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EVIDENCE FROM 62 ELECTIONS IN TEN OECD COUNTRIES

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Working Paper 26572  
<http://www.nber.org/papers/w26572>

NATIONAL BUREAU OF ECONOMIC RESEARCH  
1050 Massachusetts Avenue  
Cambridge, MA 02138  
December 2019

For suggestions that have improved this article, we are grateful to Alberto Alesina, Scott Ashworth, Christopher Berry, Ethan Bueno de Mesquita, Ernesto Dal Bo, Rafael Di Tella, Andrew Eggers, Georgy Egorov, Aaron Erlich, Frederico Finan, Alexander Fourniaies, Matthew Gentzkow, Benjamin Olken, Andrei Shleifer, Edoardo Teso, Matthew Weinzierl, and David Yang, as well as seminar participants at Houston University, Université Libre de Bruxelles, and the 2019 Galatina Summer Meetings. We also thank Sudeshna Barman, Ashley Liu, Jack Oster, and Irina Vlasache for great research assistance. The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research.

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Vote Choice Formation and Minimal Effects of TV Debates: Evidence from 62 Elections  
in Ten OECD Countries

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NBER Working Paper No. 26572

December 2019, Revised May 2020

JEL No. D72,D83

**ABSTRACT**

We use 253,000 observations from repeated survey data in 62 elections and ten OECD countries since 1952 to study the formation of vote choices and assess how TV debates contribute to this process. We find that the share of voters who state a pre-election vote intention corresponding to their final vote choice increases by 17 percentage points in the two months preceding the election. Changes in individual vote choices mostly result from changes in issue salience and in beliefs about competing candidates, and they generate aggregate shifts in predicted vote shares. Policy preferences, on the other hand, remain remarkably stable over time. We use an event study to estimate the impact of TV debates, and we find that they affect significantly neither individual vote choice formation nor convergence to aggregate vote shares. This suggests that information continuously received by voters exerts more influence on their behavior.

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# 1 Introduction

A healthy democracy requires informed voters (Downs, 1957). One view is that the weeks immediately preceding elections are a crucial period in this respect because electoral campaigns give voters the information they base their votes on (e.g., Holbrook, 1996; Hillygus and Shields, 2009). An alternative view is that campaigns have minimal effects because most people form their vote choice long in advance, based on party attachments rather than individual candidates' characteristics and election-specific information (e.g., Lazarsfeld et al., 1944; Campbell et al., 1960; Bartels, 2000). We use repeated survey data in 62 elections around the world to disentangle these contrasting views. First, we determine what fraction of people form their vote choice in the last two months before an election and whether changes in vote intentions are driven by changes in voters' beliefs about candidates, in their policy preferences, or in issue salience. Second, we use an event-study approach to assess the contribution to this process of some of campaigns' most salient and dramatic events: TV debates. Our findings shed light on the drivers of voter behavior and election results, and they hold lessons for the design of partisan campaigns and the regulation thereof.

Our first set of results relate to the *overall impact of information received in the period leading to an election*. If voters cast their ballots based on information received during the electoral season, one should expect a large number of them to reach their final vote choice only shortly before the election. On the other hand, people may vote based on preexisting partisan affiliations even if they pay attention to electoral campaigns. Partisan communication, which represents a large share of the information voters are exposed to during campaigns, may actually strengthen partisan identities and increase polarization (Holbert, 2005; Levendusky, 2013). In turn, this might decrease voters' exposure and receptiveness to pieces of information challenging their views (Taber and Lodge, 2006; Gentzkow and Shapiro, 2010).

To estimate the fraction of people forming their vote choice shortly before an election, we assembled a dataset of nationally representative surveys conducted around 62 elections in ten countries, from 1952 to 2017, and including a total of 253,000 observations. All surveys interviewed a new set of people every day before the election to elicit their vote intention, then surveyed these same people again after the election to record their actual vote choice. By comparing voters' responses to the two surveys, we can ascertain whether they had already settled on their final vote choice by the time of the pre-electoral survey without having to rely

on their own recollection of the date when they made up their mind. Most of our observations come from surveys which allocated respondents' survey date randomly, facilitating the interpretation of outcome differences over time. We find that the fraction of people with identical pre-election vote intention and post-election vote declaration increases by about 17 percentage points over the last 60 days before the election. This results both from an increased fraction of people stating any vote intention and increased consistency conditional on stating a vote intention. Vote choice consistency increases faster for younger voters and those without a college degree, suggesting that voters with less preexisting knowledge are more influenced by the information received in the electoral season.

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, measured as half the sum of the absolute value of these candidate-level differences, decreases by about 5 percentage points over the last 60 days before the election. This result indicates that vote choice formation during the electoral season can change the outcome of an election and that it is unlikely to be driven by shocks lacking any information content: indeed, such shocks should be expected to cancel each other in the aggregate. Instead, we argue that our results are primarily driven by information acquired and processed during the last two months and, therefore, that they provide a good measure of this information's impact on individual vote choice formation, aggregate vote shares, and the result of the election.

Our second set of results shed light on the *mechanisms through which information affects people's vote choices*. Information received in the electoral season may first affect voters' choice by changing their beliefs about candidates. Information on candidates' relative qualities and policy positions facilitates prospective voting and issue voting (e.g., [Enelow and Hinich, 1984](#); [Popkin, 1991](#)). In addition, voters may use the pre-election period to learn about the incumbent's policies and how the country and its economy have fared since the last election, which they can use to engage in retrospective voting (e.g., [Fiorina, 1981](#); [Vavreck, 2009](#)). Second, polls may clarify the identity of the front-runners and thus affect the choices of people voting strategically, i.e., based on likely outcomes of the election rather than expressively, for their favorite candidate ([Duverger, 1954](#)). Third, priming mechanisms may lead voters to

reevaluate candidates based on issues which received the most coverage during the campaign (e.g., [Iyengar and Kinder, 1987](#)). Finally, persuasive communication can change people's votes by changing their policy preferences (e.g., [Page and Jones, 1979](#); [Broockman and Kalla, 2016](#)).

To test the latter hypothesis, we use a set of policy questions which, similarly to people's vote choice, were asked in both the pre- and post-electoral surveys. Strikingly, we do not find any increase in the consistency between policy preferences expressed before and after an election.

We use a similar method to explore the role of priming. 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 over time.

