked the panelist to indicate the position of each candidate on ten issues. The second set asked the panelist to indicate the ideological location of each candidate on a five-point scale. We are interested in the number of “don’t know” (DK) responses across the three types of races and between the beginning and end of the general election season.

The pattern of DK responses confirms our assumptions. In Figures 1 and 2 we display the mean number of DK responses to the two sets of questions, with confidence intervals shown at the top of each bar. Figure 1 displays the average number of “don’t know” responses to candidates’ positions on a 10-item issue battery, while Figure 2 shows the percent of panelists who could not identify a candidate’s position on a liberal-conservative scale. In the pre-general election campaign season, panelists exhibit the least familiarity with House candidates and the most familiarity with presidential candidates. In fact, the differences between congressional and presidential candidates is very large. For example, the average panelist could not identify the policy position of roughly 6.5 of a given House candidate’s 10 policy positions, while the same figure only registered a 2.7 for a presidential candidate. Similarly, in both 2014 and 2016, the average panelist could not identify a given House candidate on the ideological scale between 46

and 49 percent of the time. For the presidential candidate, only 16 percent of panelists were unable to identify where Donald Trump or Hillary Clinton were on the ideological scale.

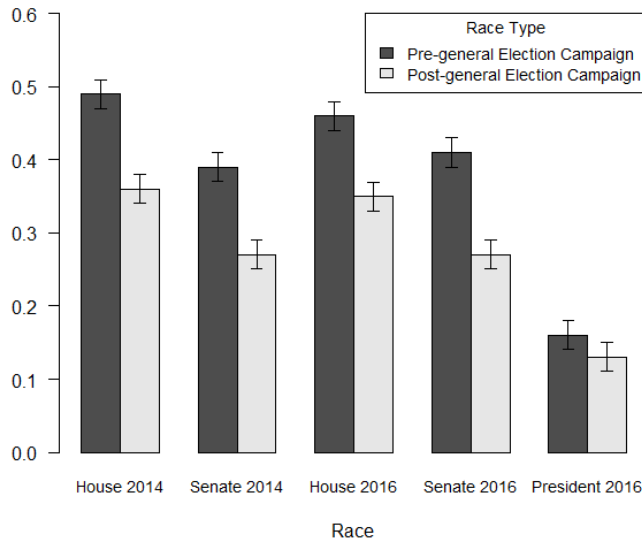
Investigating the change in panelist provided information over the campaign season presents a similar story. Panelists show a significant reduction in the number of DK responses in the congressional races. With respect to the issue battery, the average number of DKs decreased by roughly 1 issue for House and Senate races. The decrease for the ideological scale was also a significant drop of 11 to 14 percent in those races surveyed. Although there is significant improvement in the issue battery for the presidential race, we find that panelists had hardly any improvement in their ability to locate Trump and Clinton by the time of the general election. These results indicate a somewhat greater campaign effect in the congressional campaigns, which is a finding consistent with the proposition (H1) that the initial salience of races will affect the frequency of change in candidate preferences.

Figure 1: Mean Number of “Don’t Know” Responses on Ten Issue Questions Per Candidate, 2016



Note: Data from 2016 TAPS. Bars display the mean number of don't know responses for 10 items when panelists were asked to identify a given candidate's position. Brackets represent 95% CI.

Figure 2: Percent Responding “Don’t Know” to a Question about a Candidate’s Ideological Location



Note: Data from 2014 and 2016 TAPS. Bars display the percent of panelists who responded with “Don’t know” when asked to place a given candidate on the liberal-conservative scale. Brackets represent 95% CI.

H1 is confirmed more directly by Table 1. The table reports a crosstabulation of candidate preference in pre-general election campaign wave with vote choice in November.

Shaded cells represent a change in preference. The most important patterns:

- The number of undecideds increases as we move from presidential to Senate to House contests. That is, initial conditions vary systematically across the three types of races, as expected.⁸
- House and Senate races exhibit much more change during the campaign season than the presidential race. This holds for change from one candidate to another and for change from undecided to a candidate.
- The 2016 presidential campaign effect, like the 2000 effect for Hillygus and Jackman, is primarily changing undecideds to one of the two major party candidates. In 2016, this campaign effect helped Trump disproportionately.

Thus, the expectation that stronger pre-campaign candidate preferences yield a smaller net campaign effect in the presidential contest than in congressional races is confirmed at the individual level for the first time in a single study.

We find a substantial number of panelists switching from one candidate to another in 2016 Senate contests. Overall, about 15 percent of panelists who initially expressed a Senate candidate preference switched to the other majority party candidate on election day. This is much higher than for Senate contests in 2014, and higher than observed in presidential and House contests in either year.

⁸ While not the main issue of interest in this report, we note the high prevalence of undecideds at the beginning of campaigns. As an ancillary analysis, we investigate what predicts an undecided voter at the beginning of the general election. The results and a brief discussion may be found in Appendix Section SI-2.

Table 1. Stability and Change in House, Senate, and Presidential Candidate Preferences, 2014 and 2016 (Cells Representing Change are Shaded, in Percent)

		November Vote						
		House		Senate		President		
		Dem	Rep	Dem	Rep	Dem	Rep	
Pre-Campaign Preference	2014	Dem	94.8 (326)	5.2 (18)	95.7 (179)	4.3 (8)	--	--
		Rep	5.7 (19)	94.3 (314)	3.7 (6)	96.3 (157)	--	--
		Undecided	55.9 (179)	44.1 (141)	49.0 (101)	51.0 (105)	--	--
	2016	Dem	96.7 (326)	3.3 (11)	81.6 (199)	18.4 (45)	98.2 (549)	1.8 (10)
		Rep	5.9 (20)	94.1 (317)	12.2 (25)	87.8 (180)	1.3 (6)	98.7 (463)
		Undecided	50.9 (194)	49.1 (187)	44.3 (104)	55.7 (131)	43.2 (67)	56.8 (88)

A possible explanation for the Senate pattern lies in the great variation in the salience and contestedness of Senate contests from one election cycle to the next. On occasion, Senate candidates who initially are not well known can mount effective campaigns to produce changes in candidate preferences. Moreover, scandals and other campaign events in the more salient Senate contests can generate switches. In Indiana’s 2016 Senate race, for example, Democrat Evan Bayh started with a large lead over Republican Todd Young, but Bayh’s inability to counter Young’s argument that Bayh had become a Washingtonian and his missteps during the campaign appear to have been reflected in a dramatic change in the polls by election time. In the 2016 Arizona Senate contest, Republican John McCain faced a serious challenge from the right in his late primary and, in successfully fending off that challenge, endorsed of presidential candidate Trump. These events may have held back support for McCain in head-to-head polls with Democrat Ann Kirkpatrick early in their general election race. McCain eventually pulled

ahead by a substantial margin and won the general election. Indiana and Arizona panelists are greatly over-represented among the 2016 switchers shown for the Senate contests in Table 1.⁹¹⁰

The results for the multivariate tests for H2-H6 are provided in Tables 2 and 3. The tables show estimates for covariates of change in candidate preference for the 2014 and 2016 election cycles. The dependent variable in each set of estimates is November vote (1 = Democrat, 0 = Republican). A positive coefficient indicates the likelihood that a panelist supports the Democratic candidate in the general election, conditional on their pre-general election preference, as represented by the columns. For example, the first cell of Table 2 in column 1 suggests that a Republican panelist who was initially undecided in her House election was predicted to be less likely to vote for the Democrat, relative to an Independent (the baseline category).

⁹ Changes in knowledge during the campaign in these states are consistent with the rest of the sample. See Appendix Table A15.

¹⁰ 2016 political peculiarities may have created many late-switching voters. See Richard Cowan, “Democrats See FBI Controversy Hurting Chances in U.S. Congress Races,” Reuters, November 7, 2016 (<http://www.reuters.com/article/us-usa-elections-congress/democrats-see-fbi-controversy-hurting-chances-in-u-s-congress-races-idUSKBN13218S>), and Alex Seitz-Wald, “Democrats Fear Senate Majority Quest May Be Killed by Comey,” NBC News, November 1, 2016 (<https://www.nbcnews.com/politics/2016-election/democrats-fear-path-senate-majority-getting-sidetracked-comey-s-email-n675981>).

