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HOW DO CAMPAIGNS SHAPE VOTE CHOICE? MULTI-COUNTRY EVIDENCE  
FROM 62 ELECTIONS AND 56 TV DEBATES

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56 TV Debates

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**ABSTRACT**

We use two-round survey data from 62 elections in ten countries since 1952 to study the formation of vote choices, beliefs, and policy preferences, and assess how televised debates contribute to this process. Our data include 253,000 observations. We compare the consistency between vote intention and vote choice of respondents surveyed at different points before, and then again after, the election, and show that 17% to 29% of voters make up their mind during the final two months of campaigns. Changes in vote choice are concomitant to shifts in issues voters find most important and in beliefs about candidates, and they generate sizeable swings in vote shares. In contrast, policy preferences remain remarkably stable throughout the campaign. Finally, we use an event study to estimate the impact of TV debates and do not find any effect on vote choice formation, suggesting that information continuously received by voters is more impactful.

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# 1 Introduction

A healthy democracy requires informed voters (Downs, 1957) – but when do citizens acquire information they use in their choice? One longstanding view is that the weeks immediately preceding elections represent a crucial period because that is when electoral campaigns flood the electorate with information (e.g., Holbrook, 1996; Hillygus and Shields, 2009). An alternative view is that campaigns have minimal effects as most people have decided long in advance based on group identities and party attachments, not the individual characteristics of candidates or election-specific information (e.g., Lazarsfeld et al., 1944; Bartels, 2000). We disentangle these contrasting views using two-round surveys in 62 elections around the world.

Our paper makes three distinct contributions. First, we use a novel method to determine what fraction of people form their vote choice in the last two months before an election, and measure heterogeneity over time and across countries and voter types. Second, we explore whether changes in vote intentions are driven by changes in voters’ beliefs about candidates, in their policy preferences, or in issue salience. Third, we use an event study to assess how TV debates – often the most salient events in a campaign – contribute to this process of choice formation.

Existing studies have generally sought to isolate the impact on vote choice of one particular source of information, such as newspapers or television (e.g., DellaVigna and Kaplan, 2007; Gerber et al., 2009), or one specific type of campaign contact, such as field visits or TV ads (e.g., Gerber et al., 2011; Broockman and Kalla, 2018). By contrast, our first set of results relate to the *overall impact of information received during campaigns*.<sup>1</sup> If voters cast their ballots based on information received during campaigns, one should expect a large share of the electorate to reach their final choice only shortly before elections. To estimate this fraction, we assembled a dataset of nationally representative surveys conducted around 62 elections from 1952 to 2017 in ten countries: the United States, Canada, the United Kingdom, New Zealand, the Netherlands, Germany, Switzerland, Italy, Austria, and Sweden. The dataset includes a total of 253,000 observations. All of the surveys entailed interviewing a new set of people every day running up to the election to elicit their vote intention, then surveying these same people again after the election to record their actual vote choice. By comparing voters’ responses in the two rounds, we can ascertain whether they had already settled on their final choice by the time of the pre-electoral

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<sup>1</sup>As is common in the literature (e.g., Holbrook, 1996; Erikson and Wlezien, 2012), we use “campaign” interchangeably with “electoral season” to designate the period preceding an election and to refer to all factors which may influence voters in that period, including both candidates’ campaigns and factors beyond their control.

survey without having to rely on their own recollection of the date when they formed their decision, unlike most existing research on the time of voting decision (e.g., [Gopoiian and Hadjiharalambous, 1994](#); [Fournier et al., 2004](#)). Comparing the intention and ultimate choice of the same individuals also eliminates any bias present in both declarations, thereby circumventing an important limitation of studies that use self-reported vote choice as outcome. In addition, most of our data come from surveys that allocated respondents' survey date randomly, facilitating the interpretation of outcome differences over time.

We find that the fraction of people with identical vote declaration pre- and post-election increases by 17 percentage points over the 60 days leading up to the election, from a baseline of 71%. This stems both from an increased fraction of people stating any vote intention and from increased consistency conditional on stating one. On the last day before the election, 12% of voters still do not know (or will not say) whom they will vote for, or state a different vote intention than their ultimate choice. This brings the total fraction of voters making up their mind during the final two months of campaigns between 17% (if none of these voters surveyed on the last day is really a last-minute decider) and 29% (if all of them are). Within a given election, vote choice consistency increases faster for younger and less educated voters, suggesting that people with less preexisting knowledge are more influenced by campaign information. Across elections, the influence of campaigns on vote choice has been relatively stable for the last 70 years but it varies substantially from one country to another. Notably, vote choice consistency increases less in the two months preceding the election in the U.S. than in all the other countries in the sample.

The increase in individual vote choice consistency is concomitant with aggregate trends in the relative strength of competing candidates. We compute each candidate's daily predicted vote share based on the vote intentions of respondents surveyed on that day, and compare it to their final vote share measured in the post-electoral survey. The total distance between predicted and final vote shares decreases by about 5 percentage points over the last 60 days before the election. This result indicates that vote choice formation during the campaign season can change elections' outcomes, and that it is unlikely to be driven by random shocks altering the utility function that individual voters maximize but containing no election-related information: indeed, the effects of such shocks should be expected to cancel each other out in the aggregate. Instead, we argue that our results are primarily driven by information acquired and/or processed during the final two months of campaigns and, therefore, that they provide a good measure of this information's overall impact on vote choice formation (see [Section 3.6](#) for a discussion of this interpretation).

Our second set of results sheds light on the *mechanisms through which information affects people's vote choice*. Most models of electoral competition assume that voters have stable preferences over a set of policy positions (Persson and Tabellini, 2000). In practice, information shared during the electoral season may first affect voters' choice by changing their policy preferences. To test this hypothesis, we use a set of policy questions which, similarly to questions on vote choice, were asked in both the pre- and post-electoral surveys. Strikingly, we do not find any increase in the consistency in policy preferences expressed before and after an election.

Second, voters may be primed by campaign communication to think about certain policy issues and they may change their vote choice after reassessing their distance with the different candidates based on issues which received the most coverage during the campaign (e.g., Iyengar and Kinder, 1987). Using questions recording the issue that respondents consider the most important, we find that the consistency between their pre- and post-electoral survey responses increases by more than half of the increase in vote choice consistency.

Third, we assess the role of beliefs voters hold on candidates. Using questions asked again both pre- and post-election, we find that the consistency in beliefs concerning candidates' quality and the issues they stand for also increases over the campaign. In addition, we provide suggestive evidence that this type of beliefs matter more than beliefs on the relative chances of the contenders by comparing the shifts in vote intentions for strong versus lesser-known candidates.

Furthermore, using a simple multivariate regression with one observation per election per day, we show that increases in both mean issue salience consistency and beliefs consistency are associated with strong increases in mean vote choice consistency, contrasting with the outcome's lack of significant relationship with policy preferences consistency. Overall, our results on mechanisms collectively point to the conclusion that electoral campaigns affect vote choice by providing information which changes voters' beliefs on candidates' positions and quality as well as the issues they find most important without changing their policy preferences and likelihood to rally to the front-runners.

Our third set of results provides evidence on the *relative importance of different sources of information*. We observe that, as the election gets closer, voters receive a growing stream of information from the media, candidates' campaigns, and discussions with family members, friends, and coworkers. Voters may update their views on candidates based on these types of information, and arrive at their final choice at different paces, through slow, cumulative processes (e.g., Beck et al., 2002). Alternatively, many may form their vote choice within a few critical

moments, including televised debates, party conventions, scandals, and major domestic and international events such as conflicts, terrorist attacks, or economic crises (e.g., [Shaw, 1999](#)).

To investigate the role of discrete events in the formation of vote choice, we focus on TV debates between candidates for president or prime minister. TV debates are now part of the electoral cycle in many countries, and have a strong apparent potential to inform voters: they give direct and simultaneous exposure to candidates and allow voters to compare their policy positions and performance in an exercise which campaign teams do not control as much as scripted speeches or TV ads. Debates draw larger audiences than any other campaign event: close to 65% of respondents report watching them in our sample. Debates can also influence non-watchers, through subsequent discussions, social media posts, and media commentaries. Once election results are known, pundits routinely hunt for the moment in the campaign that sealed the winner's victory, and they often find it in the debates: a particularly witty comment made by the winner or a gaffe made by the loser. In sum, reasons to expect TV debates to shape voters' choices are many.

We use an event-study approach pooling 56 TV debates in 31 elections and seven countries of our sample. Including this large number of debates instead of focusing on a single election or a single country as in the existing literature dramatically increases our statistical power and the external validity of our estimates. In addition, the fact that debates were held at different times in different elections enables us to disentangle their effect from underlying time trends by controlling for a full set of daily fixed effects indicating the distance to the election. Our identification assumption is that, conditional on these and other controls, the timing of debates is uncorrelated with the outcomes.

We do not find any significant impact of TV debates on individual consistency between vote intention and vote choice – or between policy preferences, issue salience, or beliefs on candidates expressed before and after an election. The fact that we investigate effects on vote choice consistency rather than vote intentions means that we would even uncover effects going in opposite directions for different debates (e.g., with some debates benefitting the incumbent and others a challenger) or different people (e.g., with some voters rallying behind one candidate and others their opponent), which could otherwise remain undetected – yet we find none. Furthermore, at the aggregate level, debates do not significantly affect the distance between predicted and final vote shares, and only slightly increase short-term daily changes in candidates' predicted vote shares. Our null effects are precisely estimated. For instance, considering the 95% confidence interval, we can reject any impact higher than 0.5 percentage point on individual vote choice

consistency and 0.1 percentage point on the distance between predicted and final vote shares at the 5% level. Using our estimates of the overall vote choice formation over the final two months of campaigns as a benchmark, we find that, on average, a TV debate contributes no more than 3% of the total increase in vote choice consistency and 2% of the total decrease in the distance to final vote shares.

Remarkably, we do not find that debates contribute to vote choice formation for any group of voters, including those who report watching them and those most likely to form their vote choice shortly before the election, or when focusing on types of debates which could be expected to be more impactful: the first debate held during the campaign as opposed to later debates, or debates held in close races, fluctuating races, or multiparty systems. Finally, debates do not impact the predicted vote share even of lesser-known candidates, who benefit from the campaign the most overall. These results suggest that information continuously received by voters during electoral campaigns exerts more influence on their behavior than TV debates do.

Our paper makes three important contributions to the large literature studying the influence of interpersonal discussions (e.g., [Nickerson, 2008](#); [Bond et al., 2012](#)), the media (e.g., [DellaVigna and Kaplan, 2007](#); [Gerber et al., 2009](#); [Chiang and Knight, 2011](#); [Adena et al., 2015](#)), and partisan communication (e.g., [Pons, 2018](#); [Broockman and Kalla, 2018](#)) on electoral outcomes.

First, we estimate the impact on vote choice of another major type of partisan communication, on which the existing evidence is less conclusive: TV debates. A large number of studies explore the effects of TV debates by focusing on a unique election or a small number of races held in the same country and comparing individual vote intentions (e.g., [Hillygus and Jackman, 2003](#)), aggregate polls shares (e.g., [Shaw, 1999](#)), or betting odds (e.g., [Shaw and Roberts, 2000](#)) before and after debates (for broader reviews of this literature, see [McKinney and Carlin \(2004\)](#) and [Birdsell \(2017\)](#)). Most of this research focuses on the U.S., but a few papers study debates in other countries, including Canada ([Blais and Boyer, 1996](#)), the U.K. ([Pattie and Johnston, 2011](#)), Germany ([Schrott, 1990](#)), Australia ([Senior, 2008](#)), and the Netherlands ([van der Meer et al., 2016](#)). While many studies find modest or null effects (e.g., [Katz and Feldman, 1962](#); [McKinney and Warner, 2013](#)), others conclude that debates truly matter, particularly when they occur earlier in the campaign and for voters with less information (e.g., [Geer, 1988](#); [Benoit et al., 2003](#)). However, these studies' simple pre/post difference designs fail to control for underlying trends. Instead, we take advantage of the large number of debates which took place in the periods covered by our surveys and of the variation in their timing to flexibly control for the time to the election. This novel strategy provides

more reliable estimates of debates' impact. The fact that our event study includes debates held in a large number of elections and countries also increases the external validity of our estimates well beyond that of any preexisting work. Methodologically, we draw on recent event studies used in other settings (e.g., [Chetty et al., 2014](#); [Dobkin et al., 2018](#)).

Our study is related to recent experimental evidence on a different type of debates: non-televised debates shown on smartphones, in public gatherings, or broadcast on the radio, and opposing parliamentary candidates in low-income democracies ([Brierley et al., 2019](#); [Bidwell et al., 2019](#)). Scarce political information characterizing these studies' contexts ([Pande, 2011](#)) may contribute to explain the substantial effects on vote choices they find. Using randomized experiments to measure the impact of presidential or prime-ministerial TV debates has proven more difficult given the large fraction of the population that watches them and their possible influence on nonviewers. [Mullainathan et al. \(2009\)](#) encourage a random selection of 505 New York City voters to watch the final 2005 mayoral election debate and successfully increase the fraction of watchers. They do not find any significant impact on opinions on candidates but acknowledge that subsequent discussions and media commentaries, which they did not vary, may explain this null result. Instead, [Fridkin et al. \(2007\)](#) use a lab experiment with 145 participants to measure both the impact of watching live the final 2004 U.S. TV debate and of media's instant analysis following it. This setting guaranteed 100% differential take-up as long as subjects remained in the lab. Measuring their immediate reactions, the authors report large effects on candidates' evaluations. In contrast, we find null effects on vote intentions one to three days afterward, suggesting that debates' effects quickly fade away.<sup>2</sup>

While most existing research on vote choice seeks to isolate the impact of a *specific* source of information or type of campaign contact, our second contribution is to provide an estimate of their *overall* influence in the last two months before an election. Our measure of vote choice consistency, which compares vote intentions and vote choices, builds on [Wlezien and Erikson \(2002\)](#), who compare election polls and actual results and show that polls become increasingly predictive as the election comes closer. This pattern holds across most countries examined by [Jennings and Wlezien \(2016\)](#). Our finding that the distance between predicted and final vote shares decreases over time replicates this result in our set of elections. The fact that we use individual-level two-round surveys instead of aggregate polls enables us to complement the study of time patterns in vote choice formation in three important ways. First, we determine the fraction of voters who arrive at

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<sup>2</sup>Supporting this interpretation, a recent Mechanical Turk experiment which varied post-debate media coverage reports rapid decay in effects on subjects' evaluations of candidates' debate performances ([Gross et al., 2019](#)).



their final choice during the campaign, which is generally larger than the reduction in the distance between predicted and final vote shares. Second, we compare the patterns of vote choice formation across different types of voters to identify the groups that electoral campaigns influence the most. The differences across groups we uncover also inform our heterogeneous impact analysis of TV debates. Third, we investigate the mechanisms through which information affects vote choice.

Most prior work studying the timing of vote decisions with individual-level data uses respondents' own recall of the date in which they made their decision (e.g., [Gopoian and Hadjiharalambous, 1994](#); [Fournier et al., 2004](#); [McGregor, 2012](#)) or their declared level of certainty about their vote intention (e.g., [Chaffee and Choe, 1980](#); [Catellani and Alberici, 2012](#)). But voters surveyed before the election may not know how they will respond to information that is yet to come. Post-election recalls have also been shown to be marred with error ([Plumb, 1986](#); [Chaffee and Rimal, 1996](#)), due to people failing to remember when they made their decision or not consciously recording this moment in the first place. A smaller set of studies including [Kogen and Gottfried \(2012\)](#) and [Henderson and Hillygus \(2016\)](#) define the time of decision as the date from which panel respondents select the same candidate across all subsequent interviews. While these studies are based on the comparison of respondents' answers over time, like ours, they use data limited to a single election and cannot provide daily estimates of vote choice consistency, which are our main object of investigation and a necessary input of our event study. In addition, they focus on the *level* of consistency, which may be biased by misreporting (see Section 3.1), rather than its *change*.

Our last contribution is to assess the relative contribution of changes in beliefs, policy preferences, and issue salience to the formation of vote choice. A large body of evidence shows that some of the information obtained by voters during campaigns relates to economic fundamentals, which explains the good performance of models forecasting election results based on these variables (e.g., [Gelman and King, 1993](#)). Other studies find that new information on candidates' quality, policy platforms, and moral values which emerges during the campaign also matters (e.g., [Kendall et al., 2015](#); [Enke, 2020](#)). In both bodies of evidence, information received by voters affects their vote choice by changing their beliefs, whether on candidates or on the state of the economy. On the other hand, recent evidence shows that people can also change their actual preferences during campaigns, e.g., after direct interactions with politicians ([Minozzi et al., 2015](#)). Our evidence indicates that, overall, information shared during campaigns tends to affect vote

choices and election outcomes by changing beliefs and issue salience more than policy preferences.

The remainder of the paper proceeds as follows. Section 2 describes our data. Sections 3 and 4 study the formation of vote choice, beliefs, policy preferences, and issue salience in the campaign. Section 5 estimates the impact of TV debates on these outcomes, and Section 6 concludes.

## 2 Data

### 2.1 Campaign Surveys

We assembled a new dataset of nationally representative surveys conducted around 62 elections in ten countries, from 1952 to 2017. The data come from the American National Election Studies (1952 to 2016), the Canadian Election Studies (1988 to 2015), the British Election Studies (2001, 2010, 2015, 2016), the New Zealand Election Studies (1996, 1999, 2002), the Dutch Parliamentary Election Studies (1998, 2002, 2006), the National Annenberg Election Surveys (2000, 2004, 2008), the German Longitudinal Election Studies (2009, 2013, 2017), the Swiss Electoral Studies (2011, 2015), the Italian National Election Studies (2013), the Austrian National Election Studies (2013), and the Swedish National Election Studies (2014).<sup>3</sup> While all surveys can be accessed for research purposes, integrating the responses collected with independent questionnaires into a common empirical framework marks an important effort.

A few surveys cover multiple elections because multiple offices were on the ballot on the same day (for instance President and Member of Congress in the U.S.) or because voters can cast multiple ballots (for instance Germany's first and second votes). We define each of these offices or ballots as a separate election. Conversely, the 2000, 2004, and 2008 U.S. presidential elections are covered both by the American National Election Studies (henceforth ANES) and the National Annenberg Election Surveys (henceforth NAES). Appendix Table B.1 shows the full list of elections, their date, type, voting rule, as well as key features of the corresponding surveys. 27% of the elections were for President, 58% for lower house, 5% for upper house, 5% for governor, 2% for European Parliament, and 3% were referenda. 76% used the plurality rule and 24% the proportional rule. We refer indifferently to the individual candidates competing in plurality elections and lists competing in proportional elections as "parties" or "candidates." On average, the corresponding surveys started

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<sup>3</sup>The full list of links at which the surveys can be downloaded and the corresponding references are available in Appendix B.1.

53 days before Election Day and included 4,062 respondents. We keep all respondents surveyed 60 days before the election or less as only few surveys started earlier, limiting statistical power to examine earlier outcomes.

To build this dataset, we searched for all electoral surveys around the world that satisfy three criteria. First, they must survey respondents twice: once before the election, to elicit their vote intention, and once afterwards, to record their ultimate choice. We observe 253,000 pre-election vote intentions (including people who say they do not know who they will vote for) from 217,000 unique respondents, and post-electoral responses for 201,000 (80%) of these observations.<sup>4</sup> The median length between the election and the post-electoral survey was 14 days on average. The national representativeness of the surveys ensured a strong 0.97 correlation between actual aggregate vote shares and vote shares computed based on survey respondents. Second, surveys must interview a new set of respondents every day until the election and record the corresponding date. Third, respondents surveyed on different dates must be as similar as possible.

To satisfy the third criterion, most of our sample comes from rolling cross-sections – surveys that allocate each respondent’s survey date randomly. This design implies that the set of respondents surveyed on any particular day can be treated as an independently drawn random sample and it reduces the risk that answers from respondents surveyed on different dates differ because of differences in their characteristics (Johnston and Brady, 2002). To increase statistical power, we complemented our sample with surveys that were not designed as rolling cross-sections but are statistically close to daily random sampling. Specifically, we include surveys that do not show too large imbalances in pairwise comparisons of daily respondents’ observable characteristics (see Appendix A.1 for additional details). Our results are robust to excluding non rolling cross-sections, which account for 31% of our observations.<sup>5</sup>

Our key variables of interest are respondents’ pre- and post-election vote declaration. To construct these and other variables homogenously across surveys, we establish and follow a set of common rules, which are all detailed in Appendix B.2. For instance, we keep early voters in the study, to avoid generating sample selection issues, and we treat the vote choice they report in the pre-electoral survey similarly to other respondents’ vote intention.

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<sup>4</sup>The fraction of respondents surveyed twice should not be read as a success rate in re-surveying respondents. Indeed, while most surveys attempt to reach all respondents surveyed before the election a second time afterwards, others only attempt to re-survey a subset of pre-election respondents, bringing the fraction down. Conversely, a few surveys only release data for respondents successfully surveyed twice, bringing the fraction up.

<sup>5</sup>All results restricted to the subset of rolling cross-sections are shown in Appendix C.1.

In addition to comparing respondents' vote intentions and vote declarations, we study possible drivers of changes in vote choice by using questions on policy preferences, issue salience, and beliefs on candidates. We focus on questions asked in the same way before and after the election, allowing us to use the same specifications as for the formation of vote choice. We identified 46 questions from 12 surveys that recorded the policy preferences of a total of 106,000 respondents, and 76 questions from 11 surveys that elicited the beliefs of 112,000 respondents on the quality and policy positions of competing candidates (e.g., "Which party is best to handle the economic crisis?" and "Does Bush or Kerry favor an increase in the minimum wage?"). The full list of these questions is available in Appendix Tables B.3 and B.4. To measure changes in issue salience, we use open-ended questions in 12 surveys asking a total of 61,000 respondents which issue they find the most important in this election. We rank all possible answers in all surveys under 10 categories: economic policy, social policy, foreign policy, public safety, civil rights, moral values, institutions, politics, electoral issues, and other issues.

Finally, we keep the following covariates for heterogeneity and other analyses and standardize them across surveys: respondents' education, age, gender, income, and employment status, which are recorded by the vast majority of surveys, as well as their consumption of different media, party identification, propensity to watch TV debates and read polls, whether they have recently been contacted or visited by a party, and how frequently they have discussions about politics, when available (see Appendix Table B.2).

## 2.2 Complementary Data

We supplement the survey data with information that we collected from separate sources including ParlGov and the Manifesto Project on competing candidates' party, their incumbency status, and whether they were on the ballot for the first time or not (see Appendix Table B.5).

In addition, we systematically searched for the existence and dates of all TV debates between presidential or prime-ministerial candidates during the periods covered by the surveys. We used and cross-checked the following sources: academic papers, TV channels archives, newspaper articles, and Wikipedia. The full list of debates included in the analysis is shown in Appendix Table B.6.

### 3 The Formation of Vote Choice

#### 3.1 Individual Vote Choice Formation

We first study the timing of vote choice formation. The fraction of people who decide which candidate to vote for in the last weeks before an election (rather than earlier) is difficult to estimate directly. Indeed, it is difficult for voters to assess the likelihood that they will stick to their vote intention, *ex ante*, or to recall the exact date they made up their mind, *ex post*. We overcome this issue with a novel method using questions recording vote intention and vote choice, which are easier to respond to, and comparing each respondent’s answers to both.

Formally, we define vote choice consistency as a dummy equal to 1 if the respondent’s pre- and post-election vote declaration coincide and 0 if they differ or if the respondent said they did not know whom they would vote for in the first survey. We estimate the share of respondents surveyed on any day who will vote according to their intention with the following OLS specification:

$$C_{it}^e = \sum_{t=-60}^{-1} \beta_t D_t + \alpha^e + W_{it}' \lambda + u_{it}^e, \quad (1)$$

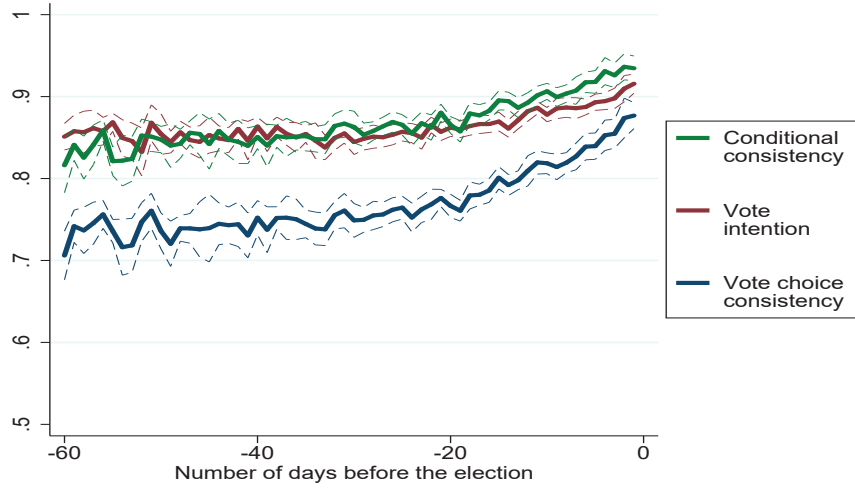
where  $C_{it}^e$  is the vote choice consistency of respondent  $i$ , surveyed for the first time  $t$  days before election  $e$ ,  $D_t$ ’s are 60 fixed effects indicating the number of days relative to the election,  $\alpha^e$  are election fixed effects, and  $W_{it}$  is a vector of controls.  $W_{it}$  includes fixed effects for the day of the week in which the pre-electoral survey took place and for the number of days separating the post-electoral survey from the election and, in some specifications, sociodemographic characteristics.<sup>6</sup>

The key coefficients of interest are the  $\beta_t$ ’s. We center all control variables around their mean value at  $t = -1$  and do not include a constant, so that  $\beta_{-1}$  is equal to the outcome’s sample average among respondents surveyed one day before the election and, for any  $t \neq -1$ ,  $\beta_t$  is the (conditional) expected outcome for respondents surveyed  $t$  days before. Our sample includes all respondents surveyed both before and after the election who said that they intended to vote, in the first survey, and who reported that they actually voted and gave a vote choice declaration, in the second. Standard errors are clustered at the survey level. For instance, all respondents surveyed in

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<sup>6</sup>In place of election fixed effects, we include two separate fixed effects for U.S. elections covered both by ANES and NAES, to also control for survey effects. Specifications shown in Appendix C.2 also control for the following sociodemographic characteristics: education (dummies indicating above high school education and college degree), age, gender, income quartiles, and employment status. Despite our survey selection process, some of these variables show slight imbalance over time (see Appendix Table A.1). For each control variable, we also include a dummy equal to 1 when the control is missing. Reassuringly, our findings are nearly identical when adding these controls.

Figure 1: Individual vote choice consistency, vote intention, and conditional consistency



Notes: We show point estimates and 95% confidence intervals from specifications in the form of equation [1], regressing vote choice consistency ( $N = 200,916$ ), vote intention ( $N = 253,489$ ), and conditional vote choice consistency ( $N = 178,176$ ) on 60 fixed effects indicating the number of days relative to the election and control variables listed in the text.

the 2008 wave of the ANES correspond to one cluster. Our results are robust to allowing for correlation of the error terms with the wild cluster bootstrap procedure, as shown in Appendix C.3, and to clustering the standard errors at the level of the election date, as shown in Appendix C.4. Respondents in the 2008 wave of both the ANES and the NAES are then included in the same cluster, for instance.

We plot the  $\beta_t$  coefficients and their 95% confidence intervals against time in Figure 1. We find that 60 days before the election, 71% of voters state a vote intention corresponding to their final vote choice, suggesting that they vote based on earlier information or along party lines. The fraction of people with identical pre- and post-election vote declaration increases by 17 percentage points during the final two months of campaigns, up to 88%. The 12% of voters surveyed on the last day before the election whose vote intention and vote choice remain different are of two types: half of them still do not know (or will not say) whom they will vote for, and the other half state a vote intention but later report a different vote choice.

We next estimate the following equation to measure the daily average increase in vote choice consistency and test whether the trend is linear or convex:

$$C_{it}^e = \beta t + \delta t^2 + \alpha^e + W_{it}' \lambda + u_{it}^e, \quad (2)$$

where  $t$  is defined as negative the number of days separating the pre-electoral survey from the election, so that higher values of  $t$  indicate closer proximity to the election. The results are reported in Table 1. We find that each additional day increases vote choice consistency by 0.25 percentage point on average, an estimate that is significant at the 1% level (column 1), and that the increase in consistency follows a convex pattern, with a significant acceleration in the last weeks preceding the election (column 2).

A possible concern is that our survey data may suffer from self-reporting biases. We address this concern in two ways. First, remember that we define our outcome, vote choice consistency, by comparing the vote intention and vote choice of the same individual. By construction, this eliminates any bias affecting both of a respondent's declarations from the outcome itself. Most expressions of survey demand effects and of social acceptability bias, which may particularly affect voters expecting their choice to be frowned upon by pollsters, likely fall in this category.

Second, one may still be concerned by the possibility that some voters misreport their vote intention while reporting their actual vote choice, or the reverse. In particular, voters may misreport their vote choice because they forgot, or out of the desire to say they voted for the winner (e.g., Wright, 1993),<sup>7</sup> leading to an inflated fraction of inconsistent voters measured on any day. However, vote choice misreporting should not bias our estimate of the *change* in consistency over time (the overall 17 percentage points increase shown in Figure 1 and the daily increase reported in Table 1). To see why, note first that taking the difference between the vote choice consistency of respondents surveyed at different dates eliminates any constant level of misreporting in and of itself. Misreporting could still vary over time: for instance, response accuracy could decrease with the time between the election and the post-electoral survey, which is in turn correlated with the date of the pre-electoral survey (as shown in Appendix Figure A.1). But we address this possibility by controlling flexibly for post-electoral survey lag. Conditional on the dummies for the number of days separating the post-electoral survey from the election, included in equations [1] and [2], vote choice misreporting should be uncorrelated with the timing of the pre-electoral survey, and the estimated change in consistency should be fully accurate.

In sum, our method insulates the estimated 17 percentage points increase in vote choice consistency from 60 days to one day before the election from multiple plausible sources of

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<sup>7</sup>In practice, in our data, the share of respondents who report voting for the winner is not systematically larger than winners' actual vote shares. Overreporting for the winner does not vary with the date of the pre-electoral survey either. Importantly, our specifications address other sources of reporting bias which, unlike overreporting for the winner, we cannot test for directly.

Table 1: Vote choice consistency and distance to final vote shares

	Vote choice consistency		Vote intention		Conditional consistency		Distance between predicted and final vote shares	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Time	0.0025*** (0.0003)	0.0061*** (0.0008)	0.0010*** (0.0002)	0.0031*** (0.0005)	0.0018*** (0.0003)	0.0038*** (0.0007)	-0.0008*** (0.0002)	-0.0013*** (0.0004)
Time <sup>2</sup>		0.0001*** (0.0000)		0.0000*** (0.0000)		0.0000*** (0.0000)		-0.0000 (0.0000)
Observations	200916	200916	253489	253489	178176	178176	3125	3125
R <sup>2</sup>	0.070	0.071	0.072	0.073	0.041	0.041	0.520	0.523
Mean at day -1	0.8768	0.8768	0.9157	0.9157	0.9346	0.9346	0.0324	0.0324
Election fixed effects	x	x	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x		
Aggregate controls							x	x

Notes: Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). Time is defined as negative the number of days separating the pre-electoral survey from the election. In columns 1 through 6, we use one observation per respondent and estimate a specification in the form of equation [2]. In columns 7 and 8, we use one observation per election per day and estimate a specification in the form of equation [5]. Individual controls include fixed effects for the day of the week in which the pre-electoral survey took place and, in columns 1, 2, 5, and 6, fixed effects for the number of days separating the post-electoral survey from the election. Aggregate controls include fixed effects for the day of the week in which the pre-electoral survey took place and the average number of days separating the post-electoral survey from the election. In this table and others, respondents included in the sample (and, therefore, sample sizes) vary across outcomes, as explained in the text.

reporting bias. In contrast, we may overestimate the share of voters who remain inconsistent on the day before the election if some of them misreport their vote choice but not their vote intention. We conclude that the fraction of voters forming their vote choice during the last two months before the election is between 17% (if none of the 12% of inconsistent voters surveyed the last day before the election is really a last-minute decider) and 29% (if all of them are).

### 3.2 Stating a Vote Intention and Expected Likelihood to Vote

The increase in vote choice consistency can result from an increased fraction of people stating any vote intention or from increased vote choice consistency conditional on stating one. Accordingly, we estimate equation [1] using as outcome a dummy equal to 1 if the respondent states a vote intention and 0 otherwise. We then restrict the sample to respondents stating a vote intention and use a dummy equal to 1 if their final vote choice corresponds.<sup>8</sup>

<sup>8</sup>Our sample for the first outcome includes all respondents surveyed before the election who said that they intended to vote. We do not control for fixed effects for the number of days separating the post-electoral survey from the election when using this outcome. For the second outcome, our sample includes all respondents surveyed before and after the



As shown in Figure 1, both the probability of stating a vote intention and conditional vote choice consistency increase in the last two months before the election, up to 92% and 93% respectively. The increase is larger for the latter outcome, suggesting that vote choice formation in this period is driven by a decrease in the fraction of voters changing their mind at least as much as in the fraction of undecided voters. Finally, as shown in columns 3 through 6 of Table 1, both outcomes follow an increasing and convex pattern similar to vote choice consistency.

Importantly, all our results exclude respondents who stated that they were unlikely to vote in the pre-electoral survey. This choice ensures symmetry with post-electoral surveys, where non-voters are usually not asked whom they would have voted for if they had voted, as well as homogeneity across surveys: while some surveys ask likely non-voters whom they would vote for if they did vote, others only record the vote intention of respondents intending to vote.

A legitimate concern is that the type of respondents saying that they intend to vote may change over time. As shown in Appendix Table A.2, the share of respondents who say that they intend to vote increases by about 6 percentage points over the 60 days leading up to the election. Accordingly, the fraction of respondents entering in the samples used to measure changes in vote choice consistency and in the likelihood of stating a vote intention also increases over time.

We do not think this is too much of an issue and check the robustness of our results to keeping respondents who state that they are unlikely to vote instead of dropping them. In our main sample, respondents who only say that they intend to vote (and enter the sample) if they are surveyed close to the election can reasonably be expected to be less interested in politics and less consistent in their vote intention, on average. Therefore, if anything, we should expect changes in sample composition to bias the estimated increase in vote choice consistency *downward*. In fact, the observed increase in vote choice consistency is slightly larger when we include unlikely voters (in the surveys in which their vote intention is recorded), as shown in column 1 of Appendix Table C.15. More generally, Appendix C.5 shows that our results are qualitatively very similar when including unlikely voters.

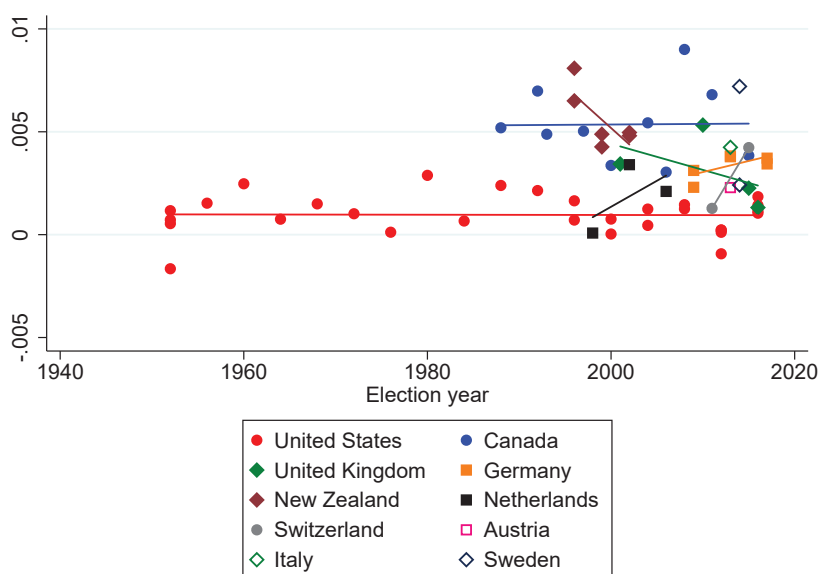
### 3.3 Heterogeneity Across Countries and Election Years

To test whether the increase in vote choice consistency measured in Section 3.1 varies across countries and over time, we estimate equation [2] for each election separately, without quadratic

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election who said that they intended to vote and stated a vote intention, in the first survey, and who reported that they actually voted and gave a vote choice declaration, in the second.

Figure 2: Increase in vote choice consistency across countries and over time



Notes: We show point estimates from election-level regressions of consistency on time against election year. Each point comes from a separate regression. Each regression controls for fixed effects for the day of the week in which the pre-electoral survey took place and for the number of days between the post-electoral survey and the election. Elections covered by two different surveys are represented by two different point estimates. We also show country-level linear fits of the point estimates, estimated by regressing the point estimates on election year, for all countries with two election years or more.  $N=65$ .

term. Figure 2 plots each election-specific daily increase in vote choice consistency against election year, along with country-level linear fits.

The extent to which people form their vote choice during the last two months before the election has been remarkably stable over time in the U.S. and in Canada, the two countries with the largest number of elections in the sample (44% and 16%, respectively, accounting for 28% and 13% of respondents). It has decreased slightly, in some countries with fewer elections (New Zealand and the U.K.), but increased slightly in others (the Netherlands, Germany, and Switzerland). Overall, the propensity to form one's vote choice in the campaign season has been relatively stable for the last 70 years, suggesting that campaigns continue to matter as much as before. This constancy is all the more striking as campaign methods have undergone major changes in this period, including the long decline and recent revival of campaign strategies focusing on the mobilization of nonvoters rather than the persuasion of active voters (Panagopoulos, 2016), new types of media have emerged

– notably cable TV and the internet –, and ideological polarization has risen in many countries (Boxell et al., 2020).

Second, even though campaigns matter everywhere and at all times, the size of the daily change in consistency differs substantially across countries. In particular, vote choice consistency increases less in the last two months before the election in the U.S. than in all the other countries. To investigate the size and statistical significance of this difference more systematically, we use the following specification:

$$C_{it}^e = \beta t + \gamma \Omega^e t + \alpha^e + W_{it}' \lambda + u_{it}^e, \quad (3)$$

where  $\Omega^e$  is a dummy equal to 1 for the U.S. As shown in Appendix Table A.3, column 1, the fraction of voters forming their vote choice during the electoral season in U.S. elections remains positive and significantly different from 0, but it is substantially lower (by about two thirds) than in other countries.

A possible interpretation is that the vast majority of U.S. elections are bipartisan, while all other countries have multiparty systems. In multiparty settings, the diversity of candidates and frequent changes in the party system may result in weaker partisan affiliations. In addition, voters can change their vote choice without having to cross the aisle.

Since the U.S. two-party system stems in part from using the plurality rule, an alternative interpretation is that cross-country differences in vote choice formation come from differences not between party systems, but between plurality and proportional elections. For instance, switching sides could be more common in proportional elections if they tend to be less confrontational. The presence in the sample of countries such as the U.K. and Canada, which use plurality voting like the U.S., yet have multiparty settings, enables us to test this hypothesis. As shown in columns 3 and 7, we do not find any significant difference between plurality and proportional rule elections, in specifications also controlling for time interacted with the U.S. dummy.