Finally, we assess the role of beliefs voters hold on candidates. Using questions directly recording voters' beliefs, we find that belief consistency also increases over the electoral season. The fraction of voters forming their vote choice in the last two months is much lower in U.S. bipartisan elections than in multiparty elections held in the other countries in the sample, bringing additional evidence that beliefs on candidates contribute an important share to vote choice formation. Indeed, we should expect campaign information to change beliefs relatively more in multiparty elections, where the higher number of candidates may make initial priors less precise. To identify the role of different types of beliefs, we compare the shift in vote intentions for incumbents and strong candidates, who should benefit from increased information on the relative chances of victory of the contenders if people vote strategically, and for lesser-known candidates (challengers, small candidates, or new candidates), who should benefit from increased information available to voters on candidates' issue positions and quality. We find that people who eventually vote for lesser-known candidates are more likely to make up their minds during the electoral season; these candidates' vote shares grow over the last 60 days before the election; and the concentration of predicted vote shares decreases in that period, bringing support for the latter interpretation.

Overall, these results suggest that electoral campaigns affect vote choices by providing information which changes issues salience and voters' beliefs on candidates' attributes without changing their policy preferences or likelihood to rally to the front-runners.

Our third set of results provide evidence on the *relative importance of different sources of information*. Voters may update their beliefs and policy preferences based on information they continuously receive from the media, candidates' campaigns, or discussions with family

members, friends, and coworkers (e.g., [Huckfeldt and Sprague, 1995](#)), and they may converge to their final choice at different paces. Alternatively, many may form their vote choices within a few critical moments, including TV debates, party conventions, campaign rallies, 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 presidential candidates or, in parliamentary systems, between candidates for prime minister. The first reason is that TV debates have a tremendous potential to inform voters ([Jamieson and Birdsell, 1988](#)). They give direct and simultaneous exposure to candidates and allow voters to compare their policy positions and performance (including their rhetorical skills and how they withstand pressure) in an exercise which campaign teams do not control as much as scripted speeches, media interviews, or TV ads. Debates draw larger audiences than any other campaign event ([McKinney and Carlin, 2004](#)). 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. Second, holding TV debates before national elections is the norm in a growing number of countries ([National Democratic Institute, 2014](#)): 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, including Canada (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 cross-country sample to study their impact.

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 preexisting 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 intentions and vote choices or that between policy preferences, issue salience, or beliefs on candidates expressed before and after an election. At the aggregate level, debates did not significantly affect the distance between predicted and final vote shares, and only slightly increased short-term daily changes in parties' 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 electoral season 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. In sum, the contribution of TV debates to the formation of vote decisions is negligible.

## 1.1 Contribution to the Literature

A large literature studies the influence of interpersonal discussions, the media, and partisan communication on vote choices, policy preferences, and electoral results. Experiments by [Nickerson \(2008\)](#) and [Bond et al. \(2012\)](#) show that information received from personal online or offline contacts can be very impactful, and quasi-experimental evidence indicates that information provided by TV ([Gentzkow, 2006](#); [DellaVigna and Kaplan, 2007](#); [Enikolopov et al., 2011](#)), radio ([Adena et al., 2015](#)), newspapers ([Gentzkow et al., 2011](#); [Chiang and Knight, 2011](#)), and the internet ([Falck et al., 2014](#); [Campante et al., 2017](#)) can also substantially affect voter behavior. However, the effects of political ads disseminated by candidates' campaigns through these media are more modest and short-lived ([Krasno and Green, 2008](#); [Gerber et al., 2011](#); [Broockman and Green, 2014](#)). Turning to candidates' field

campaigns, most studies report substantial effects on vote choice of personalized forms of communication such as direct mail (Rogers and Middleton, 2015), phone calls (Arceneaux, 2007), door-to-door visits (Pons, 2018, but see Broockman and Kalla, 2018), and town hall meetings (Fujiwara and Wantchekon, 2013). We make three important contributions to this literature.

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 between candidates. Although their medium, television, is the same as that of political ads, voters may find TV debates more informative because they last much longer, subject all candidates to the same exercise, and test their ability to respond in the moment to unexpected moderators' questions and opponents' arguments. 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 the literature on debates, 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 electoral season 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, threatening the internal validity of their results. 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; Bowles and Larreguy, 2019; Bidwell et al., 2019). Scarce political information characterizing these studies' contexts may contribute to explain the substantial effects on vote choices they find, as emphasized by Brierley et al. (2019). 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>1</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 overall estimate of their combined influence in the last two months before an election. We build on Wlezien and Erikson (2002) and Wlezien et al. (2017), who show that election polls are increasingly predictive of the final result 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, which partly overlaps theirs. The fact that we use individual-level repeated survey data instead of aggregate polls enables us to complete the study of time patterns in vote choice formation in three important ways. First, we determine the fraction of voters who converge to their final choice during the campaign, which differs from 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 are interesting in their own

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<sup>1</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).

right and they inform our heterogeneous impact analysis of TV debates. Third, we investigate the mechanisms through which information affects vote choices.

Our last contribution is to shed light on the role of beliefs and policy preferences in vote choice formation (DellaVigna and Gentzkow, 2010). A large body of evidence shows that some of the information obtained by voters during the campaign relates to events that occurred before, such as economic fundamentals, which explains the good performance of models forecasting election results based on these variables (e.g., Fair, 1978; Gelman and King, 1993). Other studies find that new information on candidates' quality and policy platforms which emerges during the campaign also matters (e.g., Kendall et al., 2015). 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 interpersonal discussions can also lead people to change their preferences, including on issues as resistant to change as intergroup prejudices (Broockman and Kalla, 2016; Paluck et al., 2019; Kalla and Broockman, 2020). One could similarly expect partisan campaigns to persuade voters by changing their policy preferences when they use this type of contact. We assess the overall contribution of changes in beliefs, policy preferences, and issue salience to the formation of vote choice. We do not find any increase in the consistency between policy preferences expressed before and after an election. Our evidence indicates that information received during the campaign tends to affect vote choices and election outcomes by changing beliefs and issue salience more than policy preferences.

The remainder of the paper is organized as followed. Section 2 describes our data. Sections 3 and 4 study the formation of vote choices, beliefs, policy preferences, and issue salience during the electoral season. 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, 20015, 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>2</sup> While all surveys are available online, either to the general public or for research purposes, identifying them and 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 [A.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 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.