Table 2. 2014 Election Transition Models, Squared Sophistication Scores

	Pre-Campaign Candidate Preference					
	House			Senate		
	Und	Dem	Rep	Und	Dem	Rep
Republican	-0.71 (0.62)	-3.29* (1.15)	-3.89* (1.16)	-0.33 (0.69)	3.57 (1.93)	-1.17 (2.39)
Democrat	1.68* (0.59)	-0.11 (0.74)	0.24 (0.86)	1.00 (0.86)	3.50* (1.26)	5.17* (1.22)
Pres. Approval	0.99* (0.18)	0.05 (0.23)	0.81* (0.27)	1.58* (0.25)	1.10 (0.60)	0.42 (0.28)
Curvilinear Sophistication	-3.41 (3.74)	-0.68 (5.63)	-2.35 (6.49)	-8.95 (6.43)	-15.47 (12.56)	-14.92 (10.30)
Race Competitiveness	-0.00 (0.01)	-0.01 (0.01)	-0.03 (0.02)	-0.02 (0.02)	0.05 (0.10)	0.03 (0.02)
Constant	1.27 (0.75)	4.30* (1.74)	0.72 (1.47)	3.07* (1.44)	3.88 (2.99)	-1.77 (1.99)
N	841			465		
R ²	0.64			0.73		
LR	221.1			120.3		

Dependent variable: 1= November vote for Democrat, 0=vote for Republican. Models estimated using a logit link function. * p<0.05

More highly contested races are expected to exhibit stronger campaign effects than less contested races. The two tables report the results for competitiveness measured as the closeness of the outcome. We find no evidence that such effects influenced transitions—that is, H2 is not confirmed. We checked two other specifications: (a) The difference between races in which the difference in vote totals for the two major party candidates was five percent or less versus others

and (b) the *Cook Report* pre-election classification of races.¹¹ Neither specification altered the finding that contested races did not generate stronger campaign season effects.^{12 13}

Table 3. 2016 Election Transition Models, Squared Sophistication Scores

	Pre-Campaign Candidate Preference								
	House			Senate			Presidential		
	Und	Dem	Rep	Und	Dem	Rep	Und	HRC	DJT
Republican	-0.75 (0.46)	-2.10 (1.80)	0.54 (0.88)	-1.17 (0.64)	-0.28 (0.96)	-0.43 (0.58)	-1.65* (0.75)	-2.83* (1.38)	0.10 (1.29)
Democrat	0.99* (0.41)	-0.37 (0.81)	-0.13 (0.88)	0.44 (0.51)	0.23 (0.47)	1.66 (1.06)	0.35 (0.60)	-0.59 (1.22)	-0.59 (1.81)
Pres. Approval	0.46* (0.13)	0.02 (0.36)	1.04* (0.26)	0.32 (0.17)	0.89* (0.18)	0.05 (0.31)	1.16* (0.18)	0.18 (0.49)	0.96* (0.27)
Curvilinear Sophistication	-4.07 (3.43)	-0.80 (7.20)	9.68 (7.33)	0.38 (3.55)	-3.81 (4.82)	-3.35 (4.49)	-10.15 (5.79)	-8.65 (6.01)	23.72 (12.56)
Race Competitiveness	-0.00 (0.01)	0.06 (0.03)	-0.02 (0.01)	0.02 (0.02)	0.03 (0.02)	-0.01 (0.02)	-0.01 (0.02)	0.01 (0.03)	0.02 (0.02)
Constant	0.98 (0.82)	2.23* (0.96)	-3.52 (1.79)	-0.58 (0.73)	0.62 (1.02)	-0.93 (0.98)	2.63 (1.36)	5.48* (1.55)	-9.46* (3.68)
N	1,012			659			1,139		
R ²	0.53			0.33			0.80		
LR	185.4			114.8			302.8		

Dependent variable: 1= November vote for Democrat, 0=vote for Republican. Models estimated using a logit link function. HRC = initial preference for Clinton; DJT = initial preference for Trump; Dem = initial preference for Democratic candidate; Rep = initial preference for Republican candidate. * p<0.05.

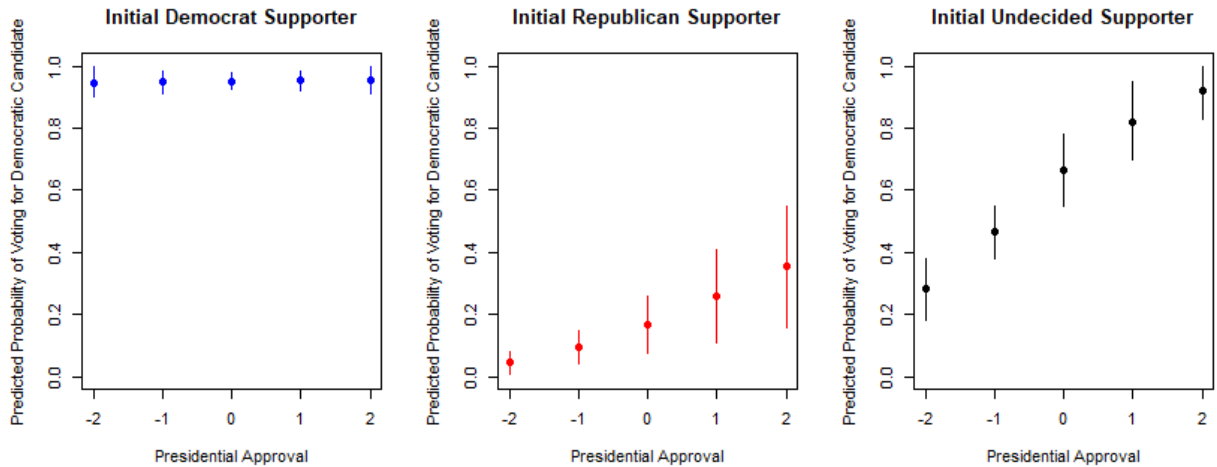
¹¹ See Appendix Tables A1-A3.

¹² At the race level, we also examined if candidate spending was associated with transitions in support. While we found no evidence of an association in 2014, we found a significant relationship in both Senate and House elections in 2016: a candidate who had a spending advantage over their opponent was significantly more likely to pick up the support among undecideds, initial Republican voters, and initial Democratic voters in Senate elections. See Tables A12 and A13.

¹³ We also estimated more saturated models with controls for income, race, ideology, rural residence, and gender. The main results of Tables 3 and 4 hold. We find strong support that conservatives are less likely to transition to Democrats over the campaign, which is largely consistent with the approval of Obama and partisan findings presented in Tables 3 and 4. See Tables A17 and A18 in the Appendix.

Tables 2 and 3 confirm the expected effects of partisanship and presidential approval (H3 and H4). These findings are supportive of the activation hypothesis—a campaign informs voters which candidate represents their political or partisan interest and they vote accordingly. Those who were most likely to change their support to a candidate did so in ways that were systematically related to their political attitudes. For example, in both years and all types of races, those undecided voters with positive attitudes about Obama’s performance were significantly more likely to move towards Democrats. Consider the predicted probability plot in Figure 3. The x-axis in this plot is president approval, while the y-axis is the predicted probability of voting for the Democratic candidate. We partition the predictions by initial support. The left panel shows weak, positive change among initial Democratic voters. That is, presidential approval played little role for those already committed to Democrats. Yet, among initial Republican supporters and undecideds, this change was much more pronounced. For the former, voters who disfavored Obama and planned to voter for Republican candidates were extremely unlikely of switching support. Yet, under the same initial condition, strong approvers of Obama were predicted to vote Democratic with 0.36 probability. Among the undecideds (panel 3), approval is a very discriminating predictor of the support. Those who strongly disapprove of Obama are likely to vote Democratic with 0.28 probability, while those who very much approve were predicted to vote Democratic with 0.92 probability.

Figure 3. Predicted Probability of Voting Democratic in the 2014 House by Presidential Approval, Conditioned on Initial Support



The figure presents the predicted probability that a voter will change her preference from the end of the primary campaign to election day while varying the Presidential Approval. The three sets of points reflect the report support at the beginning of the 2014 General Election campaign for the House.

Using the curvilinear approach, political sophistication is not consistently related to changes in vote preference for either the initially undecided or the initially declared. If those who are of medium sophistication were the most likely to be influenced by the effects of campaign season, we would expect to find a negative coefficient among the initially for the Democrat and a positive coefficient for those initially for the Republican. We fail to find sufficient evidence to demonstrate that across all levels of campaign and both years. The signs for the 2016 models align with our expectations in 2016 House campaigns, but these estimates are too imprecise to conclude that medium sophisticates are the most likely to switch.