It remains that other differences than in the party system or in the voting rule, including the fact that U.S. voters can start forming their choice during lengthy primary elections, may drive the observed difference between the U.S. and other countries. Regardless of the exact interpretation, this result suggests that lessons from U.S. studies on factors affecting voter behavior and electoral results, which account for most of the existing literature, may not extend to other contexts.

### 3.4 Heterogeneity Across Voters

Voters with less preexisting knowledge on candidates or on the state of the economy may show a larger increase in vote choice consistency before the election if they are more impacted by the information they receive in this period, as Bayesian updating would predict (e.g., Zaller, 1992). On the other hand, these voters may be less likely to change their vote intention if they are less likely to hear, understand, and remember campaign messages in the first place (e.g., Prior, 2007). To test these opposite predictions, we compare the timing of vote choice formation for voters with different age and education levels, which are two strong correlates of political informedness (e.g., Angelucci and Prat, 2021). We also test for differences along three additional dimensions available across most surveys and known to predict vote choices: gender, income, and employment status.

We use the following specification separately for each characteristic:

$$C_{it}^e = \beta t + \Omega_i + \gamma \Omega_i t + \alpha^e + W_{it}' \lambda + u_{it}^e, \quad (4)$$

where  $\Omega_i$  is a dummy variable equal to 1 if respondent  $i$  is a “type-a” voter – defined as male, above the median age of that survey’s respondents, college-educated, above the median income, or not employed – and zero if they are “type-b” – female, below median age, not college-educated, below median income, or employed.  $\gamma$  measures the differential increase in  $C_{it}^e$  for type-a voters over time.

Columns 1 through 5 of Appendix Table A.4, which include one characteristic at a time, show that vote choice consistency increases substantially for all groups during the last 60 days before the election but that the increase is faster for younger voters and those without a college degree. These differences remain significant (at the 1% level) in a specification including all sociodemographic characteristics and their interaction with the time trend (column 6). Other characteristics equal, voters without a college degree and younger voters show lower initial levels of vote choice consistency than college degree holders and older voters, but any additional day increases their consistency by an additional 0.05 and 0.07 percentage point respectively on average (or about 20 and 28% of the average daily change). Much of the differential increase in vote choice consistency for younger voters is driven by voters below 25 years old: as shown in Appendix Table A.5, this group’s vote choice consistency increases by an additional 0.06 percentage points on average, compared to other voters below median age. This result complements a large literature showing that the political behavior and attitudes of young voters are more easily influenced by external factors (Neundorf and Smets, 2017).

Appendix Table A.6 replicates this analysis for the probability of stating a vote intention (column 1) and for vote choice consistency conditional on stating one (column 2). We find that the larger increase in vote choice consistency of younger voters and voters without a college degree is mostly driven by larger changes in the latter outcome. In sum, younger and less-educated voters are more susceptible to the influence of electoral campaigns.

### 3.5 Convergence to Final Vote Shares

Changes in individual vote intentions may partly compensate each other: voters switching from intending to vote for candidate A to actually voting for candidate B will not affect aggregate vote shares and the outcome of the election if an equal number of voters follow the opposite trajectory. Alternatively, individual vote choice formation may reflect broad shifts in candidate support. We should then expect increased individual consistency between vote intention and vote choice to be concomitant with a convergence from predicted vote shares to final vote shares.

We use vote intentions and vote choices reported in the pre- and post-electoral surveys to compute  $\tilde{V}_{ct}^e$ , the predicted vote share of candidate  $c$  in election  $e$  among respondents surveyed at time  $t$ , and  $V_{ct}^e$ , the candidate's final vote share among the same respondents.<sup>9</sup> We define the overall distance between predicted and final vote shares as  $\Delta V_t^e = \frac{1}{2} \sum_c \left| \tilde{V}_{ct}^e - V_{ct}^e \right|$ , which corresponds to the minimal share of voters who had to change their vote intention after the pre-electoral survey to explain the difference between predicted and final vote shares.

We measure changes in this outcome with a specification in the form of equation [1], but using only one observation per election per day instead of one observation per individual response:

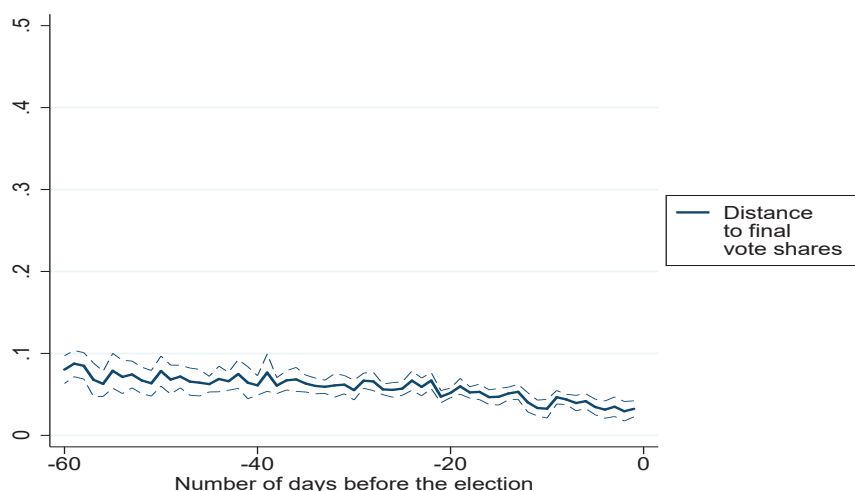
$$\Delta V_t^e = \sum_{t=-60}^{-1} \beta_t D_t + \alpha^e + W_t^{e'} \lambda + u_t^e, \quad (5)$$

where  $W_t^e$  includes pre-electoral survey day-of-the-week fixed effects, the average post-electoral survey lag among respondents who received the pre-electoral survey at time  $t$ , and, in some specifications, their average sociodemographic characteristics. To give more weight to vote shares

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<sup>9</sup>Comparing candidates' predicted vote share among respondents surveyed at time  $t$  to their final vote share among the same respondents enables us to isolate differences due to actual changes in candidate support. By contrast, measuring final vote shares based on overall election results would generate additional differences with predicted vote shares, due to idiosyncratic differences between the composition of daily survey samples and the full population of voters. Our sample includes all respondents surveyed before and after the election who said that they intended to vote and stated a vote intention different from voting blank or null, in the first survey, and who reported that they actually voted and gave a vote choice declaration different from voting blank or null, in the second.

Figure 3: Distance between predicted and final vote shares



Notes: We show point estimates and 95% confidence intervals from a specification in the form of equation [5], regressing the distance between predicted and final vote shares on 60 fixed effects indicating the number of days relative to the election and control variables listed in the text (N=3,125).

measured more precisely, we weight each observation by  $\frac{N_t^e}{N_t}$ , where  $N_t$  is the total number of respondents surveyed at time  $t$  and  $N_t^e$  is the subset of these respondents surveyed for election  $e$ .

We plot the  $\beta_t$  coefficients on Figure 3. The overall distance between predicted and final vote shares is divided by more than two, from 8 percentage points on average, 60 days before the election, to 3.2 percentage points the day before. As shown in columns 7 and 8 of Table 1, the decrease in this distance is linear but not concave. Reassuringly, we obtain a virtually identical graph when we also control for respondents' average sociodemographic characteristics (Appendix Figure C.2b).

### 3.6 Interpretation

The magnitudes of the increase in vote choice consistency and of the convergence to final vote shares during the last two months before an election are interesting in their own right. We now turn to the interpretation of these patterns.

We argue that they are first driven by the information voters receive during the campaign season and, therefore, that they provide a good measure of the impact of this information on individual vote choice formation and electoral outcomes. Information received during campaigns may come from many sources – from campaign organizations to discussions with family members and friends –

and it may relate both to contemporary and past events. For instance, voters may read newspaper articles assessing the main policies implemented since the last election and, accordingly, change their views on the incumbent. While previous work has sought to isolate the impact of specific types of information, studying the timing of vote choice formation enables us to account for the overall impact of *all* types of information shared during campaigns, without having to observe which particular information people receive.

Beyond new information, we argue that changes in vote intentions during campaigns may plausibly also result from voters incorporating information which they had beforehand. We discuss both of these interpretations below, and also state the case against an alternative one, attributing vote choice formation during campaigns to information-free shocks.

### **Stream of information**

There are two distinct reasons why voters receiving a stream of information and incorporating it into their evaluation of candidates should be expected to show increasing consistency between their pre-election vote intention and their vote choice over time.

First, voters surveyed later in the campaign will have received more information. Accordingly, their posterior on candidates will be more precise, making them more likely to state a vote intention and less likely to change it afterwards. Some voters may simply stop paying attention to new information once they have accumulated the amount of evidence they deem sufficient to choose a candidate, especially if information acquisition is costly (e.g., [Ratcliff, 1978](#); [Canen, 2017](#)).

Second, the later voters are administered the pre-electoral survey, the less time there is for them to receive new information susceptible to change their vote intention afterwards. This simple point implies that even a process where people's vote choice was entirely swayed by the latest piece of information would lead to an increase in vote choice consistency over time. That said, some of our results are more in line with the view that vote choices are information-rich. In particular, voters' increasing likelihood to express a vote intention suggests that they accumulate information over time and only state a vote intention when their level of informedness makes them feel sufficiently confident about it. Consistent with this view, Appendix Figure [A.2](#) shows that people's certainty about their vote intention (conditional on stating one), increases as well.

Beyond the overall increase in individual vote choice consistency, all other results shown in this section are consistent with electoral season vote choice formation being driven by new information. Younger and less-educated voters, who have less preexisting information, may be expected to be

more affected by information received in this period, as we find. Convexity in the increase in vote choice consistency should be expected if the stream of information available to voters increases as the election gets closer, either due to increasing demand (by voters eager to make up their mind) or supply (by candidates, the media, and friends and family members). Finally, changes in predicted aggregate vote shares should be expected if a large number of voters receive the same information and update their vote intentions in the same direction as a result.

### **Complementary interpretation: Cognitive costs of processing information**

A second possible interpretation is that the increase in vote choice consistency is due to delays in incorporating *existing* information into vote decisions. In this view, processing information and making one's vote choice takes time and effort, and the fraction of voters who have paid this cognitive cost increases over time.

We see this interpretation as complementary to the first. In both interpretations, vote choice consistency increases as voters incorporate information in their choice of candidate. This view contrasts with a rival longstanding view, which holds that vote choices are based on partisan identification and ideology. Whether the information changing people's mind is received during the last 60 days before the election or earlier – and whether it is about the candidates themselves, the state of the economy, or another voter concern – is more second-order.

Furthermore, while postponing one's vote choice until shortly before the election could simply be a manifestation of procrastination, it could also be a rational decision by voters expecting to receive useful information until the very last day and desiring to incorporate all this information into their vote choice. Conversely, some of the effects of information received during the campaign may result from the fact that it resonates with prior information (Gennaioli and Shleifer, 2010). For instance, voters may update their evaluation of a candidate negatively if new information about an unfolding crisis contradicts that candidate's earlier predictions. The increased consistency observed in the last few weeks should then be attributed jointly to people receiving new information and spending more time to process it in this period.

Finally, it is unlikely that delays in information processing could, alone, fully account for our results. Indeed, the next section provides evidence of convergence for outcomes which do not require that people exert cognitive skills but which are likely to be affected by new information, namely beliefs concerning candidates' quality and issue positions, as well as the perceived importance of different issues.



In sum, the increase in vote choice consistency and the convergence to final vote shares shown in this section reflect the integration of all types of information received during the 60 days leading up to the election. The processing of prior information may contribute to these patterns, making them an upper bound on the impact of information received during the campaign itself.

### **Alternative interpretation: Information-free shocks**

An alternative interpretation is that increased vote choice consistency stems from a stream of shocks containing no relevant information but affecting vote choice, for instance by altering the utility function that voters maximize, as in random utility or perturbed utility models (e.g., [McFadden, 1973](#); [Fudenberg et al., 2015](#)). Voters surveyed closer to an election may be more likely to vote for the candidate they announced simply because fewer shocks will hit them between their survey and the election.

This interpretation may be appealing for its simplicity, yet it is at odds with the observed convergence between predicted and final vote shares. Random shocks affecting different voters should cancel each other out in the aggregate. To account for the convergence to final vote shares, one would need to assume that shocks are correlated across voters. Shocks affecting the electorate at large may of course exist, and they play a central role in models such as probabilistic voting ([Lindbeck and Weibull, 1987](#)). However, it is difficult to see how they could change the views of a large fraction of voters without containing any relevant information. In fact, many versions of the probabilistic voting model use political scandals or economic downturns, which are rich in information, as examples of aggregate shocks (e.g., [Galasso and Nannicini, 2017](#); [Rauh, 2017](#)).

## **4 Formation of Beliefs, Policy Preferences, and Issue Salience**

### **4.1 Formation of Policy Preferences**

Information can affect vote choice through multiple mechanisms. First, voters' policy preferences might change over the course of the campaign, estranging them from candidates holding views they are moving away from. Second, voters might update their beliefs concerning candidates' issue positions and quality. This may lead them to favor a new candidate that they find more competent or whom they find themselves ideologically closer to than they thought initially. Third, in races in which more than two candidates are initially in contention for victory, polls may

clarify the identity of the front-runners and lead strategic voters to desert candidates with too little chance of winning. Fourth, campaign season information may increase the salience of some issues and prime voters to evaluate candidates on them.

To investigate the role played by the first mechanism, we test whether the formation of vote choice is mirrored by changes in policy preferences. We define individual  $i$ 's preference consistency on question  $q$  as:

$$C_{it}^q = 1 - \frac{|\tilde{A}_{it}^q - A_{it}^q|}{\overline{A^q} - \underline{A^q}},$$

where  $\tilde{A}_{it}^q$  (resp.  $A_{it}^q$ ) is the respondent's answer to the question before (resp. after) the election and  $\overline{A^q} - \underline{A^q}$  is the range of possible answers. This normalization allows us to use questions with different answer scales in the same regression.

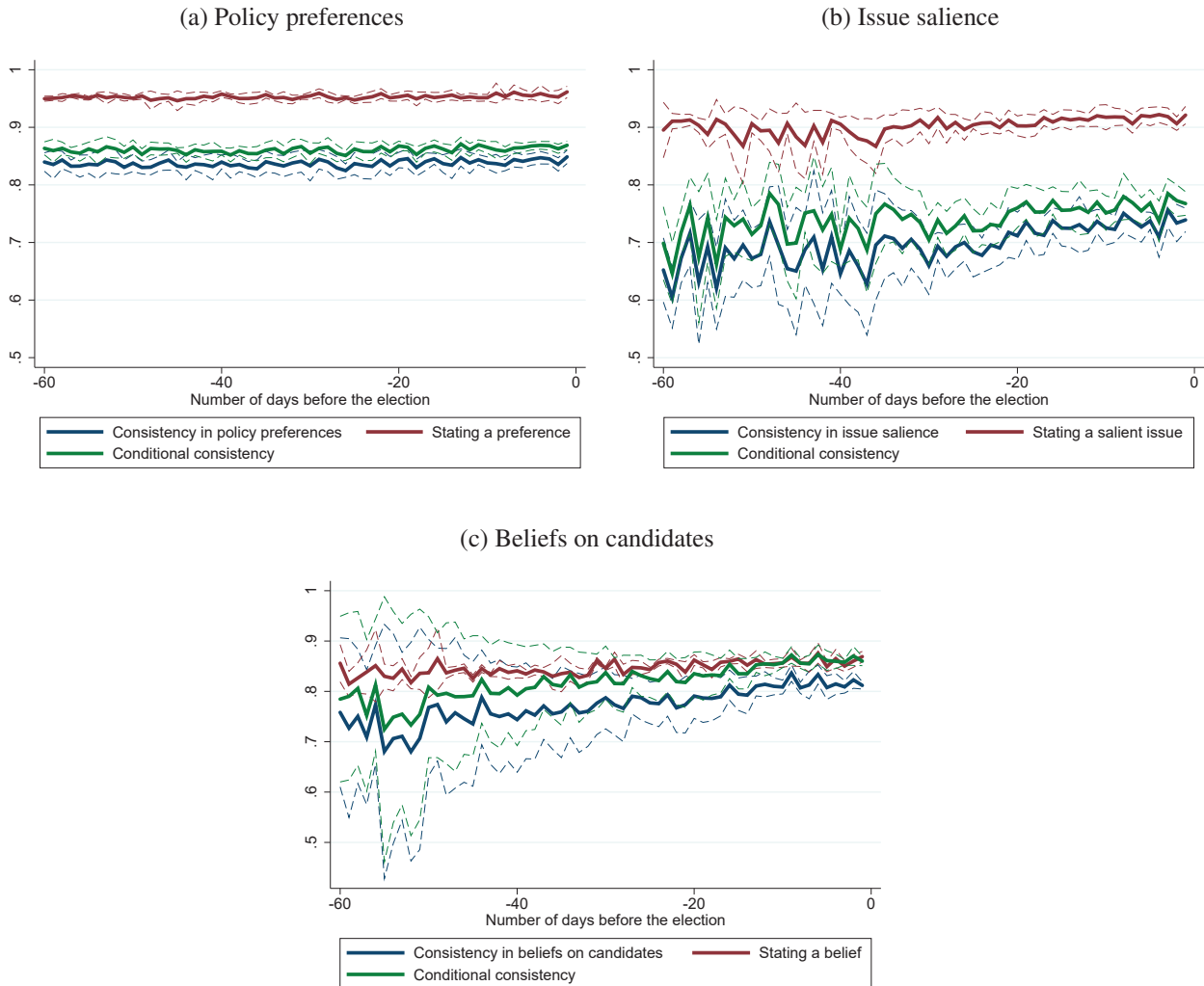
We estimate equations [1] and [2] using preference consistency as outcome.<sup>10</sup> As shown in Figure 4a and Appendix Table A.7, Panel a, policy preferences remain remarkably stable in the last two months before an election. The probability of stating a policy preference does not change over time either. Furthermore, column 1 of Appendix Table A.8, estimated based on equation [4], shows that none of the differences in trends across voter types is significant. Simply put, the persuasive communication voters receive in the campaign season does not alter their policy preferences.

The fact that vote choice formation during the campaign is not mirrored by a similar process of policy preference formation indicates, of course, that the latter is unlikely to explain the former. It also suggests that the reverse relationship, whereby voters adjust their policy preferences to their choice of candidate (Lenz, 2012), does not play an important role in the elections we study. Furthermore, this result provides support for the assumption of stable preferences, which is a cornerstone of most models of electoral competition (e.g., Downs, 1957; Besley and Coate, 1997).

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<sup>10</sup>Our sample includes all respondents surveyed before and after the election who stated a policy preference in the second survey, and we replace election fixed effects with question fixed effects. Unlike vote choice, the accuracy of reported policy preferences should not depend on the time lapsed since the election. A more likely source of variation in policy preference changes is the distance between the pre- and post-electoral survey. Therefore, in this specification and in all regressions in this section, we control for dummies indicating the number of days separating the pre- and post-electoral survey instead of the distance between the latter and the election.

Figure 4: Consistency in policy preferences, issue salience, and beliefs on candidates



Notes: We show point estimates and 95% confidence intervals from specifications in the form of equation [1], regressing consistency in policy preferences (Figure 4a), issue salience (Figure 4b), and beliefs on candidates (Figure 4c) on 60 fixed effects indicating the number of days relative to the election and control variables listed in the text. We use one observation per respondent per policy question in Figure 4a, one observation per respondent in Figure 4b, and one observation per respondent per belief question in Figure 4c. In each figure, we consider three outcomes: consistency (N = 228,562; 46,108; and 478,039); stating a preference (resp. a salient issue or a belief) (N = 330,843; 60,713; and 809,037); and conditional consistency (N = 222,785; 44,049; and 440,771).

## 4.2 Changes in Issue Salience

We use a similar method to explore the role of priming. We define issue salience consistency as a dummy equal to 1 if the respondent mentions an issue that they consider to be the most important in the pre-electoral survey and if they provide the same answer in the post-electoral survey.

As shown in Figure 4b, consistency in issue salience increases by 9 percentage points during the final two months of campaigns, contrasting with the flat pattern observed for preference consistency. The daily increase in issue salience consistency is significant at the 5% level and equal to more than half of the daily increase in vote choice consistency shown in Table 1 (Appendix Table A.7, Panel b, columns 1 and 2). It is driven by increases both in the probability of stating an important issue (columns 3 and 4) and in consistency conditional on stating an issue (columns 5 and 6). Finally, as shown in column 2 of Appendix Table A.8, the average daily change in issue salience consistency does not differ significantly across voter types.

These results indicate that electoral season information increases the salience of some issues while decreasing the importance of others, and they suggest that priming mechanisms may contribute to vote choice formation.

## 4.3 Changes in Beliefs on Candidates

We finally investigate whether increased vote choice consistency in the period leading to an election is also driven by changes in beliefs voters hold about candidates.

Using questions recording beliefs on candidates' issue positions and quality, we find that the average daily increase in belief consistency in the last two months before the election is about two thirds of the daily change in vote choice consistency but that it falls short of statistical significance (Figure 4c and Appendix Table A.7, Panel c, columns 1 and 2).<sup>11</sup> The increase in the probability of stating a belief over time (instead of responding "I don't know") is estimated more precisely and significant at the 1% level (columns 3 and 4). As shown in Appendix Table A.9, we observe similar patterns when we distinguish the beliefs voters hold about candidates' issue positions and about their quality: increases in respondents' likelihood to state a belief on candidates' issue positions

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<sup>11</sup>Questions recording beliefs on candidates are of two types. Some ask voters to select one of the candidates, e.g., the candidate that talks the most about a particular issue. Belief consistency is then defined as a dummy equal to 1 if the respondent provides the same answer in the pre- and post-electoral survey. Other questions survey voters about a particular candidate, e.g., how competent this candidate is. Belief consistency is then defined similarly as preference consistency, using the range of possible answers as denominator. Our estimates pool both types of questions. Again, we replace election fixed effects with question fixed effects.

(Panel a) and on their quality (Panel b) are of comparable magnitudes and both significant at the 1% level.

We complement this evidence by comparing changes in vote choice consistency across supporters of different types of candidates. This approach is less direct but it has the advantage of using all our data, not just surveys recording voters' beliefs both before and after the election. In addition, it enables us to distinguish information and beliefs on candidates' positions and quality from beliefs on their relative chances (based for instance on polls clarifying the identity of the front-runners). The first type of information can be expected to benefit the candidates on whom voters have less prior knowledge, including new and small candidates, as well as any candidate challenging the incumbent (Alvarez, 1988). If changes in related beliefs are responsible for vote choice formation, people who eventually vote for lesser-known candidates should be more likely to make up their minds during the electoral season, and these candidates should see their predicted vote share increase over time. Instead, information on the relative chances of the contenders should lead strategic voters to rally to the strongest candidates, increasing these candidates' predicted vote shares and overall vote share concentration.<sup>12</sup> We now test these opposite predictions.

First, we compare individual vote choice formation between voters who end up voting for well-established candidates and for candidates likely to be lesser-known at the beginning of the campaign. Formally, we estimate specifications in the form of equation [4] where we define as type-a people voting for a challenger, a small party, or a new party; and as type-b people voting for the party that won the last election, an initially strong party (with an average predicted vote share larger than 10% in the first five days of the survey), or for a party that had competed in earlier elections.<sup>13</sup> As shown in Appendix Table A.11, vote choice consistency is initially lower and it increases faster among those who eventually vote for challengers, small candidates, and new candidates.<sup>14</sup> These differential increases remain statistically significant in a specification

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<sup>12</sup>We define voting strategically as voting based on likely outcomes of the election rather than expressively, for one's favorite candidate (Duverger, 1954). Outside of strategic considerations, information on candidates' chances may affect voters if they use it as a signal of quality or if they desire to vote for the winner (Granzier et al., 2021).

<sup>13</sup>The party that won the last election is defined as the party of the president, the governor, the prime minister (in lower house elections that lead to the designation of a prime minister), or the party with plurality at the house (in other lower house elections and in upper house elections). The party is defined as new if it was absent from any previous presidential election, any previous legislative race in the country (for lower and upper house elections), or any race in that state (for gubernatorial elections).

<sup>14</sup>As shown in Appendix Table A.10, the fractions of voters who report voting for a challenger, a small party, or a new party in the post-electoral survey are stable over time, suggesting that our results are not driven by changes in sample composition.

controlling for all candidate types as well as their interaction with the time trend, with or without sociodemographic controls (columns 4 and 5).

Second, we compare changes in the predicted vote share of different types of candidates in the 60 days leading up to the election, using the individual likelihood to vote for these candidates as outcome, the same specification and sample of elections, and excluding respondents who do not state a vote intention or announce that they will cast a blank or null vote. We find that the support for challengers and small candidates increases as the election gets closer (Appendix Table A.12, columns 1 through 4). We also measure changes in the following index of vote share concentration:  $M_t^e = \sum_c (\tilde{V}_{ct}^e)^2$ . As shown in columns 7 and 8 and in Appendix Figure A.3, vote share concentration *decreases*, on average, in the last two months before an election.

Finally, changes in beliefs on candidates' relative chances should be more consequential for vote choice under plurality rule than under proportional rule, where the incentives to be strategic are weaker. But Appendix Table A.3, presented in Section 3.3, did not show a larger change in vote choice consistency in plurality elections.

These results converge to support the view that vote choice changes during campaigns are driven by changed beliefs on candidates' positions and quality more than on their chances. This conclusion echoes recent evidence showing that voters often behave expressively (Pons and Tricaud, 2018).

#### 4.4 Intermediation Analysis

The fact that consistency in beliefs and issue salience, but not policy preferences, increase during the campaign indicates that changes in the two former outcomes (and not in the latter) may contribute to vote choice formation. To go one step further in the direction of establishing a causal relationship between these variables, we compute mean vote choice consistency in each election on each day, and regress it on mean consistency in beliefs, issue salience, and policy preferences.

Formally, we estimate the following regression model:

$$\overline{C}_t^e = \rho_P \overline{C}_t^{e,P} + \rho_S \overline{C}_t^{e,S} + \rho_B \overline{C}_t^{e,B} + \sum_{t=-60}^{-1} \beta_t D_t + \alpha^e + W_t^{e'} \lambda + u_t^e, \quad (6)$$

where  $\overline{C}_t^e$  is the mean vote choice consistency among respondents surveyed  $t$  days before election  $e$  and  $\overline{C}_t^{e,P}$  (resp.  $\overline{C}_t^{e,S}$  and  $\overline{C}_t^{e,B}$ ) is the mean consistency in policy preferences (resp. in issue salience and in beliefs on candidates).<sup>15</sup>

This specification separates the influence of changes in preferences, beliefs, and issue salience consistency on vote choice consistency from two other important sources of correlation. First, individual characteristics such as age and education may affect both vote choice consistency and consistency in beliefs, preferences, and issue salience. The ensuing correlation should not affect our point estimates because our regression is at the day level and our daily samples are generally balanced on these characteristics. The same applies to other individual characteristics such as interest in politics, which we do not observe but which we can expect to be balanced over time in the rolling cross sections. Second, both mean vote choice consistency and consistency in the regressors may increase over time as the election gets closer and more information becomes available, independently of any impact of the latter on the former. The 60 fixed effects indicating the number of days relative to the election, which are included in equation [6], control for this second source of correlation.

It remains that, in addition to capturing the impact of preferences, beliefs, and issue salience consistency on vote choice consistency, our coefficients of interest  $\rho_P$ ,  $\rho_B$ , and  $\rho_S$  may also reflect the impact of information shocks deviating from the average 60 daily fixed effects and affecting both vote choice consistency and consistency in our regressors, but whose effect on the former outcome is not mediated by the latter.

The results are reported in Table 2, Panel a. We do not observe any significant relationship between consistency in policy preferences and in vote choice (column 1). Instead, increases in mean issue salience and beliefs consistency are both associated with large increases in mean vote choice consistency (columns 2 and 3). Both estimates are significant at the 5% level. They remain statistically significant (at the 5 and 10% level) and of very similar magnitude (0.25 and 0.13 percentage points) in a specification including all three variables (column 4).

Similarly, Panel b shows that one percentage point increases in the likelihood of stating an important issue or a belief on candidates are associated with 0.20 and 0.24 percentage points

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<sup>15</sup>In addition to pre-electoral survey day-of-the-week fixed effects and the average post-electoral survey lag among respondents who received the pre-electoral survey at time  $t$ , the vector of controls  $W_t^e$  includes three dummy variables indicating whether  $\overline{C}_t^{e,P}$ ,  $\overline{C}_t^{e,S}$ , and  $\overline{C}_t^{e,B}$  are missing. We weight each observation by the number of respondents it was constructed from, relative to the overall number of respondents surveyed at the same relative time to the election. In surveys including multiple policy preferences or beliefs questions, consistency in policy preferences and consistency in beliefs are averaged at the respondent level before taking the mean across respondents surveyed on a given day.

Table 2: Drivers of vote choice formation

(a) Mean vote choice consistency				
	(1)	(2)	(3)	(4)
Mean consistency in policy preferences	-0.104 (0.115)			-0.138 (0.120)
Mean consistency in issue salience		0.255** (0.096)		0.247** (0.096)
Mean consistency in beliefs on candidates			0.133** (0.064)	0.125* (0.064)
Observations	3129	3129	3129	3129
$R^2$	0.807	0.809	0.808	0.810
Election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x
(b) Mean probability of stating a vote intention				
	(1)	(2)	(3)	(4)
Mean probability of stating a policy preference	0.005 (0.150)			-0.028 (0.149)
Mean probability of stating a salient issue		0.200*** (0.053)		0.203*** (0.052)
Mean probability of stating a belief on candidates			0.233*** (0.076)	0.236*** (0.075)
Observations	3144	3144	3144	3144
$R^2$	0.840	0.840	0.841	0.841
Election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x

Notes: Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). We estimate specifications in the form of equation [6], using one observation per election per day. In Panel a, mean vote choice consistency is computed based on all respondents surveyed before and after the election who said that they intended to vote, in the first survey, and who reported that they actually voted and gave a vote choice declaration, in the second. Mean policy preferences consistency, mean consistency in issue salience, and mean consistency in beliefs on candidates are computed based on all respondents surveyed before and after the election who stated a policy preference, a salient issue, or a belief on candidates in the second survey. In Panel b, mean probability of stating a vote intention is computed based on all respondents surveyed before the election who said that they intended to vote. Mean probability of stating a policy preference, a salient issue, or a belief on candidates are computed based on all respondents surveyed before the election. Aggregate controls include fixed effects for the day of the week in which the pre-electoral survey took place and the average number of days separating the post-electoral survey from the election.



increases in the likelihood of stating a vote intention, which are significant at the 1% level, but that the probability of stating a policy preference is uncorrelated with this outcome conditional on our controls.

While these point estimates do not necessarily represent causal evidence, they do support the conclusion that changes in beliefs on candidates and priming mechanisms are likely to contribute substantially to the formation of vote choice, but that policy preferences do not.

## 5 Impact of TV Debates

Finally, we investigate which sources of information are responsible for the formation of vote choice. One view is that voters base their choice of candidate on information they continuously receive from the media, candidates' campaigns, and discussions with others. Appendix Figure A.4 and Appendix Table A.13 show the change in the fraction of voters who report getting information frequently from newspapers, TV, radio, and the Internet, having seen election polls recently, discussing politics frequently with others, and having been contacted or visited by a party recently. All these outcomes increase during the electoral season, suggesting that the corresponding sources of information may contribute to the concomitant increase in vote choice consistency.

On the other hand, the slow and continuous convergence of vote intentions to final vote choices observed across elections does not preclude the possibility that discrete events, taking place at different times in each race, play a decisive role by changing the mind of many voters. We use an event-study approach to estimate the impact of the most salient of these events: TV debates. Holding TV debates before national elections is the norm in a growing number of countries. After the first presidential TV debate, between Richard Nixon and John F. Kennedy in 1960, TV debates were held in each U.S. election beginning in 1976 and the practice quickly spread to other countries. The list of countries in which TV debates have been held includes Canada (since 1968), Germany (1972), France (1974), the Netherlands (1963), Israel (1977), Australia (1984), New Zealand (1984), Austria (1994), Ukraine (1994), South Africa (1994), Poland (1995), Greece (1996), South Korea (1997), Sweden (1998), Taiwan (2004), the U.K. (2010), and Kenya (2013). The now-common use of debates invites using a multi-country sample to study their impact.

## 5.1 Estimation Strategy

In some elections, multiple debates take place. We exclude debates held less than three days from one another, to be able to estimate effects up to three days after.<sup>16</sup> This leaves us with a total of 56 debates. Debates in our sample were held between five and 44 days before the election, with an average of 24 days (see Appendix Figure A.5). The fact that TV debates are concentrated in the period in which vote choice consistency increases the fastest makes them as plausible a driver of vote choice formation as the sources of information shown in Appendix Figure A.4. The full list of debates is included in Appendix Table B.6, together with the following information: whether the debates featured candidates for president or prime minister, their date, and the time to the election.

An observation is a respondent  $\times$  debate  $\times$  election. A few debates affect several elections, namely the first and second votes in Germany, and the electoral vote and party vote in New Zealand. In addition, for each debate, our estimation uses all respondents in the corresponding survey. As a result, the same response is included multiple times when multiple debates were held before an election. In total, our sample includes 331,000 observations. We cluster standard errors at the debate level to adjust for the correlation between the error terms of all observations related to the same debate. This clustering also accommodates for the fact that some debates preceding the 2000, 2004, and 2008 U.S. presidential elections are covered both by the ANES and the NAES. As in Section 3, we also check the robustness of our results to allowing for correlation of the error terms with the wild cluster bootstrap procedure (Appendix Tables C.9 and C.10), and to clustering the standard errors at the level of the election date (Appendix Tables C.13 and C.14).

Our main specification is as follows:

$$Y_{it}^d = \sum_{k=-3}^{-1} \mu_k + \sum_{k=1}^3 \mu_k + \mu_{4-} + \mu_{4+} + \sum_{t=-1}^{-60} \beta_t D_t + \alpha^d + W_{it}' \lambda + u_{it}^d, \quad (7)$$

where  $Y_{it}^d$  is the outcome for respondent  $i$ , surveyed  $t$  days before the election corresponding to debate  $d$ ,  $\mu_k$  ( $-3 \leq k \leq 3$ ) are dummies indicating the number of days relative to the debate,  $\mu_{4-}$  and  $\mu_{4+}$  are dummies equal to 1 for respondents surveyed four days or more before or after the debate, respectively, and  $\alpha^d$  are debate  $\times$  election fixed effects.<sup>17</sup>

<sup>16</sup>The results are robust to an extended model excluding debates held less than five days from one another. The corresponding results are shown in Appendix C.6.

<sup>17</sup>We include separate fixed effects for distinct elections affected by the same debate. We also include two separate fixed effects for U.S. debates covered both by ANES and NAES.

The key coefficients of interest are  $\mu_1$ ,  $\mu_2$ , and  $\mu_3$ , which measure the impact of debates one to three days after, relative to the omitted category  $\mu_0$ .<sup>18</sup> As this specification makes clear, we do not use elections without debates as our counterfactual. The mere fact of having debates may change the kinds of candidates chosen by parties, the overall amount and type of information provided throughout the campaign, and how much voters pay attention to it. Our estimates do not capture such general equilibrium mechanisms potentially affecting all voters. Instead, we estimate direct effects of debates on voters surveyed afterward relative to those surveyed beforehand. This enables us to assess the extent to which TV debates contribute to the increase in vote choice consistency observed in the corresponding elections.<sup>19</sup> Our estimates capture effects of debates themselves as well as effects of subsequent media commentaries and discussions, both on debate watchers and non-watchers. In Section 5.4, we separate effects on these two groups.

Importantly, the fact that debates took place at different times in different elections allows us to control flexibly for the number of days relative to the election, with the 60 daily fixed effects  $D_t$ . This is critical to disentangle the effect of debates from the underlying time trends shown in Section 3. In addition, the vector  $W_{it}$  controls again for day-of-the-week and post-electoral survey lag fixed effects and, in some specifications, for sociodemographic characteristics.

Our identifying assumption is that conditional on all these controls, and conditional on having a TV debate during our observation window, the date of the debate is uncorrelated with the outcome. In addition, we assume that any pre-trend before the fourth day preceding the debate or any impact after the fourth day following it are accurately captured by the fixed effects  $\mu_{4-}$  and  $\mu_{4+}$ .<sup>20</sup>

There are three important potential threats to our identification strategy. First, systematic differences in the characteristics of respondents surveyed before and after debates would clearly violate the identifying assumption and could lead us to mistakenly attribute to debates changes in outcomes originating in sample composition differences. The fact that most surveys in the study

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<sup>18</sup>We use the day of the debate as reference group because debates take place in the evening. Therefore, the vast majority of respondents surveyed on that day are surveyed before the debate. The exact time of the interview is available for 4,095 respondents surveyed on the day of 26 different debates. We find that only 15% of them were surveyed after the debate started.

<sup>19</sup>The increase in vote choice consistency during the final two months of campaigns is nearly identical in elections with a TV debate as in the full sample (17 percentage points).

<sup>20</sup>Our results pointing to the lack of increase in vote choice consistency and the lack of decrease in the distance to final vote shares are robust to an alternative specification which does not require this assumption because it uses a sample restricted to a balanced panel of observations for each of the three days preceding and following each debate and excluding all respondents surveyed before or after. The drawback of that specification is that we can only control for election fixed effects instead of debate  $\times$  election fixed effects because collinearity prevents estimating a full set of debate fixed effects, time fixed effects, and fixed effects for days relative to the debate. The corresponding results are shown in Appendix C.7.

are rolling cross-sections, which allocate each respondent's survey date randomly, alleviates this risk. It remains that debates, like other campaign events, may affect the characteristics of people willing to answer the survey (Gelman et al., 2016). To address this concern, Appendix Table A.14 reports balance checks for our sociodemographic characteristics as well as two other variables later used in the heterogeneity analysis. Out of 80 differences, nine are significant at the 10% level, five at the 5% level, and none at the 1% level, which is in line with what would be expected.

A second potential risk arises if unexpected shocks occurring on the same day or immediately before or after the debate bias our estimates. This risk is important for existing studies that use pre/post difference designs and focus on a unique debate or a few debates only. In our case, such shocks would only violate the identifying assumption if they were systematically correlated with debates' dates. Given the large number of debates in the study, and conditional on the daily fixed effects and other controls, this should not be the case.

The third and perhaps most serious potential violation of the identifying assumption comes from the fact that, of course, debates do not happen unexpectedly. Instead, their dates are known long in advance. As a result, candidates and the media may strategically time their communication around them. This could generate continuous trends in outcomes around debates, which the pre-debate dummies  $\mu_{-3}$ ,  $\mu_{-2}$ , and  $\mu_{-1}$  allow us to test for. However, these dummies would not capture changes only taking place after the debate. One possibility is that the amount of information increases (or that voters pay significantly more attention to it) after the debate, biasing our estimates upwards. Given our mostly null results, changes susceptible to bias our estimates downwards would be more concerning. For instance, downward bias could occur if candidates decreased the intensity of their campaign and if media decreased their coverage thereof, after the debate (e.g., because they anticipate debate-related information will lower the returns of any other type of communication), or if voters decreased their media consumption.