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 actual vote 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 about 201,000 (80%) of these observations. The national representativeness of the surveys and the high response rate to the post-electoral survey 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.

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<sup>2</sup>The full list of links at which the surveys can be downloaded and the corresponding references are available in Appendix [A.1](#).

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 underlying 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.2 for additional details). Our results are robust to excluding non rolling cross-sections, which account for 31% of our observations.<sup>3</sup>

Our key variables of interest are respondents’ pre-election vote intention and post-election vote declaration. To construct these variables homogenously across surveys, we establish and follow a set of common rules. 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. All the rules we followed when constructing our main outcomes and other variables are detailed in Appendix A.3.

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?” or “Does Bush or Kerry favor an increase in the minimum wage?”). The full list of these questions is available in Appendix Tables A.3 and A.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, such as economic policy, foreign policy, or public safety.

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<sup>3</sup>All results restricted to the subset of rolling cross-sections are shown in Appendix Tables D.1 through D.7.

Finally, we keep the following covariates for heterogeneity and other secondary 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 [A.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 candidates competing in each election: their party, their incumbency status, and whether they were on the ballot for the first time or not (see Appendix Table [A.5](#)).

In addition, we systematically searched for all TV debates held between presidential or prime-ministerial candidates during the periods covered by election surveys in our sample. Some surveys asked respondents whether they had watched debates, thereby indicating that debates had taken place before the corresponding election. In addition, we searched extensively for the existence and dates of TV debates using the following sources: academic papers, TV channels archives, newspaper articles, and Wikipedia. We cross-checked these different sources to ensure that we recorded debates' dates accurately. The full list of debates included in our analysis is shown in Appendix Table [A.6](#).

## 3 The Formation of Vote Choices

### 3.1 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 by using questions recording vote intention and vote choice, which are easier to respond to, and by comparing each respondent's answers to both.

Formally, we define vote choice consistency as a dummy equal to 1 if the respondent's pre-election vote intention 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,<sup>4</sup> 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. Finally, specifications shown in Appendix Tables D.8 and D.9 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 B.1). For each control variable, we also include a dummy equal to 1 when the control is missing. Our findings on vote choice formation are nearly identical when adding these controls.

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 the 2008 wave of the ANES correspond to one cluster.

We plot the  $\beta_t$  coefficients and their 95% confidence interval against time in Figure 1a. We find that 60 days before the election, 71% of voters state a vote intention corresponding to their final vote choice, suggesting that they voted based on earlier information or along party lines. The fraction of people with identical pre-election vote intention and post-election vote declaration increases by 17 percentage points over the last two months before the election, up to 88%. Voters who remain inconsistent even though they were surveyed just one day

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<sup>4</sup>We include two separate fixed effects for U.S. elections covered both by ANES and NAES, to also control for survey effects.

before the election can be either last-minute deciders or voters who were actually consistent but did not want to reveal their vote intention or misreported their vote intention or vote choice. Voters may misreport their vote choice because they forgot, because they expect their choice to be frowned upon by the pollster, or out of the desire to say they voted for the winner (e.g., [Wright, 1993](#)). Overall, our estimates indicate 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) to 29% (if all of them are).

While vote choice misreporting may inflate the fraction of inconsistent voters measured on any day, it is important to note that it should not bias our estimate of the *change* in this outcome over time (the 17 percentage points increase). A possible concern is that response accuracy may 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: respondents who received the pre-electoral survey closer to the election have a larger post-electoral survey lag on average (see Appendix Figure B.1). We address this concern by controlling flexibly for post-electoral survey lag in equation 1. Conditional on the dummies for the number of days separating the post-electoral survey from the election, vote choice misreporting should not correlate with the timing of the pre-electoral survey.

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 minus the number of days separating the pre-electoral survey from 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).

The increase in vote choice consistency can result from an increased fraction of people stating any vote intention or increased vote choice consistency conditional on doing so. 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>5</sup> As shown in Figure 1a, both the probability of stating a vote intention and conditional vote choice consistency increase in the last two months before the election. 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 column 1 of Appendix Table B.2, the fraction of respondents who say that they intend to vote increases by about 6 percentage points over the last 60 days before the election, consistent with preexisting studies (e.g., Hillygus, 2005). 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 (columns 2 and 3). We do not think this is too much of an issue. 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 D.10. More generally, Appendix Tables D.10 through D.12 show that our results are qualitatively very similar when including unlikely voters.

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<sup>5</sup>Our sample for the first outcome includes all respondents surveyed before the election who said that they intended to vote. For the second outcome, our sample includes all respondents surveyed before and after the 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.



### 3.2 Heterogeneity Across Voters

Voters with less preexisting knowledge on candidates' quality and issue positions or on the state of the economy may show a larger increase in their 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 the 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 high and low education, which is a strong correlate of political informedness (e.g., Angelucci and Prat, 2019). We also test for differences along four additional dimensions available across most surveys and known to predict policy preferences and vote choices (e.g., Alesina and La Ferrara, 2005; Marshall, 2019): age, gender, income, and employment status.

We use the following specification separately for each characteristic:

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

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 the outcome for type-a voters over time.

Columns 1 through 5 of Table 2, which include one characteristic at a time, show that vote choice consistency increases substantially for all groups during the 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 controlling for all sociodemographic characteristics and their interaction with the time trend: any additional day increases vote choice consistency by an additional 0.05 and 0.07 percentage point on average (or about 20 and 28% of the average daily change) for voters without a college degree compared to college degree holders and for younger voters compared to older voters, respectively (column 6). 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 B.3, this group's vote choice consistency increases by an additional 0.06 percentage points on average,

compared to other voters below median age. This difference is statistically significant and as large as the difference between the latter group and voters above median age.

In sum, younger and less-educated voters are more susceptible to the influence of electoral campaigns. We do not find heterogeneity in vote choice formation along any other dimension.

### 3.3 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 stated in the pre-electoral survey and vote choices reported in the post-electoral survey 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>6</sup> We define the overall distance between predicted and final vote shares as  $\Delta V_t^e = \frac{1}{2} \sum_c |\tilde{V}_{ct}^e - V_{ct}^e|$ , 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' distributions.