In a complementary analysis, we operationalized the sophistication variable as three categories based upon the tertiles of panelists. Those in the middle third served as a baseline category. As found in Appendix Tables A7 and A8, we find little evidence to suggest that these panelists of interest were more likely to switch. Thus, the curvilinear pattern predicted by the

Zaller model is not observed in this context. In Appendix Tables A9 and A10, we display the results from models where sophistication is treated as a measure without linear and quadratic transformation. We find that more sophisticated 2016 panelists were less likely to transition initial support. Thus, we are unable to confirm H5.

Finally, we examine the information campaign effects on vote transitions at the individual level to test H6. We use transition models where the outcome variable is a vote for the Democratic candidate but we include our directional learning variables where positive [negative] values represent learning more about the Democratic [Republican] candidate relative to the Republican [Democratic] candidate over the course of the campaign. Table 4 reports the estimates for this coefficient when added to the previous 2016 models.¹⁴

For several types of voters, we do not find that the effect of changes in the relative knowledge of candidates is large enough to be statistically significant. With little variation in the dependent variable, this is not too surprising. We find a significant effect among voters who are initially undecided in House races, where the number of undecided voters is largest: these voters are more likely to transition to the candidate about whom they report greater knowledge relative to the other candidate in the race. The effect is in the predicted direction for undecided voters in Senate and presidential contests, too. In one case, those decided for Donald Trump at an early stage, we find a significant learning effect: learning more Clinton positions relative to Trump increased the probability of changing to Clinton support among these voters. While this coefficient's magnitude appears large, one must consider that switching was quite rare in the

¹⁴ Issue item data were only available for the 2016 waves of the panel. For brevity, we present the predicted probabilities of the estimations in the main text. The estimated tables may be found in the Appendix Table A6.

presidential contest. Indeed, the model predicts that moving from having equal knowledge about the candidates, to learning two more issue positions of Trump relative to Clinton is associated with a .01 increase in the probability of voting for Clinton, or moving from a predicted probability of .005 to .015. Thus, we should caution restraint in merely limiting the analysis to the coefficient table.

Table 4. 2016 Election Transition Models with Knowledge Advantage

<i>Primary:</i>	<i>House</i>			<i>Senate</i>			<i>Presidential</i>		
	Und	Dem	Rep	Und	Dem	Rep	Und	HRC	DJT
Δ Dem. Knowledge Advantage	0.15* (0.05)	0.09 (0.07)	-0.00 (0.07)	0.08 (0.05)	0.03 (0.06)	0.15 (0.10)	0.08 (0.11)	0.37 (0.20)	0.51* (0.24)
N	488			505			934		
R ²	0.58			0.32			0.80		
LR	226.04			75.7			2065.4		

Dependent variable: 1= November vote for Democrat, 0=vote for Republican. Models estimated using a logit link function. Additional coefficients suppressed and available in Appendix Table A6. Robust standard errors in parentheses.

* $p < 0.05$.

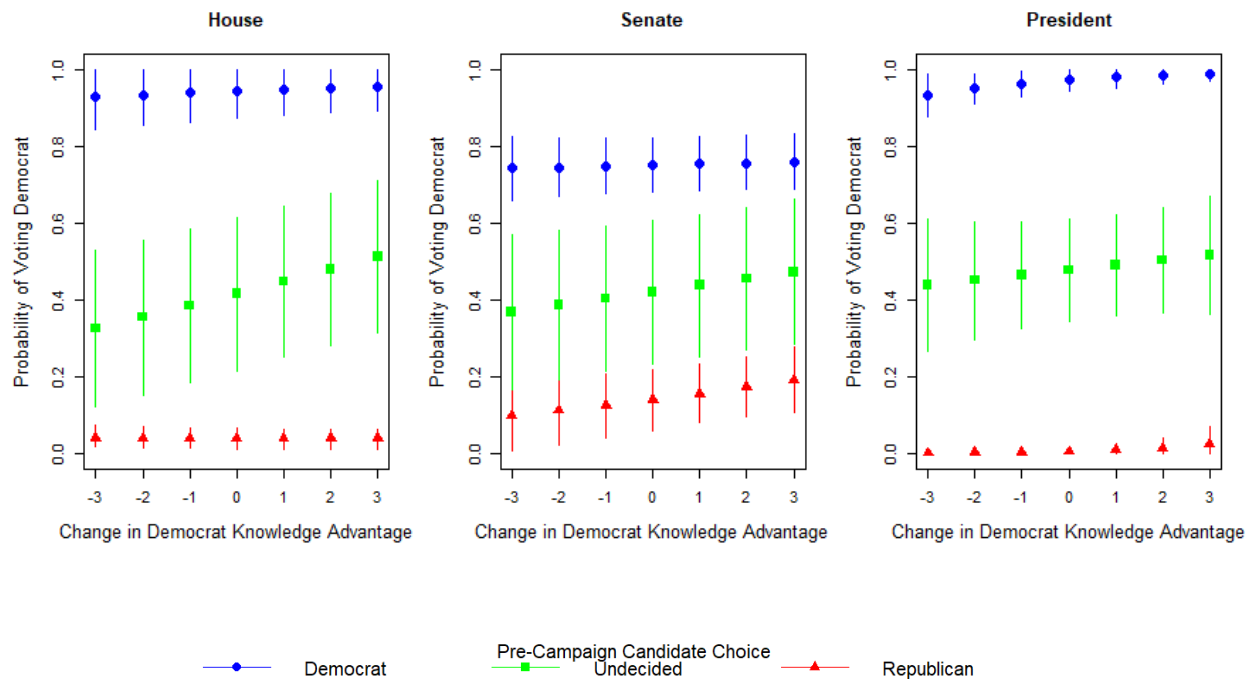
We realize that the relative knowledge effects estimated here greatly understate the actual effect. In this analysis, we are unable to examine large samples of voters in individual House or Senate races, some of which had campaigns that were uncontested or lacked much visibility. By aggregating over all races, we dampen the estimated effects we would observe in the more visible, contested races. Moreover, the largest knowledge effects should occur among the initially undecided voters who constitute a small part of the electorate, but the low precision with which we can estimate effects for such a small group undermines our ability to have confidence in even large effects.¹⁵

¹⁵ We also examined the possibility of an indirect relationship of closeness of the election on transitions in support by investigating whether close races were more likely to be associated with

With these caveats in mind, we show estimated probabilities of voting for the Democratic candidate in House, Senate, and presidential races for different patterns of change in relative knowledge proximity to the Democratic and Republican candidate in Figure 4. Figure 4 presents the predicted probabilities that the panelist will support the Democratic candidate in response to shifts in relative learning about the candidates in 2016. If changes in relative knowledge of the candidates affects candidate choice, the slope of a line connecting the levels of advantage should rise from left to right. While the effects usually are small and not statistically significant, the effects are in the predicted direction and differ across the three types of races in the predicted way. For example, in the 2016 presidential contest (right panel), change in relative knowledge has only tiny effects on candidate choice, has larger for early undecided voters but the difference is not significant due to the large standard error, and is statistically significant but tiny for initial Trump supporters. Similarly, we find change in the predicted direction but little evidence that learning is significantly related to transitioning in a Senate campaign. The relative knowledge effect is greatest on average for initially undecided voters in House races but the standard errors are too large for that group, as expected. Substantively, we can consider average effects. Our model predicts that an initially undecided voter who learns three more issue positions of the Democratic candidate relative to the Republican candidate from the primary to the general has a probability of voting Democratic is 0.52. In contrast, an initially undecided voter who learns three more issue positions of the Republican candidate relative to the Democratic candidate has a probability of voting for the Democrat is 0.38.

greater learning. As the logistic regressions in Table A21 demonstrate, we were unable to find such an effect. At the same time, however, we did find evidence that moderately sophisticated citizens were the most likely to increase their knowledge over the course of the presidential campaign.

Figure 4: Predicted Probability of Switching to Democratic Support in 2016, Conditional on Pre-Campaign Support and Change in Awareness of Policy Positions



The figure presents the predicted probability that a voter will change her preference from the end of the primary campaign to election day while varying the relative difference in known policy positions of the two major party candidates across all federal elections in 2016. The y-axis represents the probability of voting for the Democrat in November, while the x-axis represents the Democratic candidate’s advantage in identifiable issues over the Republican candidate to the individual panelist. Positive values reflect an increase in knowledge of the Democrat relative to the Republican over the campaign. The three sets of points reflect the party supported at the beginning of the campaign. Models estimated with a logit link function.