Appendix Table A.15 tests for changes in media consumption and partisan communication around debates. Columns 1 through 4 use dummies for getting information frequently from newspapers, TV, radio, and the Internet as outcomes. None of the pre-debate or post-debate dummies are significant, providing evidence of stable media consumption around debates. Columns 5 and 6 show no significant effect on the probability of having seen election polls recently or of discussing politics frequently with others. Finally, we obtain only insignificant coefficients when using dummies for having been contacted and having been visited by a party as outcomes (columns 7 and 8), except for a small decrease in party contact the day after the debate,

significant at the 10% level. While these results support our identifying assumption, we note that the object of all questions – either overall media consumption or having been contacted by a party recently, not just on the day of the survey – limits the power of these tests.

The next two sections measure mean effects of debates on individual and aggregate outcomes. We then explore potential sources of heterogeneity in debate impact.

## 5.2 Effects on Individual Outcomes

We first measure the impact of TV debates on our main outcome,  $C_{it}$ , the individual consistency between vote intention and vote choice.<sup>21</sup>

This outcome based on the comparison of pre- and post-electoral survey responses is particularly well suited to our event-study design. We would not be able to measure the impact of TV debates using only *post-electoral* responses: by that time, vote choices reported by *all* respondents may reflect debates' influence. Instead, if debates do help voters decide between candidates, we should expect the fraction of people stating a vote intention identical to their eventual vote to be higher among those who answered the pre-electoral survey right after the debate than those surveyed right before. Moreover, day-to-day increases in vote choice consistency after the debates, conditional on the controls, would indicate that debates' effects increase over time.

An alternative would be to estimate the impact of TV debates on individual vote intention and predicted aggregate vote shares, using only *pre-electoral* survey responses. While previous event studies estimating the effects of debates and other campaign events have used such outcomes, focusing instead on vote choice consistency should help uncover effects which these outcomes could miss.

To see why, first note that the types of candidates benefiting from TV debates may vary *across elections and debates*. Using vote intentions as outcome, these effects could get netted out when pooling multiple debates in the same event study. Suppose, for instance, that in each debate a unique candidate wins over some voters from the other side, and that this candidate is the incumbent in half of the debates and a challenger in the other half. In this example, debates truly change the

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<sup>21</sup>Once again, our sample includes all respondents surveyed before and after the election who said that they intended to vote, in the first survey, and who reported that they actually voted and gave a vote choice declaration, in the second. As shown in column 3 of Appendix Table A.16, TV debates marginally affect selection into this sample, with one positive coefficient three days after the debate, significant at the 10% level. However, column 1 shows no significant impact on turnout intention, and Appendix Tables C.17 and C.18 show that our main findings are robust to including unlikely voters in the sample, alleviating the concern that our results may be biased by differential sample selection.

course of each and every race. Yet, overall effects measured on intending to vote for the incumbent would be null. Using as outcomes intention to vote for left-wing versus right-wing candidates or for outsiders versus front-runners could generate similarly misleading null effects. Instead, vote choice consistency, which in this example increases following each debate (since voters persuaded by debate winners are found inconsistent if surveyed before but consistent if surveyed after), would show a positive effect.

Second, the effects of debates may also vary *across voters* within an election. Once again, effects benefiting different candidates could be netted out using traditional outcomes. Consider for instance a debate increasing the likelihood that voters of opposing sides all express support for the nominee of their preferred party, instead of supporting another candidate or not stating any vote intention. Our measure of individual vote choice consistency would capture this effect even if the net impact of this debate on individual vote intention and predicted aggregate vote shares were null. The ability to detect any type of effects is desirable in general, and especially useful here: because it works against finding a null, it only makes our mostly null results more trustworthy.

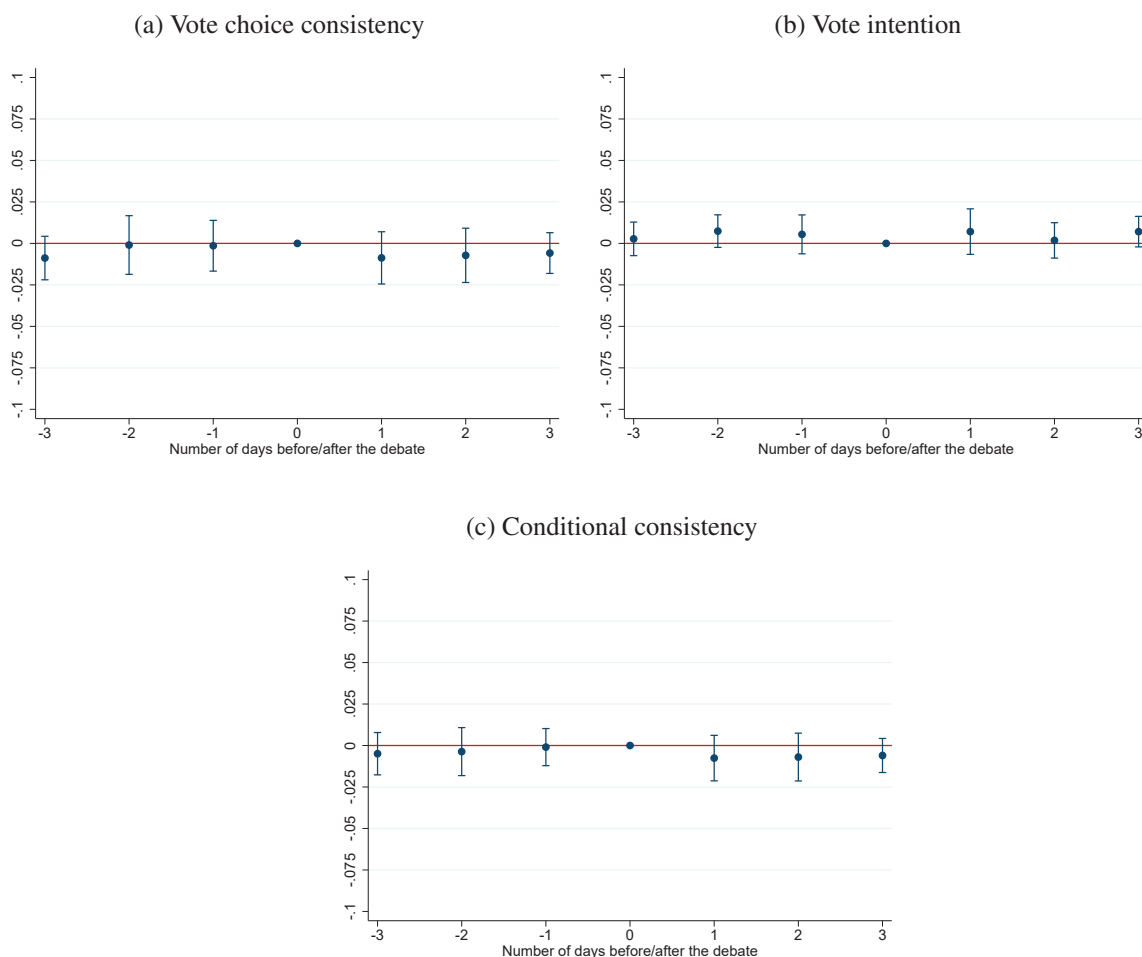
We report the coefficients on the  $\mu_k$  dummies indicating the number of days relative to the debate in Table 3, column 1, and plot them in Figure 5. We do not observe any pre-trend in vote choice consistency in the three days preceding debates. The dummies for the days following debates are also all close to zero and not significant. On average, debates decrease individual vote choice consistency by a non-significant 0.7 percentage point in the three following days. Estimates of overall vote choice formation during the final two months of campaigns shown in Section 3 provide a useful benchmark to interpret this result. Considering the upper bound of the 95% confidence interval, we can reject any impact of debates on vote choice consistency higher than 0.5 percentage point at the 5% level, which corresponds to 3% of the overall 17 percentage points increase over the electoral season (Figure 1). These results are robust to controlling for respondents' sociodemographic characteristics (column 2).

We next measure the impact of debates on stating any vote intention<sup>22</sup> and on vote choice consistency conditional on stating one. We do not observe any pre-trend in the likelihood to state a vote intention, and the impact on this outcome is not significant on any day after the debate (Figure 5b and Table 3, columns 3 and 4). The average impact of debates on the likelihood to state any vote intention in the three following days is positive but small and not significant in either specification shown in columns 3 and 4. None of the three pre-debate or post-debate dummies is significant for

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<sup>22</sup>This outcome is defined on the sample of respondents who said that they intended to vote. Column 2 of Appendix Table A.16 shows that TV debates do not affect selection into this sample.

Figure 5: Debates' effects on vote choice consistency



Notes: We show point estimates and 95% confidence intervals from specifications in the form of equation [7], regressing vote choice consistency, vote intention, and conditional vote choice consistency on dummy variables for being surveyed one, two, or three days before the debate, as well as dummies for being surveyed one, two, or three days after the debate. We also include dummies for being surveyed four days or more before or after the debate, respectively, and omit the dummy for being surveyed on the day of the debate. We control for debate  $\times$  election fixed effects as well as fixed effects for the number of days relative to the election and for the day of the week in which the pre-electoral survey took place. In Figures 5a and 5c, we also control for fixed effects for the number of days separating the post-electoral survey from the election. Standard errors are adjusted for clustering at the debate level. N=263,681; 330,621; and 240,826, respectively.

Table 3: Debates' effects on vote choice consistency

	Vote choice consistency		Vote intention		Conditional consistency	
	(1)	(2)	(3)	(4)	(5)	(6)
Before -3	-0.014** (0.006)	-0.015** (0.007)	0.003 (0.005)	0.002 (0.005)	-0.015*** (0.005)	-0.016*** (0.006)
-3	-0.009 (0.007)	-0.010 (0.007)	0.003 (0.005)	0.003 (0.005)	-0.005 (0.006)	-0.006 (0.007)
-2	-0.001 (0.009)	-0.002 (0.009)	0.007 (0.005)	0.007 (0.005)	-0.004 (0.007)	-0.004 (0.007)
-1	-0.001 (0.008)	-0.002 (0.008)	0.005 (0.006)	0.005 (0.006)	-0.001 (0.006)	-0.002 (0.006)
+1	-0.009 (0.008)	-0.009 (0.008)	0.007 (0.007)	0.007 (0.007)	-0.008 (0.007)	-0.008 (0.007)
+2	-0.007 (0.008)	-0.008 (0.008)	0.002 (0.005)	0.001 (0.005)	-0.007 (0.007)	-0.008 (0.007)
+3	-0.006 (0.006)	-0.006 (0.006)	0.007 (0.005)	0.007 (0.005)	-0.006 (0.005)	-0.006 (0.005)
After +3	-0.002 (0.006)	-0.003 (0.006)	0.008 (0.005)	0.008 (0.005)	-0.005 (0.005)	-0.005 (0.005)
Observations	263681	263681	330621	330621	240826	240826
$R^2$	0.072	0.077	0.069	0.076	0.042	0.044
Mean, day of the debate	0.811	0.811	0.896	0.896	0.887	0.887
Number of debates	56	56	56	56	56	56
Debate * election fixed effects	x	x	x	x	x	x
Fixed effects for number of days to election	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x
Sociodemographic controls		x		x		x
Linear combination of estimates						
Average pre-debate dummies -3, -2, and -1	-0.004 (0.007)	-0.005 (0.007)	0.005 (0.004)	0.005 (0.004)	-0.003 (0.005)	-0.004 (0.005)
Average post-debate dummies 1, 2, and 3	-0.007 (0.006)	-0.008 (0.006)	0.005 (0.005)	0.005 (0.005)	-0.007 (0.005)	-0.007 (0.005)

Notes: Standard errors clustered at the debate level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). We use one observation per respondent and estimate specifications in the form of equation [7]. Individual controls include fixed effects for the day of the week in which the pre-electoral survey took place and, in columns 1, 2, 5, and 6, fixed effects for the number of days separating the post-electoral survey from the election. Sociodemographic controls include education (dummies indicating above high school education and college degree), gender, age, income quartiles, and employment status. The mean values of the three pre-debate dummies and of the three post-debate dummies are also reported, along with their standard errors.



conditional vote choice consistency either, and the effect of debates on this outcome in the three following days is negative and not significant (Figure 5c and Table 3, columns 5 and 6).

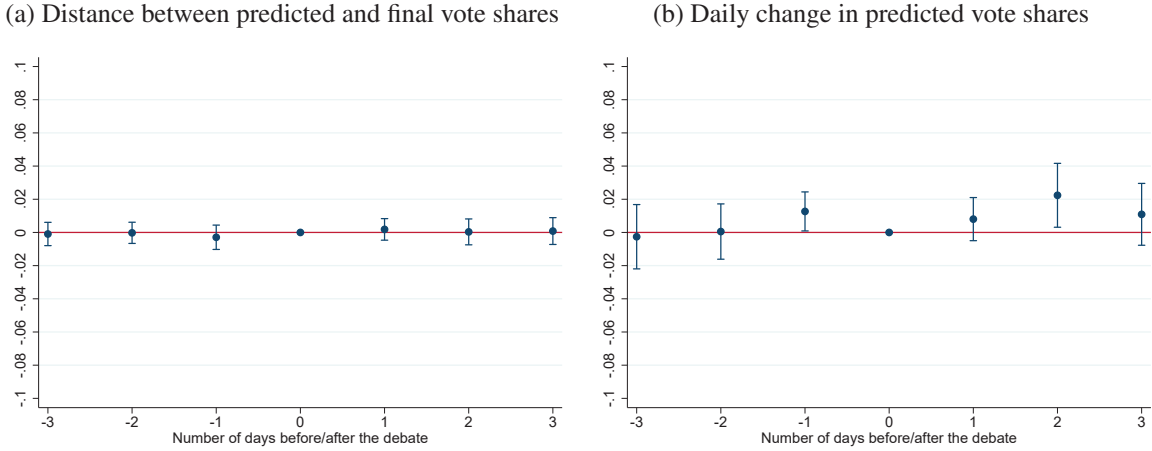
Finally, as shown in columns 3 through 6 of Appendix Table A.17 as well as in Appendix Figures A.6b and A.6c, none of the relative days dummies are significant when using consistency in issue salience or in beliefs on candidates as outcome, suggesting that debates do not affect the factors found to be likely contributors to vote choice formation in Section 4. Effects on policy preference consistency are not significant either (Appendix Table A.17, columns 1 and 2, and Appendix Figure A.6a).

All our point estimates measure the impact of debates in the short run. If our estimates were positive and significant, we could be worried about potential subsequent reversion to the mean. Instead, even if debates could in theory resonate with subsequent information, it seems unlikely that the null effects we measure three to five days after the debate give way to large effects later on.

### **5.3 Effects on Aggregate Outcomes**

Debates' lack of impact on individual vote choice consistency does not necessarily preclude effects on aggregate vote shares. Indeed, debates may lead some voters to change their views without fully converging on their final vote choice yet, and nonetheless reduce the distance to final vote shares, the first aggregate outcome we consider. Furthermore, while it is preferable to use vote choice consistency over vote intentions as outcome (for reasons discussed at the beginning of Section 5.2), a potential concern is that our null effects may hide the fact that debates increase the choice consistency of some while decreasing that of others. This scenario is unlikely but not impossible. Consider, for instance, a debate in which a charismatic candidate seduces both voters from their own party and from a rival party. The first group was previously intending to vote for other candidates but they now intend to vote for their party's candidate and will stick to this choice until the election, so that their vote choice consistency increases after the debate. Further assume, by contrast, that the second group of voters from the rival party only temporarily depart from their intention to vote for their candidate, so their vote choice consistency temporarily decreases after the debate. Overall, changes in vote intentions among both groups of voters would lead to null effects on vote choice consistency, but they would increase the predicted vote share of the charismatic candidate immediately after the debate, which would be captured by the second aggregate outcome examined in this section.

Figure 6: Debates' effects on aggregate vote shares



Notes: We show point estimates and 95% confidence intervals from specifications in the form of equation [8], using the distance between predicted and final vote shares and daily change in predicted vote shares as outcomes. We control for debate  $\times$  election fixed effects as well as fixed effects for the number of days relative to the election and for the day of the week in which the pre-electoral survey took place. We also control for the average number of days separating the post-electoral survey from the election in Figure 6a.  $N=3,802$  and  $3,749$ , respectively. Other notes as in Figure 5.

We first measure debates' effects on  $\Delta V_t$ , the overall distance between predicted and final vote shares defined in Section 3.5, with a specification using only one observation per debate per day:

$$\Delta V_t^d = \sum_{k=-3}^{-1} \mu_k + \sum_{k=1}^3 \mu_k + \mu_{4-} + \mu_{4+} + \sum_{t=-1}^{-60} \beta_t D_t + \alpha^d + W_t' \lambda + u_t^d. \quad (8)$$

As in Section 3.5, we weight each observation by the number of  $t$  respondents it was constructed from, relative to the total number of respondents surveyed at the same relative time to the debate.

As shown in Figure 6 and in columns 1 and 2 of Table 4, all pre- and post-debate relative days dummies are close to zero and not significant. The average effect on this outcome in the three days following debates is positive, small (0.1 percentage point), and not statistically significant. Considering the lower bound of the 95% confidence interval, we can reject any impact lower than -0.1 percentage point at the 5% level, which corresponds to 2% of the overall 5 percentage points decrease in the distance between predicted and final vote shares over the electoral season (Figure 3). This result is unchanged when controlling for sociodemographic variables (column 2).

Second, we test whether debates generate short-term shifts in aggregate vote intentions, which may be the case even if they do not contribute to the convergence to final vote shares. We define the

Table 4: Debates' effects on aggregate vote shares

	Distance between predicted and final vote shares		Daily change in predicted vote shares	
	(1)	(2)	(3)	(4)
Before -3	0.005 (0.004)	0.006 (0.004)	0.009 (0.006)	0.007 (0.006)
-3	-0.001 (0.004)	0.000 (0.004)	-0.003 (0.010)	-0.004 (0.010)
-2	-0.000 (0.003)	0.000 (0.003)	0.001 (0.008)	-0.001 (0.009)
-1	-0.003 (0.004)	-0.002 (0.004)	0.013** (0.006)	0.012* (0.006)
+1	0.002 (0.003)	0.002 (0.003)	0.008 (0.006)	0.006 (0.007)
+2	0.000 (0.004)	0.001 (0.004)	0.022** (0.010)	0.021** (0.009)
+3	0.001 (0.004)	0.002 (0.004)	0.011 (0.009)	0.009 (0.009)
After +3	0.002 (0.003)	0.002 (0.004)	0.006 (0.005)	0.005 (0.005)
Observations	3802	3802	3749	3749
$R^2$	0.575	0.581	0.470	0.477
Mean, day of the debate	0.046	0.046	0.085	0.085
Number of debates	56	56	56	56
Debate * election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x
Sociodemographic controls		x		x
Linear combination of estimates				
Average pre-debate dummies -3, -2, and -1	-0.001 (0.003)	-0.000 (0.003)	0.004 (0.007)	0.002 (0.007)
Average post-debate dummies 1, 2, and 3	0.001 (0.003)	0.002 (0.003)	0.014* (0.008)	0.012 (0.008)

Notes: Standard errors clustered at the debate level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). We use one observation per election per day and estimate specifications in the form of equation [8]. Aggregate controls include fixed effects for the day of the week in which the pre-electoral survey took place and, in columns 1 and 2, the average number of days separating the post-electoral survey from the election. Sociodemographic controls are averages of the sociodemographic variables included in Table 3. Other notes as in Table 3.

overall daily change in predicted vote shares as  $\delta V_t^d = \frac{1}{2} \sum_c \left| \tilde{V}_{ct}^d - \tilde{V}_{ct-1}^d \right|$ , where  $\tilde{V}_{ct}$  is the predicted vote share of candidate  $c$  among time  $t$  respondents.  $\delta V_t$  corresponds to the minimal share of voters who had to change their vote intention to explain the difference between predicted vote shares' distributions at time  $t$  and  $t - 1$ . We estimate equation [8] using this outcome, and we show the results in Figure 6b and in columns 3 and 4 of Table 4.<sup>23</sup> We find some evidence that debates increase the daily change in predicted vote shares: the dummy for the second day after the debate is significant at the 5% level, and the average effect in the three days following the debate is 1.4 percentage points, significant at the 10% level. The average of the three post-debate dummies is no longer significant but of similar magnitude in the specification including sociodemographic controls (column 4). However, the dummy for the day preceding the debate is also positive and statistically significant. The post debate increase may thus be driven in part by an unusually low change in vote shares on the day of the debate.

Debates' positive effects on the daily change in vote shares, together with their (non-significant) negative effects on individual vote choice consistency, suggest that, if anything, they move a small fraction of voters *away* from their final choice, in the short term. Overall, while debates may generate short term shifts in vote shares, these do not contribute to the overall increase in vote choice consistency established in Section 3.

## 5.4 Treatment Impact Heterogeneity

The mostly null average effects of debates reported heretofore do not rule out the possibility that debates matter relatively more in certain conditions. Debates may affect specific groups of voters or benefit particular candidates, and their effects may depend on the time at which they take place and on the type of election. We explore treatment impact heterogeneity on individual vote choice and aggregate vote shares along these three dimensions.

### Heterogeneity across debates and elections

We first study the potential mediating influence of debates' timing and election type. Debates may affect vote choice more in contexts in which preexisting knowledge about the candidates is low or incentives to pay attention are high, for instance because the race is tight. To test this hypothesis, we compare the first debate of each race to debates taking place later, when the fraction of voters

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<sup>23</sup>In this specification, we weight each observation by the number of  $t$  and  $t-1$  respondents it was constructed from, relative to the total number of respondents surveyed at the same relative time to the debate.

who have already arrived at their final choice is higher; close races to expected landslides; highly fluctuating races to more stable races;<sup>24</sup> the U.S. bipartisan elections to multiparty elections, in which a larger fraction of voters form their vote choice shortly before the election (as shown in Section 4); and plurality rule to proportional rule elections.

Formally, we interact the relative days dummies with indicators of debate type or election type:

$$\begin{aligned}
Y_{it}^d = & \left[ \sum_{k=-3}^{-1} \mu_k + \sum_{k=1}^3 \mu_k + \mu_{4-} + \mu_{4+} \right] \times \Omega^d \\
& + \left[ \sum_{k=-3}^{-1} \eta_k + \sum_{k=1}^3 \eta_k + \eta_{4-} + \eta_{4+} \right] \times (1 - \Omega^d) \\
& + \sum_{t=-1}^{-60} \beta_t D_t + \alpha^d + W_{it}' \lambda + u_{it}^d,
\end{aligned} \tag{9}$$

where  $\Omega$  is a dummy equal to 1 for “type-a” races or debates, for which effects may be expected to be larger, and 0 otherwise. We interact the  $\mu_k$ ’s and  $\eta_k$ ’s with  $\Omega$  and  $(1 - \Omega)$ , respectively, to directly test the null that neither type-a nor type-b debates have significant effects.

Results are shown in Appendix Table A.18. While a few pre- and post-debate relative days dummies are statistically significant, as would be expected given the large number of tests, we do not find any positive and significant effect on vote choice consistency in the three days following early or later debates or debates held in any subset of races we examine. This is true whether we consider the day related dummies separately or take their average.

We use a similar method to study treatment impact heterogeneity on the overall distance between predicted and final vote shares. The results are shown in Appendix Table A.19. Considering the average of the three post-debate dummies, we do not find any significant effect on the distance to actual vote shares of any type of debate, or of debates held in any type of race. Only two individual post-debate dummies are negative and significant, corresponding to the effects of first debates and U.S. debates, two days after the debate (columns 1 and 4). However, in both cases, the coefficients for one and three days after the debate and, again, the average of the three post-debate coefficients are not significant. In addition, the lower distance between predicted and actual vote shares observed two days after the debates is not mirrored by any substantial increase in individual consistency in either case (columns 1 and 4 of Appendix Table A.18).

While we explore heterogeneity along a large number of dimensions, we still may have failed to consider the one dimension that truly matters. Therefore, we make a final attempt using the

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<sup>24</sup>We define close races as elections for which the mean difference in vote shares between the two leading candidates over the five days before the debate is smaller than 10 percentage points, and highly fluctuating races as elections in which the mean daily change in vote shares (as defined in Section 5.3) over the five days before the debate is higher than 10 percentage points.

following, more agnostic approach. We estimate a specification in the form of equation [7], where each relative day dummy is interacted with a full set of debate indicators, yielding a specific set of coefficients  $\mu_{-4}$ ,  $\mu_{-3}$ , ...,  $\mu_3$ , and  $\mu_{4+}$  for each debate. The mean values of the three debate-specific post-debate dummies  $\mu_1$ ,  $\mu_2$ , and  $\mu_3$  are plotted in Appendix Figure A.7, for each debate separately and in ascending order. Since the number of observations corresponding to a specific debate and relative day is small, and we have a unique cluster for each debate, we do not report confidence intervals for the debate-specific estimates and refrain from interpreting these estimates individually.<sup>25</sup> Rather, we are interested in the overall shape of the distribution and in the possible presence of outliers – that is, exceptional debates which, unlike the average event, may have changed the course of the corresponding election. We do not find evidence of such events. Instead, we observe that estimates are centered around zero (out of the 52 estimates, 30 are negative and 22 are positive) and smoothly distributed, and we do not detect any clear outlier. Furthermore, the effects of debates held in each country tend to span the full range, with both negative and positive values.

In Appendix Figure A.8, we repeat this exercise, using the distance between predicted and final vote shares as outcome. Once again, the mean debate-specific effects are centered around zero, with no clear outlier. Overall, these two figures strengthen our conclusion that debates' null effects hold across a large number of settings.

### **Heterogeneity across voters**

We now explore treatment impact heterogeneity along voter characteristics with a specification in the form of equation [9]. First and foremost, we measure effects separately for voters who report watching debates and those who do not. We do not separate watchers from non-watchers based on information recorded in the pre-electoral survey, as this would likely generate different splits among people surveyed before and after the debate. Instead, we use post-electoral survey questions recording whether the respondents watched any of the debates held before that election. This information is available for half of the debates. In addition to people watching them, debates could plausibly have larger effects on voters with weak or no party identification, who may be freer

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<sup>25</sup>Debates covered both by the ANES and the NAES or held before elections with multiple ballots are represented by separate coefficients. Surveys with 10 or fewer respondents on the day of the debate or on any of the three days following it are excluded, as the corresponding estimates would be particularly likely to capture outcome differences across days due to sampling error rather than true effects.

to switch candidates, and on voters without college education and young voters, whom we found to be more likely to form their vote choice during the campaign in Section 3.4.

Results obtained using these four variables and our other sociodemographic characteristics as mediating factors are reported in Appendix Tables A.20 and A.21. Considering average effects in the three days following debates, we do not find any significant and positive effect on vote choice consistency or any significant and negative effect on the convergence to final vote shares for any of the 14 subgroups of voters we consider. The only exception is a negative effect, significant at the 5% level, on the distance to final vote shares for debate watchers. However, point estimates of similar magnitude and identical sign on pre-debate dummies for this group suggest that this effect is spuriously driven by unusually high distance to final vote shares among debate watchers surveyed on the day of the debate. In addition, this pattern is not mirrored by an increase in vote choice consistency: on average, the sign of the effect on the latter outcome is negative for debate watchers (column 1 of Appendix Table A.20). Overall, we do not find any clear evidence that debates contribute to the process of vote choice formation for any type of voters.

Finally, we test whether debates systematically benefit some candidates at the expense of others and, in particular, whether they contribute to the increase in the vote share of lesser-known candidates, shown in Appendix Table A.12. We first run a specification in the form of equation [7] for each type of candidate, using a dummy equal to 1 if the respondent intends to vote for them as outcome. Then, we run a specification in the form of equation [8] to estimate the impact on vote share concentration. As shown in Appendix Table A.22, debates affect significantly neither the predicted vote share of challengers, small candidates, or new candidates, nor the concentration of predicted vote shares.

## 6 Conclusion

Using 253,000 observations from two-round surveys in 62 elections around the world since 1952, we study vote choice formation during campaigns. Our method does not rely on people's own recollections of the date when they made up their mind, but instead on measuring the consistency between individuals' responses to pre- and post-electoral surveys. Focusing on this outcome also enables us to study the effects of campaign events while allowing for the possibility that different voters are influenced in opposite ways. We examine TV debates, but studies measuring the effects

of other types of events would gain from using this same method instead of ones considering outcomes such as vote intention, which only capture net effects.

We find that the fraction of people who state a pre-election vote intention identical to their eventual vote choice increases by 17 percentage points on average in the 60 days leading up to the vote. This increase in individual vote choice consistency is concomitant with a 5 percentage points reduction in the distance between predicted and final vote shares. In other words, voters who make up their mind in this period affect the electoral results. These effects have been relatively stable for several decades and they are lower in the U.S. than in all other countries. We provide evidence that changes in vote choice come from changed beliefs on candidates' positions or quality more than their chances of victory, and that priming also contributes to vote choice formation.

While our results support the view that campaigns have substantial effects on vote choice, it would be wrong to infer that voters are swayed by any information they receive in the campaign season. We were surprised to find that people's policy preferences are not affected by the campaign. In addition, our event study finds that TV debates – for all the interest they generate, the large viewing audience they draw, and the many media commentaries they provoke – neither increase individual vote choice consistency nor reduce the distance to final vote shares. These null findings are observed even for a race's first debate and in multiparty elections, in which voters remain undecided until later in the campaign. They hold when focusing on less-educated and young voters, who are the most influenced by campaigns, or on lesser-known candidates, who benefit the most from them. Even if TV debates do not contribute to the convergence to final vote shares, we find some evidence that they increase the daily change in predicted vote shares in the next three days: if anything, they move a small fraction of voters *away* from their final vote choice, in the short term.

The fact that our sample includes data from ten distinct countries makes the external validity of our results unusually broad. This said, we note that all these countries are rich, well-established democracies. The fraction of voters making up their mind during campaigns may be even larger in countries with younger democratic regimes, less stable party systems, and lower baseline levels of political information. Naturally, the effects of TV debates may be different in such countries as well.

Overall, our results suggest that even if voters sometimes seem relatively uninformed, their vote choice actually aggregates a lot of information, beyond just debates, and that other sources are more impactful. A possible interpretation is that voters discard candidates' debate statements because they rationally expect them to be more biased than information coming from nonpartisan sources,



or that they only pay attention to statements aligned with their beliefs. But there is ample evidence that some forms of partisan communication do persuade voters. An alternative interpretation is that the particular medium through which debates are broadcast is what matters: it is difficult for candidates to change people's minds, and this does not happen on TV or radio. This interpretation is consistent with the fact that political ads diffused through these channels generally fail to durably affect individual vote choice (Gerber et al., 2011; Spenkuch and Toniatti, 2018), differently from more personalized contacts such as door-to-door visits or town hall meetings (e.g., Fujiwara and Wantchekon, 2013; Pons, 2018).

One implication is that candidates should focus on organizing these more-impactful activities if they want to increase their chances of winning. In the elections we study, only a minority of voters report having been contacted or visited by a party. Our results also have implications for the regulation of campaigns. Since the first presidential TV debate in the U.S. in 1960, there has been a continuous effort to diffuse this innovation to countries which have not adopted it yet, and to improve the format of debates where they have become a tradition (McKinney and Carlin, 2004). Our results suggest that some of this energy may be better spent in reforming campaign regulations to ensure that all candidates have equal access to voters and in monitoring the most personal and tailored forms of partisan communication, to improve the quality of information available to voters and increase the chance that their final choice corresponds to their actual preferences.

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# Online Appendix to “How Do Campaigns Shape Vote Choice?” (Le Penneec and Pons)

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# A Survey Selection and Additional Results

## A.1 Survey Selection

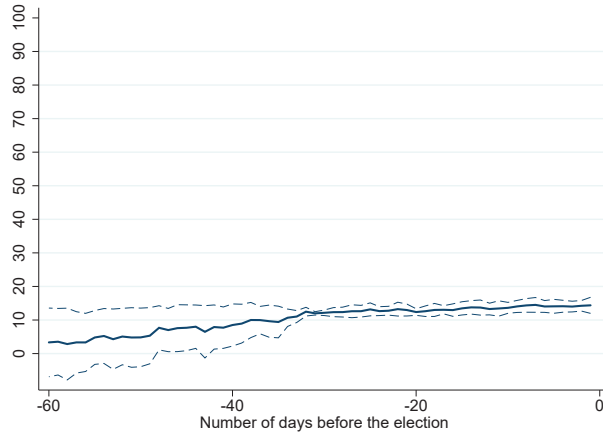
As discussed in Section 2.1, our study only includes surveys showing a sufficiently high similarity between respondents surveyed on different dates. Rolling cross-sections satisfy this criterion by design. In these surveys, a random subsample of respondents is drawn from the overall sample on each day. Those who are not successfully reached are either not contacted again (for instance in the BES), or contacted again along with randomly drawn new respondents over the next few days, following a consistent rule (e.g., all respondents are contacted for up to seven days before being removed from the pool in AUTNES 2013). In the latter case, each daily sample combines both easy-to-reach and hard-to-reach respondents. Apart from the very first days, where hard-to-reach respondents tend to be underrepresented, all daily samples are comparable in terms of both observed and unobserved respondents' characteristics.

To increase statistical power, we complemented our sample of rolling cross-sections with surveys that were not designed as rolling cross-sections but showed a sufficiently high similarity between respondents surveyed on different dates nonetheless (in addition to satisfying the two other criteria laid out in the main text). To assess the comparability of daily samples in these surveys, we tested for differences in mean sociodemographic characteristics (education, age, gender, income, and employment status) for any pair of daily samples. We excluded surveys for which we reject the null hypothesis of no difference in mean characteristics more than 15% of the times, a benchmark defined based on the rolling-cross sections. Surveys from the Cooperative Congressional Election Studies (in the U.S.) and the Israel National Election Studies were excluded because they violated this condition. Instead, surveys from the American National Election Studies, the Dutch Parliamentary Election Studies, the New Zealand Election Studies and the Swedish National Election Studies passed this test and were included in the study.

All of the surveys entail interviewing a new set of respondents every day until the election, with two minor exceptions. First, some surveys do not interview anyone on weekends and holidays. Second, all surveys end one day before Election Day, except for AUTNES 2013 and ANES 1952, which end two days before.

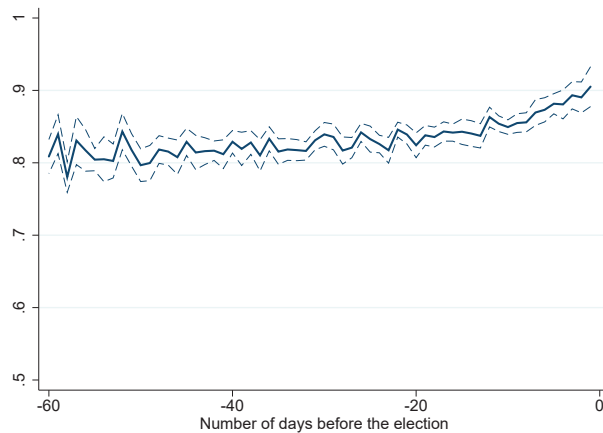
## A.2 Formation of Vote Choice: Additional Results

Figure A.1: Number of days separating the post-electoral survey from the election



Notes: We show point estimates and 95% confidence intervals from specifications in the form of equation [1], regressing the number of days separating the *post*-electoral survey from the election on 60 fixed effects indicating the number of days separating the *pre*-electoral survey from the election, election fixed effects and fixed effects for the day of the week in which the pre-electoral survey took place. The sample includes all respondents surveyed before and after the election who said that they intended to vote, in the first survey. N=186,639.

Figure A.2: Certainty of vote intention



Notes: People's certainty of their vote intention is normalized to range from 0 to 1 across all surveys when available. The sample includes all respondents surveyed before the election who said that they intended to vote, stated a vote intention, and were asked how certain they were about this intention. Other notes as in Appendix Figure A.1. N=133,022.

Table A.1: Sociodemographic characteristics over time

	More education than high school (1)	College degree (2)	Male (3)	Age (4)	2nd income quartile (5)	3rd income quartile (6)	4th income quartile (7)	Not employed (8)
Time to election	0.0005** (0.0002)	0.0004** (0.0002)	0.0000 (0.0001)	-0.0234** (0.0112)	-0.0002 (0.0002)	0.0002** (0.0001)	0.0006*** (0.0002)	-0.0008*** (0.0002)
Observations	190718	185833	215967	216541	163849	163849	163849	193300
$R^2$	0.088	0.085	0.010	0.043	0.015	0.016	0.009	0.018
Mean at day -1	0.6134	0.3970	0.4888	49.7849	0.2349	0.2468	0.2462	0.4015
Election fixed effects	x	x	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x	x	x

Notes: Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). Time is defined as negative the number of days separating the pre-electoral survey from the election. The sample includes all respondents surveyed before the election who said that they intended to vote. Individual controls include fixed effects for the day of the week in which the pre-electoral survey took place.

Table A.2: Sample selection tests

	Turnout intention (1)	Sample, vote intention (2)	Sample, vote choice consistency (3)
Time	0.0010*** (0.0002)	0.0006** (0.0003)	0.0009*** (0.0002)
Observations	312672	312672	259001
$R^2$	0.074	0.079	0.078
Mean at day -1	0.8519	0.8071	0.7873
Election fixed effects	x	x	x
Individual controls	x	x	x

Notes: Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). Time is defined as negative the number of days separating the pre-electoral survey from the election. In column 1, the sample includes all respondents surveyed before the election who were asked if they intended to vote, and the outcome is a dummy equal to 1 if the respondent said yes. In column 2, the sample includes all respondents surveyed before the election who were asked if they intended to vote, and the outcome is a dummy equal to 1 if the respondent said yes and answered the vote intention question (including if they said they did not know whom they would vote for). In column 3, the sample includes all respondents surveyed before and after the election who were asked if they intended to vote, in the first survey, and if they actually voted, in the second. The outcome is a dummy equal to 1 if the respondent said that they intended to vote and answered the vote intention question, in the first survey, and reported that they actually voted and gave a vote choice declaration, in the second. Individual controls include fixed effects for the day of the week in which the pre-electoral survey took place and, in column 3, fixed effects for the number of days separating the post-electoral survey from the election in column 3.

Table A.3: Vote choice consistency and distance to final vote shares across election types

	Vote choice consistency				Distance between predicted and final vote shares			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Time	0.0036*** (0.0003)	0.0037*** (0.0003)	0.0037*** (0.0003)	0.0038*** (0.0003)	-0.0012*** (0.0002)	-0.0012*** (0.0002)	-0.0012*** (0.0002)	-0.0012*** (0.0002)
Time * U.S.	-0.0025*** (0.0003)		-0.0025*** (0.0004)	-0.0025*** (0.0005)	0.0007*** (0.0003)		0.0007* (0.0004)	0.0007* (0.0003)
Time * Plurality rule		-0.0013*** (0.0004)	-0.0000 (0.0005)	-0.0002 (0.0005)		0.0004 (0.0003)	0.0000 (0.0004)	0.0000 (0.0004)
Observations	175832	175832	175832	175832	3045	3045	3045	3045
R <sup>2</sup>	0.068	0.066	0.068	0.073	0.482	0.476	0.482	0.484
Mean at day -1	0.8639	0.8639	0.8639	0.8639	0.0376	0.0376	0.0376	0.0376
Election fixed effects	x	x	x	x	x	x	x	x
Individual controls	x	x	x	x				
Aggregate controls					x	x	x	x
Sociodemographic controls				x				x
Linear combination of estimates								
Time + Time * US	0.0012*** (0.0001)		0.0012** (0.0005)	0.0013** (0.0005)	-0.0004*** (0.0001)		-0.0004 (0.0004)	-0.0005 (0.0004)
Time + Time * Plurality rule		0.0023*** (0.0003)	0.0036*** (0.0004)	0.0036*** (0.0005)		-0.0008*** (0.0002)	-0.0012*** (0.0003)	-0.0012*** (0.0003)

Notes: Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). The linear time trend is interacted with dummies for being surveyed before a type-a election (U.S. bipartisan system or plurality voting rule) as opposed to a type-b election (multiparty system or proportional rule). Referenda are excluded. Sociodemographic controls include education (dummies indicating above high school education and college degree), gender, age, income quartiles, and employment status. Linear combinations of estimates are also reported, along with their standard errors. Other notes as in Table 1.