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

$$\Delta V_t^e = \sum_{t=-60}^{-1} \beta_t D_t + \alpha^e + W_t^e \lambda + u_t^e, \quad (4)$$

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 measured more precisely, we weight each observation by  $\frac{N_t^e}{N_t}$ , where  $N_t$

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<sup>6</sup>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. Our analysis occurs at the level of the overall election, not the level of an individual race. For instance, we aggregate the vote intentions and vote choices of all respondents surveyed about U.S. congressional elections irrespective of the local race in which they participate.

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 1b. 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.

### 3.4 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. In our view, they are primarily driven by the information voters receive during the electoral season (as opposed to information they already have before the campaign begins). Therefore, they provide a good measure of the impact of this information on individual vote choice formation, aggregate vote shares, and the result of the election. While previous work has sought to isolate the impact of specific types of information by comparing voters exposed to them or not, studying the timing of vote choice formation enables us to account for the overall impact of *all* types of information received during the campaign, without having to observe the particular pieces of information that people are exposed to.

#### 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., [Simon, 1955](#); [Ratcliff, 1978](#); [Canen, 2017](#); [Fudenberg et al., 2018](#)).

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 choices were entirely swayed by the latest piece of information would lead to an increase in vote choice consistency over time. This 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 B.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 primarily 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 and the media). 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.

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

An alternative interpretation is that increased vote choice consistency results from a stream of shocks containing no information but affecting vote choices, for instance by altering the utility function that voters maximize or changing their beliefs on the behavior of other voters (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 in the aggregate. To account for the convergence to final vote shares, one would need to assume that shocks are correlated across voters. However, it is unlikely that shocks that do not contain any relevant information could affect the electorate at large.

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

While our preferred interpretation attributes the increase in vote choice consistency to the acquisition of *new* information, a third possible interpretation is that this pattern is due to delays in incorporating *existing* information into vote decisions. In this interpretation, 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 our preferred one. First, even in this interpretation, choices of voters showing an increase in consistency are based on information that requires time to process, instead of preexisting factors such as partisan affiliations. This information is just not necessarily received during the last 60 days before the election.

Second, 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 before the election and desiring to incorporate all this information into their vote choice. 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.

Third, it is unlikely that delays in information processing could, alone, fully account for our results. It is not clear why such delays would predict a larger increase in vote choice consistency among younger and less educated voters. In addition, 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, such as beliefs on candidates' quality and issue positions, as well as issue salience.

In sum, the increase in vote choice consistency and the convergence to final vote shares shown in this section likely result for the most part from information received during the last 60 days before the election. Other factors, including postponed information processing, may contribute to these patterns, making them an upper bound on the impact of electoral season information.

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

### 4.1 Formation of Policy Preferences

Information can affect vote choices through multiple mechanisms. First, voters' policy preferences might change over the course of the campaign, estranging them from candidates defending positions they are moving away from. Second, voters might update their beliefs on 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, to avoid losing their vote. Fourth, electoral season information may increase the salience of some issues and prime voters to evaluate candidates on them. Voters may thus desert candidates they were close to on issues which received less coverage, even though their policy preferences and beliefs on candidates' issue positions, quality, and electoral chances remain unchanged.

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:

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

where  $\tilde{A}_{it}^q$  (resp.  $A_{it}^q$ ) is the respondent's answer to the question before (resp. after) the election and  $\bar{A}^q - \underline{A}^q$  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 and replacing election fixed effects with question fixed effects.<sup>7</sup> As shown in Figure 2a and Appendix Table B.4, Panel a, policy preferences remain remarkably stable in the last two months before an election, contrasting with the increase in vote choice consistency. The probability of stating a policy preference does not change over time either. Simply put, the persuasive communication voters receive in the electoral season does not alter their policy preferences.

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<sup>7</sup>Our sample includes all respondents surveyed before and after the election who stated a policy preference in the second survey. Unlike self-reported 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 regarding policy preferences, 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.

## 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.<sup>8</sup>

As shown in Figure 2b, consistency in issue salience increases by 9 percentage points during the last two months before an election. This increase 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 B.4, Panel b, column 1). It is driven by increases both in the probability of stating an important issue (column 2) and in consistency conditional on stating an issue (column 3).

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 contribute an important share 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 increase in belief consistency in the last two months before the election is about two thirds of the change in vote choice consistency but that it falls short of statistical significance (Figure 2c and Appendix Table B.4, Panel c, column 1).<sup>9</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 percent level (column 2). We complement this evidence by comparing changes in vote choice consistency across different types of elections and across supporters of different types of candidates, an approach which is less direct but which has the advantage of using all our data, not just surveys recording voters' beliefs both before and after the election.

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<sup>8</sup>Our sample includes all respondents surveyed before and after the election who stated a most important issue in the second survey. Similarly as in regressions regarding policy preference consistency, 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.

<sup>9</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 they are. Belief consistency is then defined similarly as preference consistency, using the range of possible answers as denominator. Our estimates pool both types of questions.

We can expect information received in the electoral season to change beliefs on candidates relatively more in multiparty settings, where the diversity of candidates and frequent changes in the party system may make initial priors less precise on all dimensions. If changes in these beliefs are responsible for the formation of vote choices, we should thus expect vote choice consistency to be initially lower and increase more rapidly in multiparty elections than in bipartisan systems.

Using a specification of the form in equation 3, we interact a linear time trend with a dummy  $\Omega^e$  equal to 1 for the U.S., where the vast majority of elections are bipartisan, by difference with the multiparty systems prevalent in all other countries in the sample.<sup>10</sup> As shown in Appendix Table B.5, column 1, vote choice consistency increases in both types of elections, but a much larger fraction of voters form their vote choice during the electoral season in multiparty elections. Similarly, the distance between predicted and final vote shares decreases less in the U.S. than in other countries (column 5). Of course, other cross-country differences than in the party system may drive the observed patterns. Regardless of the exact interpretation, these results are noteworthy: they inform our heterogeneity analysis of debates' impact and suggest 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.

We now distinguish beliefs on candidates' positions and quality, which may affect the choice of any voter, from beliefs on their chances to win the election, which should primarily affect strategic voters. Changes in the second type of beliefs should be more consequential for vote choice in plurality rule elections, where the incentives to be strategic are stronger than under proportional rule. We find suggestive evidence that changes in the former type of beliefs, due to new information on candidates' positions and quality, exert more influence on vote choice. Indeed, the change in vote choice consistency is not larger in plurality elections (columns 2 through 4), and the distance between predicted and final vote shares decreases at the same pace in plurality and proportional systems (columns 6 through 8).