As expected, the small sub-samples and large standard errors for the initially undecided voters reduce the confidence of our inferences about that group. Moreover, aggregating over all states and districts surely camouflages the effects that likely would be observed in House and Senate races that are contested and visible. Nevertheless, we do find some significant effects, the measured effects are in the expected direction, and the expected differences between the three types of races are plain. These findings should motivate future studies with appropriate samples in individual states and districts to measure these effects.

Conclusion

With a novel dataset, we address four key issues about the dynamics of campaigns. First, we draw inferences about the differences between House, Senate, and presidential campaigns that appear to be due to systematic differences in average salience across the three types of races. Our findings reinforce these observations, each consistent with our hypotheses about the effects of campaign salience:

- Voters show the least uncertainty about the presidential candidates at the start of the campaign and the most uncertainty in House contests;
- Voters evaluations of the candidates change the most in House contests and the least in the presidential contest; and
- Relative knowledge of the candidates has the greatest effect in House races and least effect in the presidential contest.

Second, we find evidence that some voters learn candidates' policy positions over the course of congressional and presidential campaigns. In House, Senate, and presidential contests in 2016, panelists responded with significantly more confidence in their identification of candidate policy positions and their general ideological location at the end of the general election than at the beginning. These changes are found to have a modest effect on candidate preferences. Among undecideds in House races, simply learning about issue positions are associated with candidate choice, although subgroup sample sizes require that we keep an open mind about these effects. These results suggest that campaigns can produce significant returns for candidates among undecided voters in lower-salience contests.

Third, we find that those who are most likely to systematically change their support during a general election campaign move in a manner that is consistent with their beliefs about the president and their partisan identification. Mismatched party identifiers are likely to “return home” to their party and perceptions of the president’s performance exerts an expected directional effect. Furthermore, we find that contrary to our expectations, it is not medium sophisticated voters who are most likely to be influenced by the campaign season. Rather, the relationship between changing support and sophistication is more directly linear among those who are initially decided. This finding has important implications for the study of campaign communication and warrants future investigation.

Fourth, we demonstrate that across campaigns, initial preferences are very stable among those voters who express preferences at the beginning of the general election campaign. Nonetheless, these stable preferences only demonstrate a portion of the campaign narrative. Significant proportions of the electorate do not support a candidate at the beginning of the campaign and choose a candidate while being exposed to information about the candidates during the campaign season.

We have improved upon the approach of observational studies of campaign effects by providing panel data for all three types of American federal elections and confirmed the presence of campaigns effects that are related to the salience of the campaigns. Of course, we cannot attribute the campaign effects to any particular campaign event, strategy, or media coverage, as experimental studies attempt to do, but we have, for the first time, captured candidate evaluations at the beginning and end of House, Senate, and presidential general election campaigns. We have confirmed the important differences between these elections and demonstrated the conditionality

of partisan and sophistication effects on change in voters' candidate evaluations during campaigns.

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Appendix

SI-1: Supplementary Regressions

Table A1. 2014 Election Transition Models, Cook Scores

<i>Primary:</i>	Senate			House		
	Und	Dem	Rep	Und	Dem	Rep
Rep	-0.61 (0.61)	0.89 (1.42)	-0.36 (1.55)	-1.19* (0.49)	-2.15* (0.82)	-2.15 (1.13)
Dem	0.63 (0.58)	1.32 (1.23)	16.36 (1716)	1.64* (0.42)	0.60 (0.71)	1.07 (0.65)
Approval	1.36* (0.21)	1.07* (0.41)	0.75 (0.50)	0.79* (0.13)	0.30 (0.24)	0.53* (0.21)
Medium Sophistication	-1.06 (0.61)	-0.22 (1.39)	14.40 (1716)	0.05 (0.44)	-0.62 (0.96)	0.06 (0.67)
High Sophistication	0.03 (0.60)	1.83 (1.62)	14.36 (1716)	0.59 (0.46)	-0.41 (0.89)	-1.59 (0.91)
Cook Score	-0.00 (0.02)	-0.17 (0.17)	-0.01 (0.52)	0.02 (0.22)	0.02 (0.22)	0.42 (0.42)
Constant	1.37* (0.70)	2.41 (1.44)	-17.04 (1716)	0.07 (0.48)	3.21* (1.01)	-2.14* (0.90)
N	471			849		
R ²	0.73			0.66		
LR	478.7			781.1		

Dependent variable: 1= November vote for Democrat, 0=vote for Republican. Models estimated using a logit link function. Robust standard errors in parentheses

* p<0.05

Table A2. 2016 Election Transition Models, Cook Scores

<i>Primary:</i>	<i>Presidential</i>			<i>Senate</i>			<i>House</i>		
	Und	HRC	DJT	Und	Dem	Rep	Und	Dem	Rep
Rep	-0.65 (0.56)	-2.17 (1.33)	0.63 (1.32)	-0.71 (0.45)	0.16 (0.68)	-1.07* (0.51)	-0.75* (0.34)	-0.10 (1.20)	-0.68 (0.67)
Dem	0.80 (0.50)	-0.63 (1.11)	0.57 (1.54)	0.82* (0.38)	0.65 (0.43)	0.21 (0.84)	0.85* (0.31)	-0.18 (0.86)	0.67 (0.66)
Approval	0.96* (0.18)	0.66 (0.35)	1.01* (0.38)	0.60* (0.11)	0.69* (0.16)	0.32 (0.21)	0.63* (0.09)	0.43 (0.27)	0.56* (0.19)
Medium Sophistication	0.68 (0.50)	0.32 (0.92)	1.26 (1.28)	0.16 (0.38)	0.01 (0.52)	-1.87* (0.69)	-0.42 (0.31)	1.21 (0.77)	-1.13 (0.67)
High Sophistication	0.79 (0.59)	1.33 (0.99)	- -	0.26 (0.45)	0.90 (0.51)	-1.21* (0.53)	0.61 (0.35)	2.26* (0.88)	-1.18 (0.63)
Cook Score	0.02 (0.19)	-0.35 (0.34)	-0.33 (0.54)	-0.03 (0.12)	0.09 (0.15)	0.09 (0.19)	0.04 (0.17)	-0.68 (0.35)	0.52 (0.27)
Constant	-0.61 (0.59)	4.25* (1.35)	-3.77* (1.72)	-0.31 (0.35)	-0.09 (0.59)	-0.18 (0.81)	0.02 (0.37)	2.86* (0.90)	-2.04* (0.67)
N	948			659			1,012		
R ²	0.80			0.41			0.61		
LR	1,002.2			376.3			850.7		

Dependent variable: 1= November vote for Democrat, 0=vote for Republican. Models estimated using a logit link function. HRC = initial preference for Clinton; DJT = initial preference for Trump; Dem = initial preference for Democratic candidate; Rep = initial preference for Republican candidate. Robust standard errors in parentheses.

* p<0.05.

Table A3. 2016 Election Transition Models, Within 5 Points

<i>Primary:</i>	<i>Presidential</i>			<i>Senate</i>			<i>House</i>		
	Und	HRC	DJT	Und	Dem	Rep	Und	Dem	Rep
Rep	-0.60 (0.57)	-2.23 (1.32)	1.17 (1.52)	-0.71 (0.45)	0.09 (0.68)	-1.08* (0.51)	-0.76* (0.34)	-0.50 (1.07)	-0.54 (0.66)
Dem	0.81 (0.50)	-0.63 (1.11)	1.26 (1.75)	0.78* (0.38)	0.60 (0.44)	0.12 (0.82)	0.84* (0.31)	0.06 (0.82)	0.65 (0.65)
Approval	0.97* (0.18)	0.66 (0.34)	1.36* (0.50)	0.61* (0.12)	0.71* (0.16)	0.34 (0.21)	0.63* (0.09)	0.42 (0.25)	0.59* (0.18)
Medium Sophistication	0.75 (0.51)	0.26 (0.91)	2.32 (1.20)	0.19 (0.38)	0.02 (0.51)	-1.82* (0.68)	-0.43 (0.31)	1.27 (0.75)	-1.11 (0.66)
High Sophistication	0.82 (0.59)	1.20 (0.97)	- -	0.31 (0.45)	0.91 (0.51)	-1.20* (0.54)	0.61 (0.35)	2.16* (0.85)	-1.14 (0.61)
Within 5 Points	0.51 (0.45)	-0.24 (0.78)	- -	0.27 (0.45)	0.31 (0.51)	0.10 (0.59)	0.15 (0.82)	12.06 (876)	0.70 (1.14)
Constant	-0.79 (0.48)	3.64* (1.17)	-4.96* (1.93)	-0.43 (0.38)	0.10 (0.49)	0.07 (0.61)	0.07 (0.29)	1.82* (0.71)	-1.38* (0.56)
N	884			659			1,012		
R ²	0.78			0.41			0.60		
LR	871.4			376.4			844.8		

Dependent variable: 1= November vote for Democrat, 0=vote for Republican. Models estimated using a logit link function. HRC = initial preference for Clinton; DJT = initial preference for Trump; Dem = initial preference for Democratic candidate; Rep = initial preference for Republican candidate. Robust standard errors in parentheses.