Table A.4: Vote choice consistency across voter types

	College degree vs. no college degree (1)	Above median age vs. below (2)	Male vs. female (3)	Above median income vs. below (4)	Not employed vs. employed (5)	All (6)
Time	0.0024*** (0.0003)	0.0028*** (0.0003)	0.0025*** (0.0003)	0.0025*** (0.0003)	0.0025*** (0.0003)	0.0030*** (0.0004)
College degree	-0.0016 (0.0057)					0.0029 (0.0053)
Time * College degree	-0.0006*** (0.0002)					-0.0005*** (0.0002)
Above median age		0.0221*** (0.0078)				0.0166* (0.0086)
Time * Above median age		-0.0007*** (0.0002)				-0.0007*** (0.0002)
Male			0.0351*** (0.0046)			0.0336*** (0.0043)
Time * Male			-0.0000 (0.0002)			-0.0000 (0.0002)
Above median income				-0.0020 (0.0065)		0.0005 (0.0066)
Time * Above median income				-0.0003 (0.0002)		-0.0002 (0.0002)
Not employed					0.0208*** (0.0051)	0.0217*** (0.0054)
Time* Not employed					-0.0001 (0.0002)	0.0001 (0.0002)
Observations	200916	200916	200916	200916	200916	200916
R <sup>2</sup>	0.071	0.072	0.072	0.070	0.071	0.075
Mean at day -1	0.8768	0.8768	0.8768	0.8768	0.8768	0.8768
Election fixed effects	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x

Notes: Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). We regress vote choice consistency on a linear time trend, its interaction with dummies for being a type-a voter (having a college degree, being above the median age, a male, above the median income, and not employed) as opposed to a type-b voter (not having a college degree, being below the median age, a female, below the median income, and employed). Dummies for being a type-a voter as well as dummies for whether the characteristics are missing and their interaction with the time trend are also included. Other notes as in Table 1.

Table A.5: Vote choice consistency across voter types with more detailed age categories

	(1)	(2)
Time	0.0027*** (0.0003)	0.0029*** (0.0004)
Above median age	0.0226*** (0.0068)	0.0163** (0.0075)
Time * Above median age	-0.0006*** (0.0002)	-0.0006*** (0.0002)
25 years old or younger	0.0039 (0.0102)	-0.0005 (0.0096)
Time * 25 years old or younger	0.0007** (0.0003)	0.0006* (0.0004)
College degree		0.0029 (0.0053)
Time * College degree		-0.0005** (0.0002)
Male		0.0336*** (0.0044)
Time * Male		-0.0000 (0.0002)
Above median income		0.0005 (0.0066)
Time * Above median income		-0.0002 (0.0002)
Not employed		0.0221*** (0.0054)
Time* Not employed		0.0001 (0.0002)
Observations	200916	200916
$R^2$	0.072	0.075
Mean at day -1	0.8768	0.8768
Election fixed effects	x	x
Individual controls	x	x

Notes: Same notes as in Appendix Table A.4. We include an additional dummy for being 25 years old or younger and its interaction with the linear time trend.

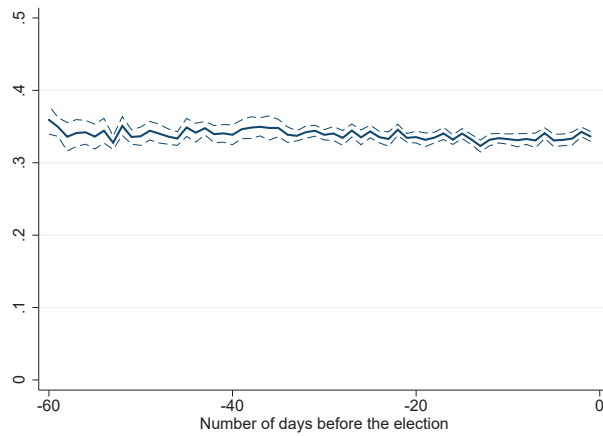
Table A.6: Vote intention and conditional consistency across voter types

	Vote intention (1)	Conditional consistency (2)
Time	0.0011*** (0.0003)	0.0023*** (0.0004)
College degree	0.0098** (0.0045)	-0.0011 (0.0048)
Time * College degree	-0.0002 (0.0002)	-0.0004** (0.0002)
Above median age	0.0141*** (0.0052)	0.0065 (0.0065)
Time * Above median age	-0.0003* (0.0002)	-0.0006*** (0.0002)
Male	0.0360*** (0.0050)	0.0063** (0.0027)
Time * Male	-0.0002 (0.0002)	0.0001 (0.0001)
Above median income	0.0058 (0.0038)	-0.0008 (0.0062)
Time * Above median income	-0.0001 (0.0001)	-0.0002 (0.0002)
Not employed	0.0174*** (0.0044)	0.0088*** (0.0032)
Time* Not employed	0.0002 (0.0002)	-0.0000 (0.0001)
Observations	253489	178176
$R^2$	0.080	0.043
Mean at day -1	0.9157	0.9346
Election fixed effects	x	x
Individual controls	x	x

Notes: Same notes as in Table 1 (columns 3 and 5) and Appendix Table A.4.

### A.3 Formation of Beliefs, Policy Preferences, and Issue Salience: Additional Results

Figure A.3: Vote share concentration



Notes: We show point estimates and 95% confidence intervals from a specification in the form of equation [5], regressing the vote share concentration on 60 fixed effects indicating the number of days relative to the election and control variables. The outcome is computed based on all respondents surveyed before the election who said that they intended to vote and stated a vote intention different from voting blank or null. We weight each observation by the number of respondents it was constructed from, relative to the total number of respondents surveyed at the same relative time to the election. We control for election fixed effects and fixed effects for the day of the week in which the pre-electoral survey took place. Standard errors are adjusted for clustering at the survey level. N=3,138.



Table A.7: Consistency in policy preferences, issue salience, and beliefs on candidates

(a) Policy preferences						
	Consistency		Giving an answer		Conditional consistency	
	(1)	(2)	(3)	(4)	(5)	(6)
Time	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)
Observations	228562	228562	330843	330843	222785	222785
$R^2$	0.047	0.052	0.078	0.091	0.040	0.041
Mean at day -1	0.8488	0.8488	0.9615	0.9615	0.8689	0.8689
Question fixed effects	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x
Sociodemographic controls		x		x		x

(b) Issue salience						
	Consistency		Giving an answer		Conditional consistency	
	(1)	(2)	(3)	(4)	(5)	(6)
Time	0.0015** (0.0006)	0.0013** (0.0006)	0.0006* (0.0003)	0.0006* (0.0003)	0.0010** (0.0004)	0.0008 (0.0004)
Observations	46108	46108	60713	60713	44049	44049
$R^2$	0.046	0.050	0.063	0.085	0.054	0.060
Mean at day -1	0.7392	0.7392	0.9212	0.9212	0.7676	0.7676
Election fixed effects	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x
Sociodemographic controls		x		x		x

(c) Beliefs on candidates						
	Consistency		Giving an answer		Conditional consistency	
	(1)	(2)	(3)	(4)	(5)	(6)
Time	0.0018 (0.0015)	0.0018 (0.0014)	0.0006*** (0.0001)	0.0006*** (0.0001)	0.0017 (0.0014)	0.0016 (0.0014)
Observations	478039	478039	809037	809037	440771	440771
$R^2$	0.074	0.084	0.101	0.139	0.095	0.097
Mean at day -1	0.8119	0.8119	0.8690	0.8690	0.8601	0.8601
Question fixed effects	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x
Sociodemographic controls		x		x		x

Notes: Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). Time is defined as negative the number of days separating the pre-electoral survey from the election. We use one observation per respondent per policy question in Panel a, one observation per respondent in Panel b, and one observation per respondent per belief question in Panel c. We estimate specifications in the form of equation [2]. Individual controls include fixed effects for the day of the week in which the pre-electoral survey took place and, in columns 1, 2, 5, and 6, fixed effects for the number of days separating the pre- and post-electoral survey. Sociodemographic controls include education (dummies indicating above high school education and college degree), gender, age, income quartiles, and employment status.

Table A.8: Consistency in policy preferences, issue salience, and beliefs on candidates across voter types

	Policy preferences (1)	Issue salience (2)	Beliefs on candidates (3)
Time	-0.0001 (0.0002)	0.0005 (0.0011)	0.0021 (0.0015)
College degree	0.0232** (0.0081)	-0.0057 (0.0136)	0.0302** (0.0123)
Time * College degree	0.0001 (0.0001)	-0.0002 (0.0006)	-0.0003 (0.0003)
Above median age	0.0058 (0.0117)	-0.0182 (0.0205)	0.0148*** (0.0043)
Time * Above median age	-0.0000 (0.0001)	0.0003 (0.0006)	-0.0001 (0.0002)
Male	0.0125* (0.0067)	0.0079 (0.0208)	0.0383** (0.0149)
Time * Male	-0.0001 (0.0001)	0.0007 (0.0007)	-0.0005 (0.0003)
Above median income	0.0154* (0.0076)	0.0527*** (0.0090)	0.0223** (0.0071)
Time * Above median income	0.0002 (0.0001)	0.0008 (0.0004)	0.0003** (0.0001)
Not employed	0.0015 (0.0068)	-0.0289* (0.0132)	-0.0001 (0.0041)
Time* Not employed	0.0001 (0.0001)	-0.0001 (0.0005)	-0.0000 (0.0001)
Observations	228562	46108	478039
$R^2$	0.051	0.050	0.084
Mean at day -1	0.8488	0.7392	0.8119
Question fixed effects	x		x
Election fixed effects		x	
Individual controls	x	x	x

Notes: Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). We regress consistency in policy preferences, issue salience and beliefs on candidates (respectively) on a linear time trend, its interaction with dummies for being a type-a voter (having a college degree, being above the median age, a male, above the median income, and not employed) as opposed to a type-b voter (not having a college degree, being below the median age, a female, below the median income, and employed), and control variables. Dummies for being a type-a voter as well as dummies for whether the characteristics are missing and their interaction with the time trend are also included. Individual controls include fixed effects for the day of the week in which the pre-electoral survey took place and for the number of days separating the pre- and post-electoral survey.

Table A.9: Consistency in beliefs on candidates' issue positions and quality

(a) Beliefs on candidates' issue positions

	Consistency		Giving an answer		Conditional consistency	
	(1)	(2)	(3)	(4)	(5)	(6)
Time	0.0013 (0.0013)	0.0013 (0.0012)	0.0007*** (0.0002)	0.0007*** (0.0002)	0.0012 (0.0013)	0.0011 (0.0012)
Observations	294791	294791	460655	460655	265245	265245
$R^2$	0.040	0.056	0.074	0.128	0.072	0.076
Mean at day -1	0.7774	0.7774	0.7857	0.7857	0.8527	0.8527
Question fixed effects	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x
Sociodemographic controls		x		x		x

(b) Beliefs on candidates' quality

	Consistency		Giving an answer		Conditional consistency	
	(1)	(2)	(3)	(4)	(5)	(6)
Time	0.0030 (0.0019)	0.0031 (0.0019)	0.0005*** (0.0000)	0.0004*** (0.0001)	0.0029 (0.0019)	0.0029 (0.0019)
Observations	183248	183248	348382	348382	175526	175526
$R^2$	0.124	0.127	0.034	0.055	0.112	0.113
Mean at day -1	0.8449	0.8449	0.9395	0.9395	0.8666	0.8666
Question fixed effects	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x
Sociodemographic controls		x		x		x

Notes: In columns 1 and 2, the sample includes all respondents surveyed before and after the election who stated a belief on candidates' issue positions (Panel a), or a belief on candidates' quality (Panel b), in the second survey. In columns 3 and 4, the sample includes all respondents surveyed before the election. In columns 5 and 6, the sample includes all respondents surveyed before and after the election who stated a belief on candidates' issue positions (Panel a) or a belief on candidates' quality (Panel b) in both the first and the second surveys. Other notes as in Appendix Table A.7, Panel c.

Table A.10: Voting for lesser-known candidates

	Voted for a challenger (1)	Voted for a small candidate (2)	Voted for a new candidate (3)
Time	0.0001 (0.0001)	0.0000 (0.0001)	-0.0000 (0.0000)
Observations	174996	175606	172891
$R^2$	0.083	0.108	0.137
Mean at day -1	0.6656	0.1491	0.0215
Election fixed effects	x	x	x
Individual controls	x	x	x

Notes: Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). The sample includes all respondents surveyed before and after the election who said that they intended to vote, in the first survey, and who reported that they actually voted and gave a vote choice declaration different from voting blank or null, in the second. Referenda are excluded. We define the outcomes as dummies equal to 1 if voters declared having voted for a challenger, a small candidate, or a new candidate after the election, and use one observation per respondent. Individual controls include fixed effects for the day of the week in which the pre-electoral survey took place and for the number of days separating the post-electoral survey from the election.

Table A.11: Vote choice consistency across voters voting for different candidates

	Voted for a challenger vs. the incumbent (1)	Voted for a small vs. a bigger candidate (2)	Voted for a new vs. known candidate (3)	All (4)	All (5)
Time	0.0016*** (0.0002)	0.0019*** (0.0003)	0.0024*** (0.0003)	0.0014*** (0.0003)	0.0014*** (0.0003)
Voted for a challenger	-0.0416*** (0.0124)			-0.0146 (0.0141)	-0.0123 (0.0136)
Time * Voted for a challenger	0.0016*** (0.0004)			0.0011*** (0.0004)	0.0011*** (0.0004)
Voted for a small candidate		-0.0834** (0.0322)		-0.0718** (0.0345)	-0.0719** (0.0312)
Time * Voted for a small candidate		0.0049*** (0.0010)		0.0035*** (0.0010)	0.0035*** (0.0009)
Voted for a new candidate			-0.0160 (0.0572)	0.0029 (0.0442)	0.0008 (0.0441)
Time * Voted for a new candidate			0.0038*** (0.0012)	0.0018*** (0.0006)	0.0018*** (0.0006)
Observations	200916	200916	200916	200916	200916
$R^2$	0.078	0.095	0.082	0.100	0.105
Mean at day -1	0.8768	0.8768	0.8768	0.8768	0.8768
Election fixed effects	x	x	x	x	x
Individual controls	x	x	x	x	x
Sociodemographic controls					x

Notes: Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). We regress vote choice consistency on a linear time trend and its interaction with dummies for voting for a lesser-known candidate (challenger, small candidate, or new candidate). Dummies for voting for a lesser-known candidate and for an undefined candidate type are also included. Referenda are excluded. Individual controls include fixed effects for the day of the week in which the pre-electoral survey took place and for the number of days separating the post-electoral survey from the election. Sociodemographic controls include education (dummies indicating above high school education and college degree), gender, age, income quartiles, and employment status.

Table A.12: Likelihood to vote for lesser-known candidates and vote share concentration

	Support for challenger		Support for small candidate		Support for new candidate		Vote share concentration	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Time	0.00046*** (0.00017)	0.00043** (0.00017)	0.00038** (0.00015)	0.00035** (0.00014)	0.00006 (0.00004)	0.00005 (0.00004)	-0.00021** (0.00010)	-0.00019** (0.00009)
Observations	189733	189733	190329	190329	187068	187068	3138	3138
$R^2$	0.079	0.085	0.089	0.094	0.145	0.147	0.932	0.933
Mean at day -1	0.66015	0.66015	0.14837	0.14837	0.02083	0.02083	0.33637	0.33637
Election fixed effects	x	x	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x	x	x
Sociodemographic controls		x		x		x		x

Notes: Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). In columns 1 through 6, the sample includes all respondents surveyed before the election who said that they intended to vote and stated a vote intention different from voting blank or null. Referenda are excluded. We define the outcomes as dummies equal to 1 if voters intend to vote for a challenger, a small candidate, or a new candidate, and use one observation per respondent. In columns 7 and 8, we use one observation per election per day and compute vote share concentration based on all these respondents (including referenda). We weight each observation by the number of respondents it was constructed from, relative to the total number of respondents surveyed at the same relative time to the election. Individual controls include fixed effects for the day of the week in which the pre-electoral survey took place. Sociodemographic controls include education (dummies indicating above high school education and college degree), gender, age, income quartiles, and employment status.

## A.4 Impact of TV Debates: Additional Results

Figure A.4: Media consumption, political discussions, and partisan communication

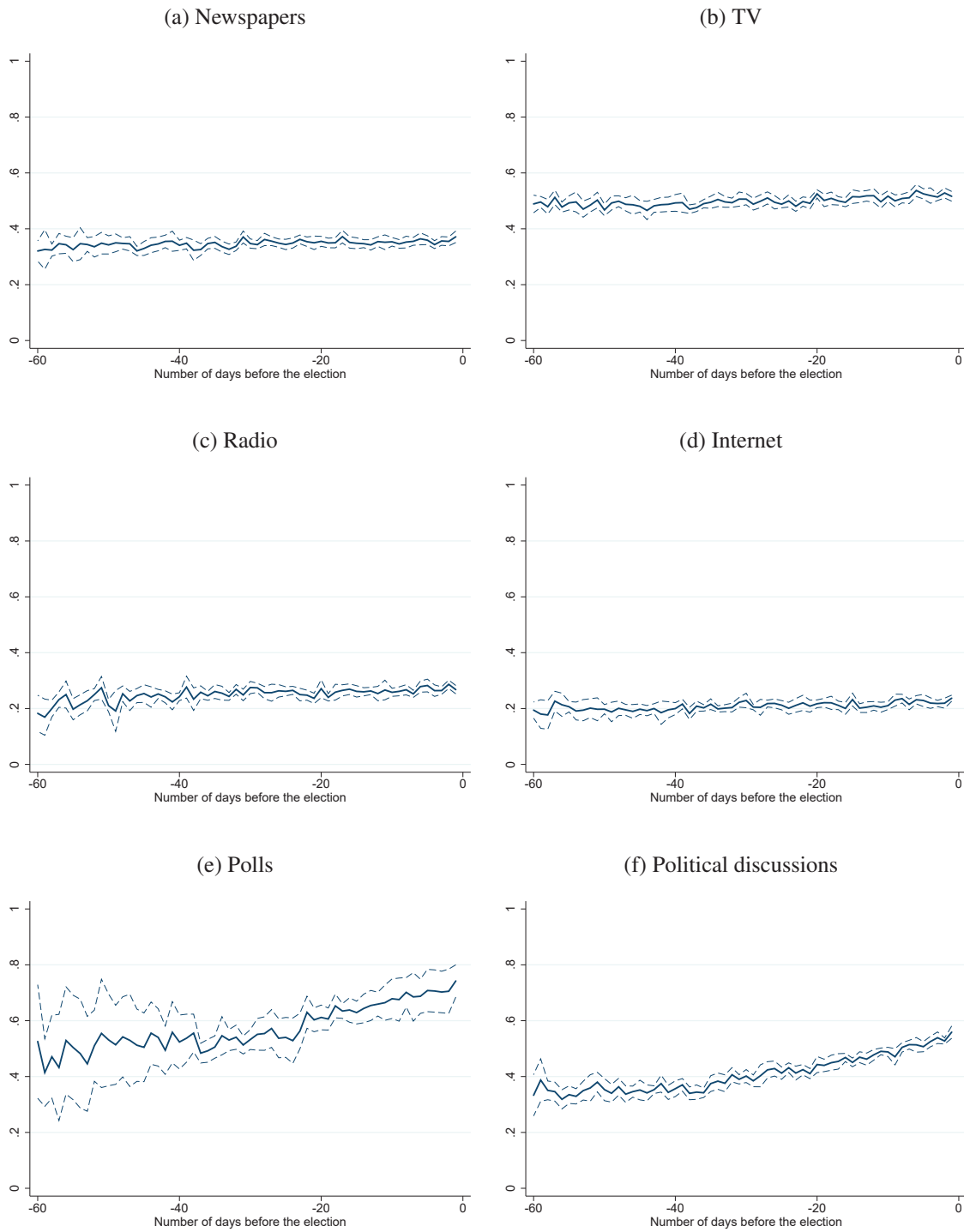
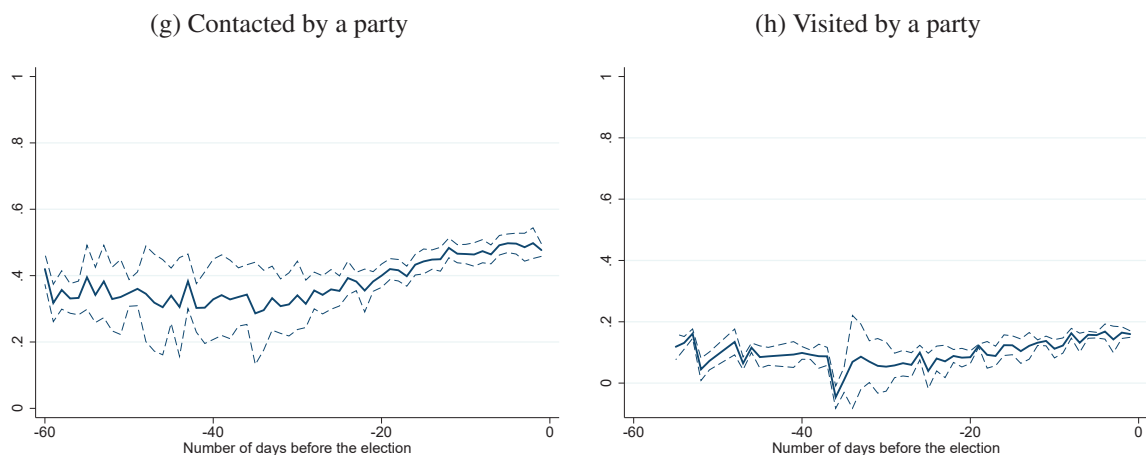
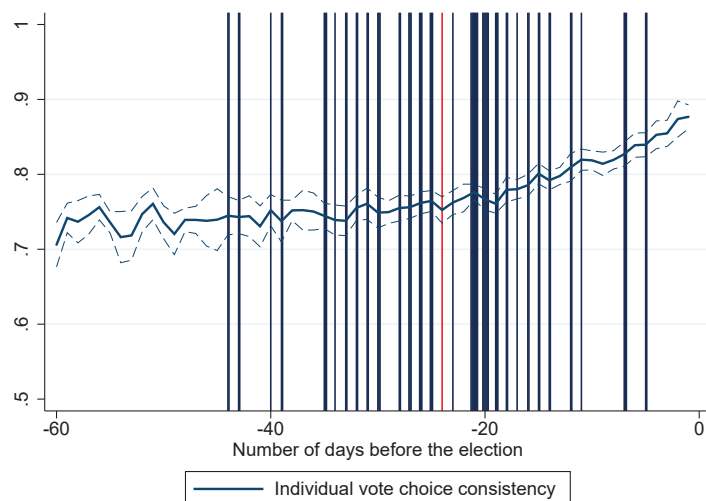


Figure A.4: Media consumption, political discussions, and partisan communication (cont.)



Notes: We show point estimates and 95% confidence intervals from specifications in the form of equation [1], regressing different forms of media consumption, political discussions, and partisan communication on 60 fixed effects indicating the number of days relative to the election, election fixed effects and fixed effects for the day of the week in which the pre-electoral survey took place. The sample includes all respondents surveyed before the election who said that they intended to vote. The outcomes are dummies for getting information frequently from newspapers (N=147,119), TV (N=140,040), radio (N=101,015), and the Internet (N=119,596), having seen election polls recently (N=38,355), discussing politics frequently with others (N=103,805), having been contacted by a party recently (N=57,634), and having been visited at home by a party recently (N=41,301).

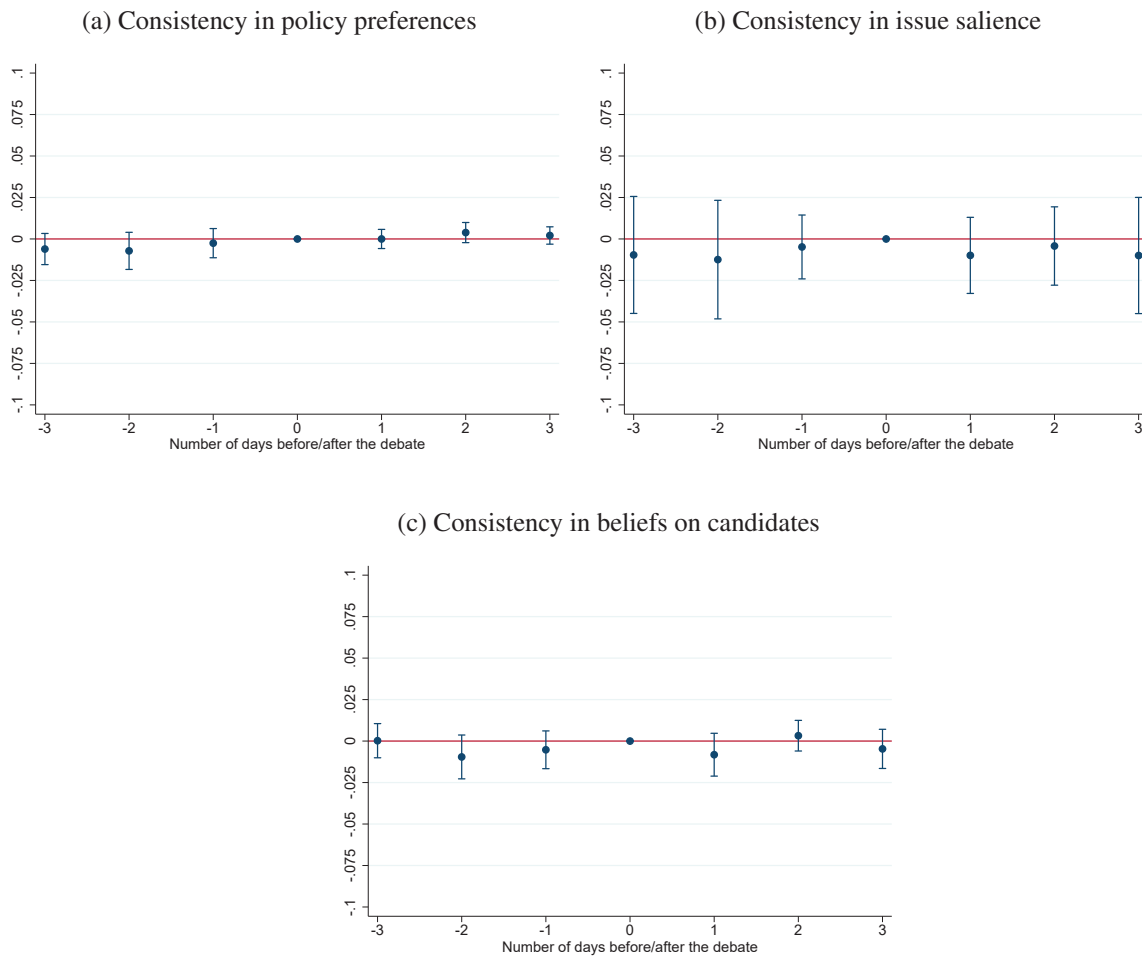
Figure A.5: Vote choice consistency and debate dates



Notes: Each debate is represented by a vertical bar. Thicker bars correspond to dates in which debates were held in multiple elections. On average, debates were held 24 days before the election. This average distance to the election is represented by a red vertical bar. Other notes as in Figure 1.

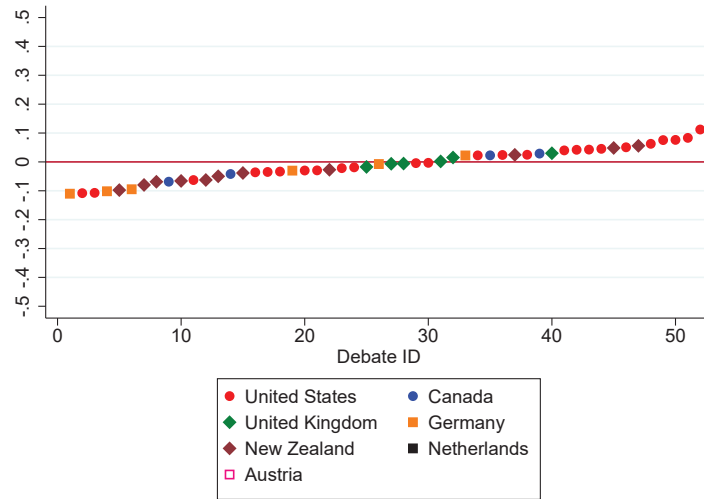


Figure A.6: Debates' effects on consistency in policy preferences, issue salience, and beliefs on candidates



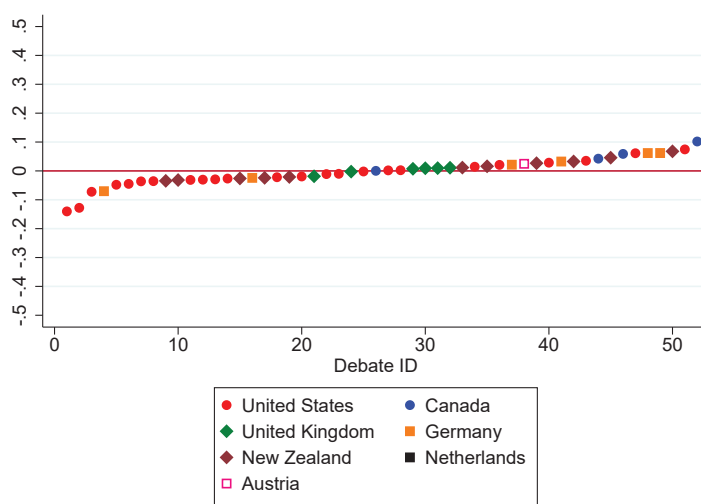
Notes: We show point estimates and 95% confidence intervals from specifications in the form of equation [7], regressing consistency in policy preferences, issue salience and beliefs on candidates on dummy variables for being surveyed one, two, or three days before the debate, as well as dummies for being surveyed one, two, or three days after the debate. We also include dummies for being surveyed four days or more before or after the debate, respectively, and omit the dummy for being surveyed on the day of the debate. We control for debate  $\times$  question (Figures A.6a and A.6c) or debate  $\times$  election (Figure A.6b) fixed effects as well as fixed effects for the number of days relative to the election, for the day of the week in which the pre-electoral survey took place, and for the number of days separating the pre- and post-electoral survey. Standard errors are adjusted for clustering at the debate level. There are 12 debates ( $N=346,231$ ) in Figure A.6a, seven debates ( $N=51,821$ ) in Figure A.6b, and 16 debates ( $N=546,861$ ) in Figure A.6c.

Figure A.7: Debate-specific effects on vote choice consistency



Notes: We show the mean value of the three debate-specific post-debate dummies for each debate separately and in ascending order, from a specification in the form of [7] where each relative day dummy is interacted with a full set of debate  $\times$  election indicators. The outcome is vote choice consistency and we control for debate  $\times$  election fixed effects as well as fixed effects for the number of days relative to the election, for the day of the week in which the pre-electoral survey took place, and for the number of days separating the post-electoral survey from the election. Surveys with 10 or fewer respondents on the day of the debate or on any of the three days following it are excluded. N=52.

Figure A.8: Debate-specific effects on distance to final vote shares



Notes: We show the mean value of the three debate-specific post-debate dummies for each debate separately and in ascending order, from a specification in the form of [8] where each relative day dummy is interacted with a full set of debate  $\times$  election indicators. The outcome is the distance between predicted and final vote shares and we control for debate  $\times$  election fixed effects, fixed effects for the number of days relative to the election and for the day of the week in which the pre-electoral survey took place, and the average number of days separating the post-electoral survey from the election. Other notes as in Appendix Figure A.7.

Table A.13: Campaign exposure over time

	Newspapers (1)	Television (2)	Radio (3)	Internet (4)	Polls (5)	Political discussions (6)	Contact by a party (7)	Visit by a party (8)
Time	0.0004 (0.0003)	0.0007*** (0.0002)	0.0007** (0.0003)	0.0006** (0.0002)	0.0046** (0.0018)	0.0042*** (0.0003)	0.0043** (0.0016)	0.0030** (0.0010)
Observations	147119	140040	101015	119596	38355	103805	59259	41301
$R^2$	0.139	0.189	0.109	0.091	0.084	0.097	0.137	0.017
Mean at day -1	0.3715	0.5162	0.2676	0.2372	0.7424	0.5591	0.4770	0.1599
Election fixed effects	x	x	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x	x	x

Notes: Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). Time is defined as negative the number of days separating the pre-electoral survey from the election. The outcomes are dummies for getting information frequently from newspapers, TV, radio, and the Internet, having seen election polls recently, discussing politics frequently with others, having been contacted by a party recently, and having been visited by a party recently. The sample includes all respondents surveyed before the election who said that they intended to vote. Individual controls include fixed effects for the day of the week in which the pre-electoral survey took place.

Table A.14: Balance checks around TV debates

	More education than high school (1)	College degree (2)	Age (3)	Male (4)	2nd income quartile (5)	3rd income quartile (6)	4th income quartile (7)	Not employed (8)	Watching debates (9)	Strong party identification (10)
Before -3	0.006 (0.009)	0.014 (0.010)	0.737* (0.405)	-0.000 (0.006)	0.004 (0.006)	0.000 (0.005)	0.002 (0.007)	0.015* (0.008)	0.002 (0.007)	0.004 (0.005)
-3	0.007 (0.011)	0.011 (0.007)	0.648* (0.338)	-0.011 (0.007)	-0.003 (0.008)	0.006 (0.007)	0.000 (0.007)	0.005 (0.009)	-0.006 (0.011)	-0.009 (0.009)
-2	-0.015* (0.008)	-0.002 (0.009)	0.835** (0.369)	-0.007 (0.008)	0.005 (0.008)	0.005 (0.008)	-0.009 (0.007)	0.025** (0.011)	0.005 (0.013)	0.006 (0.009)
-1	0.003 (0.008)	0.002 (0.007)	0.595** (0.283)	-0.000 (0.008)	0.005 (0.007)	0.002 (0.008)	-0.003 (0.007)	0.022** (0.010)	-0.006 (0.010)	-0.008 (0.008)
+1	-0.007 (0.007)	-0.001 (0.007)	-0.001 (0.318)	-0.004 (0.008)	0.003 (0.010)	-0.008 (0.006)	0.000 (0.008)	0.011 (0.010)	0.013 (0.009)	-0.002 (0.007)
+2	0.003 (0.008)	0.008 (0.010)	0.472 (0.441)	-0.002 (0.007)	0.001 (0.011)	-0.002 (0.007)	0.009 (0.007)	0.011 (0.012)	-0.003 (0.010)	0.001 (0.009)
+3	0.006 (0.009)	0.004 (0.013)	0.430 (0.416)	-0.009 (0.008)	0.006 (0.009)	-0.005 (0.007)	-0.002 (0.007)	0.026** (0.010)	-0.013 (0.008)	0.005 (0.009)
After +3	0.001 (0.009)	-0.003 (0.011)	0.351 (0.406)	-0.001 (0.006)	0.001 (0.007)	-0.001 (0.006)	-0.002 (0.007)	0.009 (0.008)	-0.014 (0.009)	0.007 (0.007)
Observations	279567	253308	303051	304519	242745	242745	242745	250543	80930	214027
R <sup>2</sup>	0.052	0.045	0.020	0.005	0.015	0.022	0.010	0.016	0.044	0.062
Mean, day of the debate	0.606	0.388	50.160	0.489	0.231	0.229	0.227	0.423	0.759	0.298
Number of debates	50	50	56	56	50	50	50	47	28	41
Debate * election fixed effects	x	x	x	x	x	x	x	x	x	x
Fixed effects for number of days to election	x	x	x	x	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x	x	x	x	x
F-stat	2.254	1.421	1.877	0.683	0.400	1.225	0.989	1.367	2.437	0.796
P-val	0.053	0.226	0.101	0.664	0.875	0.310	0.443	0.248	0.052	0.578

Notes: Standard errors clustered at the debate level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). For each debate and election, our estimation uses all respondents surveyed before the election who said that they intended to vote. In columns 9 and 10, the sample is further restricted to respondents also surveyed after the election, since the outcomes are constructed from questions asked in the post-electoral survey exclusively. Individual controls include fixed effects for the day of the week in which the pre-electoral survey took place. We report the F-stat and p-value of a test of joint significance of the six relative days dummies, from three days before the debate to three days after.

Table A.15: Debates' effects on campaign exposure and political engagement

	Newspapers (1)	Television (2)	Radio (3)	Internet (4)	Polls (5)	Political discussions (6)	Contact by a party (7)	Visit by a party (8)
Before -3	0.002 (0.007)	0.005 (0.009)	0.008 (0.008)	0.003 (0.005)	0.063 (0.037)	-0.001 (0.012)	0.004 (0.018)	-0.005 (0.012)
-3	-0.000 (0.009)	0.012 (0.008)	0.003 (0.012)	0.008 (0.009)	0.042 (0.036)	-0.007 (0.011)	-0.005 (0.017)	0.001 (0.003)
-2	-0.000 (0.011)	0.006 (0.010)	0.009 (0.012)	0.013 (0.010)	0.041 (0.029)	0.006 (0.013)	-0.004 (0.006)	-0.000 (0.016)
-1	-0.004 (0.006)	0.012 (0.010)	0.015 (0.009)	0.000 (0.009)	0.072*** (0.016)	0.003 (0.010)	0.006 (0.017)	-0.000 (0.011)
+1	-0.015 (0.010)	0.011 (0.007)	-0.005 (0.011)	-0.002 (0.009)	0.097 (0.053)	-0.000 (0.011)	-0.015* (0.007)	-0.006 (0.008)
+2	-0.007 (0.010)	0.013 (0.009)	0.002 (0.011)	0.004 (0.011)	0.025 (0.031)	0.014 (0.013)	-0.001 (0.005)	-0.001 (0.007)
+3	0.008 (0.010)	0.014 (0.009)	-0.007 (0.013)	0.002 (0.009)	-0.022 (0.035)	0.015 (0.012)	-0.009 (0.007)	0.000 (0.005)
After +3	0.002 (0.007)	0.013 (0.008)	0.010 (0.010)	0.006 (0.005)	0.069 (0.048)	0.003 (0.011)	-0.012 (0.014)	0.005 (0.008)
Observations	212884	219246	173741	192123	23632	119225	77961	62545
R <sup>2</sup>	0.161	0.247	0.132	0.115	0.083	0.071	0.129	0.012
Mean, day of the debate	0.330	0.521	0.260	0.248	0.525	0.437	0.494	0.150
Number of debates	31	35	19	22	9	18	12	7
Debate * election fixed effects	x	x	x	x	x	x	x	x
Fixed effects for number of days to election	x	x	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x	x	x
Linear combination of estimates								
Average pre-debate dummies -3, -2, and -1	-0.002 (0.007)	0.010 (0.008)	0.009 (0.010)	0.007 (0.008)	0.052* (0.023)	0.001 (0.010)	-0.001 (0.012)	0.000 (0.010)
Average post-debate dummies 1, 2, and 3	-0.005 (0.009)	0.013 (0.008)	-0.003 (0.010)	0.002 (0.008)	0.033 (0.036)	0.009 (0.011)	-0.008 (0.005)	-0.003 (0.006)

Notes: Same notes as in Appendix Table A.14. The mean value of the three pre-debate dummies and the mean value of the three post-debate dummies are reported, along with their standard errors.