To bring additional evidence on the role of these two types of beliefs, note that information on candidates' positions and quality should 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; Larreguy et al., 2018). If changes in related beliefs are responsible for vote choice formation, people who eventually vote for lesser-known

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<sup>10</sup>To avoid perfect multicollinearity with the set of election fixed effects  $\alpha^e$ , we do not include the dummy  $\Omega^e$ .



candidates should converge to their vote choice later in the campaign, and these candidates should see their predicted vote share increase over time. Instead, information on candidates' chances should lead strategic voters to rally to the strongest candidates, increasing these candidates' predicted vote shares and overall vote share concentration. 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 of the form in equation 3 where we define as type-a voters 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>11</sup> As shown in Appendix Table B.7, vote choice consistency is initially lower and it increases faster among those who eventually vote for challengers, small candidates, and new candidates.<sup>12</sup> These differential increases remain statistically significant in a specification 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 last two months before an 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 (Table 3, columns 1 through 3).

Finally, we measure changes in the following index of vote share concentration:  $M_t^e = \sum_c (\tilde{V}_{ct}^e)^2$ . As shown in column 4 and in Appendix Figure B.3, vote share concentration *decreases*, on average, in the last two months before an election.

Overall, these multiple results converge to support the interpretation that vote choice formation is driven by changed beliefs on candidates' issue positions and quality more than

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<sup>11</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>12</sup>As shown in Appendix Table B.6, 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.

on their relative chances. This conclusion echoes recent evidence indicating that voters are more likely to behave expressively than strategically (Pons and Tricaud, 2018).

## 5 Impact of TV Debates

Finally, we investigate which types of information are responsible for the formation of vote choices and beliefs on candidates as well as changes in issue salience. 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 C.1 and Table C.1 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.

### 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>13</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 C.2). 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 C.1.<sup>14</sup> The full list of debates is included in Appendix Table A.6, together with the

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<sup>13</sup>The results are robust to an extended model excluding debates held less than five days from one another and including relative day dummies for up to five (not three) days before and after the debate. The corresponding results are shown in Appendix Tables D.17 through D.20.

<sup>14</sup>As shown in Appendix Figure C.3, vote choice consistency increases at a similar pace in the sample of elections including debates as in the overall sample.

following information: whether the debates featured presidential candidates or candidates for prime minister, their date, the time to the election, and the surveys covering them.

A few debates affect several elections, namely the first and second votes in German elections, and the electoral vote and party vote in New Zealand elections. Therefore, an observation is a respondent  $\times$  debate  $\times$  election. 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.

Our main specification is as follows:

$$Y_{it}^d = \sum_{k=-3}^{-1} \mu_k + \sum_{k=1}^3 \mu_k + \mu_{4-} + \mu_{4+} + \sum_{t=-1}^{-60} \beta_t D_t + \alpha^d + W_{it}' \lambda + u_{it}^d, \quad (5)$$

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>15</sup>

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>16</sup> Our estimates capture direct effects of debates as well as indirect effects of subsequent media commentaries and discussions, both on people who watch debates and those who do not. In Section 5.4, we separate effects on watchers and non-watchers.

Importantly, the fact that debates took place at different times in different elections, as shown on Appendix Figure C.2, 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  $W_{it}$

<sup>15</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.

<sup>16</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, on average.

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 timing 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>17</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 changes. The fact that most surveys in the study are rolling cross-sections alleviates this risk, as these surveys allocate each respondent's survey date randomly. It remains that debates, like other campaign events, may affect the characteristics of people willing to answer the survey, once contacted (Gelman et al., 2016). To address this concern, Appendix Table C.2 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 using pre/post difference designs and focusing 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

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<sup>17</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 Tables D.21 through D.24.

debates, which the pre-debate dummies  $\mu_{-3}$ ,  $\mu_{-2}$ , and  $\mu_{-1}$  allow us to test for. However, these dummies would not capture discrete changes taking place on the day of the debate or immediately after. One possibility is that the amount of information increases abruptly (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 C.3 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 TV debates. Columns 5 and 6 show no significant effect on the probability of having seen election polls recently (despite a significant point estimate one day before the debate) 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>18</sup> We would not be able to measure the impact of TV debates using only post-electoral survey responses: by the time of the

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<sup>18</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 C.4, 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 D.13 through D.16 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.

post-electoral surveys, vote choices reported by *all* respondents may reflect debates' influence. However, if debates do help voters decide between candidates, we should expect the fraction of people stating a vote intention identical to their actual vote to be higher among those who answered the pre-electoral survey right after the debate than those surveyed right before. Day-to-day increases in vote choice consistency after the debates, conditional on the controls, would indicate that debates' effects increase over time. It is important to note that studying individual vote choice formation should help uncover effects which aggregate predicted vote shares could miss. For instance, debates and subsequent media commentaries may increase the likelihood that voters of opposing sides express support for the nominee of their preferred party instead of not stating any vote intention if they are watched through a partisan lens. Our measure of individual vote choice consistency would capture this effect even if the net impact on aggregate vote shares were null.

We report the coefficients on the  $\mu_k$  dummies indicating the number of days relative to the debate in Table 4, column 1, and plot them in Figure 3a. 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 over the electoral season 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 shown (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>19</sup> and vote choice consistency conditional on doing so. 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 3b and Table 4, 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 conditional vote choice consistency either, and the effect of debates

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<sup>19</sup>This outcome is defined on the sample of respondents who said that they intended to vote. Column 2 of Appendix Table C.4 shows that TV debates do not affect selection into this sample.

on this outcome in the three following days is negative and not significant (Figure 3c and Table 4, columns 5 and 6).

Finally, as shown in columns 3 through 6 of Appendix Table C.5 as well as in Appendix Figures C.4b and C.4c, 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 C.5, columns 1 and 2, and Appendix Figure C.4a).

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, it is unlikely that the null effects we measure three to five days after the debate give way to larger 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: debates may lead some voters to change their views without fully converging on their final vote choice yet.

We first measure debates' effects on  $\Delta V_t^d$ , the overall distance between predicted and final vote shares defined in Section 3.3, with a specification using only one observation per debate per day:

$$\Delta V_t^d = \sum_{k=-3}^{-1} \mu_k + \sum_{k=1}^3 \mu_k + \mu_{4-} + \mu_{4+} + \sum_{t=-1}^{-60} \beta_t D_t + \alpha^d + W_t' \lambda + u_t^d. \quad (6)$$

As shown in Figure 4a and in columns 1 and 2 of Table 5, all pre- and post-debate relative days dummies are close to zero and not significant. The average effect of debates 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 1b). This result is unchanged when controlling for sociodemographic variables (column 2).