* p<0.05.

Table A4. 2014 Election Transition Models, Unweighted

<i>Primary:</i>	<i>Senate</i>			<i>House</i>		
	Und	Dem	Rep	Und	Dem	Rep
Rep	-0.73 (0.60)	0.25 (1.36)	-0.53 (1.55)	-1.30* (0.49)	-2.22* (0.82)	-1.98 (1.13)
Dem	0.65 (0.58)	1.34 (1.23)	3.05 (2.04)	1.44* (0.43)	0.65 (0.71)	0.77 (0.70)
Approval	1.24* (0.19)	1.04* (0.41)	0.77 (0.47)	0.85* (0.14)	0.29 (0.24)	0.62* (0.23)
Sophistication	0.20 (0.19)	0.44 (0.40)	0.32 (0.58)	0.19 (0.15)	0.13 (0.26)	-0.52* (0.25)
Competitiveness	-0.00 (0.02)	0.02 (0.06)	0.02 (0.03)	-0.01 (0.01)	0.00 (0.01)	-0.02 (0.02)
Constant	0.64 (0.50)	2.04 (1.12)	-3.41* (1.37)	0.81* (0.40)	2.70* (0.66)	-1.03 (0.75)
N	465			841		
R ²	0.72			0.67		
LR	465.2			781.9		

Dependent variable: 1= November vote for Democrat, 0=vote for Republican. Models estimated using a logit link function. Robust standard errors in parentheses

* p<0.05

Table A5. 2016 Election Transition Models, Unweighted

<i>Primary:</i>	<i>Presidential</i>			<i>Senate</i>			<i>House</i>		
	Und	HRC	DJT	Und	Dem	Rep	Und	Dem	Rep
Rep	-0.70 (0.57)	-2.13 (1.34)	0.41 (1.28)	-0.71 (0.45)	0.05 (0.68)	-1.14* (0.50)	-0.70* (0.33)	-0.81 (1.20)	-0.66 (0.65)
Dem	0.89 (0.51)	-0.60 (1.11)	0.36 (1.52)	0.85* (0.38)	0.73 (0.43)	-0.29 (0.82)	0.88* (0.31)	0.04 (0.83)	0.65 (0.65)
Approval	0.97* (0.19)	0.61 (0.34)	0.96* (0.38)	0.59* (0.11)	0.69* (0.16)	0.37 (0.20)	0.61* (0.09)	0.23 (0.27)	0.57* (0.18)
Sophistication	0.44* (0.21)	0.39 (0.20)	-0.07 (0.46)	0.14 (0.15)	0.33* (0.17)	-0.39 (0.20)	0.18 (0.12)	0.89* (0.27)	-0.47* (0.24)
Competitiveness	-0.02 (0.02)	0.01 (0.03)	0.02 (0.04)	0.00 (0.01)	0.02 (0.02)	-0.00 (0.02)	-0.00 (0.01)	0.07* (0.03)	-0.02 (0.01)
Constant	0.22 (0.39)	3.87* (1.11)	-4.20* (1.31)	-0.29 (0.35)	-0.01 (0.42)	-0.69 (0.53)	0.08 (0.28)	1.36 (0.83)	-1.32* (0.58)
N	1,139			659			1,012		
R ²	0.84			0.41			0.61		
LR	1,327.0			371.9			849.6		

Dependent variable: 1= November vote for Democrat, 0=vote for Republican. Models estimated using a logit link function. HRC = initial preference for Clinton; DJT = initial preference for Trump; Dem = initial preference for Democratic candidate; Rep = initial preference for Republican candidate. Robust standard errors in parentheses.

* p<0.05

Table A6. 2016 Election Transition Models with Knowledge Advantage

<i>Primary:</i>	<i>House</i>			<i>Senate</i>			<i>Presidential</i>		
	Und	Dem	Rep	Und	Dem	Rep	Und	HRC	DJT
Rep	-1.07 (0.80)	-0.64 (2.47)	0.63 (1.27)	-0.85 (0.75)	1.68 (0.85)	-0.12 (0.65)	-1.24 (0.82)	-2.42 (1.63)	12.93* (1.10)
Dem	1.28* (0.61)	-1.70 (1.17)	1.31 (1.07)	0.22 (0.59)	0.25 (0.60)	2.14 (1.04)	0.22 (0.63)	-0.10 (1.12)	-0.10 (1.13)
Approval	0.47* (0.22)	0.06 (0.45)	0.79* (0.37)	0.35 (0.18)	1.22* (0.25)	-0.25 (0.34)	1.18* (0.22)	0.21 (0.73)	0.63 (0.36)
Curvilinear Sophistication	-3.44 (4.63)	10.34* (3.66)	7.91 (10.05)	1.56 (4.22)	-0.50 (4.24)	-8.33 (5.39)	- 12.16* (5.97)	-12.19 (9.20)	33.40 (29.72)
Competitiveness	-0.01 (0.02)	0.00 (0.01)	0.01 (0.03)	0.02 (0.02)	-0.01 (0.03)	-0.01 (0.03)	-0.01 (0.02)	0.02 (0.03)	0.01 (0.02)
Δ Dem. Knowledge Advantage	0.15* (0.05)	0.09 (0.07)	-0.00 (0.07)	0.08 (0.05)	0.03 (0.06)	0.15 (0.10)	0.08 (0.11)	0.37 (0.20)	0.51* (0.24)
Constant	0.88 (1.16)	2.40* (1.42)	-5.06* (2.56)	-0.94 (0.76)	0.18 (1.04)	-0.90 (1.10)	3.13* (1.38)	6.03* (2.11)	- (7.23) 24.85*
N	488			505			934		
R ²	0.58			0.32			0.80		
LR	226.04			75.7			2065.4		

Dependent variable: 1= November vote for Democrat, 0=vote for Republican. Models estimated using a logit link function. HRC = initial preference for Clinton; DJT = initial preference for Trump; Dem = initial preference for Democratic candidate; Rep = initial preference for Republican candidate. Robust standard errors in parentheses.

* $p < 0.05$.

Table A7. Estimates for Voting Democratic by Pre-Campaign Candidate Preference, Categorical Sophistication

2014 (Transition Models)

Pre-Campaign Candidate Preference						
	Senate			House		
<i>Primary:</i>	Und	Dem	Rep	Und	Dem	Rep
Rep	-0.22 (0.72)	2.36 (1.65)	-0.69 (2.14)	-0.70 (0.61)	-4.07* (1.27)	- (1.00)
Dem	0.89 (0.82)	3.33* (1.59)	17.22* (1.54)	1.66* (0.57)	0.15 (0.92)	1.02 (1.00)
Approval	1.62* (0.24)	0.87 (0.54)	0.57 (0.43)	1.02* (0.18)	0.16 (0.26)	0.68* (0.28)
Low Sophistication	0.67 (0.76)	-1.78 (1.41)	-12.55* (1.99)	0.52 (0.54)	-0.53 (0.96)	-1.77 (1.38)
High Sophistication	1.23 (0.82)	1.28 (0.91)	1.26 (3.05)	0.63 (0.60)	-0.96 (0.98)	-0.50 (1.12)
Competitiveness	-0.01 (0.02)	0.03 (0.08)	0.02 (0.01)	-0.00 (0.01)	0.01 (0.01)	-0.02 (0.03)
Constant	0.52 (0.62)	1.27 (0.75)	-4.81* (1.63)	0.24 (0.72)	3.27* (0.93)	0.17 (1.22)
N	465			841		
R ²	0.73			0.64		
LR	1088.8			239.4		

Dependent variable: 1= November vote for Democrat, 0=vote for Republican. Models estimated using a logit link function. Robust standard errors in parentheses.