Table A.16: Sample selection around debates

	Turnout intention (1)	Sample, vote intention (2)	Sample, vote choice consistency (3)
Before -3	-0.002 (0.008)	-0.002 (0.009)	0.005 (0.008)
-3	0.010 (0.009)	0.009 (0.009)	0.008 (0.009)
-2	0.002 (0.006)	0.003 (0.006)	0.009 (0.008)
-1	-0.005 (0.007)	-0.002 (0.007)	0.001 (0.008)
+1	0.009 (0.007)	0.009 (0.007)	0.010 (0.007)
+2	0.009 (0.007)	0.009 (0.008)	0.014 (0.010)
+3	0.002 (0.007)	0.006 (0.007)	0.013* (0.007)
After +3	0.006 (0.008)	0.006 (0.009)	0.010 (0.009)
Observations	396349	396349	329783
$R^2$	0.065	0.073	0.036
Mean, day of the debate	0.835	0.821	0.794
Number of debates	56	56	56
Debate * election fixed effects	x	x	x
Fixed effects for number of days to election	x	x	x
Individual controls	x	x	x
Linear combination of estimates			
Average pre-debate dummies -3, -2, and -1	0.002 (0.007)	0.003 (0.007)	0.006 (0.007)
Average post-debate dummies 1, 2, and 3	0.007 (0.006)	0.008 (0.006)	0.012* (0.007)

Notes: Standard errors clustered at the debate level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). In column 1, the sample includes all respondents surveyed before the election who were asked if they intended to vote, and the outcome is a dummy equal to 1 if the respondent said yes. In column 2, the sample includes all respondents surveyed before the election who were asked if they intended to vote, and the outcome is a dummy equal to 1 if the respondent said yes and answered the vote intention question (including if they said they did not know whom they would vote for). In column 3, the sample includes all respondents surveyed before and after the election who were asked if they intended to vote, in the first survey, and if they actually voted, in the second. The outcome is a dummy equal to 1 if the respondent said that they intended to vote and answered the vote intention question, in the first survey, and reported that they actually voted and gave a vote choice declaration, in the second. Individual controls include fixed effects for the day of the week in which the pre-electoral survey took place and, in column 3, fixed effects for the number of days separating the post-electoral survey from the election. Other notes as in Table 3.

Table A.17: Debates' effects on consistency in policy preferences, issue salience, and beliefs on candidates

	Consistency in policy preferences		Consistency in issue salience		Consistency in beliefs on candidates	
	(1)	(2)	(3)	(4)	(5)	(6)
Before -3	-0.001 (0.002)	-0.001 (0.002)	-0.012 (0.009)	-0.011 (0.008)	-0.005 (0.006)	-0.006 (0.006)
-3	-0.006 (0.004)	-0.006 (0.004)	-0.010 (0.014)	-0.009 (0.014)	0.000 (0.005)	0.001 (0.005)
-2	-0.007 (0.005)	-0.006 (0.005)	-0.012 (0.015)	-0.011 (0.014)	-0.010 (0.006)	-0.010 (0.006)
-1	-0.003 (0.004)	-0.002 (0.003)	-0.005 (0.008)	-0.004 (0.007)	-0.005 (0.005)	-0.005 (0.005)
+1	-0.000 (0.003)	-0.000 (0.002)	-0.010 (0.009)	-0.010 (0.010)	-0.008 (0.006)	-0.008 (0.006)
+2	0.004 (0.003)	0.003 (0.003)	-0.004 (0.010)	-0.004 (0.009)	0.003 (0.004)	0.003 (0.004)
+3	0.002 (0.002)	0.003 (0.003)	-0.010 (0.014)	-0.009 (0.014)	-0.005 (0.006)	-0.004 (0.005)
After +3	-0.005 (0.003)	-0.005 (0.003)	0.001 (0.009)	0.002 (0.009)	0.002 (0.003)	0.002 (0.003)
Observations	346231	346231	51821	51821	558194	558194
$R^2$	0.048	0.054	0.069	0.074	0.092	0.100
Mean, day of the debate	0.837	0.837	0.719	0.719	0.807	0.807
Number of debates	12	12	7	7	16	16
Debate * question fixed effects	x	x			x	x
Debate * election fixed effects			x	x		
Fixed effects for number of days to election	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x
Sociodemographic controls		x		x		x
Linear combination of estimates						
Average pre-debate dummies -3, -2, and -1	-0.005 (0.004)	-0.005 (0.004)	-0.009 (0.011)	-0.008 (0.010)	-0.005 (0.005)	-0.005 (0.005)
Average post-debate dummies 1, 2, and 3	0.002 (0.001)	0.002 (0.002)	-0.008 (0.009)	-0.007 (0.009)	-0.003 (0.005)	-0.003 (0.005)

Notes: Standard errors clustered at the debate level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). In columns 1 and 2, we use one observation per respondent per policy question. In columns 5 and 6, we use one observation per respondent per belief question. Other notes as in Table 3.

Table A.18: Debates' effects on vote choice consistency across debate and election types

	First vs. next debate (1)	Close vs. less-close race (2)	Fluctuating vs. stable race (3)	U.S. vs. other countries (4)	Plurality vs. proportional rule (5)
-3*type-b	-0.011 (0.008)	-0.009 (0.012)	-0.007 (0.007)	-0.014 (0.009)	-0.027 (0.021)
-2*type-b	0.007 (0.010)	-0.004 (0.013)	0.007 (0.012)	-0.004 (0.011)	-0.021 (0.021)
-1*type-b	0.003 (0.009)	-0.010 (0.011)	0.003 (0.009)	-0.002 (0.010)	-0.013 (0.020)
+1*type-b	-0.001 (0.007)	-0.008 (0.010)	-0.000 (0.007)	-0.015 (0.011)	-0.055* (0.029)
+2*type-b	-0.007 (0.010)	0.003 (0.013)	-0.005 (0.010)	-0.013 (0.011)	-0.044* (0.023)
+3*type-b	-0.006 (0.007)	-0.001 (0.010)	-0.006 (0.006)	-0.008 (0.008)	-0.027 (0.019)
-3*type-a	-0.010 (0.012)	-0.010 (0.007)	-0.016 (0.013)	0.002 (0.011)	-0.008 (0.007)
-2*type-a	-0.025** (0.011)	-0.000 (0.011)	-0.019* (0.011)	0.004 (0.012)	-0.000 (0.010)
-1*type-a	-0.016 (0.012)	0.003 (0.009)	-0.014 (0.013)	-0.002 (0.011)	-0.002 (0.008)
+1*type-a	-0.029* (0.016)	-0.009 (0.010)	-0.024 (0.015)	0.003 (0.012)	-0.003 (0.007)
+2*type-a	-0.012 (0.011)	-0.016* (0.009)	-0.012 (0.013)	0.004 (0.010)	-0.003 (0.008)
+3*type-a	-0.011 (0.013)	-0.010 (0.008)	-0.007 (0.012)	-0.002 (0.010)	-0.004 (0.006)
Observations	263681	263681	263681	263681	263681
$R^2$	0.077	0.077	0.077	0.077	0.077
Mean, day of the debate	0.811	0.811	0.811	0.811	0.811
Number of debates	56	56	56	56	56
Debate * election fixed effects	x	x	x	x	x
Fixed effects for number of days to election	x	x	x	x	x
Individual controls	x	x	x	x	x
Sociodemographic controls	x	x	x	x	x
Linear combination of estimates					
Average pre-debate dummies for type-b	-0.000 (0.008)	-0.007 (0.010)	0.001 (0.008)	-0.007 (0.009)	-0.020 (0.018)
Average post-debate dummies for type-b	-0.004 (0.006)	-0.002 (0.009)	-0.003 (0.006)	-0.012 (0.008)	-0.042*** (0.015)
Average pre-debate dummies for type-a	-0.017 (0.010)	-0.002 (0.008)	-0.016 (0.010)	0.001 (0.008)	-0.003 (0.007)
Average post-debate dummies for type-a	-0.017 (0.011)	-0.012 (0.007)	-0.014 (0.010)	0.002 (0.009)	-0.003 (0.006)

Notes: Standard errors clustered at the debate level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). We interact the relative days dummies with indicators for type-a debate or election (first debate, close race, fluctuating race, U.S. bipartisan system, and plurality rule) and type-b debate or election (next debates, less-close race, more stable race, multiparty system, and proportional rule). Dummies for being surveyed four days or more before or after the debate interacted with the type-a and type-b indicators were included in the regressions but are not shown, for presentation clarity. Other notes as in Table 3, columns 1 and 2.



Table A.19: Debates' effects on distance to final vote shares across debate and election types

	First vs. next debate (1)	Close vs. less-close race (2)	Fluctuating vs. stable race (3)	U.S. vs. other countries (4)	Plurality vs. proportional rule (5)
-3*type-b	-0.000 (0.004)	-0.007 (0.006)	0.001 (0.004)	0.002 (0.005)	-0.016 (0.017)
-2*type-b	0.001 (0.003)	-0.003 (0.006)	-0.001 (0.003)	0.004 (0.004)	0.000 (0.016)
-1*type-b	0.001 (0.004)	-0.006 (0.007)	-0.002 (0.004)	0.000 (0.005)	-0.020 (0.016)
+1*type-b	0.004 (0.004)	-0.006 (0.005)	0.005 (0.004)	0.006* (0.004)	-0.013 (0.015)
+2*type-b	0.008* (0.004)	-0.009 (0.006)	0.004 (0.005)	0.007 (0.005)	-0.002 (0.009)
+3*type-b	0.005 (0.006)	-0.004 (0.006)	0.003 (0.006)	0.003 (0.005)	-0.005 (0.015)
-3*type-a	-0.000 (0.008)	0.005 (0.005)	-0.002 (0.008)	-0.006 (0.006)	0.003 (0.004)
-2*type-a	-0.002 (0.008)	0.003 (0.003)	0.003 (0.008)	-0.008 (0.006)	0.001 (0.003)
-1*type-a	-0.010 (0.009)	0.002 (0.004)	-0.001 (0.010)	-0.007 (0.007)	0.001 (0.004)
+1*type-a	-0.002 (0.007)	0.008* (0.004)	-0.004 (0.006)	-0.006 (0.007)	0.004 (0.004)
+2*type-a	-0.016** (0.007)	0.008 (0.005)	-0.005 (0.007)	-0.012* (0.006)	0.001 (0.004)
+3*type-a	-0.006 (0.006)	0.007 (0.007)	-0.001 (0.007)	-0.000 (0.007)	0.003 (0.005)
Observations	3802	3802	3802	3802	3802
$R^2$	0.582	0.581	0.583	0.587	0.584
Mean, day of the debate	0.046	0.046	0.046	0.046	0.046
Number of debates	56	56	56	56	56
Debate * election fixed effects	x	x	x	x	x
Fixed effects for number of days to election	x	x	x	x	x
Aggregate controls	x	x	x	x	x
Sociodemographic controls	x	x	x	x	x
Linear combination of estimates					
Average pre-debate dummies for type-b	0.001 (0.003)	-0.005 (0.006)	-0.000 (0.003)	0.002 (0.004)	-0.012 (0.014)
Average post-debate dummies for type-b	0.006 (0.004)	-0.006 (0.004)	0.004 (0.004)	0.005 (0.004)	-0.007 (0.009)
Average pre-debate dummies for type-a	-0.004 (0.007)	0.003 (0.003)	-0.000 (0.007)	-0.007 (0.005)	0.001 (0.003)
Average post-debate dummies for type-a	-0.008 (0.005)	0.008 (0.005)	-0.003 (0.005)	-0.006 (0.006)	0.003 (0.003)

Notes: Same notes as in Table 4, columns 1 and 2, and Appendix Table A.18.

Table A.20: Debates' effects on vote choice consistency across voter types

	Debate watchers vs. non-watchers (1)	Strong vs. weak party identification (2)	College degree vs. no college degree (3)	Above median age vs. below (4)	Male vs. female (5)	Above median income vs. below (6)	Not employed vs. employed (7)
-3*type-b	-0.014 (0.022)	-0.006 (0.008)	-0.010 (0.010)	-0.017 (0.011)	-0.003 (0.010)	-0.004 (0.014)	-0.011 (0.009)
-2*type-b	-0.002 (0.024)	0.018 (0.013)	-0.005 (0.009)	-0.009 (0.014)	0.012 (0.012)	0.010 (0.014)	-0.009 (0.011)
-1*type-b	0.010 (0.025)	0.009 (0.011)	-0.004 (0.011)	-0.008 (0.013)	0.012 (0.012)	-0.002 (0.016)	-0.007 (0.009)
+1*type-b	-0.032 (0.022)	0.007 (0.009)	-0.009 (0.009)	-0.021 (0.013)	-0.002 (0.012)	0.010 (0.015)	-0.017 (0.012)
+2*type-b	-0.016 (0.016)	0.001 (0.012)	-0.020* (0.011)	-0.004 (0.013)	-0.000 (0.015)	-0.012 (0.015)	-0.013 (0.008)
+3*type-b	0.015 (0.021)	0.012 (0.009)	-0.011 (0.009)	-0.008 (0.010)	0.002 (0.012)	-0.011 (0.017)	-0.009 (0.010)
-3*type-a	-0.002 (0.012)	-0.008 (0.009)	-0.007 (0.008)	-0.004 (0.012)	-0.016 (0.010)	-0.004 (0.010)	-0.005 (0.014)
-2*type-a	-0.014 (0.012)	-0.025* (0.013)	0.008 (0.012)	0.003 (0.010)	-0.016* (0.009)	-0.000 (0.012)	0.005 (0.013)
-1*type-a	-0.022* (0.013)	-0.017* (0.010)	0.010 (0.010)	0.002 (0.010)	-0.017** (0.008)	0.003 (0.010)	0.009 (0.014)
+1*type-a	0.004 (0.013)	-0.020* (0.011)	0.004 (0.011)	0.002 (0.009)	-0.016* (0.009)	-0.003 (0.011)	0.002 (0.010)
+2*type-a	0.005 (0.010)	-0.028** (0.013)	0.013* (0.007)	-0.011 (0.011)	-0.016* (0.008)	0.002 (0.010)	-0.010 (0.014)
+3*type-a	-0.015 (0.012)	-0.029* (0.015)	-0.005 (0.010)	-0.004 (0.007)	-0.014* (0.007)	-0.009 (0.008)	-0.005 (0.014)
Observations	85235	217168	214383	262830	263584	205284	219659
R <sup>2</sup>	0.095	0.096	0.072	0.077	0.077	0.069	0.085
Mean, day of the debate	0.810	0.817	0.817	0.811	0.811	0.816	0.807
Number of debates	28	41	50	56	56	50	47
Debate * election fixed effects	x	x	x	x	x	x	x
Fixed effects for number of days to election	x	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x	x
Sociodemographic controls	x	x	x	x	x	x	x
Linear combination of estimates							
Average pre-debate dummies for type-b	-0.002 (0.021)	0.007 (0.009)	-0.006 (0.009)	-0.011 (0.012)	0.007 (0.010)	0.001 (0.013)	-0.009 (0.008)
Average post-debate dummies for type-b	-0.011 (0.012)	0.007 (0.008)	-0.013* (0.008)	-0.011 (0.010)	-0.000 (0.011)	-0.004 (0.014)	-0.013* (0.007)
Average pre-debate dummies for type-a	-0.013 (0.010)	-0.017* (0.008)	0.004 (0.007)	0.001 (0.009)	-0.016** (0.007)	-0.001 (0.009)	0.003 (0.012)
Average post-debate dummies for type-a	-0.002 (0.010)	-0.026** (0.012)	0.004 (0.007)	-0.005 (0.007)	-0.015** (0.005)	-0.003 (0.008)	-0.004 (0.011)

Notes: Standard errors clustered at the debate level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). We interact the relative days dummies with indicators for type-a voter (debate watcher, voter with strong party identification, with a college degree, above the median age, male, above the median income, and not employed) and type-b voter (non-debate watcher, voter with weak or no party identification, without college degree, below the median age, female, below the median income, and employed) and also control for the dummy for being a type-a voter, uninteracted. Dummies for being surveyed four days or more before or after the debate interacted with the type-a and type-b indicators were included in the regressions but are not shown, for presentation clarity. Other notes as in Table 3, columns 1 and 2.

Table A.21: Debates' effects on distance to final vote shares across voter types

	Debate watchers vs. non-watchers (1)	Strong vs. weak party identification (2)	College degree vs. no college degree (3)	Above median age vs. below (4)	Male vs. female (5)	Above median income vs. below (6)	Not employed vs. employed (7)
-3*type-b	-0.003 (0.012)	-0.004 (0.005)	-0.001 (0.006)	0.007 (0.006)	-0.003 (0.007)	-0.003 (0.011)	-0.004 (0.004)
-2*type-b	0.017 (0.018)	-0.005 (0.004)	-0.002 (0.005)	0.011 (0.007)	-0.002 (0.007)	-0.001 (0.008)	0.003 (0.006)
-1*type-b	0.014 (0.012)	-0.010* (0.005)	-0.001 (0.005)	0.007 (0.007)	-0.010 (0.007)	-0.005 (0.008)	-0.003 (0.008)
+1*type-b	0.004 (0.019)	-0.003 (0.005)	-0.002 (0.006)	0.004 (0.007)	-0.000 (0.007)	-0.002 (0.011)	0.005 (0.006)
+2*type-b	0.012 (0.014)	-0.005 (0.006)	0.008 (0.006)	0.006 (0.005)	-0.003 (0.007)	0.008 (0.008)	0.003 (0.006)
+3*type-b	0.021 (0.014)	-0.007* (0.004)	0.001 (0.006)	0.007 (0.008)	-0.004 (0.007)	-0.005 (0.007)	0.006 (0.008)
-3*type-a	-0.015* (0.008)	0.006 (0.005)	-0.004 (0.005)	-0.005 (0.007)	-0.002 (0.007)	-0.003 (0.006)	0.001 (0.010)
-2*type-a	-0.006 (0.007)	0.007 (0.008)	0.005 (0.007)	-0.007 (0.005)	0.003 (0.005)	0.003 (0.007)	-0.001 (0.007)
-1*type-a	-0.019** (0.008)	0.004 (0.009)	0.002 (0.007)	-0.008 (0.006)	0.003 (0.007)	-0.004 (0.007)	-0.005 (0.008)
+1*type-a	-0.014 (0.009)	0.016** (0.008)	0.002 (0.007)	-0.000 (0.006)	0.006 (0.005)	0.001 (0.006)	-0.005 (0.008)
+2*type-a	-0.018** (0.008)	0.015* (0.008)	-0.007 (0.006)	-0.003 (0.005)	0.008 (0.006)	-0.001 (0.006)	0.001 (0.008)
+3*type-a	-0.013** (0.006)	0.017** (0.008)	0.006 (0.007)	-0.004 (0.005)	0.002 (0.006)	0.005 (0.007)	-0.005 (0.007)
Observations	3503	4988	6608	7556	7553	6465	6637
R <sup>2</sup>	0.321	0.512	0.435	0.456	0.464	0.439	0.462
Mean, day of the debate	0.062	0.047	0.054	0.058	0.056	0.058	0.055
Number of debates	28	41	50	56	56	50	47
Debate * election fixed effects	x	x	x	x	x	x	x
Fixed effects for number of days to election	x	x	x	x	x	x	x
Aggregate controls	x	x	x	x	x	x	x
Sociodemographic controls	x	x	x	x	x	x	x
Linear combination of estimates							
Average pre-debate dummies for type-b	0.009 (0.012)	-0.006* (0.003)	-0.002 (0.005)	0.008 (0.006)	-0.005 (0.006)	-0.003 (0.008)	-0.001 (0.005)
Average post-debate dummies for type-b	0.012 (0.011)	-0.005 (0.004)	0.002 (0.005)	0.006 (0.006)	-0.002 (0.006)	0.001 (0.008)	0.005 (0.006)
Average pre-debate dummies for type-a	-0.013** (0.006)	0.006 (0.006)	0.001 (0.005)	-0.007 (0.005)	0.001 (0.005)	-0.001 (0.005)	-0.002 (0.007)
Average post-debate dummies for type-a	-0.015** (0.006)	0.016** (0.007)	0.000 (0.006)	-0.002 (0.004)	0.006 (0.005)	0.002 (0.005)	-0.003 (0.006)

Notes: Same notes as in Table 4, columns 1 and 2, and Appendix Table A.20.

Table A.22: Debates' effects on likelihood to vote for lesser-known candidates and on vote share concentration

	Challenger		Small candidate		New candidate		Vote share concentration	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Before -3	0.002 (0.006)	0.003 (0.007)	0.006 (0.006)	0.006 (0.007)	-0.000 (0.002)	-0.000 (0.002)	-0.003 (0.005)	-0.002 (0.005)
-3	0.007 (0.007)	0.007 (0.007)	-0.001 (0.007)	0.000 (0.007)	0.001 (0.003)	0.001 (0.003)	-0.002 (0.005)	-0.002 (0.005)
-2	0.009 (0.009)	0.010 (0.009)	0.005 (0.005)	0.006 (0.005)	-0.002 (0.002)	-0.002 (0.002)	-0.003 (0.005)	-0.004 (0.005)
-1	0.001 (0.007)	0.002 (0.008)	0.002 (0.007)	0.003 (0.007)	0.001 (0.002)	0.001 (0.002)	-0.002 (0.005)	-0.002 (0.005)
+1	0.008 (0.007)	0.008 (0.007)	0.005 (0.008)	0.005 (0.008)	0.003 (0.003)	0.003 (0.003)	-0.004 (0.006)	-0.004 (0.006)
+2	0.003 (0.008)	0.004 (0.008)	0.007 (0.007)	0.007 (0.007)	0.003 (0.003)	0.003 (0.003)	-0.007 (0.005)	-0.006 (0.005)
+3	0.000 (0.009)	0.000 (0.010)	0.005 (0.007)	0.005 (0.007)	0.001 (0.002)	0.001 (0.002)	-0.004 (0.006)	-0.003 (0.006)
After +3	0.005 (0.007)	0.005 (0.008)	0.002 (0.005)	0.002 (0.005)	0.000 (0.002)	0.000 (0.002)	-0.001 (0.005)	-0.000 (0.004)
Observations	294615	294615	294615	294615	290799	290799	3802	3802
$R^2$	0.042	0.049	0.084	0.091	0.076	0.077	0.921	0.923
Mean, day of the debate	0.634	0.634	0.148	0.148	0.007	0.007	0.324	0.324
Number of debates	56	56	56	56	56	56	56	56
Debate * election fixed effects	x	x	x	x	x	x	x	x
Fixed effects for number of days to election	x	x	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x	x	x
Sociodemographic controls		x		x		x		x
Linear combination of estimates								
Average pre-debate dummies -3, -2, and -1	0.006 (0.007)	0.006 (0.007)	0.002 (0.005)	0.003 (0.005)	-0.000 (0.002)	-0.000 (0.002)	-0.003 (0.005)	-0.002 (0.004)
Average post-debate dummies 1, 2, and 3	0.004 (0.006)	0.004 (0.006)	0.006 (0.006)	0.006 (0.006)	0.002 (0.002)	0.002 (0.002)	-0.005 (0.005)	-0.004 (0.005)

Notes: Standard errors clustered at the debate level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10%, respectively). In columns 1 through 6, we use the set of respondents as defined in Appendix Table A.12, columns 1 through 6. In columns 7 and 8, we use one observation per election per day, vote shares are computed based on the set of respondents used in Appendix Table A.12, columns 7 and 8, and we weight each observation by the number of respondents it was constructed from, relative to the total number of respondents surveyed at the same relative time to the debate. Other notes as in Table 3, columns 3 and 4.

## **B Additional Information on the Data**

### **B.1 Data References and Links to Surveys**

The references for the nationally representative surveys included in the sample and the links at which the corresponding data can be downloaded are as follows.

#### **Austrian National Election Studies (AUTNES):**

2013: Kritzinger, Sylvia; Zeglovits, Eva; Aichholzer, Julian; Glantschnigg, Christian; Glinitzer, Konstantin; Johann, David; Thomas, Kathrin; Wagner, Markus (2017): AUTNES Pre- and Post Panel Study 2013. GESIS Data Archive, Cologne. ZA5859 Data file Version 2.0.1, doi:10.4232/1.12724.

This dataset can be downloaded at: <https://www.autnes.at/en/data-download/>.

#### **British Election Studies (BES):**

2001: Clarke, H. et al., British General Election Study, 2001; Cross-Section Survey. Colchester, Essex: UK Data Archive [distributor], March 2003.

2010: Whiteley, P.F. and Sanders, D., British Election Study, 2010: Face-to-Face Survey. Colchester, Essex: UK Data Archive [distributor], August 2014.

2015: Fieldhouse, E., J. Green., G. Evans., H. Schmitt, C. van der Eijk, J. Mellon and C. Prosser (2015) British Election Study Internet Panel Wave 5. DOI: 10.15127/1.293723.

2016: Evans, G., E. Fieldhouse., J. Green., H. Schmitt, C., van der Eijk., J. Mellon and C. Prosser (2016) British Election Study Internet Panel Wave 8 (2016 EU Referendum Study, Daily Campaign Survey). DOI: 10.15127/1.293723.

These datasets can be downloaded at: <https://www.britishelectionstudy.com/data/#.XRIYB-hKhPY>.

#### **Canadian Election Studies (CES):**

1988: Johnston, Richard, et al. Canadian Election Study, 1988 [Computer file]. Toronto, Canada: Institute for Social Research [producer], 1989. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 1990.

1992-1993: Johnston, Richard, Andre Blais, Henry Brady, Elisabeth Gidengil, and Neil Nevitte. Canadian Election Study 1993: Incorporating the 1992 Referendum Survey on the Charlottetown Accord [Computer file]. ICPSR version. Vancouver, British Columbia: Richard Johnston, University of British Columbia/Montreal, Quebec: Andre Blais, University of

Montreal/Berkeley, CA: Henry Brady, University of California at Berkeley/Montreal, Quebec: Elisabeth Gidengil, McGill University/Calgary, Alberta: Neil Nevitte, University of Calgary [producers], 1995. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 1995.

1997: Blais, Andre, Elisabeth Gidengil, Richard Nadeau, and Neil Nevitte. Canadian Election Study, 1997 [Computer file]. 3rd ICPSR version. Toronto, Ontario: York University, Institute for Social Research [producer], 1997. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2000.

2000: Blais, Andre, Elisabeth Gidengil, Richard Nadeau, and Neil Nevitte. Canadian Election Study, 2000 [Computer file]. ICPSR version. Toronto, Ontario: York University, Institute for Social Research [producer], 2000. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2004.

2004-2011: Fournier, Patrick, Fred Cutler, Stuart Soroka and Dietlind Stolle. 2011. The 2004-2011 Canadian Election Study. [dataset].

2015: Fournier, Patrick, Fred Cutler, Stuart Soroka and Dietlind Stolle. 2015. The 2015 Canadian Election Study. [dataset].

These datasets can be downloaded at: <https://ces-ec.arts.ubc.ca/english-section/surveys/>.

### **Dutch Parliamentary Election Studies (DPES):**

1998: M. Kamp, (Universiteit Twente); C.W.A.M. Aarts (Universiteit Twente); H. van der Kolk (Universiteit Twente); J.J.A. Thomassen (Universiteit Twente); Stichting Kiezersonderzoek Nederland (SKON)(1998): Nationaal Kiezersonderzoek, NKO 1998. DANS.

2002: G.A. Irwin (University of Leiden); J.J.M. Holsteyn (University of Leiden); J.M. den Ridder (University of Leiden); Stichting Kiezersonderzoek Nederland (SKON) (2003): Nationaal Kiezersonderzoek, NKO 2002 2003. DANS.

2006: Kolk, Dr. H. van der (Universiteit Twente); Aarts, Prof.dr. C.W.A.M. (Universiteit Twente); Rosema, Dr. M. (Universiteit Twente); Stichting Kiezersonderzoek Nederland (SKON) (2006): Nationaal Kiezersonderzoek, NKO 2006. DANS.

These datasets can be downloaded at:

<https://www.surveeydata.nl/browse-our-data/repository/dutch-parliamentary-election-studies-28>.

### **German Longitudinal Election Studies (GLES):**

2009: Rattinger, Hans; Roßteutscher, Sigrid; Schmitt-Beck, Rüdiger; Weßels, Bernhard (2011): Rolling Cross-Section Campaign Survey with post- election Panel Wave (GLES 2009). GESIS Data Archive, Co-logne. ZA5303 Data file Version 6.0.0, doi: 10.4232/1.11604.

2013: Rattinger, Hans; Roßteutscher, Sigrid; Schmitt-Beck, Rüdiger; Weßels, Bernhard; Wolf, Christof (2014): Rolling Cross-Section Cam-paign Survey with Post-election Panel Wave (GLES 2013). GESIS Data Archive, Cologne. ZA5703 Data file Version 2.0.0, doi: 10.4232/1.11892.

2017: Roßteutscher, Sigrid; Schoen, Harald; Schmitt-Beck, Rüdiger; Weßels, Bernhard; Wolf, Christof; Staudt, Alexander (2019): Rolling Cross-Section Campaign Survey with Post-election Panel Wave (GLES 2017). GESIS Data Archive, Cologne: ZA6803 Data file Version 4.0.1, 10.4232/1.13213.

These datasets can be downloaded at: <https://www.gesis.org/en/elections-home/gles/data/>.

#### **Italian National Election Studies (ITANES):**

2013: Vezzoni, Cristiano. (2014). Italian National Election Survey 2013: A further step in a consolidating tradition. *Rivista Italiana di Scienza Politica*. 2014. 81-108. 10.1426/76399.

This dataset can be downloaded at: <http://www.itanes.org/en/>.

#### **Swiss Electoral Studies (SELECTS):**

2011: Selects: Swiss national election studies, Rolling Cross-Section (RCS) - 2011 [Dataset]. Distributed by FORS, Lausanne, 2012. [www.selects.ch](http://www.selects.ch) <https://doi.org/10.23662/FORS-DS-596->.

2015: Selects: Panel / Rolling cross-section study - 2015 [Dataset]. Distributed by FORS, Lausanne, 2016. [www.selects.ch](http://www.selects.ch).

These datasets can be downloaded at: <https://forscenter.ch/projects/selects/>.

#### **New Zealand Election Studies (NZES):**

1996: Vowles, J, Banducci, S, Karp, J, Aimer, P, Catt, H, Miller, R, and Denemark, D. 1996. New Zealand Election Study, 1990 [computer file].

1999: Vowles, J, Banducci, S, and Karp, J. 1999. New Zealand Election Study, 1999 [computer file].

2002: Vowles, J, Banducci, S, Karp, J, Aimer, P, and Miller, M. 2002. New Zealand Election Study, 2002 [computer file].

These datasets can be downloaded at: <http://www.nzes.org/>.

#### **Swedish National Election Studies (SNES):**

2014: Boije, Edvin, Oscarsson, Henrik & Maria Oskarson (2016) The 2014 CSM campaign panel study. Dataset. University of Gothenburg: Swedish National Election Studies, The Department of Political Science.

This dataset can be downloaded at: <https://valforskning.pol.gu.se/>.

### **American National Election Studies (ANES):**

1952: The data were made available by the Inter-university Consortium for Political Research. The data were originally collected by Angus Campbell, Gerald Gurin, and Warren Miller. Neither the original collectors of the data nor the consortium bear any responsibility for the analyses or interpretations presented here.

1956: The data were made available by the Inter-university Consortium for Political Research. The data for the SRC 1956 American National Election Study were originally collected by the Survey Research Center of the Institute for Social Research, the University of Michigan under a grant from the Rockefeller Foundation. Neither the original collectors of the data nor the consortium bear any responsibility for the analyses or interpretations presented here.

1960: The data were made available by the Inter-university Consortium for Political Research. The data for the Survey Research Center 1960 American National Election Study were originally collected by Angus Campbell, Philip Converse, Warren Miller, and Donald Stokes. Neither the original collectors of the data nor the consortium bear any responsibility for the analyses or interpretations presented here.

1964: The data were made available by the Inter-university Consortium for Political Research. The data were originally collected by the Survey Research Center Political Behavior Program. Neither the original collectors of the data nor the consortium bear any responsibility for the analyses or interpretations presented here.

1968: The data were made available by the Inter-university Consortium for Political Research. The data for the SRC 1968 American National Election Study were originally collected by the Political Behavior Program of the Survey Re-search Center, Institute for Social Research, the University of Michi-gan. Neither the original collectors of the data nor the consortium bear any responsibility for the analyses or interpretations presented here.

1972: The data were made available by the Inter-university Consortium for Political Research. The data for the CPS 1972 American National Election Study were originally collected by the Center for Political Studies of the Institute for Social Research, the University of Michigan under grants from the National Science Foundation and the National Institute for Mental Health. Neither



the original collectors of the data nor the consortium bear any responsibility for the analyses or interpretations presented here.

1976: The data were made available by the Inter-university Consortium for Political and Social Re-search. The data for the CPS 1976 American National Election Study were originally collected by the Center for Political Studies of the Institute for Social Research, the University of Michigan under a grant from the National Science Foundation. Neither the original collectors of the data nor the consortium bear any responsibility for the analyses or interpretations presented here.

1980: The data were made available by the Inter-university Consortium for Political and Social Re-search. The data for the American National Election Study, 1980, were originally collected by the Center for Political Studies of the Institute for Social Research, the University of Michigan, for the National Election Studies, under the overall direction of Warren E. Miller; Maria Elena Sanchez was director of studies in 1980. The data were collected under a grant from the National Science Foundation. Neither the original collectors of the data nor the consortium bear any responsibility for the analyses or interpretations presented here.

1984: The data were made available by the Inter-university Consortium for Political and Social Re-search. The data for the American National Election Study, 1984, were originally collected by the Center for Political Studies of the Institute for Social Research, the University of Michigan, for the National Election Studies, under the overall direction of Warren E. Miller; Santa Traugott was director of studies in 1984. The data were collected under a grant from the national science foundation. Neither the collector of the original data nor the consortium bears any responsibility for the analyses or interpretations presented here.

1988: Miller, Warren E., and the National Election Studies. American National Election Study, 1988: Pre- and Post-Election Survey computer file. Ann Arbor, MI: Center for Political Studies, University of Michigan, 1989 original producer. Ann Arbor, Michigan: Inter-university Consortium for Political and Social Research, 1989 producer and distributor.

1992: Miller, Warren E., Donald R. Kinder, Steven J. Rosenstone, and the National Election Studies. American National Election Study, 1992: Pre- and Post-election survey [Computer file]. Conducted by University of Michigan, Center for Political Studies. ICPSR ed. Ann Arbor, MI: University of Michigan, Center for Political Studies, and Inter-university Consortium for Political and Social Research [producers], 1993. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 1993.

1996: The National Election Studies ([www.umich.edu/~nes](http://www.umich.edu/~nes)). The 1996 National Election Study [dataset]. Ann Arbor, MI: University of Michigan, Center for Political Studies [producer and distributor].

2000: Burns, Nancy, Donald R. Kinder, Steven J. Rosenstone, Virginia Sapiro, and the National Election Studies. National Election Studies, 2000:Pre-/Post-election Study [dataset]. Ann Arbor, MI: University of Michigan, Center for Political Studies [producer and distributor], 2001.

2004: The National Election Studies ([www.umich.edu/~nes](http://www.umich.edu/~nes)). THE 2004 National Election Study [dataset]. Ann Arbor, MI: University of Michigan, Center for Political Studies [producer and distributor]. These materials are based on work supported by the National Science Foundation under grant SES-0118451, and the University of Michigan. Any opinions, findings and conclusions or recommendations expressed in these materials are those of the author(s) and do not necessarily reflect the views of the funding organizations.

2008: Arthur Lupia, Jon A. Krosnick, Pat Luevano, Matthew DeBell, and Darrell Donakowski. 2009. User's Guide to the ANES 2008 Time Series Study. Ann Arbor, MI and Palo Alto, CA: the University of Michigan and Stanford University.

2012: ANES. 2014. User's Guide and Codebook for the ANES 2012 Time Series Study. Ann Arbor, MI and Palo Alto, CA: the University of Michigan and Stanford University.

2016: The American National Election Studies. These materials are based on work supported by the National Science Foundation under grant numbers SES 1444721, 2014-2017, the University of Michigan, and Stanford University.

These datasets can be downloaded at: <https://electionstudies.org/data-center/>.

### **National Annenberg Election Surveys (NAES):**

2000-2004: Romer, Daniel, et al. Capturing campaign dynamics, 2000 and 2004: The national Annenberg election survey. University of Pennsylvania Press, 2006.

2008: Johnston, Richard. "Modeling campaign dynamics on the web in the 2008 National Annenberg Election Study." *Journal of Elections, Public Opinion and Parties* 18.4 (2008): 401-412.

These datasets can be downloaded at: <https://www.annenbergpublicpolicycenter.org/political-communication/naes/>.

## B.2 Definition of Key Variables

### B.2.1 Main outcomes

**Vote intention:** Categorical variable indicating which candidate or party the respondent intends to vote for.

- This variable is constructed from questions in the pre-electoral survey of the type: “Who do you think you will vote for? Hillary Clinton, Donald Trump, Gary Johnson, Jill Stein, or someone else?” (ANES 2016) or “Which constituency candidate of which party will you give your first vote to in the federal election?” (GLES 2009).
- Possible values include answers of the type “blank” (for respondents who say they intend to vote blank or null) or “don’t know” (for respondents who say they do not know whom they will vote for).
- The variable is set to missing for respondents who mention a candidate or party which does not appear among answers to the post-electoral vote choice question. We take the fact that they do not appear among answers to the post-electoral vote choice question as a sign that this option was not proposed in the post-electoral survey, so that comparing the respondent’s pre-election vote intention and post-electoral vote choice would be uninformative. This rule also applies to answers of the type “other” (for respondents who state they intend to vote for another candidate or party) or “blank” (for respondents who state they intend to vote blank or null): we set the variable to missing for the answers “other” or “blank” when these answers do not appear among answers to the post-electoral vote choice question.
- When an answer “other” is available both in the pre- and post-electoral surveys, we keep it and treat it as a unique party. In that case, we also give the value “other” to respondents who say they intend to vote for small candidates who do not appear in the post-electoral survey.
- This variable is set to missing for people who respond “I will not vote” instead of naming a candidate or party.
- This variable, and all variables described below, are set to missing for respondents who refused to answer the question.

**Vote choice:** Categorical variable indicating which candidate or party the respondent voted for.

- This variable is constructed from questions in the post-electoral survey of the type: “Who did you vote for? Hillary Clinton, Donald Trump, Gary Johnson, Jill Stein, or someone else?”

(ANES 2016) or “Which constituency candidate of which party did you give your first vote to?” (GLES 2009).

- Possible values include answers of the type “blank” (for respondents who report that they voted blank or null).
- The variable is set to missing for people who respond “I don’t know” to the question.
- The variable is set to missing for respondents who mention a candidate or party which does not appear among answers to the pre-electoral vote intention question, for the same reason as mentioned above. This rule also applies to answers of the type “other” (for respondents who report they voted for another candidate or party) or “blank” (for respondents who report they voted blank or null): we set the variable to missing for the answers “other” or “blank” when these answers do not appear among answers to the pre-electoral vote intention question.
- When an answer “other” is available both in the pre- and post-electoral surveys, we keep it and treat it as a unique party. In that case, we also give the value “other” to respondents who report they voted for small candidates who do not appear in the pre-electoral survey.
- This variable is set to missing for people who respond “I did not vote” instead of naming a candidate or party.