Even if debates do not contribute to the convergence to final vote shares, they may generate short-term shifts in aggregate vote intentions. We define the overall daily change in predicted



vote shares as  $\delta V_t^d = \frac{1}{2} \sum_c |\tilde{V}_{ct}^d - \tilde{V}_{ct-1}^d|$ , where  $\tilde{V}_{ct}$  is the predicted vote share of candidate  $c$  among respondents surveyed at time  $t$ .  $\delta V_t$  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 6 using this outcome, and we show the results in Figure 4b and in columns 3 and 4 of Table 5.<sup>20</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 vote 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.

We first study the potential mediating influence of debates' timing and election type. Debates may affect vote choices 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 who have already converged on their final vote choice is higher;

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<sup>20</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.



close races to expected landslides; highly fluctuating races to more stable races;<sup>21</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 3); and plurality rule to proportional rule elections.

To study treatment impact heterogeneity on vote choice formation, we interact the relative days dummies with indicators of debate type or election type:

$$\begin{aligned}
Y_{it}^d = & \left[ \sum_{k=-3}^{-1} \mu_k + \sum_{k=1}^3 \mu_k + \mu_{4-} + \mu_{4+} \right] \times \Omega^d \\
& + \left[ \sum_{k=-3}^{-1} \eta_k + \sum_{k=1}^3 \eta_k + \eta_{4-} + \eta_{4+} \right] \times (1 - \Omega^d) \\
& + \sum_{t=-1}^{-60} \beta_t D_t + \alpha^d + W'_{it} \lambda + u_{it}^d,
\end{aligned} \tag{7}$$

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 measure the effects of the two types of debates (not the difference in effect size) and directly test the null that neither type-a nor type-b debates have significant effects.

Results are shown in Table 6. 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 C.6. 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 Table 6).

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<sup>21</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.

We now explore treatment impact heterogeneity along voter characteristics with a specification of the form in equation 7. First and foremost, we measure effects separately for voters who report watching debates and those who do not, to test the natural prediction that the former group may be more affected. 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 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 3.2.

Results obtained using these four variables and our other sociodemographic characteristics as mediating factors are reported in Table 7 and Appendix Table C.7. 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 from predicted vote shares 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 Table 7). 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 Table 3. We first run a specification of the form in equation 5 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 of the form in equation 6 to estimate the impact of debates on vote share concentration. As shown in Appendix Table C.8, debates affect significantly neither the predicted vote share of challengers, small candidates, or new

candidates, nor the concentration of predicted vote shares. Overall, our results suggest that the impact of TV debates on vote choice formation is minimal.

## 6 Conclusion

Using 253,000 observations from repeated survey data in 62 elections around the world since 1952, we find that the fraction of people who state a pre-election vote intention identical to the vote choice they report after the election increases by 17 percentage points on average in the 60 days preceding the vote. This increase in individual vote choice consistency is concomitant with a 5 percentage points reduction in the overall 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 are larger in multiparty elections than in the U.S. biparty system, they are similar across races using plurality and proportional rule, and they benefit lesser-known candidates. These patterns suggest that changes in vote choices reflect expressive motives more than strategic behavior and are driven by changed beliefs on candidate' issue positions or quality more than their chances of victory. The fraction of voters who hold beliefs on candidates' attributes also increases, corroborating this view. Beyond changes in beliefs, we find that the consistency between issues that voters rate the most important before and after an election increases substantially during the campaign, suggesting that priming also contributes to vote choice formation.

While our results support the view that campaigns have substantial effects on vote choices, it would be wrong to infer that voters are an uninformed public, swayed by any information they receive in the electoral season. It is quite the opposite. First, contrasting with their vote choice, people's policy preferences are not affected by the campaign: we were surprised to find that the fraction of respondents stating identical policy preferences in the pre- and post-electoral survey does not increase during the campaign. In addition, our event-study approach finds that presidential or prime minister TV debates, campaigns' most salient events, do not play any significant role in shaping voters' choice of candidate. For all the interest they generate, the large audience they draw, and the many media commentaries they provoke, debates neither increase individual vote choice consistency nor reduce the distance to final aggregate vote shares. These null findings are observed even for a race's first debate and in multiparty elections, in which voters remains 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 by an average 1.4 percentage points in the next three days. Together with the small and non-significant decline in vote choice consistency, this effect indicates that, if anything, debates move a small fraction of voters *away* from their final vote choice, in the short term.

These results suggest that even if voters sometimes seem relatively uninformed, their vote choices actually aggregate 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 campaign advertisements diffused through these channels fail to affect individual vote choices (e.g., [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, even if this means spending less time on TV and more time recruiting and organizing volunteers. 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 and ongoing 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 studying and reforming campaign regulations to ensure that all campaigns have equal direct access to voters and in monitoring the most personal and tailored forms of partisan communication, on the field and in social media, to improve the quality of information available to voters and thereby increase the chance that their final choice corresponds to their actual preferences.