* p<0.05

Table A8. Estimates for Voting Democratic by Pre-Campaign Candidate Preference, Categorical Sophistication 2016 (Transition Models)

Pre-Campaign Candidate Preference									
<i>Primary:</i>	<i>Presidential</i>			<i>Senate</i>			<i>House</i>		
	Und	HRC	DJT	Und	Dem	Rep	Und	Dem	Rep
Rep	-1.64* (0.74)	-3.16* (1.59)	0.53 (1.24)	-1.18 (0.63)	-0.48 (0.81)	-0.46 (0.62)	-0.74 (0.48)	-2.07 (1.66)	0.50 (0.88)
Dem	0.79 (0.64)	-0.60 (1.24)	-0.07 (1.82)	0.44 (0.52)	0.21 (0.50)	1.61 (0.97)	0.99* (0.43)	-0.47 (0.89)	0.01 (0.92)
Approval	1.13* (0.18)	0.12 (0.50)	1.24* (0.34)	0.33 (0.17)	0.92* (0.18)	0.12 (0.26)	0.48* (0.13)	-0.13 (0.39)	1.02* (0.25)
Low Sophistication	-1.21 (0.64)	-0.90 (0.989)	-2.84 (1.28)	0.40 (0.55)	-0.76 (0.68)	1.73 (0.93)	0.71 (0.42)	-2.87* (0.96)	0.82 (0.70)
High Sophistication	0.66 (0.74)	1.60 (0.96)	- -	0.09 (0.45)	1.23* (0.55)	0.64 (0.97)	1.04* (0.39)	0.18 (1.06)	-0.86 (0.66)
Competitiveness	-0.00 (0.24)	-0.02 (0.34)	0.06* (0.02)	0.03 (0.01)	0.04* (0.02)	-0.02 (0.22)	-0.03 (0.01)	0.06 (0.02)	-0.02 (0.01)
Constant	0.78 (0.58)	3.89* (1.62)	-3.82* (1.07)	-0.69 (0.50)	-0.40 (0.45)	-2.22* (0.96)	-0.36 (0.44)	3.42* (1.46)	-1.60 (0.87)
N	948			659			1,012		
R ²	0.78			0.36			0.56		
LR	308.2			136.5			221.8		

Dependent variable: 1= November vote for Democrat, 0=vote for Republican. Models estimated using a logit link function. HRC = initial preference for Clinton; DJT = initial preference for Trump; Dem = initial preference for Democratic candidate; Rep = initial preference for Republican candidate. Robust standard errors in parentheses.

* p<0.05.

Table A9. 2014 Election Transition Models, Continuous Sophistication Scores

	Pre-Campaign Candidate Preference					
	House			Senate		
	Und	Dem	Rep	Und	Dem	Rep
Republican	-0.75* (0.60)	-3.29* (1.14)	-3.67* (1.16)	-0.09 (0.69)	2.79 (1.77)	-0.58 (2.14)
Democrat	1.59* (0.54)	-0.13 (0.73)	-0.05 (0.93)	1.08 (0.89)	3.06* (1.26)	5.33* (1.18)
Pres. Approval	0.99* (0.18)	0.06 (0.23)	0.79* (0.23)	1.57* (0.24)	0.86 (0.51)	0.48 (0.35)
Sophistication	0.10 (1.28)	-0.74 (2.23)	-1.68 (1.68)	2.86 (1.51)	5.23 (3.95)	2.04 (2.56)
Race Competitiveness	-0.00 (0.01)	-0.01 (0.01)	-0.02 (0.02)	-0.01 (0.02)	0.03 (0.09)	0.03 (0.02)
Constant	0.59 (0.96)	4.67* (1.48)	1.19 (1.12)	-0.77 (1.23)	-2.35 (2.99)	-6.09* (1.28)
N	841			465		
R ²	0.64			0.73		
LR	229.97			156.3		

Dependent variable: 1= November vote for Democrat, 0=vote for Republican. Models estimated using a logit link function. * p<0.05

Table A10. 2016 Election Transition Models, Continuous Sophistication Scores
Pre-Campaign Candidate Preference

	House			Senate			Presidential		
	Und	Dem	Rep	Und	Dem	Rep	Und	HRC	DJT
Republican	-0.70* (0.33)	-2.64 (1.56)	0.59 (0.85)	-1.17 (0.63)	-0.28 (0.87)	-0.46 (0.62)	-1.75* (0.76)	-3.26* (1.63)	0.14 (1.35)
Democrat	0.88* (0.31)	0.06 (0.88)	-0.13 (0.89)	0.45 (0.52)	0.35 (0.50)	0.79 (0.85)	1.04 (0.51)	-0.56 (1.26)	-0.32 (1.80)
Pres. Approval	0.61* (0.09)	-0.28 (0.36)	1.05* (0.27)	0.32 (0.17)	0.94* (0.16)	0.19 (0.25)	1.11* (0.18)	0.11 (0.54)	1.07* (0.30)
Sophistication	0.13 (1.17)	11.16* (2.85)	-4.33* (2.13)	-0.05 (1.59)	4.47* (1.57)	-3.26* (1.59)	6.65* (1.99)	5.29* (0.35)	1.04 (1.41)
Race Competitiveness	-0.00 (0.01)	0.10* (0.02)	-0.02 (0.02)	0.02 (0.01)	0.04 (0.02)	-0.01 (0.02)	-0.00 (0.02)	0.01 (0.03)	0.03* (0.02)
Constant	0.03 (0.84)	-5.06* (1.74)	1.28 (1.62)	-0.48 (1.23)	-3.13* (1.15)	0.89* (1.20)	-3.71* (1.37)	0.85 (1.44)	-4.98* (0.93)
N	1,012			659			1,139		
R ²	0.56			0.36			0.82		
LR	162.72			126.1			342.75		

Dependent variable: 1= November vote for Democrat, 0=vote for Republican. Models estimated using a logit link function. HRC = initial preference for Clinton; DJT = initial preference for Trump; Dem = initial preference for Democratic candidate; Rep = initial preference for Republican candidate. * p<0.05.

SI-2: Predicting Undecideds

To understand who exhibits campaign effects, we focus on a change from undecided to choosing one of the major party candidates. Table A8 reports estimates of the effects of party identification, political sophistication, and race competitiveness on being undecided at the start of the general election campaign (that is, in the month after the primary in each state). Partisans are less likely than Independents to be undecided. The difference between partisans and Independents is larger in House contests than Senate contests, consistent with the expectation that Senate candidates are better known at the start of campaign season. Partisanship had a strong effect on undecidedness at the start of the 2016 presidential contest. Additionally, less sophisticated citizens are more likely to be undecided as a general election campaign begins than more sophisticated citizens. The eventual competitiveness of the contest, contrary to expectations, is not related to being undecided at an early stage in the congressional general election campaigns.

Table A11. Covariates of Being Undecided at the Start of the General Election Campaign.

	<i>2014 Campaigns</i>		<i>2016 Campaigns</i>		
	House	Senate	House	Senate	President
Republican	-0.08 (0.28)	-0.39 (0.41)	-0.64* (0.27)	-0.51 (0.33)	-0.53 (0.32)
Democrat	-0.37 (0.27)	-0.22 (0.38)	-0.41 (0.25)	0.47 (0.33)	0.51 (0.37)
Approval	0.05 (0.09)	0.00 (0.02)	-0.08 (0.08)	-0.09 (0.10)	0.09 (0.11)
Sophistication	-0.37* (0.09)	-0.33* (0.12)	-0.45* (0.09)	-0.32* (0.11)	0.32* (0.09)
Competitiveness	0.00 (0.00)	0.02 (0.01)	-0.00 (0.00)	0.00 (0.01)	-0.00 (0.01)
Constant	-0.44 (0.23)	-0.30 (0.31)	0.04 (0.23)	-0.14 (0.22)	-1.34* (0.27)
N	841	465	1,012	659	1,139
R ²	0.04	0.05	0.06	0.04	0.04
LR	18.23	12.41	35.06	13.62	22.12

Dependent variable: 1= Undecided voter at the end of primary, 0=Committed to Republican or Democratic candidate. Models estimated using a logit link function. Sample includes only those voters who identified support for the Republican or Democratic candidate in November. * p<0.05.