**Turnout intention:** Dummy equal to 1 if the respondent intends to vote, and 0 otherwise.

- This variable is constructed from questions in the pre-electoral survey of the type: “Many people vote at elections. Others don’t get around to voting or don’t take part in the election for other reasons. The next federal election will be held on 27 September. What will you do? Are you certain to vote, likely to vote, might you vote, or are you not likely or certain not to vote?” (GLES 2009) or “How about the election for President? Do you intend to vote for a candidate for President?” (ANES 2016).
- When the question in the survey proposes a range of answers, from answers of the type “certain not to vote” or 0 on a scale from 0 to 10, to answers of the type “certain to vote” or 10 on the 0-10 scale, the variable is set to 1 for respondents who give the highest answer (respondents who intend to vote with certainty) and to 0 for respondents who give any other answer, including respondents who say that they may vote but are not certain they will. This rule has the advantage of being easily applicable in a uniform way to surveys with very different response scales. In addition, in the vast majority of surveys, even the share of respondents who give the highest answer exceeds actual turnout by a substantial amount. In few surveys (e.g., ANES 1952-1968), the variable is set to 1 for respondents who give either

the highest or the second highest answer (“yes, definitely” or “yes”) as a very small share of respondents give the highest answer (“yes, definitely”).

- When possible, this variable is specific to each ballot (in surveys asking questions about multiple ballots, e.g., the first and second vote in Germany) or to each office (in surveys asking questions about multiple offices, e.g., presidential and gubernatorial elections in the U.S.). The variable is then set to 0 both for respondents who do not intend to vote in the overall election and for those who intend to vote but not for that specific ballot or office.
- The variable is set to 0 for people who respond “I don’t know” to the question.
- The variable is also set to 0 for people who respond “I will not vote” to the vote intention question, regardless of their answer to the turnout intention question.

**Turnout declaration:** Dummy equal to 1 if the respondent voted, and 0 otherwise.

- This variable is constructed from questions in the post-electoral survey of the type: “Many voters didn’t get around to voting or did not participate in the federal election on 27 September for other reasons. What about you? Did you vote or not?” (GLES 2009) or “In talking to people about elections, we often find that a lot of people were not able to vote because they weren’t registered, they were sick, or they just didn’t have time. Which of the following statements best describes you: One, I did not vote (in the election this November); Two, I thought about voting this time, but didn’t; Three, I usually vote, but didn’t this time; or Four, I am sure I voted?” (ANES 2016).
- This variable is set to missing for people who respond “I don’t know” to the question.
- This variable is set to 0 for people who respond “I did not vote” to the vote choice question, regardless of their answer to the turnout declaration question.

**Certainty of vote intention:** Numerical variable from 0 to 1 indicating how certain the respondent is to vote for the candidate or party they intend to vote for.

- This variable is constructed from questions asked in the pre-electoral survey of the type: “How certain are you that you would vote for this party?” (BES 2016), “Will you definitely vote for George W. Bush for president, or is there a chance you could change your mind and vote for someone else?” (NAES 2004), or “Would you say that your preference for this candidate is strong or not strong?” (ANES 1996).
- When the certainty question in the survey proposes more than two answers (“certain” or “not certain”), this variable is normalized to range from 0 (for respondents who are not certain at

all that they will vote for the candidate or party they intend to vote for) to 1 (for respondents who are certain they will vote for the candidate or party they intend to vote for).

- This variable is set to missing for people who respond “I don’t know” to the question.
- It is also set to missing for people who responded “I don’t know” to the vote intention question.

### **B.2.2 Special cases**

**Early voters:** Some countries allow people to vote before Election Day, by casting their ballot in-person at a polling place or by mailing their ballot. In our sample, pre-electoral survey respondents were asked whether they voted early and for whom in the following surveys: AUTNES 2013, BES 2016, CES 2004-15, SELECTS 2011-15, GLES 2009-13, NAES 2000-08, ANES 2012-16. In some surveys, these questions were asked to all respondents; and in others, only to respondents surveyed sufficiently close to the election. Differently from other voters, early voters’ pre-electoral answers report their actual vote choice, not their vote intention. In addition, their vote choice consistency is mechanically very high, as their pre-electoral vote intention is identical to their post-electoral vote choice, provided that they do not misrecall or misreport whom they voted for in any of the two surveys. Nonetheless, we keep early voters in the sample and treat the vote choice they report in the pre-electoral survey similarly to other respondents’ vote intention. The reason is, first, that their high vote choice consistency adequately reflects the fact that they have already arrived at their final choice by the time in which they receive the pre-electoral survey. In fact, they felt sufficiently certain about it that they casted their ballot ahead of time. Second, the share of respondents who report they voted early naturally increases over time. But early voters likely differ from other voters on many dimensions, including the time at which they reach their final vote decision. Dropping them could therefore generate sample selection issues. Our treatment of early voters includes the following rules:

- Turnout intention is set to 1 for all early voters.
- Certainty of vote intention is set to 1 for all early voters, except those who say that they do not know whom they voted for, in which case certainty of vote intention is set to missing.
- When early voters are not asked whether they voted and whom they voted for in the post-electoral survey, we set the post-electoral turnout declaration of these respondents equal to 1, and their post-electoral vote choice equal to their recorded pre-electoral vote choice.

**Unlikely voters:** The vote intention variable is defined for all respondents who were asked this question, including those who are not certain that they will vote. In several surveys, likely and unlikely voters are asked separate questions, of the type “Which political party will you give your vote to in the federal election?” for respondents likely to vote and “Which political party would you vote for, assuming you voted at all?” for unlikely voters (GLES 2009). Our vote intention variable combines answers to both questions.

**Undecided voters:** In the BES 2001-15 surveys, pre-electoral survey respondents are asked whether they have already decided whom they will vote for before being asked whom they intend to vote for. For instance, BES 2001 first asks “If you do vote in the general election, have you decided which party you will vote for, or haven’t you decided yet?” Voters who answer “yes” to that question are then asked “Which party is that?” while undecided voters who answer “no” are then asked “Which party do you think you are most likely to vote for?” Our vote intention variable combines answers to both of these questions. In BES 2016, CES 1988-2015, SELECTS 2011-15, NZES 1996-2002, and DPES 1998-2002, respondents who answer “I don’t know” to the vote intention question are asked a second question of the type “Which party would you be most likely to vote for?” (NZES 1996). These respondents’ answer would be treated as “don’t know” in surveys that ask a single question. Therefore, to ensure that we treat vote intentions homogeneously across all surveys, we ignore their answer to the second question.

### **B.2.3 Policy preferences, issue salience, and beliefs on candidates**

**Pre-electoral policy preference:** Numerical variable indicating the respondent’s position on a policy issue before the election.

- This variable is constructed from questions about policy issues or policy proposals that allow for a range of answers ordered from one extreme position (e.g., “I do not agree at all” or “I am very unfavorable”) to the opposite extreme position (e.g., “I agree very much” or “I am very favorable”).
- This variable is constructed from questions that were asked both in the pre- and the post-electoral surveys, using the same wording and admitting the same answers in both surveys. The full list of policy questions included in our analysis is available in Table B.3.
- In some surveys (e.g., GLES 2009 or CES 1988), the variable combines answers to several versions of the same policy question that are asked to different subsamples of respondents.

- Possible values include answers of the type “don’t know” (for respondents who state they do not have a preferred position on the issue).

**Post-electoral policy preference:** Numerical variable indicating the respondent’s preferred position on a specific policy issue after the election.

- The variable is set to missing for people who respond “I don’t know” to the question.

**Pre-electoral most important issue:** Categorical variable indicating which issue the respondent considers the most important before the election.

- This variable is constructed from questions that ask respondents to choose from a closed list of issues or from open-ended questions that allow respondents to provide their own answer. We only use questions of the latter type if respondents’ answers were aggregated into a finite number of issues *ex post* in the survey data. We further aggregate respondents’ answers into 10 larger categories: economic policy (e.g., ‘inflation’), social policy (e.g., ‘abortion’), foreign policy (e.g., ‘Iraq war’), public safety (e.g., ‘crime and violence’), civil rights (e.g., ‘civil liberties’), moral values (e.g., ‘decline of tradition’), institutions (e.g., ‘country stability’), politics (e.g., ‘integrity in politics’), electoral issues (e.g., ‘low turnout’), and other.
- Possible values include answers of the type “don’t know” (for respondents who state they do not know which issue they find the most important).
- We also include answers of the type “no issue” (for respondents who state that they do not find any issue important) or “other issue” (for respondents who mention an issue that is not on the list). These “no issue” and “other issue” answers are assigned to the “other” category.

**Pre-electoral most important issue:** Categorical variable indicating which issue the respondent considers the most important after the election.

- The variable is set to missing for people who respond “I don’t know” to the question.

**Pre-electoral belief on candidate:** Variable indicating the respondent’s belief about candidates’ or parties’ positions on specific policy issues and/or candidates’ or parties’ quality, before the election.

- This variable is constructed from questions of two different types:
  1. Numerical questions, which ask respondents to choose from a range of answers ordered from one extreme (e.g., “this party is very unfavorable to this policy proposal” or “this party is very incompetent”) to the other (e.g., “this party is very favorable to this policy proposal” or “this party is very competent”).



2. Categorical questions, which ask respondents to choose from the list of candidates or parties in the race, e.g., to identify which one would be the best to address the issue they deem the most important, or which one has a certain position on the issue of immigration.

- This variable is constructed from questions that were asked both in the pre- and the post-electoral surveys, using the same wording and allowing for the same list of answers. The full list of belief questions included in our analysis is available in Table B.4.
- Possible values include answers of the type “don’t know” (for respondents who state they do not know the answer to the question).
- For questions of the second type, we also include answers of the type “no party” or “all parties”.

**Post-electoral belief on candidate:** Variable indicating the respondent’s belief about candidates’ or parties’ positions on specific policy issues and/or candidates’ or parties’ quality, after the election.

- The variable is set to missing for people who respond “I don’t know” to the question.

#### **B.2.4 Sociodemographic characteristics**

**Gender:** Dummy variable equal to 1 if the respondent is a man, and 0 otherwise.

- This variable, and all other sociodemographic characteristics, is constructed from questions asked in the pre-electoral survey. If the characteristic was not recorded in the pre-electoral survey, we use questions asked in surveys that preceded the pre-electoral survey (in studies that survey respondents over multiple waves before the election) or questions asked in the post-electoral survey.
- This variable, and all other sociodemographic characteristics, is set to missing for people who respond “other” to the question.

**Age:** Respondent’s age in number of years.

- One survey (ANES 1956) records age brackets instead of exact age in years. For that survey, the variable is set to the median age within each bracket. We use ANES surveys conducted in previous and following election years (1952 and 1960) to determine the median age among respondents selecting into the youngest bracket (below 21 years old) and the oldest bracket (65 years old and older).

**More education than high school:** Dummy variable equal to 1 if the respondent has completed more education than high school, and 0 otherwise.

- This variable is constructed from questions of the type: “At what age did you finish full-time education?” (BES 2001) or “What is the highest level of education that you have completed?” (CES 2015).

**College degree:** Dummy variable equal to 1 if the respondent has a college degree, and 0 otherwise.

**Income quartiles:** Dummy variables (one for each quartile) equal to 1 if the respondent’s income falls into the first (resp. second, third, and fourth) quartile of the income distribution (among respondents from the same survey), and 0 otherwise.

- This variable is constructed from questions of the type: “What is your total household income before taxes for the year 2014?” (CES 2015) or “How would you assess your current income situation? Would you say that you get along very well, get along well, get along with difficulty, get along with great difficulty?” (AUTNES 2013).

**Employment status:** Dummy variable equal to 1 if the respondent has a full-time or part-time employed job or is self-employed, and 0 otherwise.

- This variable is constructed from questions of the type: “Which of the following best describes your current situation?” (AUTNES 2013) or “We’d like to know if you are working now, or are you unemployed, retired, permanently disabled, a housewife, a student or what?” (ANES 1976). We do not use questions of the type: “Are you currently unemployed?”, which give the same value to people who are currently employed and people outside the labor force.
- This variable is set to 0 for respondents who are currently enrolled as students or retired, even if they state they have a paid job as well.

## **B.2.5 Media consumption, campaign exposure, and political engagement**

**Newspapers:** Dummy variable equal to 1 if the respondent’s consumption of newspapers is high, and 0 otherwise.

- This variable, and, unless specified, all other variables in this subsection, are constructed from questions asked in the pre-electoral survey exclusively.
- When possible, this variable is constructed from questions specific to political news of the type: “How often do you inform yourself about political events in Austria through

newspapers?” (AUTNES 2013). When specific questions are unavailable, we use questions about general news.

- Some surveys ask respondents how frequently they read newspapers and how much attention they pay to political news in newspapers (e.g., NAES). In this case, the newspapers variable is set to 0 for respondents who never read newspapers and for respondents who read newspapers but do not pay any attention to political news.
- In many surveys, media questions propose more than two answers, from answers of the type “never” or “not at all” (for respondents who never read newspapers and/or who do not pay attention to political news in newspapers) to answers of the type “every day” or “a lot” (for respondents who read newspapers everyday and/or pay a lot of attention to political news in newspapers). When the possible number of answers  $K$  is even, the newspapers variable is set to 1 for respondents who provide one of the  $\frac{K}{2}$  highest answers, and 0 otherwise. When the possible number of answers  $K$  is odd, the newspapers variable is set to 1 for respondents who provide one of the  $\frac{K-1}{2}$  highest answers, and 0 otherwise.
- This variable is typically constructed from questions that ask respondents about their consumption of newspapers offline. However, for surveys conducted in the most recent election years, it is likely that respondents answer the newspaper question with both offline and online newspapers in mind. In a few surveys, the variable is constructed from questions that explicitly ask respondents about their consumption of newspapers both offline and online (e.g., BES 2016: “During the last seven days, on average how much time (if any) have you spent per day following news about politics or current affairs from newspapers (including online)?”).

**TV News:** Dummy variable equal to 1 if the respondent’s consumption of TV news is high, and 0 otherwise.

- This variable is constructed from questions specific to news programs exclusively. We do not use questions that ask respondents about their consumption of other TV programs such as sport and entertainment.
- Like for newspapers, some surveys ask respondents how frequently they watch TV news programs and how much attention they pay to political news on TV (e.g., NAES). In this case, the TV news variable is set to 0 for respondents who never watch TV, for respondents who never watch news programs on TV, and for respondents who watch news programs on TV but say that they do not pay any attention to political news.

**Radio news:** Dummy variable equal to 1 if the respondent's consumption of radio news is high, and 0 otherwise.

**Online news:** Dummy variable equal to 1 if the respondent's consumption of online news is high, and 0 otherwise.

- The variable is constructed from questions that ask respondents about their consumption of online news, broadly defined. In a few surveys, it is constructed from questions that ask about the respondent's consumption of news on Internet sites, excluding newspapers (e.g., BES 2016). In others, it is constructed from questions that ask about the respondent's consumption of online newspapers (e.g., ANES 2004).

**Contact by campaign:** Dummy variable equal to 1 if the respondent has recently been contacted by a candidate's or party's campaign, and 0 otherwise.

- The variable is constructed from questions that ask respondents if they have recently been contacted by any candidate, party member, or campaign activist, of the type: "In the past week, were you contacted in person or by telephone by any of the local candidates or party workers in your riding?" (CES 1992).
- When the survey specifies the mean of communication used by the candidate's or party's campaign to contact the respondent, the variable is constructed from questions referring to contact by mail, email, phone call, text message, and home visit. We exclude questions that ask respondents if they proactively engaged with a candidate's or party's campaign themselves, e.g., by attending a meeting or visiting a campaign office.
- When respondents are asked multiple contact questions, one for each candidate or party in the race, the variable is set to 0 for respondents who give a negative answer to all questions.

**Visit by campaign:** Dummy variable equal to 1 if the respondent has recently been visited at home by a candidate's or party's campaign, and 0 otherwise.

**Polls:** Dummy variable equal to 1 if the respondent has seen elections polls recently, and 0 otherwise.

**Political discussions:** Dummy variable equal to 1 if the respondent reports a high propensity to discuss politics with others in the recent period, and 0 otherwise.

- The variable is constructed from questions of the type: "During the last week, roughly on how many days did you talk about politics with other people?" (BES 2015).

- In many surveys, the discussion question proposes more than two answers, from answers of the type “never” or “not at all” (for respondents who never discuss politics with others) to answers of the type “every day” or “a lot” (for respondents who discuss politics with others very often). When the possible number of answers  $K$  is even, the discussion variable is set to 1 for respondents who provide one of the  $\frac{K}{2}$  highest answers, and 0 otherwise. When the possible number of answers  $K$  is odd, the variable is set to 1 for respondents who provide one of the  $\frac{K-1}{2}$  highest answers, and 0 otherwise.

**Party identification:** Dummy variable equal to 1 if the respondent strongly identifies with a party, and 0 otherwise.

- Unlike other variables described in this section, the party identification variable is constructed from questions asked in the post-electoral survey exclusively.
- In many surveys, the question that asks respondents how strongly they identify with a party is preceded by a question that asks respondents which party they identify with. The variable on party identification strength is set to 0 for people who respond “no party” or – in the U.S. – “independent” to the former question.
- In many surveys, the party identification question proposes more than two answers, from answers of the type “no party identification” or “not strong at all” (for respondents who do not strongly identify with a party) to answers of the type “very strong” (for respondents who strongly identify with a party). When the possible number of answers  $K$  is even, the party identification variable is set to 1 for respondents who provide one of the  $\frac{K}{2}$  highest answers, and 0 otherwise. When the possible number of answers  $K$  is odd, the variable is set to 1 for respondents who provide one of the  $\frac{K-1}{2}$  highest answers, and 0 otherwise.

**Debate watching:** Dummy variable equal to 1 if the respondent has watched TV debates during the campaign, and 0 otherwise.

- Unlike other variables described in this section, the debate watching variable is constructed from questions asked in the post-electoral survey exclusively.
- The variable is constructed from questions that ask respondents (after the election) if they watched a specific TV debate or TV debates in general during the campaign. It is set to 0 for respondents who have not watched any debate during the campaign.

### B.3 Sampling Frame

This section provides the full list of elections, surveys, policy and belief questions, parties, and TV debates included in our analysis.

Table B.1: List of elections by country

(a) United States

Survey	Election date	Election type	Voting rule	# days before election	N pre-election	N pre- and post-election	Post-election: median lag
ANES 1952	11/4/1952	Governor	Plurality	50	753	610	19
ANES 1952	11/4/1952	Lower House	Plurality	50	1230	888	19
ANES 1952	11/4/1952	President	Plurality	50	1333	1108	19
ANES 1952	11/4/1952	Upper House	Plurality	50	934	694	19
ANES 1956	11/6/1956	President	Plurality	50	1304	1155	21
ANES 1960	11/8/1960	President	Plurality	57	943	836	23
ANES 1964	11/3/1964	President	Plurality	57	1410	1190	22
ANES 1968	11/5/1968	President	Plurality	60	1302	1026	19
ANES 1972	11/7/1972	President	Plurality	67	2117	1535	22
ANES 1976	11/2/1976	President	Plurality	46	1522	1138	17
ANES 1980	11/4/1980	President	Plurality	90	1196	896	18
ANES 1984	11/6/1984	President	Plurality	63	1807	1336	11
ANES 1988	11/8/1988	President	Plurality	63	1615	1170	13
ANES 1992	11/3/1992	President	Plurality	63	2040	1609	27
ANES 1996	11/5/1996	Lower House	Plurality	63	1316	945	12
ANES 1996	11/5/1996	President	Plurality	63	1460	1107	12
ANES 2000	11/7/2000	President	Plurality	63	1523	1121	14
ANES 2004	11/2/2004	President	Plurality	56	1045	804	11
ANES 2008	11/4/2008	President	Plurality	63	1925	1500	14
ANES 2012	11/6/2012	Governor	Plurality	58	191	132	20
ANES 2012	11/6/2012	Lower House	Plurality	58	1312	1001	20
ANES 2012	11/6/2012	President	Plurality	58	1631	1290	20
ANES 2012	11/6/2012	Upper House	Plurality	58	971	772	20
ANES 2016	11/8/2016	Governor	Plurality	62	461	339	11
ANES 2016	11/8/2016	Lower House	Plurality	62	2988	2117	11
ANES 2016	11/8/2016	President	Plurality	62	3589	2665	11
ANES 2016	11/8/2016	Upper House	Plurality	62	2187	1469	11
NAES 2000	11/7/2000	President	Plurality	112	3156	2765	15
NAES 2004	11/2/2004	President	Plurality	110	7351	6771	26
NAES 2008	11/4/2008	President	Plurality	67	21093	15777	27

## (b) Canada

Survey	Election date	Election type	Voting rule	# days before election	N pre-election	N pre- and post-election	Post-election: median lag
CES 1988	11/21/1988	Lower House	Plurality	48	3043	2125	24
CES 1992	10/26/1992	Referendum	Yes/No	32	1781	1431	9
CES 1993	10/25/1993	Lower House	Plurality	45	2916	2347	12
CES 1997	6/2/1997	Lower House	Plurality	36	2671	1869	14
CES 2000	11/27/2000	Lower House	Plurality	34	2405	1606	19
CES 2004	6/28/2004	Lower House	Plurality	36	2607	1794	26
CES 2006	1/23/2006	Lower House	Plurality	55	2754	2120	14
CES 2008	10/14/2008	Lower House	Plurality	18	2149	1485	8
CES 2011	5/2/2011	Lower House	Plurality	37	2849	2126	16
CES 2015	10/19/2015	Lower House	Plurality	69	7606	4863	11

## (c) Netherlands

Survey	Election date	Election type	Voting rule	# days before election	N pre-election	N pre- and post-election	Post-election: median lag
DPES 1998	5/6/1998	Lower House	Proportional	39	1771	1501	16
DPES 2002	5/15/2002	Lower House	Proportional	31	1805	1468	12
DPES 2006	11/22/2006	Lower House	Proportional	43	2382	2133	7

## (d) Germany

Survey	Election date	Election type	Voting rule	# days before election	N pre-election	N pre- and post-election	Post-election: median lag
GLES 2009	9/27/2009	Lower House - 1st vote	Plurality	60	4479	3009	8
GLES 2009	9/27/2009	Lower House - 2nd vote	Proportional	60	4531	3089	8
GLES 2013	9/22/2013	Lower House - 1st vote	Plurality	76	6131	4122	8
GLES 2013	9/22/2013	Lower House - 2nd vote	Proportional	76	6217	4211	8
GLES 2017	9/24/2017	Lower House - 1st vote	Plurality	62	6185	3426	6
GLES 2017	9/24/2017	Lower House - 2nd vote	Proportional	62	6257	3505	6

## (e) Switzerland

Survey	Election date	Election type	Voting rule	# days before election	N pre-election	N pre- and post-election	Post-election: median lag
SELECTS 2011	10/23/2011	Lower House	Proportional	41	2777	2214	4
SELECTS 2015	10/18/2015	Lower House	Proportional	62	5094	4355	2

## (f) Sweden

Survey	Election date	Election type	Voting rule	# days before election	N pre-election	N pre- and post-election	Post-election: median lag
SNES 2014	05/25/2014	European Parliament	Proportional	11	14096	12565	1
SNES 2014	09/14/2014	Lower House	Proportional	12	14426	13212	1

## (g) New Zealand

Survey	Election date	Election type	Voting rule	# days before election	N pre-election	N pre- and post-election	Post-election: median lag
NZES 1996	10/12/1996	Lower House - 1st vote	Plurality	37	2100	1925	24
NZES 1996	10/12/1996	Lower House - 2nd vote	Proportional	37	2093	1944	24
NZES 1999	11/27/1999	Lower House - 1st vote	Plurality	40	2211	2074	23
NZES 1999	11/27/1999	Lower House - 2nd vote	Proportional	40	2217	2131	23
NZES 2002	7/27/2002	Lower House - 1st vote	Plurality	36	2068	1973	N/A
NZES 2002	7/27/2002	Lower House - 2nd vote	Proportional	36	2073	1987	N/A

## (h) Italy

Survey	Election date	Election type	Voting rule	# days before election	N pre-election	N pre- and post-election	Post-election: median lag
ITANES 2013	2/24/2013	Lower House	Proportional	50	1658	1478	31

## (i) Austria

Survey	Election date	Election type	Voting rule	# days before election	N pre-election	N pre- and post-election	Post-election: median lag
AUTNES 2013	9/29/2013	Lower House	Proportional	55	2441	1555	18

## (j) United Kingdom

Survey	Election date	Election type	Voting rule	# days before election	N pre-election	N pre- and post-election	Post-election: median lag
BES 2001	6/7/2001	Lower House	Plurality	30	2737	2024	4
BES 2010	5/6/2010	Lower House	Plurality	29	10701	9004	2
BES 2015	5/7/2015	Lower House	Plurality	38	25917	23250	3
BES 2016	6/23/2016	Referendum	Yes/No	48	29175	23653	3

Notes: The surveys included in the study are the American National Election Studies (ANES), the National Annenberg Election Surveys (NAES), the Austrian National Election Studies (AUTNES), the British Election Studies (BES), the Canadian Election Studies (CES), the Dutch Parliamentary Election Studies (DPES), the German Longitudinal Election Studies (GLES), the Italian National Election Studies (ITANES), the Swiss Electoral Studies (SELECTS), the New Zealand Election Studies (NZES), and the Swedish National Election Studies (SNES). In New Zealand and Sweden, Lower House refers to the only house in the country's unicameral parliament. Other columns report how many days before Election Day the survey started, the number of respondents who said that they intended to vote (N pre-election), and the number of respondents surveyed before and after the election who said that they intended to vote, in the first survey, and who reported that they voted and gave a vote choice declaration, in the second (N pre- and post-election). We also report the median number of days separating the post-electoral survey from the election.



Table B.2: List of surveys by country

(a) United States

Survey	Survey mode	RCS design	Sociodemographic factors	Media consumption	Contact by party	Party identification	Political discussions	Watching debates
ANES 1952	Face-to-face	No	All	None	None	No	No	No
ANES 1956	Face-to-face	No	All	None	None	No	No	No
ANES 1960	Face-to-face	No	All	None	None	Yes	No	Yes
ANES 1964	Face-to-face	No	All	None	None	No	No	No
ANES 1968	Face-to-face/ Mail	No	Some	None	None	No	No	No
ANES 1972	Face-to-face/ Mail	No	All	None	None	No	No	No
ANES 1976	Face-to-face	No	All	None	None	No	No	Yes
ANES 1980	Face-to-face	No	All	Some	None	Yes	No	Yes
ANES 1984	Face-to-face/ Phone	No	All	Some	None	Yes	Yes	Yes
ANES 1988	Face-to-face	No	All	Some	None	No	Yes	No
ANES 1992	Face-to-face/ Phone	No	Some	None	None	No	No	No
ANES 1996	Face-to-face/ Phone	No	All	Some	None	Yes	No	No
ANES 2000	Face-to-face/ Phone	No	All	Some	None	No	No	Yes
ANES 2004	Face-to-face	No	All	Some	None	No	No	No
ANES 2008	Face-to-face	No	All	Some	None	No	No	No
ANES 2012	Face-to-face	No	All	Some	None	Yes	No	No
ANES 2016	Face-to-face/ Online	No	Some	Some	None	No	No	No
NAES 2000	Phone	Yes	All	Some	None	Yes	Yes	Yes
NAES 2004	Phone	Yes	All	Some	None	Yes	Yes	Yes
NAES 2008	Phone/Online	Yes	All	Some	None	Yes	No	No

(b) Austria

Survey	Survey mode	RCS design	Sociodemographic factors	Media consumption	Contact by party	Party identification	Political discussions	Watching debates
AUTNES 2013	Phone	Yes	All	Some	All	No	No	No

(c) Netherlands

Survey	Survey mode	RCS design	Sociodemographic factors	Media consumption	Contact by party	Party identification	Political discussions	Watching debates
DPES 1998	Face-to-face/ Phone	No	All	Some	None	No	No	Yes
DPES 2002	Face-to-face	No	All	Some	None	No	No	Yes
DPES 2006	Face-to-face	No	All	Some	None	No	No	Yes

## (d) Canada

Survey	Survey mode	RCS design	Sociodemographic factors	Media consumption	Contact by party	Party identification	Political discussions	Watching debates
CES 1988	Phone	Yes	All	Some	None	Yes	Yes	Yes
CES 1992	Phone	Yes	All	Some	None	No	No	Yes
CES 1993	Phone	Yes	All	Some	Some	Yes	Yes	Yes
CES 1997	Phone	Yes	All	Some	None	Yes	Yes	Yes
CES 2000	Phone	Yes	All	Some	All	No	Yes	Yes
CES 2004	Phone	Yes	All	Some	All	Yes	Yes	Yes
CES 2006	Phone	Yes	All	All	None	Yes	Yes	No
CES 2008	Phone	Yes	All	None	None	Yes	No	No
CES 2011	Phone	Yes	All	None	None	Yes	No	No
CES 2015	Phone/Online	Yes	All	None	None	Yes	No	No

## (e) Switzerland

Survey	Survey mode	RCS design	Sociodemographic factors	Media consumption	Contact by party	Party identification	Political discussions	Watching debates
SELECTS 2011	Phone	Yes	All	Some	None	No	Yes	No
SELECTS 2015	Phone	Yes	All	Some	None	Yes	Yes	No

## (f) Italy

Survey	Survey mode	RCS design	Sociodemographic factors	Media consumption	Contact by party	Party identification	Political discussions	Watching debates
ITANES 2013	Face-to-face	Yes	Some	Some	Some	No	No	No

## (g) New Zealand

Survey	Survey mode	RCS design	Sociodemographic factors	Media consumption	Contact by party	Party identification	Political discussions	Watching debates
NZES 1996	Phone/Mail	Yes	All	None	None	Yes	No	No
NZES 1999	Phone	Yes	All	Some	Some	Yes	No	No
NZES 2002	Phone	No	All	Some	None	Yes	Yes	No

## (h) Sweden

Survey	Survey mode	RCS design	Sociodemographic factors	Media consumption	Contact by party	Party identification	Political discussions	Watching debates
SNES 2014	Online	No	All	None	None	No	No	No
SNES 2014	Online	No	All	None	All	No	No	Yes

## (i) Germany

Survey	Survey mode	RCS design	Sociodemographic factors	Media consumption	Contact by party	Party identification	Political discussions	Watching debates
GLES 2009	Phone	Yes	Some	Some	Some	Yes	Yes	Yes
GLES 2013	Phone	Yes	Some	Some	Some	Yes	Yes	Yes
GLES 2017	Phone	Yes	Some	Some	Some	Yes	Yes	Yes

## (j) United Kingdom

Survey	Survey mode	RCS design	Sociodemographic factors	Media consumption	Contact by party	Party identification	Political discussions	Watching debates
BES 2001	Phone	Yes	Some	Some	None	Yes	No	No
BES 2010	Online	Yes	Some	None	All	Yes	No	No
BES 2015	Online	Yes	All	Some	All	Yes	Yes	No
BES 2016	Online	Yes	All	Some	All	Yes	Yes	No

Notes: For each survey included in the study, we indicate: which survey mode was used; whether the survey is a rolling cross-section; whether all, some, or none of the selected sociodemographic factors and variables on media consumption, contact by a party, and the respondent's propensity to discuss politics with others are available in the pre-electoral survey; and whether information on party identification and watching TV debates is available in the post-electoral survey. Other notes as in Appendix Table B.1.

Table B.3: List of policy questions by country

## (a) Sweden

Survey	Year	Question
SNES	2014	What is your opinion on the following proposal that has appeared in the political debate: introducing a grade in order and behavior at school?

## (b) United Kingdom

Survey	Year	Question
BES	2001	Thinking of the Single European Currency, which of the following statements on this card would come closest to your own view?
BES	2016	Some people feel that Britain should do all it can to unite fully with the European Union. Other people feel that Britain should do all it can to protect its independence from the European Union. Where would you place yourself on this scale?
BES	2016	Some people think that the UK should allow many more immigrants to come to the UK to live and others think that the UK should allow many fewer immigrants. Where would you place yourself on this scale?
BES	2016	In politics people sometimes talk of left and right. Where would you place yourself on the following scale?

## (c) United States

Survey	Year	Question
ANES	1972	Some people believe a change in our whole form of government is needed to solve the problems facing our country, while others feel no real change is necessary. Do you think a big change is needed in our form of government, or should it be kept pretty much as it is?
ANES	1976	Some people feel that the government in Washington should see to it that every person has a job and a good standard of living. Suppose that these people are at one end of this scale – at point number 1. Others think the government should just let each person get ahead on his own. Suppose that these people are at the other end -- at point number 7. And, of course, some other people have opinions in between. Where would you place yourself on this scale, or haven't you thought much about this?
NAES	2004	Making recent federal tax cuts permanent – do you favor or oppose this?
NAES	2004	Do you favor or oppose increasing the \$5.15 minimum wage employers now must pay their workers?
NAES	2004	As far as you know, has the No Child Left Behind education law made American public schools much better, somewhat better, somewhat worse, much worse, or hasn't it made a difference?
NAES	2004	The federal government helping to pay for health insurance for all children – do you favor or oppose this?
NAES	2004	The federal government helping employers pay the cost of their workers' health insurance – do you favor or oppose this?
NAES	2004	Who do you think will benefit more from the new Medicare prescription drug plan – seniors on Medicare or the drug manufacturers?
NAES	2004	Changing the recently passed Medicare prescription drug law to allow re-importing drugs from Canada – do you favor or oppose this?
NAES	2004	Do you favor or oppose allowing workers to invest some of their Social Security contributions in the stock market?
NAES	2004	Do you think the US should keep military troops in Iraq until a stable government is established there, or do you think the U.S. should bring its troops home as soon as possible?
NAES	2004	Laws making it more difficult for a woman to get an abortion – do you favor or oppose this?
NAES	2004	Making additional stem cell lines from human embryos available for federally funded research on diseases like Parkinson's – do you favor or oppose this?
NAES	2004	Would you favor or oppose an amendment to the U.S. Constitution saying that no state can allow two men to marry each other or two women to marry each other?
NAES	2004	Extending the federal law banning assault weapons – do you favor or oppose this?
NAES	2004	The government placing limits on how much people could collect when a jury finds that a doctor has committed medical malpractice – do you favor or oppose this?

## (d) United States (cont.)

Survey	Year	Question
NAES	2008	I'm going to read you some options about federal income taxes. Please tell me which one comes closest to your view on what we should be doing about federal income taxes: Taxes should be cut. Taxes should be kept pretty much as they are. Taxes should be raised if necessary in order to maintain current federal programs and services.
NAES	2008	Do you favor or oppose the federal government in Washington negotiating more free trade agreements like NAFTA?
NAES	2008	I'm going to read you some plans for United States policy in Iraq. Please tell me which one comes closest to your own position: The US should withdraw all troops from Iraq as soon as possible. The US should set a deadline for withdrawing its troops if the Iraqi government doesn't show definite progress. The US should keep its troops in Iraq until a stable government is established.
NAES	2008	All in all, do you think the situation in Iraq was worth going to war over, or not?
NAES	2008	I'm going to read you a proposal some have made regarding immigration. Please tell me whether you strongly favor, somewhat favor, somewhat oppose, or strongly oppose it: provide a path to citizenship for some illegal aliens who agree to return to their home country for a period of time and pay substantial fines.
NAES	2008	I'm going to read you a proposal some have made regarding immigration. Please tell me whether you strongly favor, somewhat favor, somewhat oppose, or strongly oppose it: increase border security by building a fence along part of the US border with Mexico.
NAES	2008	Please tell me which of the following statements about abortion comes closest to your own view: Abortion should be available to anyone who wants it. Abortion should be available, but with stricter limits than it is now. Abortion should not be permitted except in cases of rape, incest, or when the life of the woman is at risk. Abortion should not be permitted under any circumstances.
NAES	2008	There has been much talk recently about whether gays and lesbians should have the legal right to marry someone of the same sex. Which of the following options comes closest to your position on this issue? I support full marriage rights for gay and lesbian couples. I support civil unions or domestic partnerships, but not gay marriage. I do not support any form of legal recognition of the relationships of gay and lesbian couples.

## (e) Germany

Survey	Year	Question
GLÉS	2009	Some people would like to see lower taxes even if that means some reduction in health, education and social benefits; others would like to see more government spending on health, education and social benefits even if it means some increases in taxes. How would you describe your own views on this issue?
GLÉS	2009	How would you describe your views on the issue of nuclear energy? Should more nuclear power stations be built or should all nuclear power stations be closed down today?
GLÉS	2009	To what extent do you agree with the statement: "The German Armed Forces should be pulled out of Afghanistan immediately"?

## (f) Germany (cont.)

Survey	Year	Question
GLES	2013	And what do you think of the following statements: “Immigrants should be obliged to assimilate into the German culture”?
GLES	2013	And what do you think of the following statements: “The government should take measures to reduce the discrepancies in income”?
GLES	2013	And what do you think of the following statements: “In times of the European debt crisis, Germany should provide financial support for the EU member states with financial and economic difficulties”?
GLES	2017	And what do you think of the following statements: “The government should take measures to reduce discrepancies in income”?
GLES	2017	And what do you think of the following statements: “Germany should provide financial support for EU member states experiencing financial and economic difficulties”?
GLES	2017	In politics people sometimes talk of left and right. Where would you place yourself on a scale from 1 to 11 where 1 means the left and 11 means the right?

## (g) Canada

Survey	Year	Question
CES	1988	Now we would like to get your views on abortion. We know that this is a sensitive question. Of the following three positions, which is closest to your own opinion: abortion should never be permitted or should be a matter of the woman’s personal choice?
CES	1988	Now I would like to ask you about the Meech Lake Accord, reached by the federal and provincial governments. Do you support the accord or oppose it?
CES	1988	As we have already mentioned, the government has made a number of changes to the tax system. On the whole, do you support or oppose these changes?
CES	1992	Do you agree or disagree with the proposal to recognize the right of Canada’s aboriginal peoples to govern themselves?
CES	1992	Quebec has been guaranteed one quarter of the seats in the House of Commons. Do you agree or disagree with this proposal?
CES	1992	Do you agree or disagree with the proposal to recognize Quebec as a distinct society?
CES	1992	If you had to choose, should each province have an equal number of Senators or should bigger provinces have more Senators?
CES	1992	Does the agreement give the Senate too much, too little, or about the right amount of power?

Notes: We report the exact wording of all policy questions included in the study, based on the survey codebooks. These questions were asked using the same wording and proposed the same range of answers in the pre- and post-electoral surveys. Other notes as in Appendix Table B.1.