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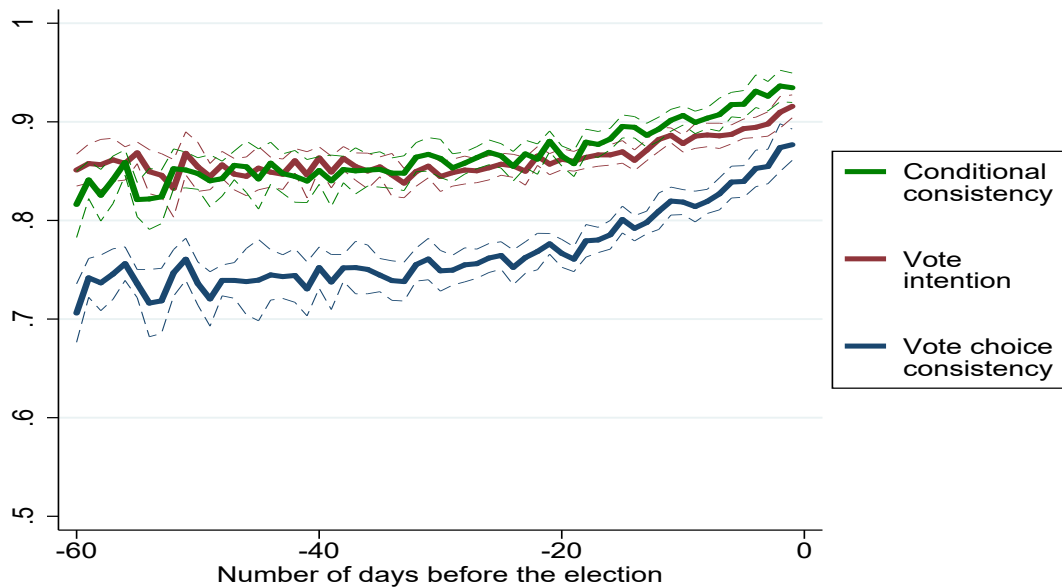
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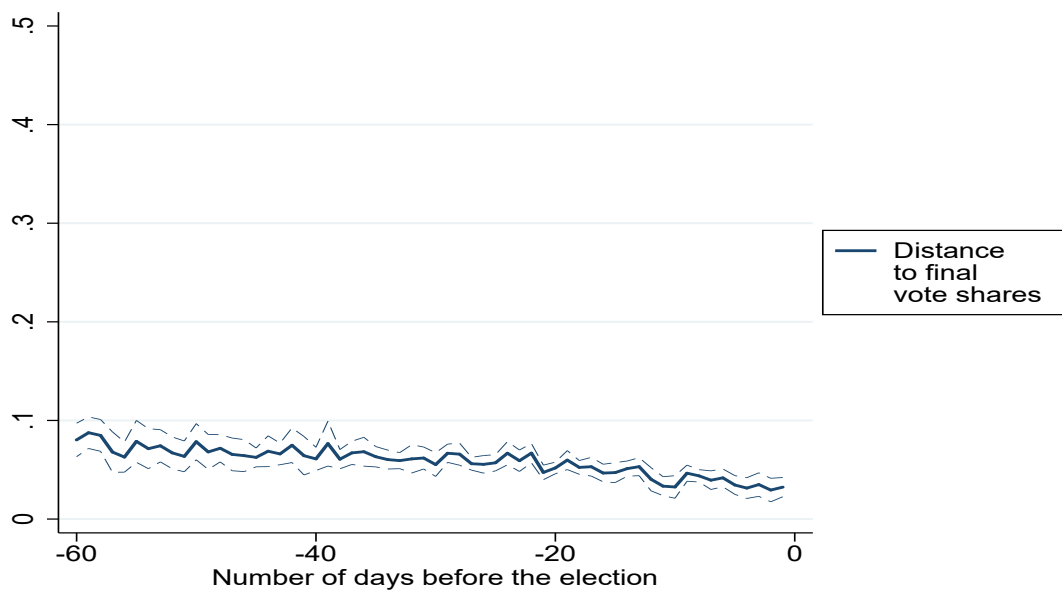


Figure 1: Vote choice consistency and distance to final vote shares

(a) Individual vote choice consistency, vote intention, and conditional consistency