Table A12. 2014 Election Transition Models, Controlling for Candidate Spending

	Pre-Campaign Candidate Preference					
	House			Senate		
	Und	Dem	Rep	Und	Dem	Rep
Republican	-0.70 (0.62)	-3.61* (1.41)	-4.48* (1.53)	-0.36 (0.69)	3.43 (1.94)	-1.28 (2.48)
Democrat	1.71* (0.62)	-0.27 (0.85)	0.19 (0.81)	0.91 (0.85)	3.41* (1.37)	5.65* (1.38)
Pres. Approval	0.99* (0.18)	0.08 (0.29)	0.81* (0.26)	1.57* (0.25)	1.33* (0.62)	0.48* (0.24)
Curvilinear Sophistication	-3.24 (3.63)	-2.06 (5.87)	-3.73 (6.86)	-9.18 (5.33)	-18.48 (14.39)	-13.25 (9.14)
Race Competitiveness	-0.00 (0.01)	-0.02 (0.02)	-0.03* (0.02)	-0.02 (0.02)	0.06 (0.10)	0.04 (0.03)
Republican Spending Adv.	-0.08 (0.16)	-0.33* (0.12)	-0.36 (0.26)	0.04 (0.04)	0.08 (0.6)	-0.08 (0.09)
Constant	1.22 (0.74)	5.03* (2.02)	1.18 (1.89)	3.30* (1.39)	-4.99 (2.87)	-2.21 (1.73)
N	840			465		
Pseudo R ²	0.64			0.73		
LR	216.2			146.7		

Dependent variable: 1= November vote for Democrat, 0=vote for Republican. Models estimated using a logit link function. * p<0.05. Republican Spending Advantage is measured in the Republican candidate's advantage over the Democratic candidate in millions of dollars.

Table A13. 2016 Election Transition Models, Controlling for Candidate Spending

	Pre-Campaign Candidate Preference					
	House			Senate		
	Und	Dem	Rep	Und	Dem	Rep
Republican	-0.75 (0.46)	-2.23 (1.83)	0.19 (0.83)	-1.25* (0.64)	-0.41 (0.61)	-0.41 (0.58)
Democrat	0.97** (0.42)	-0.43 (0.82)	0.04 (0.86)	0.22 (0.56)	0.10 (0.48)	1.59 (0.96)
Pres. Approval	0.49* (0.14)	0.02 (0.37)	1.00* (0.23)	0.36 (0.18)	0.90* (0.19)	0.06 (0.30)
Curvilinear Sophistication	-3.99 (3.62)	-1.38 (7.17)	10.25 (6.84)	1.44 (3.69)	-4.29 (5.13)	-5.56 (4.22)
Race Competitiveness	-0.00 (0.01)	0.05 (0.04)	-0.01 (0.01)	0.03 (0.02)	-0.02 (0.02)	-0.02 (0.02)
Republican Spending Adv.	-0.19* (0.08)	-0.14 (0.11)	-0.43* (0.19)	-0.20* (0.08)	-0.23* (0.08)	-0.17* (0.08)
Constant	1.06 (0.86)	2.43* (0.99)	-3.65* (1.63)	-0.61 (0.77)	0.99 (1.11)	-0.53 (0.93)
N	1,010			657		
R ²	0.54			0.35		
LR	195.0			121.7		

Dependent variable: 1= November vote for Democrat, 0=vote for Republican. Models estimated using a logit link function. HRC = initial preference for Clinton; DJT = initial preference for Trump; Dem = initial preference for Democratic candidate; Rep = initial preference for Republican candidate. * p<0.05. Republican Spending Advantage is measured in the Republican candidate's advantage over the Democratic candidate in millions of dollars.

Table A14. 2016 Senate Election Transition Models, Excluding Arizona and Indiana

	Pre-Campaign Candidate Preference		
	Senate		
	Und	Dem	Rep
Republican	-1.36 (0.52)	-1.87 (0.99)	-0.75 (0.66)
Democrat	0.50 (0.52)	-0.45 (0.56)	1.57 (1.08)
Pres. Approval	0.29 (0.17)	0.37 (0.25)	0.10 (0.34)
Curvilinear Sophistication	-0.28 (3.75)	-1.19 (4.83)	-4.97 (5.20)
Race Competitiveness	0.02 (0.02)	0.02 (0.02)	-0.02 (0.02)
Constant	-0.23 (3.07)	1.62 (0.98)	-0.46 (1.17)
N	597		
R ²	0.33		
LR	130.0		

Dependent variable: 1= November vote for Democrat, 0=vote for Republican. Models estimated using a logit link function. HRC = initial preference for Clinton; DJT = initial preference for Trump; Dem = initial preference for Democratic candidate; Rep = initial preference for Republican candidate. * p<0.05.

Table A15. 2016 Senate Election Don't Know Changes, with and without Arizona and Indiana

	With Arizona and Indiana		Without Arizona and Indiana	
	Pre-General Election Campaign	Post-General Election Campaign	Pre-General Election Campaign	Post-General Election Campaign
Mean Don't Knows on Policy	6.02 (5.84, 6.20)	5.05 (4.87, 5.23)	6.07 (5.88, 6.25)	5.11 (4.92, 5.30)
Mean Percent Don't Know Ideological Position	0.41 (0.39, 0.43)	0.27 (0.25, 0.29)	0.41 (0.39, 0.43)	0.27 (0.25, 0.29)

Table A16. Comparing Knowledge Between Single Representative States and Multiple Representative States

	Single Representative States		Multiple Representative States	
	Pre-General Election Campaign	Post-General Election Campaign	Pre-General Election Campaign	Post-General Election Campaign
Mean Don't Knows on Policy, House	7.00 (4.92, 9.08)	6.50 (4.91, 8.09)	6.45 (6.28, 6.61)	5.78 (5.62, 5.94)
Mean Don't Knows on Policy, Senate	5.56 (3.58, 7.53)	4.57 (1.89, 7.24)	6.02 (5.84, 6.20)	5.04 (4.87, 5.23)

Table A17. 2014 Election Transition Models, Controlling for Demographics

	Pre-Campaign Candidate Preference					
	House			Senate		
	Und	Dem	Rep	Und	Dem	Rep
Republican	-0.19 (0.67)	-2.84 (1.53)	-4.45* (1.84)	0.13 (1.00)	4.13 (4.05)	0.35 (3.61)
Democrat	1.62* (0.51)	-0.39 (0.76)	0.20 (1.11)	1.10 (0.77)	3.47 (2.33)	5.47* (1.17)
Pres. Approval	0.88* (0.20)	-0.03 (0.34)	0.61 (0.31)	1.54* (0.26)	1.05 (0.56)	0.55 (0.36)
Curvilinear Sophistication	-7.39 (3.78)	-3.07 (7.25)	16.45* (8.38)	-8.47 (6.53)	-6.31 (11.72)	-21.80 (13.63)
Race Competitiveness	-0.00 (0.01)	-0.01 (0.02)	-0.03 (0.02)	-0.01 (0.02)	-0.01 (0.10)	0.03 (0.05)
Female	0.57 (0.47)	1.00 (0.72)	0.68 (1.07)	-1.29 (0.87)	-0.60 (1.56)	-0.73 (1.24)
Income	-0.13 (0.07)	0.08 (0.09)	0.26 (0.19)	-0.14 (0.09)	-0.06 (0.38)	-0.45 (0.27)
White	-1.63* (0.65)	-0.63 (0.94)	-2.91* (1.14)	-0.91 (0.73)	2.06 (1.60)	-0.28 (1.15)
Conservatism	-0.38* (0.19)	-0.20 (0.20)	-0.02 (0.25)	-0.56* (0.20)	-0.32 (0.52)	-1.37* (0.53)
Rural	-1.91* (0.67)	0.36 (1.02)	1.70 (0.89)	1.36 (1.11)	0.03 (1.26)	-0.75 (0.78)
Age	0.01 (0.02)	-0.01 (0.03)	-0.08* (0.03)	-0.03 (0.02)	0.08 (0.04)	0.03 (0.03)
Constant	4.99* (1.67)	5.37 (3.29)	0.70 (3.51)	7.35* (2.15)	-0.94 (3.08)	7.26* (2.59)
N	787			434		
Pseudo R ²	0.70			0.78		
LR	284.8			202.3		

Dependent variable: 1= November vote for Democrat, 0=vote for Republican. Models estimated using a logit link function. * p<0.05