Table B.4: List of belief questions by country

(a) Germany

Survey	Year	Question
GLES	2009	And which political party do you think is best able to solve the issue you find most important?
GLES	2009	In your view, using a scale from 1 to 11, what is the position of the CDU on this socioeconomic dimension?
GLES	2009	In your view, using a scale from 1 to 11, what is the position of the SPD on this socioeconomic dimension?
GLES	2009	In your view, using a scale from 1 to 11, what is the position of the FDP on this socioeconomic dimension?
GLES	2009	In your view, using a scale from 1 to 11, what is the position of the Green Party on this socioeconomic dimension?
GLES	2009	In your view, using a scale from 1 to 11, what is the position of the Die Linke on this socioeconomic dimension?
GLES	2009	In your view, what is the position of the CDU on the use of nuclear energy?
GLES	2009	In your view, what is the position of the SPD on the use of nuclear energy?
GLES	2009	In your view, what is the position of the FDP on the use of nuclear energy?
GLES	2009	In your view, what is the position of the Green Party on the use of nuclear energy?
GLES	2009	In your view, what is the position of Die Linke on the use of nuclear energy?
GLES	2013	And which political party do you think is best able to solve the issue you find most important?
GLES	2017	And which political party do you think is best able to solve the issue you find most important?

(b) United States

Survey	Year	Question
ANES	1976	Some people feel that the government in Washington should see to it that every person has a job and a good standard of living. Suppose that these people are at one end of this scale – at point number 1. Others think the government should just let each person get ahead on his own. Suppose that these people are at the other end – at point number 7. And, of course, some other people have opinions in between. Where would you place the Democratic Party on this scale?
ANES	1976	Where would you place the Republican Party on this scale?
ANES	1976	Where would you place Gerard Ford on this scale?
ANES	1976	Where would you place Jimmy Carter on this scale?

## (c) United States (cont.)

Survey	Year	Question
NAES	2004	To the best of your knowledge, who favors making the recent tax cuts permanent – George W. Bush, John Kerry, both, or neither?
NAES	2004	To the best of your knowledge, who favors eliminating tax breaks for overseas profits of American corporations and using the money to cut corporate income taxes – George W. Bush, John Kerry, both, or neither?
NAES	2004	To the best of your knowledge, which candidate favors increasing the \$5.15 minimum wage employers must pay their workers – George W. Bush, John Kerry, both, or neither?
NAES	2004	To the best of your knowledge, who favors the federal government helping to pay for health insurance for all children and helping employers pay the cost of the workers' health insurance – George W. Bush, John Kerry, both, or neither?
NAES	2004	To the best of your knowledge, who favors changing the recently passed Medicare prescription drug law to allow re-importing drugs from Canada – George W. Bush, John Kerry, both, or neither?
NAES	2004	To the best of your knowledge, which candidate favors allowing the federal government to negotiate with drug companies for lower prescription drug prices for senior citizens – George W. Bush, John Kerry, both, or neither?
NAES	2004	To the best of your knowledge, who favors allowing workers to invest some of their Social Security contributions in the stock market – George W. Bush, John Kerry, both, or neither?
NAES	2004	To the best of your knowledge, who favors reinstating the military draft – George W. Bush, John Kerry, both, or neither?
NAES	2004	To the best of your knowledge, who favors laws making it more difficult for a woman to get an abortion – George W. Bush, John Kerry, both, or neither?
NAES	2004	To the best of your knowledge, which candidate wants to make additional stem cell lines from human embryos available for federally funded research on diseases like Parkinson's – George W. Bush, John Kerry, both, or neither?
NAES	2004	To the best of your knowledge, who urges Congress to extend the federal law banning assault weapons – George W. Bush, John Kerry, both, or neither?
NAES	2004	To the best of your knowledge, which candidate favors placing limits on how much people can collect when a jury finds that a doctor has committed medical malpractice – George W. Bush, John Kerry, both, or neither?
NAES	2004	To the best of your knowledge, who is a former prosecutor – George W. Bush, John Kerry, both, or neither?

## (d) Switzerland

Survey	Year	Question
SELECTS	2011	In your opinion, which party is the best qualified to resolve the issue you find the most important?



## (e) United Kingdom

Survey	Year	Question
BES	2010	Which party is best able to handle the issue you find the most important?
BES	2010	How well do you think the Labour government has handled Britain's education system?
BES	2010	How well do you think the Labour government has handled immigration?
BES	2010	How well do you think the Labour government has handled the National Health Service?
BES	2010	How well do you think the Labour government has handled the current financial crisis?
BES	2010	How well do you think the Labour government has handled the economy in general?
BES	2010	How well do you think the Labour government has handled the level of taxation?
BES	2015	Which party is best able to handle the issue you find the most important?
BES	2015	How well do you think Conservatives are able to handle the single most important issue facing the country?
BES	2015	What about the Labour Party?
BES	2015	What about the Liberal Democrats?
BES	2015	What about UKIP?
BES	2015	What about the Green Party?
BES	2016	Some people think that the UK should allow many more immigrants to come to the UK to live and others think that the UK should allow many fewer immigrants. Where would you place the Conservative party on this scale?
BES	2016	And where would you place the Labor party on this scale?
BES	2016	And where would you place the Liberal Democrats on this scale?
BES	2016	And where would you place the SNP on this scale?
BES	2016	And where would you place Plaid Cymru on this scale?
BES	2016	And where would you place UKIP on this scale?
BES	2016	And where would you place the Greens on this scale?
BES	2016	Some people feel that Britain should do all it can to unite fully with the European Union. Other people feel that Britain should do all it can to protect its independence from the European Union. Where would you place the Conservative Party on this scale?
BES	2016	And where would you place the Labour party on this scale?
BES	2016	And where would you place the Liberal Democrats on this scale?
BES	2016	And where would you place SNP on this scale?
BES	2016	And where would you place Plaid Cymru on this scale?
BES	2016	And where would you place UKIP on this scale?
BES	2016	And where would you place the Greens on this scale?

## (f) Canada

Survey	Year	Question
CES	2004	Do you happen to recall which party is promising to get rid of the gun registry?
CES	2004	Which party is promising to do away with the Federal Sales Tax on family essentials?
CES	2004	Which party is promising to increase military spending by 2 billion dollars each year?
CES	2004	Which party is promising to spend 250 million for fighting AIDS in poor countries?
CES	2004	Do you happen to recall which party is promising to spend 4 billion dollars to reduce waiting times for surgeries?
CES	2004	Which party is promising an inheritance tax on estates over 1 million dollars?

## (g) Austria

Survey	Year	Question
AUTNES	2013	Party best able to handle the issue you find the most important?
AUTNES	2013	Party with best proposals: financial and euro crisis?
AUTNES	2013	Party with best proposals: education?
AUTNES	2013	Party with best proposals: unemployment?
AUTNES	2013	Party with best proposals: immigration?
AUTNES	2013	Party with best proposals: fighting corruption?
AUTNES	2013	Party with most statements: financial and euro crisis?
AUTNES	2013	Party with most statements: education?
AUTNES	2013	Party with most statements: unemployment?
AUTNES	2013	Party with most statements: immigration?
AUTNES	2013	Party with most statements: fighting corruption?

Notes: We report the exact wording of all belief questions included in the study, based on the survey codebooks. These questions were asked using the same wording and proposed the same list of answers in the pre- and post-electoral surveys. Other notes as in Appendix Table B.1.

Table B.5: List of parties and candidates by country

(a) United States 1952-1992

Election date	Election type	Candidate	Incumbent	Small	New
4-Nov-52	Governor	Democratic Party	N/A	No	No
4-Nov-52	Governor	Republican Party	N/A	No	No
4-Nov-52	Lower House	Democratic Party	Yes	No	No
4-Nov-52	Lower House	Republican Party	No	No	No
4-Nov-52	President	Adlai Stevenson	Yes	No	No
4-Nov-52	President	Dwight D. Eisenhower	No	No	No
4-Nov-52	Upper House	Democratic Party	Yes	No	No
4-Nov-52	Upper House	Republican Party	No	No	No
6-Nov-56	President	Adlai Stevenson	No	No	No
6-Nov-56	President	Dwight D. Eisenhower	Yes	No	No
8-Nov-60	President	John F. Kennedy	No	No	No
8-Nov-60	President	Richard Nixon	Yes	No	No
3-Nov-64	President	Lyndon B. Johnson	Yes	No	No
3-Nov-64	President	Barry Goldwater	No	Yes	No
5-Nov-68	President	Hubert Humphrey	Yes	No	No
5-Nov-68	President	Richard Nixon	No	No	No
5-Nov-68	President	George Wallace	No	Yes	No
7-Nov-72	President	George McGovern	No	No	No
7-Nov-72	President	Richard Nixon	Yes	No	No
7-Nov-72	President	John G. Schmitz	No	Yes	No
2-Nov-76	President	Jimmy Carter	No	No	No
2-Nov-76	President	Gerald Ford	Yes	No	No
2-Nov-76	President	Eugene McCarthy	No	Yes	No
2-Nov-76	President	Lester Maddox	No	Yes	No
4-Nov-80	President	Jimmy Carter	Yes	No	No
4-Nov-80	President	Ronald Reagan	No	No	No
4-Nov-80	President	John B. Anderson	No	Yes	No
6-Nov-84	President	Walter Mondale	No	No	No
6-Nov-84	President	Ronald Reagan	Yes	No	No
8-Nov-88	President	Michael Dukakis	No	No	No
8-Nov-88	President	George Bush	Yes	No	No
3-Nov-92	President	George Bush	Yes	No	No
3-Nov-92	President	Bill Clinton	No	No	No
3-Nov-92	President	Ross Perot	No	Yes	No

## (b) United States 1996-2016

Election date	Election type	Candidate	Incumbent	Small	New
5-Nov-96	Lower House	Democratic Party	No	No	No
5-Nov-96	Lower House	Republican Party	Yes	No	No
5-Nov-96	President	Bill Clinton	Yes	No	No
5-Nov-96	President	Bob Dole	No	No	No
5-Nov-96	President	Ross Perot	No	Yes	Yes
7-Nov-00	President	Al Gore	Yes	No	No
7-Nov-00	President	George W. Bush	No	No	No
7-Nov-00	President	Pat Buchanan	No	Yes	No
7-Nov-00	President	Ralph Nader	No	Yes	No
2-Nov-04	President	John Kerry	No	No	No
2-Nov-04	President	George W. Bush	Yes	No	No
2-Nov-04	President	Ralph Nader	No	Yes	No
4-Nov-08	President	Barack Obama	No	No	No
4-Nov-08	President	Bob Barr	No	Yes	No
4-Nov-08	President	John McCain	Yes	No	No
4-Nov-08	President	Ralph Nader	No	Yes	No
6-Nov-12	Governor	Democratic Party	Varies by state	No	No
6-Nov-12	Governor	Republican Party	Varies by state	No	No
6-Nov-12	Lower House	Democratic Party	No	No	No
6-Nov-12	Lower House	Republican Party	Yes	No	No
6-Nov-12	Lower House	Independent(s)	No	Yes	No
6-Nov-12	President	Barack Obama	Yes	No	No
6-Nov-12	President	Mitt Romney	No	No	No
6-Nov-12	Upper House	Democratic Party	Yes	No	No
6-Nov-12	Upper House	Republican Party	No	No	No
8-Nov-16	Governor	Democratic Party	Varies by state	No	No
8-Nov-16	Governor	Republican Party	Varies by state	No	No
8-Nov-16	Lower House	Democratic Party	No	No	No
8-Nov-16	Lower House	Republican Party	Yes	No	No
8-Nov-16	President	Hillary Clinton	Yes	No	No
8-Nov-16	President	Donald Trump	No	No	No
8-Nov-16	President	Gary Johnson	No	Yes	No
8-Nov-16	President	Jill Stein	No	Yes	No
8-Nov-16	Upper House	Democratic Party	No	No	No
8-Nov-16	Upper House	Republican Party	Yes	No	No

## (c) United Kingdom

Election date	Election type	Candidate	Incumbent	Small	New
7-Jun-01	Lower House	Conservative Party	No	No	No
7-Jun-01	Lower House	Green Party	No	Yes	No
7-Jun-01	Lower House	Labour Party	Yes	No	No
7-Jun-01	Lower House	Liberal Democrat	No	Yes	No
7-Jun-01	Lower House	Plaid Cymru	No	Yes	No
7-Jun-01	Lower House	Scottish National Party	No	Yes	No
6-May-10	Lower House	British National Party	No	Yes	No
6-May-10	Lower House	Conservative Party	No	No	No
6-May-10	Lower House	Green Party	No	Yes	No
6-May-10	Lower House	Labour Party	Yes	No	No
6-May-10	Lower House	Liberal Democrat	No	No	No
6-May-10	Lower House	Plaid Cymru	No	Yes	No
6-May-10	Lower House	Scottish National Party	No	Yes	No
6-May-10	Lower House	United Kingdom Independence Party	No	Yes	No
7-May-15	Lower House	British National Party	No	Yes	No
7-May-15	Lower House	Conservative Party	Yes	No	No
7-May-15	Lower House	Green Party	No	Yes	No
7-May-15	Lower House	Labour Party	No	No	No
7-May-15	Lower House	Liberal Democrat	No	Yes	No
7-May-15	Lower House	Plaid Cymru	No	Yes	No
7-May-15	Lower House	Scottish National Party	No	Yes	No
7-May-15	Lower House	United Kingdom Independence Party	No	No	No
23-Jun-16	Referendum	Leave the EU	N/A	N/A	N/A
23-Jun-16	Referendum	Stay/Remain in the EU	N/A	N/A	N/A

## (d) Austria

Election date	Election type	Candidate	Incumbent	Small	New
29-Sep-13	Lower House	Alliance for the Future of Austria	No	Yes	No
29-Sep-13	Lower House	Freedom Party in Carinthia	No	Yes	No
29-Sep-13	Lower House	Freedom Party	No	No	No
29-Sep-13	Lower House	Communist Party	No	Yes	No
29-Sep-13	Lower House	The New Austria and Liberal Forum	No	Yes	Yes
29-Sep-13	Lower House	Austrian People's Party	No	No	No
29-Sep-13	Lower House	Pirate Party	No	Yes	Yes
29-Sep-13	Lower House	Social Democratic Party	Yes	No	No
29-Sep-13	Lower House	Team Stronach	No	Yes	Yes
29-Sep-13	Lower House	The Greens - The Green Alternative	No	No	No

## (e) Italy

Election date	Election type	Candidate	Incumbent	Small	New
24-Feb-13	Lower House	Democratic Centre	No	Yes	Yes
24-Feb-13	Lower House	Act to Stop the Decline	No	Yes	Yes
24-Feb-13	Lower House	Future and Freedom	No	Yes	Yes
24-Feb-13	Lower House	Brothers of Italy	No	Yes	Yes
24-Feb-13	Lower House	The Right	No	Yes	No
24-Feb-13	Lower House	Northern League	No	Yes	No
24-Feb-13	Lower House	Five Star Movement	No	No	No
24-Feb-13	Lower House	Democratic Party	No	No	No
24-Feb-13	Lower House	The People of Freedom	Yes	No	No
24-Feb-13	Lower House	Civil Revolution	No	Yes	No
24-Feb-13	Lower House	Civic Choice	No	No	Yes
24-Feb-13	Lower House	Left Ecology Freedom	No	Yes	No
24-Feb-13	Lower House	Union of the Centre	No	Yes	No

## (f) Canada (1988-1997)

Election date	Election type	Candidate	Incumbent	Small	New
21-Nov-88	Lower House	Progressive Conservative Party	Yes	No	No
21-Nov-88	Lower House	Liberal Party	No	No	No
21-Nov-88	Lower House	New Democratic Party	No	No	No
26-Oct-92	Referendum	No	N/A	N/A	N/A
26-Oct-92	Referendum	Yes	N/A	N/A	N/A
25-Oct-93	Lower House	Bloc Québécois	No	No	Yes
25-Oct-93	Lower House	Progressive Conservative Party	Yes	No	No
25-Oct-93	Lower House	Liberal Party	No	No	No
25-Oct-93	Lower House	New Democratic Party	No	Yes	No
25-Oct-93	Lower House	Reform Party	No	No	No
2-Jun-97	Lower House	Bloc Québécois	No	No	No
2-Jun-97	Lower House	Liberal Party	Yes	No	No
2-Jun-97	Lower House	New Democratic Party	No	No	No
2-Jun-97	Lower House	Progressive Conservative Party	No	No	No
2-Jun-97	Lower House	Reform Party	No	No	No

## (g) Canada (2000-2015)

Election date	Election type	Candidate	Incumbent	Small	New
27-Nov-00	Lower House	Alliance Party	No	No	Yes
27-Nov-00	Lower House	Bloc Québécois	No	Yes	No
27-Nov-00	Lower House	Progressive Conservative Party	No	Yes	No
27-Nov-00	Lower House	Liberal Party	Yes	No	No
27-Nov-00	Lower House	New Democratic Party	No	Yes	No
28-Jun-04	Lower House	Bloc Québécois	No	No	No
28-Jun-04	Lower House	Conservative Party	No	No	Yes
28-Jun-04	Lower House	Green Party	No	Yes	No
28-Jun-04	Lower House	Liberal Party	Yes	No	No
28-Jun-04	Lower House	Marijuana Party	No	Yes	No
28-Jun-04	Lower House	Progressive Conservative Party	No	Yes	No
28-Jun-04	Lower House	New Democratic Party	No	No	No
23-Jan-06	Lower House	Bloc Québécois	No	No	No
23-Jan-06	Lower House	Conservative Party	No	No	No
23-Jan-06	Lower House	Green Party	No	Yes	No
23-Jan-06	Lower House	Liberal Party	Yes	No	No
23-Jan-06	Lower House	New Democratic Party	No	No	No
14-Oct-08	Lower House	Bloc Québécois	No	No	No
14-Oct-08	Lower House	Conservative Party	Yes	No	No
14-Oct-08	Lower House	Green Party	No	Yes	No
14-Oct-08	Lower House	Liberal Party	No	No	No
14-Oct-08	Lower House	New Democratic Party	No	No	No
2-May-11	Lower House	Bloc Québécois	No	No	No
2-May-11	Lower House	Conservative Party	Yes	No	No
2-May-11	Lower House	Green Party	No	Yes	No
2-May-11	Lower House	Liberal Party	No	No	No
2-May-11	Lower House	New Democratic Party	No	No	No
19-Oct-15	Lower House	Bloc Québécois	No	Yes	No
19-Oct-15	Lower House	Conservative Party	Yes	No	No
19-Oct-15	Lower House	Green Party	No	Yes	No
19-Oct-15	Lower House	Liberal Party	No	No	No
19-Oct-15	Lower House	New Democratic Party	No	No	No

## (h) Netherlands (1998-2002)

Election date	Election type	Candidate	Incumbent	Small	New
6-May-98	Lower House	General Elderly Alliance	No	Yes	No
6-May-98	Lower House	Christian Democratic Appeal	No	No	No
6-May-98	Lower House	Centre Democrats	No	Yes	No
6-May-98	Lower House	Democrats 66	No	Yes	No
6-May-98	Lower House	The Greens	No	Yes	No
6-May-98	Lower House	Reformed Political League	No	Yes	No
6-May-98	Lower House	Green Left	No	Yes	No
6-May-98	Lower House	Mobile Netherlands	No	Yes	Yes
6-May-98	Lower House	Labour Party	Yes	No	No
6-May-98	Lower House	Reforming Political Federation	No	Yes	No
6-May-98	Lower House	Political Reformed Party	No	Yes	No
6-May-98	Lower House	Socialist Party	No	Yes	No
6-May-98	Lower House	Seniors 2000	No	Yes	No
6-May-98	Lower House	Union 55+	No	Yes	No
6-May-98	Lower House	Progressive Integration Party	No	Yes	N/A
6-May-98	Lower House	People's Party for Freedom and Democracy	No	No	No
15-May-02	Lower House	Christian Democratic Appeal	No	No	No
15-May-02	Lower House	Christian Union	No	Yes	No
15-May-02	Lower House	Democrats 66	No	Yes	No
15-May-02	Lower House	Green Left	No	Yes	No
15-May-02	Lower House	Livable Netherlands	No	Yes	Yes
15-May-02	Lower House	Pim Fortuyn List	No	No	Yes
15-May-02	Lower House	Labour Party	Yes	No	No
15-May-02	Lower House	Political Reformed Party	No	Yes	No
15-May-02	Lower House	Socialist Party	No	Yes	No
15-May-02	Lower House	People's Party for Freedom and Democracy	No	No	No
15-May-02	Lower House	United Seniors Party	No	Yes	Yes



## (i) Netherlands (2006)

Election date	Election type	Candidate	Incumbent	Small	New
15-May-02	Lower House	United Seniors Party	No	Yes	Yes
22-Nov-06	Lower House	Christian Democratic Appeal	Yes	No	No
22-Nov-06	Lower House	Christian Union	No	Yes	No
22-Nov-06	Lower House	Democrats 66	No	Yes	No
22-Nov-06	Lower House	One Netherlands	No	Yes	Yes
22-Nov-06	Lower House	Pim Fortuyn List	No	Yes	No
22-Nov-06	Lower House	Green Left	No	Yes	No
22-Nov-06	Lower House	Party for the Animals	No	Yes	No
22-Nov-06	Lower House	Party for Freedom	No	Yes	Yes
22-Nov-06	Lower House	Party for the Netherlands	No	Yes	Yes
22-Nov-06	Lower House	Labour Party	No	No	No
22-Nov-06	Lower House	Politically Reformed Party	No	Yes	No
22-Nov-06	Lower House	Socialist Party	No	Yes	No
22-Nov-06	Lower House	People's Party for Freedom and Democracy	No	No	No

## (j) Germany (2009-2013)

Election date	Election type	Candidate	Incumbent	Small	New
27-Sep-09	Lower House	Christian Democratic Union / Christian Social Union in Bavaria	Yes	No	No
27-Sep-09	Lower House	The Left	No	No	Yes
27-Sep-09	Lower House	Free Democratic Party	No	Yes	No
27-Sep-09	Lower House	Alliance 90s/The Greens	No	No	No
27-Sep-09	Lower House	National Democratic Party of Germany	No	Yes	No
27-Sep-09	Lower House	Pirate Party Germany	No	Yes	Yes
27-Sep-09	Lower House	The Republicans	No	Yes	No
27-Sep-09	Lower House	Social Democratic Party of Germany	No	No	No
22-Sep-13	Lower House	Alternative for Germany	No	Yes	Yes
22-Sep-13	Lower House	Christian Democratic Union	Yes	No	No
22-Sep-13	Lower House	The Left	No	Yes	No
22-Sep-13	Lower House	Free Democratic Party	No	Yes	No
22-Sep-13	Lower House	Alliance 90s/The Greens	No	No	No
22-Sep-13	Lower House	National Democratic Party of Germany	No	Yes	No
22-Sep-13	Lower House	Pirate Party Germany	No	Yes	No
22-Sep-13	Lower House	Social Democratic Party of Germany	No	No	No

## (k) Germany (2017)

Election date	Election type	Candidate	Incumbent	Small	New
24-Sep-17	Lower House	Alternative for Germany	No	Yes	No
24-Sep-17	Lower House	Christian Democratic Union / Christian Social Union in Bavaria	Yes	No	No
24-Sep-17	Lower House	The Left	No	Yes	No
24-Sep-17	Lower House	Free Democratic Party	No	Yes	No
24-Sep-17	Lower House	Alliance 90s/The Greens	No	Yes	No
24-Sep-17	Lower House	Social Democratic Party of Germany	No	No	No

## (l) New Zealand (1996-1999)

Election date	Election type	Candidate	Incumbent	Small	New
12-Oct-96	Lower House	ACT	No	Yes	Yes
12-Oct-96	Lower House	Alliance	No	No	No
12-Oct-96	Lower House	Christian Coalition	No	Yes	Yes
12-Oct-96	Lower House	Labour Party	No	No	No
12-Oct-96	Lower House	McGillicuddy Serious	No	Yes	No
12-Oct-96	Lower House	National Party	Yes	No	No
12-Oct-96	Lower House	New Zealand First	No	No	No
12-Oct-96	Lower House	Progressive Green	No	Yes	Yes
12-Oct-96	Lower House	United	No	Yes	Yes
27-Nov-99	Lower House	ACT	No	Yes	No
27-Nov-99	Lower House	Alliance	No	Yes	No
27-Nov-99	Lower House	Christian Heritage	No	Yes	No
27-Nov-99	Lower House	Green Party	No	Yes	No
27-Nov-99	Lower House	Labour Party	No	No	No
27-Nov-99	Lower House	National Party	Yes	No	No
27-Nov-99	Lower House	New Zealand First	No	Yes	No
27-Nov-99	Lower House	United	No	Yes	No

## (m) New Zealand (2002)

Election date	Election type	Candidate	Incumbent	Small	New
27-Jul-02	Lower House	National Party	No	No	No
27-Jul-02	Lower House	ACT	No	Yes	No
27-Jul-02	Lower House	Alliance	No	Yes	No
27-Jul-02	Lower House	Christian Heritage	No	Yes	No
27-Jul-02	Lower House	Green Party	No	Yes	No
27-Jul-02	Lower House	Independent(s)	No	Yes	No
27-Jul-02	Lower House	Jim Anderton's Progressive Party	No	Yes	Yes
27-Jul-02	Lower House	New Zealand First	No	Yes	No
27-Jul-02	Lower House	Outdoor Recreation	No	Yes	Yes
27-Jul-02	Lower House	United Future	No	Yes	Yes
27-Jul-02	Lower House	Labour Party	Yes	No	No

## (n) Sweden

Election date	Election type	Candidate	Incumbent	Small	New
25-May-14	European	Centre Party	No	Yes	No
25-May-14	European	Christian Democrats	No	Yes	No
25-May-14	European	Feminist Initiative	No	No	No
25-May-14	European	Green Party	No	No	No
25-May-14	European	June List	No	Yes	No
25-May-14	European	Left Party	No	No	No
25-May-14	European	Moderate Party	No	Yes	No
25-May-14	European	Liberal People's Party	No	No	No
25-May-14	European	Pirate Party	No	Yes	No
25-May-14	European	Social Democrats	Yes	No	No
25-May-14	European	Sweden Democrats	No	Yes	No
14-Sept-2014	Lower House	Centre Party	No	Yes	No
14-Sept-2014	Lower House	Christian Democrats	No	Yes	No
14-Sept-2014	Lower House	Feminist Initiative	No	Yes	No
14-Sept-2014	Lower House	Green Party	No	No	No
14-Sept-2014	Lower House	Left Party	No	No	No
14-Sept-2014	Lower House	Moderate Party	Yes	No	No
14-Sept-2014	Lower House	Liberal People's Party	No	No	No
14-Sept-2014	Lower House	Social Democrats	No	No	No
14-Sept-2014	Lower House	Sweden Democrats	No	No	No

## (o) Switzerland

Election date	Election type	Candidate	Incumbent	Small	New
23-Oct-11	Lower House	Conservative Democratic Party	No	Yes	Yes
23-Oct-11	Lower House	Christian Democratic People's Party	No	No	No
23-Oct-11	Lower House	FDP.The Liberals	No	No	No
23-Oct-11	Lower House	Green Liberal Party	No	Yes	No
23-Oct-11	Lower House	Green Party	No	Yes	No
23-Oct-11	Lower House	Social Democratic Party	No	No	No
23-Oct-11	Lower House	Swiss People's Party	Yes	No	No
18-Oct-15	Lower House	Conservative Democratic Party	No	Yes	No
18-Oct-15	Lower House	Christian Democratic People's Party	No	No	No
18-Oct-15	Lower House	FDP.The Liberals	No	No	No
18-Oct-15	Lower House	Green Liberal Party	No	Yes	No
18-Oct-15	Lower House	Green Party	No	Yes	No
18-Oct-15	Lower House	Social Democratic Party	No	No	No
18-Oct-15	Lower House	Swiss People's Party	Yes	No	No

Notes: We report the list of candidates or parties included as possible answers to questions on pre-electoral vote intention and post-electoral vote choice in each survey. We also report, for elections that are not referenda, whether they are the incumbent candidate (for presidential and gubernatorial elections) or party (for lower and upper house elections), whether they are a small candidate or party that had an average predicted vote share lower than 10% in the first five days of the survey, and whether the party (or candidate's party) was absent from any previous election of the same type. In elections for lower house and upper house, the incumbent is defined as the party that had a plurality of seats in the house before the election (in the U.S.) of the party of the incumbent prime minister (in all other countries). For gubernatorial election in the U.S., the incumbent is defined as the incumbent governor in each state, and is left blank when we do not know in which state the respondent is registered. Options such as "Other candidate" or "Blank/Invalid vote" are not reported in this list but included in some of our analyses.

Table B.6: List of TV debates by country

(a) United States (1960-2004)

Survey	Debate date	Election type	# days before election
ANES 1960	26-Sep	President	43
ANES 1960	7-Oct	President	32
ANES 1960	13-Oct	President	26
ANES 1960	21-Oct	President	18
ANES 1976	23-Sep	President	40
ANES 1976	6-Oct	President	27
ANES 1976	22-Oct	President	11
ANES 1980	21-Sep	President	44
ANES 1980	28-Oct	President	7
ANES 1984	7-Oct	President	30
ANES 1984	21-Oct	President	16
ANES 1988	25-Sep	President	44
ANES 1988	13-Oct	President	26
ANES 1992	11-Oct	President	23
ANES 1992	15-Oct	President	19
ANES 1992	19-Oct	President	15
ANES 1996	6-Oct	President	30
ANES 1996	16-Oct	President	20
ANES 2000	3-Oct	President	35
NAES 2000	"	"	"
ANES 2000	11-Oct	President	27
NAES 2000	"	"	"
ANES 2000	17-Oct	President	21
NAES 2000	"	"	"
ANES 2004	8-Oct	President	25
NAES 2004	"	"	"
ANES 2004	30-Sep	President	33
NAES 2004	"	"	"
ANES 2004	13-Oct	President	20
NAES 2004	"	"	"

(b) United States (2004-2016)

Survey	Debate date	Election type	# days before election
ANES 2008	26-Sep	President	39
NAES 2008	"	"	"
ANES 2008	7-Oct	President	28
NAES 2008	"	"	"
ANES 2008	15-Oct	President	20
NAES 2008	"	"	"
ANES 2012	3-Oct	President	34
ANES 2012	16-Oct	President	21
ANES 2012	22-Oct	President	15
ANES 2016	26-Sep	President	43
ANES 2016	9-Oct	President	30
ANES 2016	19-Oct	President	20

(c) Austria

Survey	Debate date	Election type	# days before election
AUTNES 2013	29-Aug	Lower House	31

(d) United Kingdom

Survey	Debate date	Election type	# days before election
BES 2010	15-Apr	Lower House	21
BES 2010	22-Apr	Lower House	14
BES 2010	29-Apr	Lower House	7
BES 2015	2-Apr	Lower House	35
BES 2015	16-Apr	Lower House	21
BES 2015	30-Apr	Lower House	7

(e) Canada

Survey	Debate date	Election type	# days before election
CES 2015	17-Sep-2015	Lower House	32
CES 2015	24-Sep-2015	Lower House	25
CES 2015	28-Sep-2015	Lower House	21
CES 2015	2-Oct-2015	Lower House	17

(f) Netherlands

Survey	Debate date	Election type	# days before election
DPES 1998	24-Apr-1998	Lower House	12
DPES 2002	27-Apr-2002	Lower House	18
DPES 2006	3-Nov-2006	Lower House	19

(g) Germany

Survey	Debate date	Election type	# days before election
GLS 2009	13-Sep-2009	Lower House	14
GLS 2013	1-Sep-2013	Lower House	21
GLS 2017	3-Sep-2017	Lower House	21

(h) New Zealand

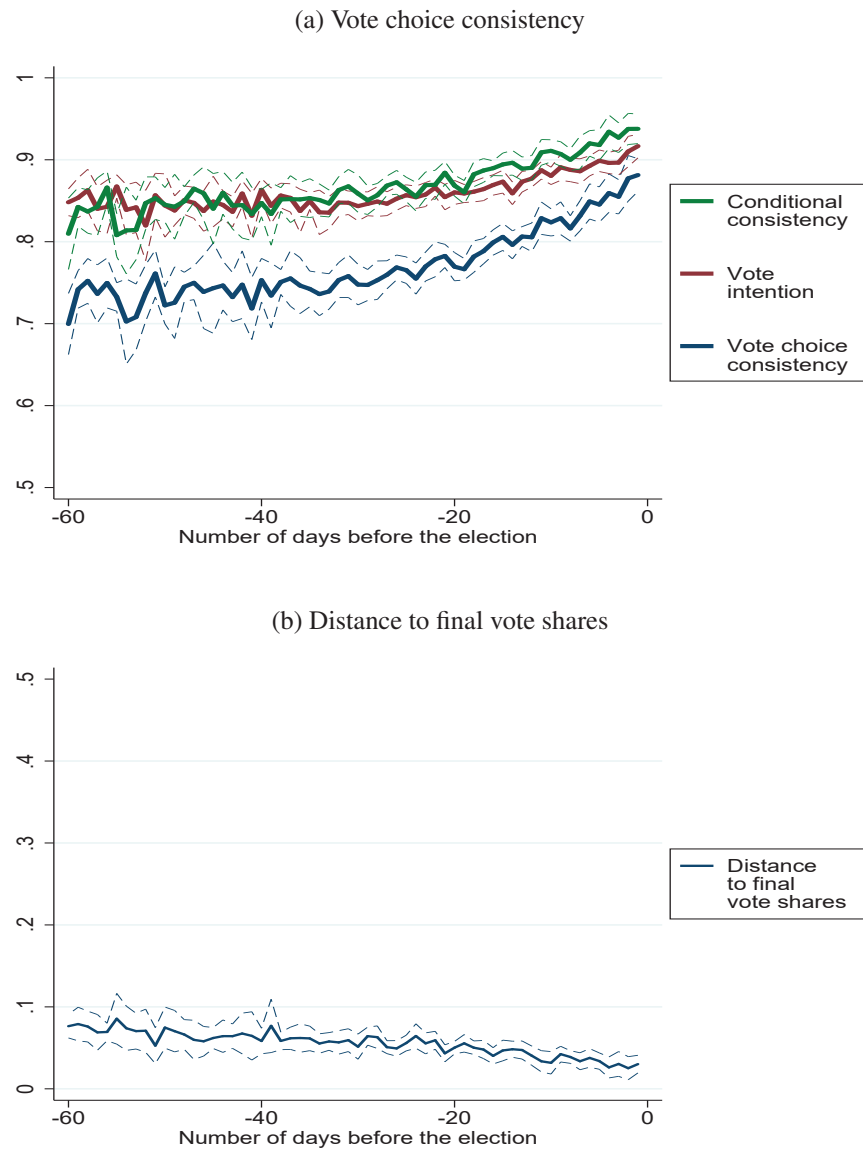
Survey	Debate date	Election type	# days before election
NZES 1996	26-Sep-1996	Lower House	16
NZES 1996	7-Oct-1996	Lower House	5
NZES 1999	27-Oct-1999	Lower House	31
NZES 1999	1-Nov-1999	Lower House	26
NZES 2002	15-Jul-2002	Lower House	12
NZES 2002	22-Jul-2002	Lower House	5

Notes: For each TV debate included in the study, we indicate the date when the debate was held and the number of days separating the debate from the election.

## C Additional Robustness Checks

### C.1 Rolling Cross-Sections

Figure C.1: Vote choice consistency and distance to final vote shares, rolling cross-sections



Notes: The sample is restricted to the 31 surveys designed as rolling cross-sections. Other notes as in Figures 1 and 3.



Table C.1: Vote choice consistency and distance to final vote shares, rolling cross-sections

	Vote choice consistency		Vote intention		Conditional consistency		Distance between predicted and final vote shares	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Time	0.0028*** (0.0004)	0.0062*** (0.0010)	0.0012*** (0.0002)	0.0034*** (0.0007)	0.0019*** (0.0003)	0.0038*** (0.0008)	-0.0008*** (0.0002)	-0.0013** (0.0005)
Time <sup>2</sup>		0.0001*** (0.0000)		0.0000*** (0.0000)		0.0000*** (0.0000)		-0.0000 (0.0000)
Observations	136211	136211	175514	175514	120611	120611	1418	1418
$R^2$	0.083	0.084	0.075	0.075	0.049	0.050	0.618	0.620
Mean at day -1	0.8814	0.8814	0.9166	0.9166	0.9378	0.9378	0.0509	0.0509
Election fixed effects	x	x	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x		
Aggregate controls							x	x

Notes: The sample is restricted to the 31 surveys designed as rolling cross-sections. Other notes as in Table 1.

Table C.2: Drivers of vote choice formation, rolling cross-sections

(a) Mean vote choice consistency				
	(1)	(2)	(3)	(4)
Mean consistency in policy preferences	-0.266 (0.211)			-0.301 (0.210)
Mean consistency in issue salience		0.249** (0.096)		0.247** (0.094)
Mean consistency in beliefs on candidates			0.095 (0.066)	0.094 (0.062)
Observations	1418	1418	1418	1418
$R^2$	0.855	0.857	0.855	0.858
Election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x
(b) Mean probability of stating a vote intention				
	(1)	(2)	(3)	(4)
Mean probability of stating a policy preference	-0.125 (0.248)			-0.179 (0.234)
Mean probability of stating a salient issue		0.197*** (0.059)		0.197*** (0.055)
Mean probability of stating a belief on candidates			0.203** (0.077)	0.220*** (0.071)
Observations	1418	1418	1418	1418
$R^2$	0.877	0.877	0.878	0.879
Election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x

Notes: Same notes as in Table 2 and Appendix Table C.1.

Table C.3: Debates' effects on vote choice consistency, rolling cross-sections

	Vote choice consistency		Vote intention		Conditional consistency	
	(1)	(2)	(3)	(4)	(5)	(6)
Before -3	0.002 (0.006)	0.003 (0.007)	0.002 (0.006)	0.001 (0.006)	-0.016** (0.007)	-0.017** (0.007)
-3	0.007 (0.007)	0.007 (0.007)	0.008 (0.006)	0.008 (0.006)	-0.010 (0.008)	-0.010 (0.008)
-2	0.009 (0.009)	0.010 (0.009)	0.007 (0.006)	0.006 (0.006)	-0.002 (0.009)	-0.003 (0.009)
-1	0.001 (0.007)	0.002 (0.008)	0.005 (0.008)	0.004 (0.008)	-0.004 (0.006)	-0.005 (0.006)
+1	0.008 (0.007)	0.008 (0.007)	0.009 (0.008)	0.009 (0.008)	-0.013 (0.008)	-0.013 (0.008)
+2	0.003 (0.008)	0.004 (0.008)	-0.001 (0.006)	-0.002 (0.006)	-0.012 (0.009)	-0.012 (0.009)
+3	0.000 (0.009)	0.000 (0.010)	0.010* (0.005)	0.009* (0.005)	-0.009 (0.006)	-0.009 (0.006)
After +3	0.005 (0.007)	0.005 (0.008)	0.009 (0.007)	0.008 (0.007)	-0.008 (0.006)	-0.008 (0.006)
Observations	294615	294615	264252	264252	192493	192493
$R^2$	0.042	0.049	0.071	0.078	0.040	0.042
Mean, day of the debate	0.634	0.634	0.892	0.892	0.886	0.886
Number of debates	56	56	27	27	27	27
Debate * election fixed effects	x	x	x	x	x	x
Fixed effects for number of days to election	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x
Sociodemographic controls		x		x		x
Linear combination of estimates						
Average pre-debate dummies -3, -2, and -1	0.006 (0.007)	0.006 (0.007)	0.006 (0.005)	0.006 (0.005)	-0.005 (0.007)	-0.006 (0.007)
Average post-debate dummies 1, 2, and 3	0.004 (0.006)	0.004 (0.006)	0.006 (0.006)	0.006 (0.006)	-0.011 (0.007)	-0.011 (0.007)

Notes: The sample is restricted to the 27 debates covered by surveys designed as rolling cross-sections. Other notes as in Table 3.