Table A18. 2016 Election Transition Models, Saturated

Pre-Campaign Candidate Preference									
	House			Senate			Presidential		
	Und	Dem	Rep	Und	Dem	Rep	Und	HRC	DJT
Republican	-1.05 (0.54)	0.71 (2.20)	0.03 (1.02)	-1.46 (0.85)	0.81 (1.10)	-0.38 (0.61)	-1.41* (0.92)	-2.78 (1.63)	0.43 (1.19)
Democrat	0.51 (0.39)	0.36 (0.98)	-0.05 (0.85)	-0.12 (0.58)	-0.30 (0.53)	0.61 (0.80)	0.34 (0.60)	-0.22 (1.39)	-1.76 (2.42)
Pres. Approval	0.48* (0.14)	-0.01 (0.34)	0.96* (0.26)	0.33 (0.19)	0.84* (0.22)	0.16 (0.27)	1.21* (0.23)	0.27 (0.70)	1.78* (0.88)
Curvilinear Sophistication	-10.41* (4.10)	-11.48 (8.23)	13.40 (8.84)	-4.36 (5.38)	-6.08 (5.83)	-2.49 (5.64)	-14.48* (6.71)	-1.64 (10.04)	40.23 (31.53)
Race Competitiveness	0.01 (0.01)	0.12* (0.05)	-0.01 (0.01)	0.02 (0.02)	0.01 (0.02)	-0.01 (0.02)	0.01 (0.02)	0.02 (0.04)	0.04 (0.03)
Female	0.79* (0.36)	-1.81 (1.07)	0.01 (0.73)	0.84 (0.51)	-0.36 (0.52)	1.04 (0.69)	0.36 (0.59)	-0.68 (0.86)	4.90 (3.91)
Income	0.06 (0.06)	-0.17 (0.13)	0.10 (0.09)	0.16* (0.08)	-0.05 (0.08)	-0.28* (0.11)	0.14 (0.09)	0.14 (0.14)	0.45 (0.27)
White	-0.49 (0.41)	-0.27 (0.77)	-1.69* (0.80)	-0.87 (0.54)	-0.94 (0.61)	0.27 (0.99)	-0.48 (0.71)	0.66 (0.86)	
Conservatism	-0.17 (0.14)	-1.15* (0.51)	-0.02 (0.27)	-0.37 (0.20)	-0.50* (0.23)	0.02 (0.34)	-0.50 (0.30)	-0.11 (0.33)	-0.45 (0.94)
Rural	0.37 (0.58)	-2.72* (1.02)	-2.03* (0.97)	0.55 (0.75)	-0.82 (0.68)	-0.28 (0.68)	-0.50 (0.30)		
Age	-0.02 (0.01)	0.06 (0.04)	-0.02 (0.03)	-0.02 (0.02)	0.01 (0.02)	-0.03 (0.03)	-0.00 (0.02)	0.03 (0.02)	-0.06 (0.04)
Constant	3.36 (1.39)	6.78* (2.26)	-2.81 (2.64)	2.83 (4.40)	2.03 (1.79)	1.52 (1.66)	4.18 (3.11)	1.58 (3.13)	-15.18 (8.11)
N	954			618			1,122		
R ²	0.59			0.41			0.81		
LR	203.7			162.9			1643.7		

Dependent variable: 1= November vote for Democrat, 0=vote for Republican. Models estimated using a logit link function. HRC = initial preference for Clinton; DJT = initial preference for Trump; Dem = initial preference for Democratic candidate; Rep = initial preference for Republican candidate. * p<0.05.

Table A19. Summary Statistics for Variables in Multivariate Estimates.

Variable	Mean	Minimum	Maximum	Note
Vote for Democrat: House 2014	0.53	0	1	1= Vote for the Democratic Candidate, 0=Vote for the Republican candidate
Vote for Democrat: Senate 2014	0.52	0	1	
Vote for Democrat: House 2016	0.51	0	1	
Vote for Democrat: Senate 2016	0.48	0	1	
Vote for Democrat: President 2016	0.54	0	1	
Democrat	0.40	0	0	Mutually exclusive dummy variables. Independent is baseline in multivariate models
Republican	0.28	0	0	
Independent	0.32	0	0	
Obama Approval 11/14	-0.34	-2	2	-2=Strongly Disapprove +2=Strongly Approve
Obama Approval 11/16	-0.09	-2	2	
Sophistication	0.65	0	1	Values are the first-dimension factor scores of a 10-item political knowledge battery, education level, and interest in politics. Values are scaled from 0, the least sophisticated, to 1, the most.
Curvilinear Sophistication	0.19	0	0.25	Quadratic transformation of Sophistication measure: $y = x - x^2$. Higher values indicate panelist is closer to medium sophistication.
District Margin: House 2014	37.52	0.07	100	Electoral margin of the two-party vote share. Higher values indicate less competitive races.
State Margin: Senate 2014	18.17	0.83	100	
District Margin: House 2016	34.52	0.52	100	
State Margin: Senate 2016	16.07	0.20	100	
State Margin: President 2016	14.94	0.24	91.39	
Δ Democratic Knowledge Advantage: House 2016	0.77	-10	16	The change in the relative difference of don't knows

Δ Democratic Knowledge Advantage: Senate 2016	0.47	-10	19	between the Republican and the Democratic candidates from primary to general. Higher values indicate learning more about the Democrat's positions relative to the Republican
Δ Democratic Knowledge Advantage: President 2016	-0.09	-10	12	
Female	0.50	0	1	Dummy indicator for gender
Income	7.26	1	16	16-point income category variable. 1= less than \$10k, 16=More than \$300k
Conservatism	4.13	1	7	7-point Self-reported Ideology, 1=Strong Liberal, 7=Strong Conservative
Rural	0.15	0	1	Dummy indicator where 1=Not residing in MSA.
White	0.80	0	1	Dummy indicator for race
Age	58.63	18	95	Continuous measure of age in 2016.

Table A20. Summary Means for Panelists by Campaign

	House 2014	Senate 2014	House 2016	Senate 2016	President 2016
Republican	0.29	0.31	0.30	0.30	0.29
Democrat	0.41	0.36	0.38	0.39	0.41
Curvilinear Sophistication	0.18	0.18	0.18	0.19	0.18
Presidential Approval	-0.37	-0.40	-0.11	-0.17	-0.04
Female	0.48	0.46	0.50	0.53	0.50
Income	7.30	7.53	7.27	7.04	7.26
White	0.80	0.81	0.81	0.85	0.80
Conservatism	4.20	4.27	4.19	4.19	4.13
Rural	0.15	0.18	0.15	0.16	0.15
Age	60.64	60.30	58.75	58.46	58.63

Table A21. Predicting Increase Knowledge

VARIABLES	(1) 2016 House	(2) 2016 Senate	(3) 2016 President
Republican	0.226 (0.537)	-0.739 (0.567)	-0.00819 (0.367)
Democrat	0.0793 (0.518)	-0.808 (0.539)	-0.271 (0.371)
Curvilinear Sophistication	-2.662 (2.936)	0.206 (3.410)	3.195* (1.860)
Presidential Approval	-0.0929 (0.154)	0.120 (0.174)	0.147 (0.121)
Election Competitiveness	0.00282 (0.00755)	0.0220 (0.0191)	-0.00523 (0.00777)
Female	-0.147 (0.460)	-0.261 (0.477)	0.0251 (0.279)
Income	-0.0159 (0.0663)	0.0594 (0.0662)	0.0558 (0.0466)
White	0.391 (0.528)	0.511 (0.563)	-0.00927 (0.303)
Conservatism	0.0422 (0.162)	-0.105 (0.155)	0.0302 (0.0852)
Rural	1.189** (0.604)	1.043* (0.632)	0.675** (0.307)
Age	-0.00349 (0.0122)	0.00430 (0.0144)	-0.00183 (0.00719)
Constant	0.896 (1.269)	0.0220 (0.0191)	-0.304 (0.913)
Observations	686	627	987
R-squared	0.026	0.036	0.020

Robust standard errors in parentheses. DV= The Increase in the Number of Issue Positions the panelist is willing to identify from the Beginning of the General Election to the end of the general election.

*** p<0.01, ** p<0.05, * p<0.1

SI-3: Issue Position Questions

Does [Candidate] generally support or oppose . . .

- Increasing income taxes on wealthy individuals
- Federal Common Core Standards for Schools
- Allowing illegal immigrants to eventually be eligible for U.S. citizenship
- Gun control legislation
- Same-sex marriage
- A woman's right to an abortion
- Building the Keystone XL oil pipeline
- Repealing the Affordable Care Act (Obamacare)
- Federal regulation of greenhouse gas emissions
- Using U.S. ground troops to fight ISIS in Iraq and Syria