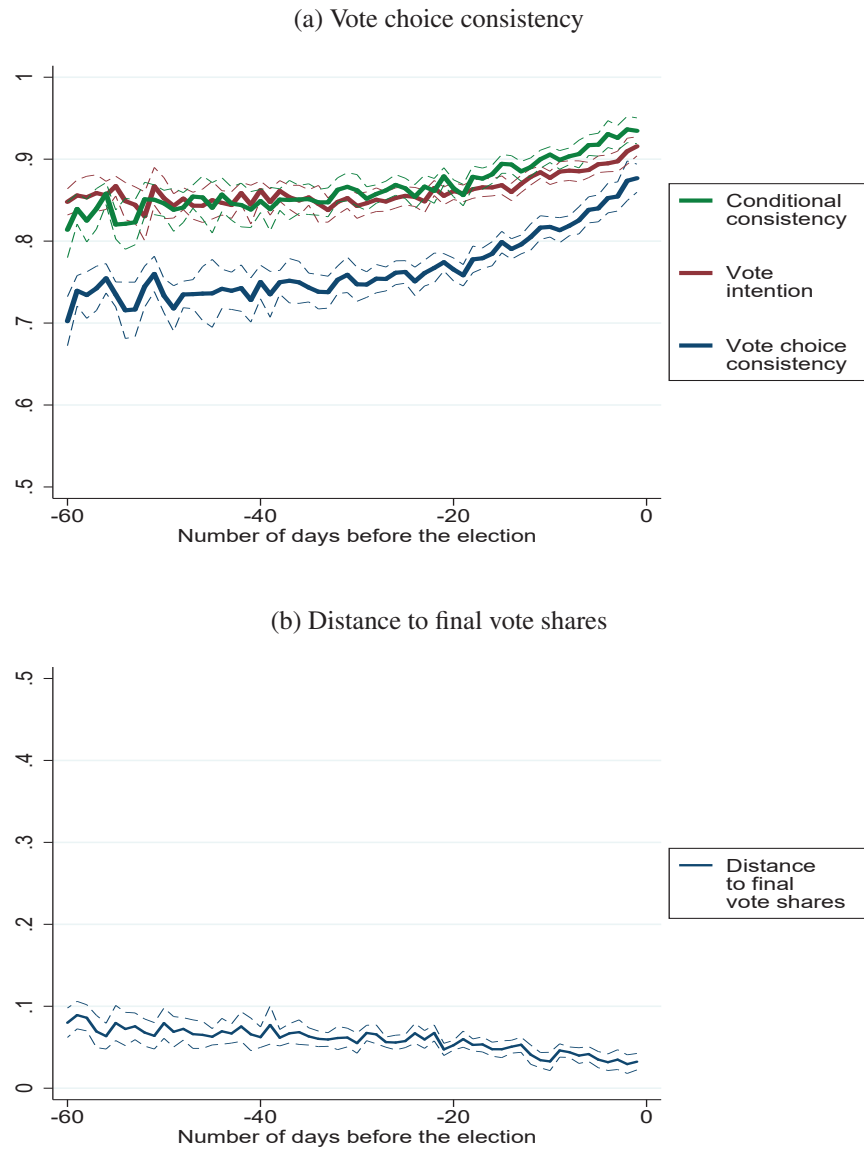
Table C.4: Debates' effects on aggregate vote shares, rolling cross-sections

	Distance between predicted and final vote shares		Daily change in predicted vote shares	
	(1)	(2)	(3)	(4)
Before -3	0.008*	0.009*	0.011	0.010
	(0.004)	(0.005)	(0.007)	(0.007)
-3	0.004	0.006	0.007	0.007
	(0.004)	(0.005)	(0.010)	(0.011)
-2	0.004	0.006	0.009	0.008
	(0.003)	(0.004)	(0.007)	(0.007)
-1	0.002	0.005	0.019***	0.019***
	(0.004)	(0.005)	(0.006)	(0.006)
+1	0.005	0.006	0.007	0.006
	(0.004)	(0.004)	(0.007)	(0.007)
+2	0.007	0.008	0.021**	0.021**
	(0.004)	(0.005)	(0.010)	(0.010)
+3	0.006	0.008	0.014*	0.014
	(0.005)	(0.006)	(0.008)	(0.008)
After +3	0.005	0.005	0.007	0.006
	(0.004)	(0.004)	(0.005)	(0.005)
Observations	1689	1689	1665	1665
$R^2$	0.668	0.678	0.604	0.609
Mean, day of the debate	0.040	0.040	0.071	0.071
Number of debates	27	27	27	27
Debate * election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x
Sociodemographic controls		x		x
Linear combination of estimates				
Average pre-debate dummies -3, -2, and -1	0.004	0.006	0.012*	0.011*
	(0.003)	(0.004)	(0.006)	(0.006)
Average post-debate dummies 1, 2, and 3	0.006*	0.007*	0.014*	0.014*
	(0.003)	(0.004)	(0.007)	(0.007)

Notes: Same notes as in Table 4 and Appendix Table C.3.

## C.2 Sociodemographic Controls

Figure C.2: Vote choice consistency and distance to final vote shares, with sociodemographic controls



Notes: Each sociodemographic characteristic from Appendix Table A.1 and a dummy indicating whether it is missing are included. Other notes as in Figures 1 and 3.

Table C.5: Vote choice consistency and distance to final vote shares, with sociodemographic controls

	Vote choice consistency		Vote intention		Conditional consistency		Distance between predicted and final vote shares	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Time	0.0025*** (0.0003)	0.0062*** (0.0008)	0.0010*** (0.0002)	0.0032*** (0.0005)	0.0018*** (0.0003)	0.0039*** (0.0007)	-0.0008*** (0.0002)	-0.0013*** (0.0005)
Time <sup>2</sup>		0.0001*** (0.0000)		0.0000*** (0.0000)		0.0000*** (0.0000)		-0.0000 (0.0000)
Observations	200916	200916	253489	253489	178176	178176	3125	3125
R <sup>2</sup>	0.075	0.077	0.080	0.080	0.043	0.043	0.522	0.524
Mean at day -1	0.8768	0.8768	0.9157	0.9157	0.9346	0.9346	0.0324	0.0324
Election fixed effects	x	x	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x		
Aggregate controls							x	x
Sociodemographic controls	x	x	x	x	x	x	x	x

Notes: Each sociodemographic characteristic from Appendix Table A.1 and a dummy indicating whether it is missing are included. Other notes as in Table 1.

Table C.6: Drivers of vote choice formation, with sociodemographic controls

(a) Mean vote choice consistency				
	(1)	(2)	(3)	(4)
Mean consistency in policy preferences	-0.108 (0.119)			-0.141 (0.126)
Mean consistency in issue salience		0.260*** (0.097)		0.252** (0.097)
Mean consistency in beliefs on candidates			0.132** (0.065)	0.123* (0.065)
Observations	3129	3129	3129	3129
$R^2$	0.808	0.810	0.809	0.811
Election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x
Sociodemographic controls	x	x	x	x
(b) Mean probability of stating a vote intention				
	(1)	(2)	(3)	(4)
Mean probability of stating a policy preference	-0.016 (0.150)			-0.044 (0.150)
Mean probability of stating a salient issue		0.201*** (0.057)		0.204*** (0.055)
Mean probability of stating a belief on candidates			0.221*** (0.082)	0.226*** (0.080)
Observations	3144	3144	3144	3144
$R^2$	0.842	0.843	0.843	0.844
Election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x
Sociodemographic controls	x	x	x	x

Notes: Same notes as in Table 2 and Appendix Table C.5. We control for the daily average of each sociodemographic characteristic from Appendix Table A.1.

### C.3 Wild Cluster Bootstrap Standard Errors

Table C.7: Vote choice consistency and distance to final vote shares, wild cluster bootstrap

	Vote choice consistency		Vote intention		Conditional consistency		Distance between predicted and final vote shares	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Time	0.0025*** (0.0000)	0.0061*** (0.0000)	0.0010*** (0.0000)	0.0031*** (0.0000)	0.0018*** (0.0000)	0.0038*** (0.0000)	-0.0008*** (0.0002)	-0.0013** (0.0007)
Time <sup>2</sup>		0.0001*** (0.0000)		0.0000*** (0.0000)		0.0000*** (0.0000)		-0.0000 (0.0000)
Observations	200916	200916	253489	253489	178176	178176	3125	3125
R <sup>2</sup>	0.070	0.071	0.072	0.073	0.041	0.041	0.520	0.523
Mean at day -1	0.8768	0.8768	0.9157	0.9157	0.9346	0.9346	0.0324	0.0324
Election fixed effects	x	x	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x		
Aggregate controls							x	x
Number of replications	1000	1000	1000	1000	1000	1000	1000	1000

Notes: We use the wild cluster bootstrap procedure proposed by Cameron et al. (2008) to allow for correlation of the error terms at the survey level, and report the corresponding p-value in brackets. We use 1,000 bootstrap replications. Other notes as in Table 1.



Table C.8: Drivers of vote choice formation, wild cluster bootstrap

(a) Mean vote choice consistency				
	(1)	(2)	(3)	(4)
Mean consistency in policy preferences	-0.104 [0.41]			-0.138 [0.30]
Mean consistency in issue salience		0.255** [0.03]		0.247** [0.04]
Mean consistency in beliefs on candidates			0.133* [0.05]	0.125* [0.09]
Observations	3129	3129	3129	3129
$R^2$	0.807	0.809	0.808	0.810
Election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x
Number of replications	1000	1000	1000	1000
(b) Mean probability of stating a vote intention				
	(1)	(2)	(3)	(4)
Mean probability of stating a policy preference	0.005 [0.95]			-0.028 [0.90]
Mean probability of stating a salient issue		0.200** [0.01]		0.203*** [0.01]
Mean probability of stating a belief on candidates			0.233*** [0.01]	0.236*** [0.00]
Observations	3144	3144	3144	3144
$R^2$	0.840	0.840	0.841	0.841
Election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x
Number of replications	1000	1000	1000	1000

Notes: Same notes as in Table 2 and Appendix Table C.7.

Table C.9: Debates' effects on vote choice consistency, wild cluster bootstrap

	Vote choice consistency		Vote intention		Conditional consistency	
	(1)	(2)	(3)	(4)	(5)	(6)
Before -3	-0.014**	-0.015**	0.003	0.002	-0.015**	-0.016**
	[0.03]	[0.01]	[0.61]	[0.69]	[0.02]	[0.02]
-3	-0.009	-0.010	0.003	0.003	-0.005	-0.006
	[0.17]	[0.15]	[0.61]	[0.64]	[0.46]	[0.42]
-2	-0.001	-0.002	0.007	0.007	-0.004	-0.004
	[0.87]	[0.78]	[0.15]	[0.15]	[0.64]	[0.58]
-1	-0.001	-0.002	0.005	0.005	-0.001	-0.002
	[0.82]	[0.74]	[0.38]	[0.45]	[0.91]	[0.79]
+1	-0.009	-0.009	0.007	0.007	-0.008	-0.008
	[0.26]	[0.26]	[0.38]	[0.35]	[0.29]	[0.29]
+2	-0.007	-0.008	0.002	0.001	-0.007	-0.008
	[0.35]	[0.30]	[0.80]	[0.85]	[0.35]	[0.32]
+3	-0.006	-0.006	0.007	0.007	-0.006	-0.006
	[0.30]	[0.27]	[0.14]	[0.14]	[0.25]	[0.22]
After +3	-0.002	-0.003	0.008	0.008	-0.005	-0.005
	[0.69]	[0.62]	[0.19]	[0.21]	[0.35]	[0.29]
Observations	263681	263681	330621	330621	240826	240826
$R^2$	0.072	0.077	0.069	0.076	0.042	0.044
Mean, day of the debate	0.811	0.811	0.811	0.811	0.887	0.887
Number of debates	56	56	56	56	56	56
Debate * election fixed effects	x	x	x	x	x	x
Fixed effects for number of days to election	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x
Sociodemographic controls		x		x		x
Linear combination of estimates						
Average pre-debate dummies -3, -2, and -1	-0.004	-0.005	0.005	0.005	-0.003	-0.004
	[0.584]	[0.482]	[0.246]	[0.268]	[0.582]	[0.506]
Average post-debate dummies 1, 2, and 3	-0.007	-0.008	0.005	0.005	-0.007	-0.007
	[0.182]	[0.164]	[0.328]	[0.306]	[0.236]	[0.206]
Number of replications	1000	1000	1000	1000	1000	1000

Notes: We use the wild cluster bootstrap procedure proposed by Cameron et al. (2008) to allow for correlation of the error terms at the debate level, and report the corresponding p-value in brackets. We use 1,000 bootstrap replications. Other notes as in Table 3.

Table C.10: Debates' effects on aggregate vote shares, wild cluster bootstrap

	Distance between predicted and final vote shares		Daily change in predicted vote shares	
	(1)	(2)	(3)	(4)
Before -3	0.005 [0.254]	0.006 [0.204]	0.009 [0.160]	0.007 [0.246]
-3	-0.001 [0.796]	0.000 [0.980]	-0.003 [0.792]	-0.004 [0.704]
-2	-0.000 [0.972]	0.000 [0.906]	0.001 [0.952]	-0.001 [0.898]
-1	-0.003 [0.410]	-0.002 [0.640]	0.013** [0.030]	0.012* [0.056]
+1	0.002 [0.554]	0.002 [0.498]	0.008 [0.256]	0.006 [0.428]
+2	0.000 [0.966]	0.001 [0.844]	0.022** [0.048]	0.021* [0.050]
+3	0.001 [0.826]	0.002 [0.658]	0.011 [0.288]	0.009 [0.368]
After +3	0.002 [0.636]	0.002 [0.546]	0.006 [0.216]	0.005 [0.312]
Observations	3802	3802	3749	3749
$R^2$	0.575	0.581	0.470	0.477
Mean, day of the debate	0.046	0.046	0.085	0.085
Number of debates	56	56	56	56
Debate * election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x
Sociodemographic controls		x		x
Linear combination of estimates				
Average pre-debate dummies -3, -2, and -1	-0.001 [0.63]	-0.000 [0.88]	0.004 [0.63]	0.002 [0.79]
Average post-debate dummies 1, 2, and 3	0.001 [0.76]	0.002 [0.60]	0.014 [0.11]	0.012 [0.17]
Number of replications	1000	1000	1000	1000

Notes: Same notes as in Table 4 and Appendix Table C.9.

## C.4 Standard Errors Adjusted for Clustering at the Election Date Level

Table C.11: Vote choice consistency and distance to final vote shares, election date clusters

	Vote choice consistency		Vote intention		Conditional consistency		Distance between predicted and final vote shares	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Time	0.0025*** (0.0003)	0.0061*** (0.0008)	0.0010*** (0.0002)	0.0031*** (0.0005)	0.0018*** (0.0003)	0.0038*** (0.0007)	-0.0008*** (0.0002)	-0.0013*** (0.0005)
Time <sup>2</sup>		0.0001*** (0.0000)		0.0000*** (0.0000)		0.0000*** (0.0000)		-0.0000 (0.0000)
Observations	200916	200916	253489	253489	178176	178176	3125	3125
R <sup>2</sup>	0.070	0.071	0.072	0.073	0.041	0.041	0.520	0.523
Mean at day -1	0.8768	0.8768	0.9157	0.9157	0.9346	0.9346	0.0324	0.0324
Election fixed effects	x	x	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x		
Aggregate controls							x	x

Notes: Standard errors are adjusted for clustering at the election date level. Other notes as in Table 1.

Table C.12: Drivers of vote choice formation, election date clusters

(a) Mean vote choice consistency				
	(1)	(2)	(3)	(4)
Mean consistency in policy preferences	-0.108 (0.120)			-0.141 (0.127)
Mean consistency in issue salience		0.260*** (0.096)		0.252** (0.096)
Mean consistency in beliefs on candidates			0.132** (0.064)	0.123* (0.064)
Observations	3129	3129	3129	3129
$R^2$	0.808	0.810	0.809	0.811
Election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x
(b) Mean probability of stating a vote intention				
	(1)	(2)	(3)	(4)
Mean probability of stating a policy preference	-0.016 (0.150)			-0.044 (0.150)
Mean probability of stating a salient issue		0.201*** (0.057)		0.204*** (0.056)
Mean probability of stating a belief on candidates			0.221*** (0.081)	0.226*** (0.080)
Observations	3144	3144	3144	3144
$R^2$	0.842	0.843	0.843	0.844
Election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x

Notes: Same notes as in Table 2 and Appendix Table C.11.

Table C.13: Debates' effects on vote choice consistency, election date clusters

	Vote choice consistency		Vote intention		Conditional consistency	
	(1)	(2)	(3)	(4)	(5)	(6)
Before -3	-0.014** (0.007)	-0.015** (0.007)	0.003 (0.004)	0.002 (0.004)	-0.015** (0.006)	-0.016** (0.006)
-3	-0.009 (0.005)	-0.010* (0.005)	0.003 (0.005)	0.003 (0.005)	-0.005 (0.005)	-0.006 (0.005)
-2	-0.001 (0.006)	-0.002 (0.006)	0.007* (0.004)	0.007* (0.004)	-0.004 (0.005)	-0.004 (0.006)
-1	-0.001 (0.006)	-0.002 (0.006)	0.005 (0.004)	0.005 (0.003)	-0.001 (0.005)	-0.002 (0.006)
+1	-0.009 (0.008)	-0.009 (0.008)	0.007 (0.005)	0.007 (0.005)	-0.008 (0.007)	-0.008 (0.007)
+2	-0.007 (0.007)	-0.008 (0.007)	0.002 (0.004)	0.001 (0.004)	-0.007 (0.006)	-0.008 (0.006)
+3	-0.006 (0.006)	-0.006 (0.006)	0.007* (0.004)	0.007* (0.004)	-0.006 (0.007)	-0.006 (0.007)
After +3	-0.002 (0.006)	-0.003 (0.006)	0.008* (0.004)	0.008 (0.004)	-0.005 (0.005)	-0.005 (0.005)
Observations	263681	263681	330621	330621	240826	240826
$R^2$	0.072	0.077	0.069	0.076	0.042	0.044
Mean, day of the debate	0.811	0.811	0.896	0.896	0.887	0.887
Number of debates	56	56	56	56	56	56
Debate * election fixed effects	x	x	x	x	x	x
Fixed effects for number of days to election	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x
Sociodemographic controls		x		x		x
Linear combination of estimates						
Average pre-debate dummies -3, -2, and -1	-0.004 (0.005)	-0.005 (0.005)	0.005 (0.003)	0.005 (0.003)	-0.003 (0.004)	-0.004 (0.004)
Average post-debate dummies 1, 2, and 3	-0.007 (0.006)	-0.008 (0.006)	0.005 (0.004)	0.005 (0.004)	-0.007 (0.006)	-0.007 (0.006)

Notes: Standard errors are adjusted for clustering at the election date level. Other notes as in Table 3.

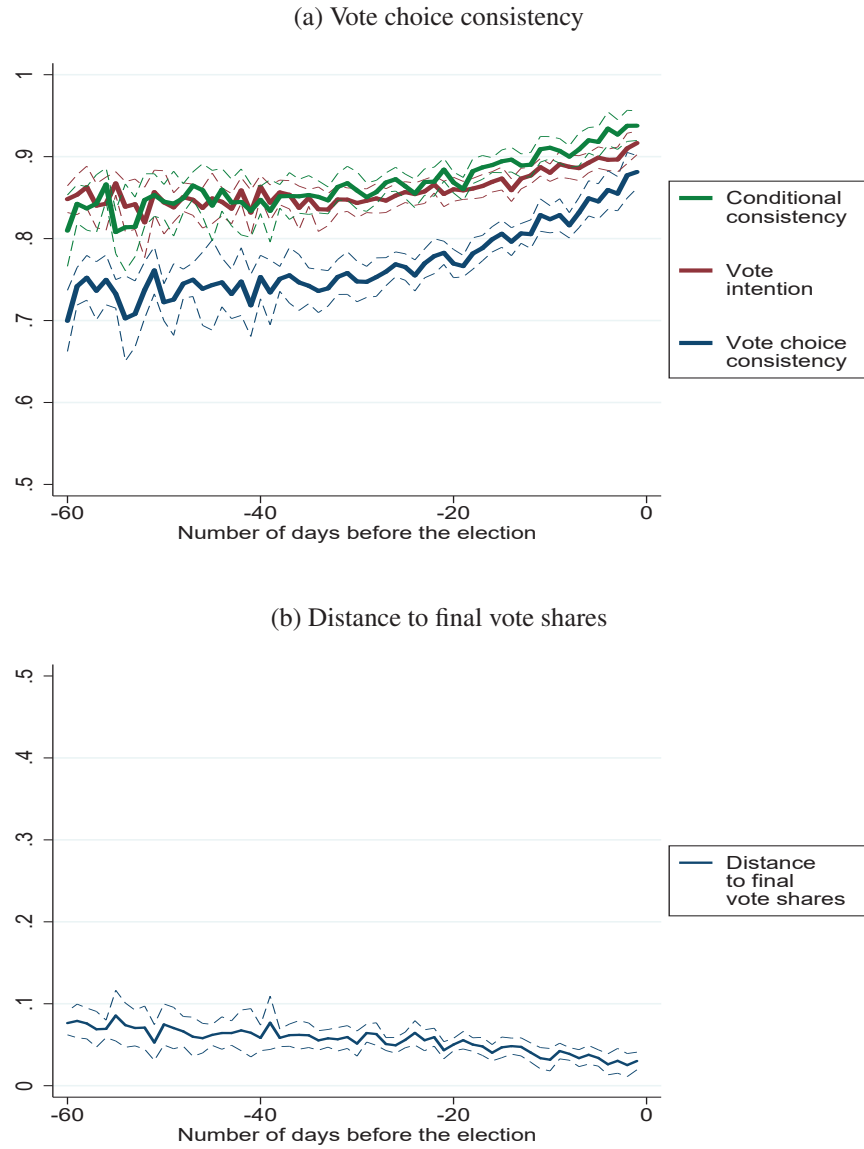
Table C.14: Debates' effects on aggregate vote shares, election date clusters

	Distance between predicted and final vote shares		Daily change in predicted vote shares	
	(1)	(2)	(3)	(4)
Before -3	0.005 (0.003)	0.006 (0.004)	0.009** (0.004)	0.007 (0.005)
-3	-0.001 (0.003)	0.000 (0.004)	-0.003 (0.007)	-0.004 (0.006)
-2	-0.000 (0.004)	0.000 (0.004)	0.001 (0.008)	-0.001 (0.009)
-1	-0.003 (0.005)	-0.002 (0.005)	0.013* (0.007)	0.012 (0.007)
+1	0.002 (0.004)	0.002 (0.004)	0.008* (0.004)	0.006 (0.005)
+2	0.000 (0.004)	0.001 (0.005)	0.022*** (0.006)	0.021*** (0.007)
+3	0.001 (0.005)	0.002 (0.006)	0.011 (0.008)	0.009 (0.008)
After +3	0.002 (0.004)	0.002 (0.004)	0.006 (0.005)	0.005 (0.005)
Observations	3802	3802	3749	3749
$R^2$	0.575	0.581	0.470	0.477
Mean, day of the debate	0.046	0.046	0.085	0.085
Number of debates	56	56	56	56
Debate * election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x
Sociodemographic controls		x		x
Linear combination of estimates				
Average pre-debate dummies -3, -2, and -1	-0.001 (0.004)	-0.000 (0.004)	0.004 (0.006)	0.002 (0.007)
Average post-debate dummies 1, 2, and 3	0.001 (0.004)	0.002 (0.004)	0.014** (0.005)	0.012** (0.005)

Notes: Same notes as in Table 4 and Appendix Table C.13.

## C.5 Including Unlikely Voters

Figure C.3: Vote choice consistency and distance to final vote shares, including unlikely voters



Notes: The sample includes all respondents who were asked whom they intended to vote for, including those who said they were unlikely to vote. Other notes as in Figures 1 and 3.



Table C.15: Vote choice consistency and distance to final vote shares, including unlikely voters

	Vote choice consistency		Vote intention		Conditional consistency		Distance between predicted and final vote shares	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Time	0.0027*** (0.0003)	0.0066*** (0.0007)	0.0011*** (0.0002)	0.0037*** (0.0005)	0.0019*** (0.0003)	0.0040*** (0.0007)	-0.0008*** (0.0002)	-0.0013*** (0.0004)
Time <sup>2</sup>		0.0001*** (0.0000)		0.0000*** (0.0000)		0.0000*** (0.0000)		-0.0000 (0.0000)
Observations	218269	218269	293913	293913	190927	190927	3125	3125
R <sup>2</sup>	0.069	0.071	0.065	0.066	0.042	0.042	0.537	0.539
Mean at day -1	0.8633	0.8633	0.8961	0.8961	0.9280	0.9280	0.0329	0.0329
Election fixed effects	x	x	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x		
Aggreghdfeate controls							x	x
Sociodemographic controls								

Notes: The sample includes all respondents who were asked whom they intended to vote for, including those who said they were unlikely to vote. Other notes as in Table 1.

Table C.16: Drivers of vote choice formation, including unlikely voters

(a) Mean vote choice consistency				
	(1)	(2)	(3)	(4)
Mean consistency in policy preferences	-0.067 (0.104)			-0.105 (0.109)
Mean consistency in issue salience		0.255*** (0.093)		0.245** (0.092)
Mean consistency in beliefs on candidates			0.156** (0.067)	0.147** (0.066)
Observations	3129	3129	3129	3129
$R^2$	0.820	0.822	0.821	0.823
Election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x
(b) Mean probability of stating a vote intention				
	(1)	(2)	(3)	(4)
Mean probability of stating a policy preference	0.162 (0.160)			0.114 (0.146)
Mean probability of stating a salient issue		0.197*** (0.047)		0.206*** (0.047)
Mean probability of stating a belief on candidates			0.318*** (0.066)	0.313*** (0.067)
Observations	3144	3144	3144	3144
$R^2$	0.841	0.841	0.843	0.843
Election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x

Notes: Same notes as in Table 2 and Appendix Table C.15.

Table C.17: Debates' effects on vote choice consistency, including unlikely voters

	Vote choice consistency		Vote intention		Conditional consistency	
	(1)	(2)	(3)	(4)	(5)	(6)
Before -3	-0.015** (0.007)	-0.016** (0.007)	-0.001 (0.005)	-0.002 (0.005)	-0.015*** (0.005)	-0.016*** (0.005)
-3	-0.009 (0.006)	-0.010 (0.007)	0.002 (0.006)	0.001 (0.006)	-0.004 (0.006)	-0.005 (0.006)
-2	-0.004 (0.008)	-0.005 (0.008)	0.002 (0.005)	0.002 (0.005)	-0.005 (0.006)	-0.006 (0.006)
-1	-0.007 (0.007)	-0.008 (0.007)	0.001 (0.006)	0.001 (0.006)	-0.004 (0.006)	-0.005 (0.006)
+1	-0.010 (0.008)	-0.010 (0.008)	0.006 (0.007)	0.006 (0.007)	-0.009 (0.007)	-0.009 (0.007)
+2	-0.009 (0.009)	-0.011 (0.009)	-0.000 (0.006)	-0.001 (0.006)	-0.008 (0.007)	-0.009 (0.007)
+3	-0.005 (0.006)	-0.006 (0.006)	0.004 (0.005)	0.004 (0.005)	-0.005 (0.005)	-0.006 (0.005)
After +3	-0.002 (0.007)	-0.003 (0.007)	0.005 (0.006)	0.005 (0.006)	-0.004 (0.005)	-0.005 (0.005)
Observations	284942	284942	378317	378317	257507	257507
$R^2$	0.073	0.079	0.066	0.077	0.042	0.045
Mean, day of the debate	0.795	0.795	0.878	0.878	0.880	0.880
Number of debates	56	56	56	56	56	56
Debate * election fixed effects	x	x	x	x	x	x
Fixed effects for number of days to election	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x
Sociodemographic controls		x		x		x
Linear combination of estimates						
Average pre-debate dummies -3, -2, and -1	-0.006 (0.006)	-0.007 (0.006)	0.002 (0.005)	0.002 (0.005)	-0.005 (0.005)	-0.006 (0.005)
Average post-debate dummies 1, 2, and 3	-0.008 (0.007)	-0.009 (0.006)	0.003 (0.006)	0.003 (0.006)	-0.007 (0.005)	-0.008 (0.005)

Notes: The sample includes all respondents who were asked whom they intended to vote for, including those who said they were unlikely to vote. Other notes as in Table 3.

Table C.18: Debates' effects on aggregate vote shares, including unlikely voters

	Distance between predicted and final vote shares		Daily change in predicted vote shares	
	(1)	(2)	(3)	(4)
Before -3	0.002 (0.004)	0.003 (0.004)	0.005 (0.005)	0.004 (0.006)
-3	-0.002 (0.004)	-0.001 (0.004)	-0.005 (0.008)	-0.006 (0.008)
-2	-0.004 (0.003)	-0.003 (0.003)	-0.001 (0.008)	-0.003 (0.008)
-1	-0.004 (0.004)	-0.003 (0.004)	0.008 (0.005)	0.008 (0.006)
+1	0.001 (0.004)	0.002 (0.004)	0.008 (0.005)	0.006 (0.005)
+2	-0.004 (0.004)	-0.004 (0.004)	0.017** (0.008)	0.016** (0.008)
+3	0.000 (0.004)	0.001 (0.004)	0.013* (0.007)	0.012 (0.007)
After +3	-0.001 (0.003)	0.000 (0.003)	0.006 (0.004)	0.005 (0.004)
Observations	3802	3802	3753	3753
$R^2$	0.589	0.594	0.480	0.488
Mean, day of the debate	0.049	0.049	0.082	0.082
Number of debates	56	56	56	56
Debate * election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x
Sociodemographic controls		x		x
Linear combination of estimates				
Average pre-debate dummies -3, -2, and -1	-0.003 (0.003)	-0.002 (0.003)	0.001 (0.006)	-0.000 (0.006)
Average post-debate dummies 1, 2, and 3	-0.001 (0.003)	-0.000 (0.003)	0.013** (0.005)	0.011** (0.005)

Notes: Same notes as in Table 4 and Appendix Table C.17.

## C.6 Event Study with Five-Day Window

Table C.19: Debates' effects on vote choice consistency, five-day window

	Vote choice consistency		Stating vote intention		Conditional consistency	
	(1)	(2)	(3)	(4)	(5)	(6)
Before -5	-0.018** (0.007)	-0.019** (0.007)	-0.002 (0.005)	-0.003 (0.005)	-0.015** (0.006)	-0.016** (0.006)
-5	-0.012 (0.008)	-0.013 (0.008)	0.005 (0.004)	0.004 (0.004)	-0.015** (0.008)	-0.016** (0.008)
-4	-0.014* (0.008)	-0.015* (0.008)	-0.001 (0.005)	-0.001 (0.005)	-0.010 (0.009)	-0.011 (0.009)
-3	-0.006 (0.007)	-0.007 (0.007)	0.001 (0.006)	0.000 (0.006)	-0.001 (0.007)	-0.002 (0.007)
-2	0.001 (0.009)	-0.000 (0.009)	0.008* (0.004)	0.008* (0.004)	-0.001 (0.007)	-0.002 (0.007)
-1	0.001 (0.006)	0.001 (0.006)	0.005 (0.004)	0.005 (0.004)	0.002 (0.005)	0.002 (0.005)
+1	-0.007 (0.007)	-0.007 (0.007)	0.008 (0.006)	0.008 (0.006)	-0.006 (0.007)	-0.006 (0.007)
+2	-0.006 (0.009)	-0.007 (0.009)	0.001 (0.005)	-0.000 (0.005)	-0.004 (0.008)	-0.005 (0.008)
+3	-0.004 (0.007)	-0.004 (0.006)	0.005 (0.005)	0.005 (0.005)	-0.003 (0.006)	-0.003 (0.006)
+4	0.002 (0.007)	0.002 (0.007)	0.003 (0.004)	0.002 (0.004)	0.004 (0.007)	0.003 (0.007)
+5	-0.008 (0.008)	-0.008 (0.008)	-0.001 (0.005)	-0.001 (0.005)	-0.004 (0.007)	-0.004 (0.007)
After +5	-0.003 (0.007)	-0.004 (0.007)	0.005 (0.005)	0.004 (0.005)	-0.003 (0.006)	-0.004 (0.006)
Observations	225519	225519	280927	280927	207744	207744
R <sup>2</sup>	0.064	0.068	0.066	0.073	0.038	0.040
Mean, day of the debate	0.827	0.827	0.913	0.913	0.891	0.891
Number of debates	45	45	45	45	45	45
Debate * election fixed effects	x	x	x	x	x	x
Fixed effects for number of days to election	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x
Sociodemographic controls		x		x		x
Linear combination of estimates						
Average pre-debate dummies -5, -4, -3, -2, and -1	-0.006 (0.006)	-0.007 (0.006)	0.004 (0.004)	0.003 (0.004)	-0.005 (0.006)	-0.006 (0.006)
Average post-debate dummies 1, 2, 3, 4 and 5	-0.004 (0.006)	-0.005 (0.006)	0.003 (0.004)	0.003 (0.004)	-0.003 (0.005)	-0.003 (0.005)

Notes: The set of relative days dummies includes dummy variables for being surveyed one, two, three, four, or five days before the debate, as well as dummies for being surveyed one, two, three, four, or five days after the debate. Debates held less than five days from one another are excluded. Other notes as in Table 3.

Table C.20: Debates' effect on aggregate vote shares, five-day window

	Distance between predicted and final vote shares		Daily change in predicted vote shares	
	(1)	(2)	(3)	(4)
Before -5	0.005 (0.004)	0.005 (0.004)	0.008 (0.007)	0.006 (0.007)
-5	-0.003 (0.005)	-0.002 (0.005)	0.013 (0.011)	0.011 (0.011)
-4	0.004 (0.004)	0.004 (0.004)	0.003 (0.009)	0.002 (0.009)
-3	-0.003 (0.004)	-0.003 (0.004)	-0.003 (0.011)	-0.004 (0.011)
-2	-0.003 (0.003)	-0.002 (0.003)	-0.001 (0.010)	-0.003 (0.010)
-1	-0.007** (0.003)	-0.007* (0.004)	0.010 (0.006)	0.009 (0.007)
+1	-0.000 (0.003)	0.000 (0.003)	0.010 (0.007)	0.008 (0.008)
+2	-0.004 (0.004)	-0.003 (0.004)	0.019 (0.012)	0.017 (0.012)
+3	-0.003 (0.004)	-0.002 (0.004)	0.008 (0.010)	0.006 (0.010)
+4	-0.003 (0.004)	-0.003 (0.004)	-0.004 (0.007)	-0.005 (0.007)
+5	0.002 (0.003)	0.002 (0.003)	-0.005 (0.008)	-0.006 (0.008)
After +5	-0.002 (0.004)	-0.002 (0.004)	0.006 (0.007)	0.004 (0.007)
Observations	3010	3010	2971	2971
$R^2$	0.568	0.573	0.504	0.511
Mean, day of the debate	0.043	0.043	0.080	0.080
Number of debates	45	45	45	45
Debate * election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x
Sociodemographic controls		x		x
Linear combination of estimates				
Average pre-debate dummies -5, -4, -3, -2, and -1	-0.002 (0.003)	-0.002 (0.003)	0.005 (0.008)	0.003 (0.008)
Average post-debate dummies 1, 2, 3, 4 and 5	-0.002 (0.003)	-0.001 (0.003)	0.005 (0.007)	0.004 (0.007)

Notes: Same notes as in Table 4 and Appendix Table C.19.

## C.7 Event Study with Balanced Panel on Three-Day Window

Table C.21: Debates' effects on vote choice consistency, balanced panel

	Vote choice consistency		Vote intention		Conditional consistency	
	(1)	(2)	(3)	(4)	(5)	(6)
-3	-0.008 (0.009)	-0.009 (0.009)	0.007 (0.007)	0.007 (0.007)	-0.007 (0.008)	-0.008 (0.008)
-2	-0.011 (0.011)	-0.012 (0.011)	0.009 (0.008)	0.009 (0.008)	-0.011 (0.010)	-0.012 (0.010)
-1	-0.010 (0.012)	-0.010 (0.012)	0.007 (0.008)	0.007 (0.008)	-0.002 (0.009)	-0.003 (0.009)
+1	-0.011 (0.008)	-0.011 (0.008)	0.014 (0.009)	0.014 (0.009)	-0.014* (0.008)	-0.014* (0.008)
+2	-0.020** (0.009)	-0.021** (0.009)	0.008 (0.007)	0.008 (0.007)	-0.024*** (0.008)	-0.025*** (0.008)
+3	-0.021** (0.008)	-0.022** (0.008)	0.011* (0.006)	0.011* (0.006)	-0.022*** (0.008)	-0.023*** (0.008)
Observations	41536	41536	50980	50980	37751	37751
$R^2$	0.062	0.066	0.066	0.073	0.036	0.038
Mean, day of the debate	0.814	0.814	0.900	0.900	0.887	0.887
Number of debates	54	54	54	54	53	53
Debate * election fixed effects	x	x	x	x	x	x
Fixed effects for number of days to election	x	x	x	x	x	x
Individual controls	x	x	x	x	x	x
Sociodemographic controls		x		x		x
Linear combination of estimates						
Average pre-debate dummies -3, -2, and -1	-0.010 (0.009)	-0.010 (0.009)	0.008 (0.007)	0.008 (0.007)	-0.007 (0.008)	-0.008 (0.007)
Average post-debate dummies 1, 2, and 3	-0.017** (0.007)	-0.018** (0.007)	0.011* (0.007)	0.011 (0.007)	-0.020*** (0.007)	-0.020*** (0.007)

Notes: The sample is restricted to debates for which respondents are surveyed on each day within the -3/+3-days window. Respondents surveyed earlier than three days before the debate or later than three days after the debate are excluded. Debate fixed effects are replaced by election fixed effects. Other notes as in Table 3.

Table C.22: Debates' effects on aggregate vote shares, balanced panel

	Distance between predicted and final vote shares		Daily change in predicted vote shares	
	(1)	(2)	(3)	(4)
-3	0.003 (0.007)	0.003 (0.007)	-0.008 (0.011)	-0.012 (0.012)
-2	0.004 (0.007)	0.004 (0.007)	-0.005 (0.014)	-0.011 (0.015)
-1	0.002 (0.007)	0.002 (0.007)	0.012 (0.011)	0.008 (0.011)
+1	0.004 (0.006)	0.003 (0.006)	0.008 (0.009)	0.003 (0.008)
+2	0.002 (0.007)	0.000 (0.006)	0.034** (0.013)	0.028** (0.012)
+3	0.004 (0.007)	0.003 (0.007)	0.014 (0.015)	0.011 (0.014)
Observations	490	490	483	483
$R^2$	0.662	0.670	0.611	0.628
Mean, day of the debate	0.046	0.046	0.087	0.087
Number of debates	53	53	52	52
Debate * election fixed effects	x	x	x	x
Fixed effects for number of days to election	x	x	x	x
Aggregate controls	x	x	x	x
Sociodemographic controls		x		x
Linear combination of estimates				
Average pre-debate dummies -3, -2, and -1	0.003 (0.006)	0.003 (0.006)	-0.000 (0.010)	-0.005 (0.011)
Average post-debate dummies 1, 2, and 3	0.003 (0.005)	0.002 (0.005)	0.019* (0.010)	0.014 (0.009)

Notes: Same notes as in Table 4 and Appendix Table C.21.