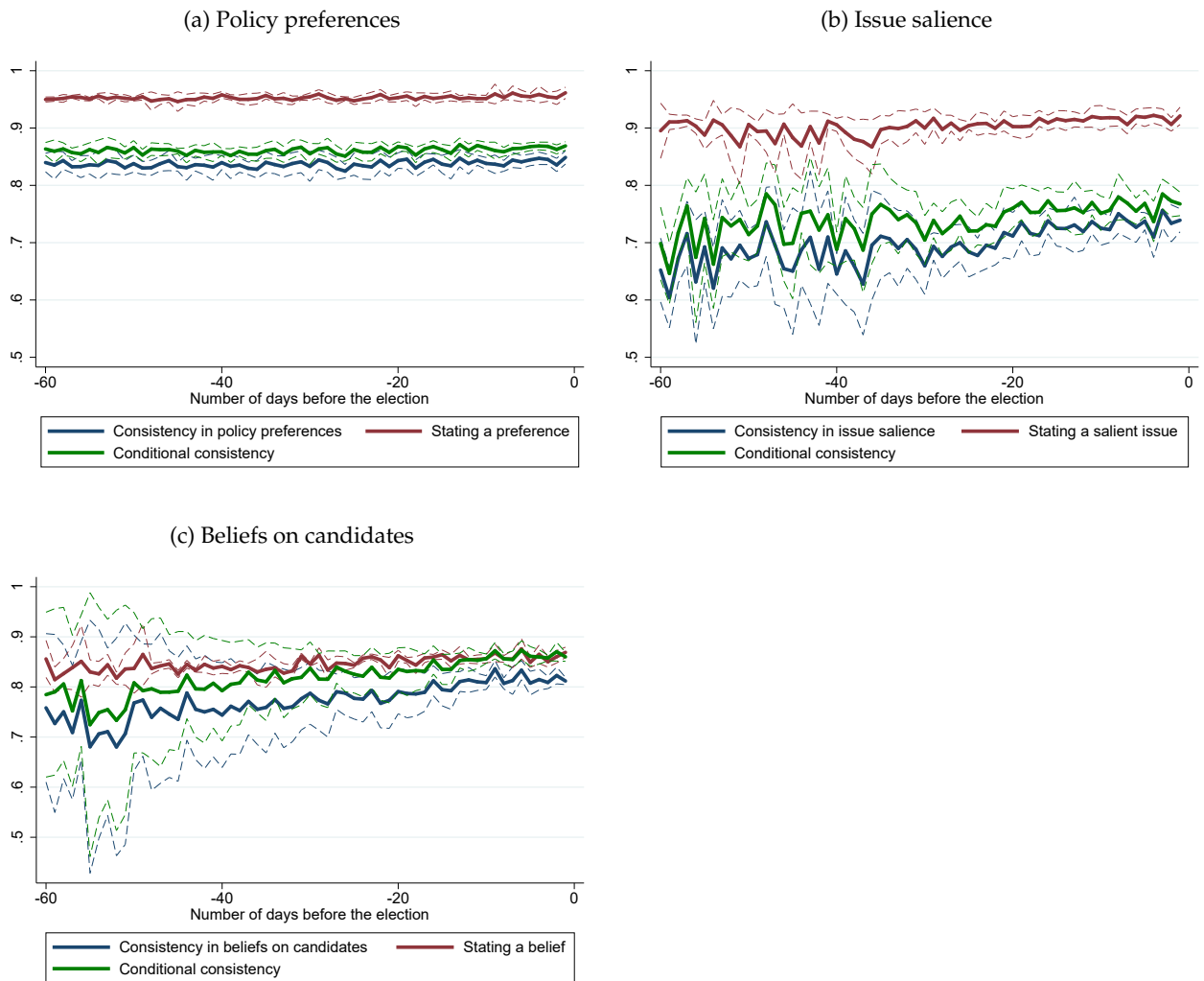


(b) Distance between predicted and final vote shares



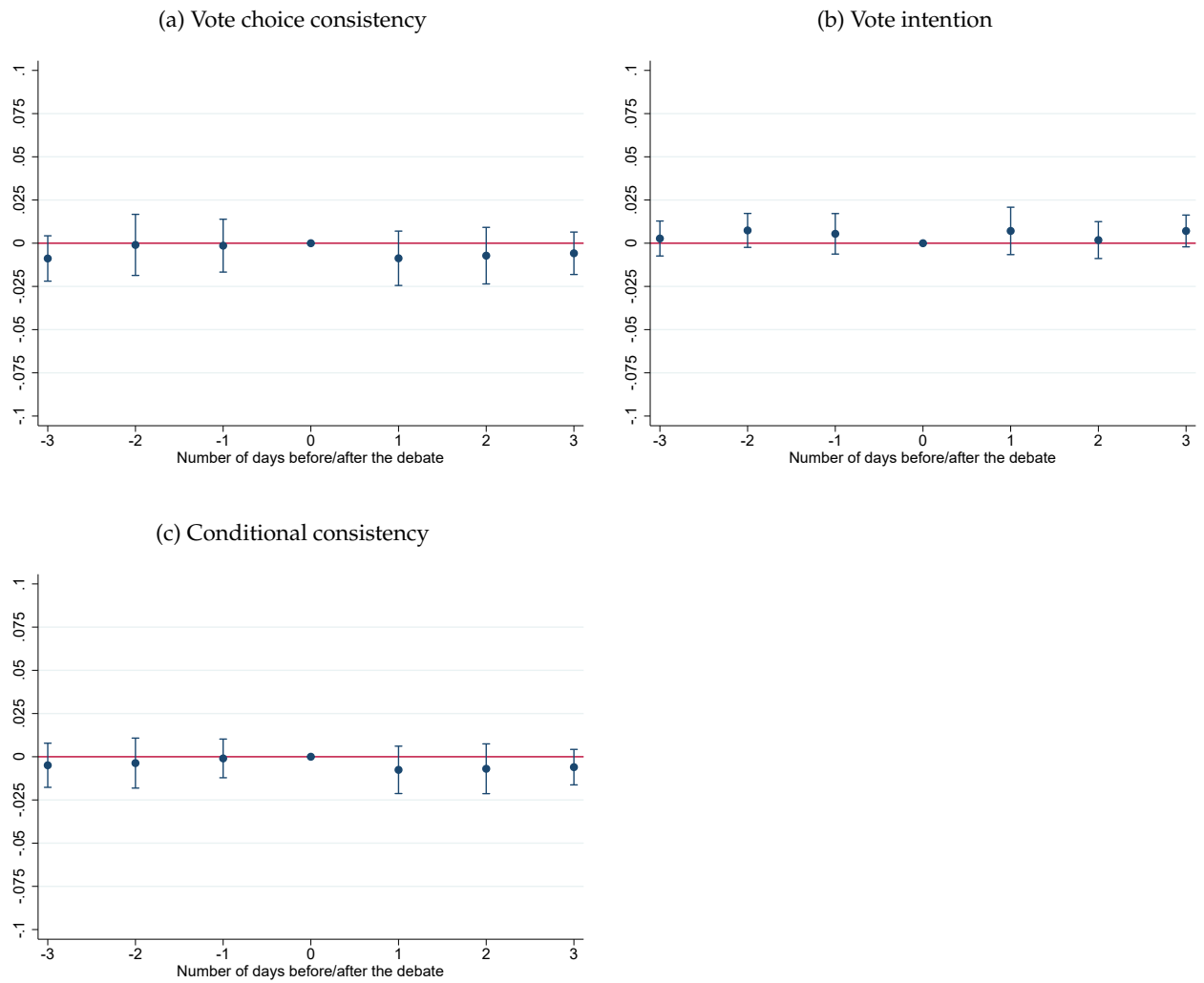
Notes: Figure 1a shows the point estimates and the 95% confidence interval from a regression of vote choice consistency, vote intention, and conditional vote choice consistency on 60 fixed effects indicating the number of days relative to the election. The respective samples include all respondents surveyed 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 (N = 200,916); all respondents surveyed before the election who said that they intended to vote (N = 253,489); and all respondents surveyed before and after the 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 (N = 178,176). Figure 1b plots the distance between predicted and final vote shares. Vote shares are computed based on 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. We use one observation per election per day 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 election (N=3,125). Both figures control for election fixed effects as well as fixed effects for the day of the week in which the pre-electoral survey took place. In addition, Figure 1a controls for fixed effects for the number of days between the post-electoral survey and the election and Figure 1b for the average of this variable. Standard errors are adjusted for clustering at the survey level.

Figure 2: Consistency in policy preferences, issue salience, and beliefs on candidates



*Notes:* We show the point estimates and the 95% confidence interval from regressions of consistency in policy preferences (Figure 2a), issue salience (Figure 2b), and beliefs on candidates (Figure 2c) on 60 fixed effects indicating the number of days relative to the election. We use one observation per respondent per policy question in Figure 2a, one observation per respondent in Figure 2b, and one observation per respondent per belief question in Figure 2c. We control for question fixed effects (Figures 2a and 2c) or election fixed effects (Figure 2b), as well as 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. Standard errors are adjusted for clustering at the survey level. In each figure, we consider three outcomes: consistency; stating a preference (resp. a salient issue or a belief); and conditional consistency. The sample includes (respectively) 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 ( $N = 228,562$ ; 46,108; and 478,039); all respondents surveyed before the election ( $N = 330,843$ ; 60,713; and 809,037); and all respondents surveyed before and after the election who stated a policy preference, a salient issue, or a belief on candidates in both the first and the second surveys ( $N = 222,785$ ; 44,049; and 440,771).

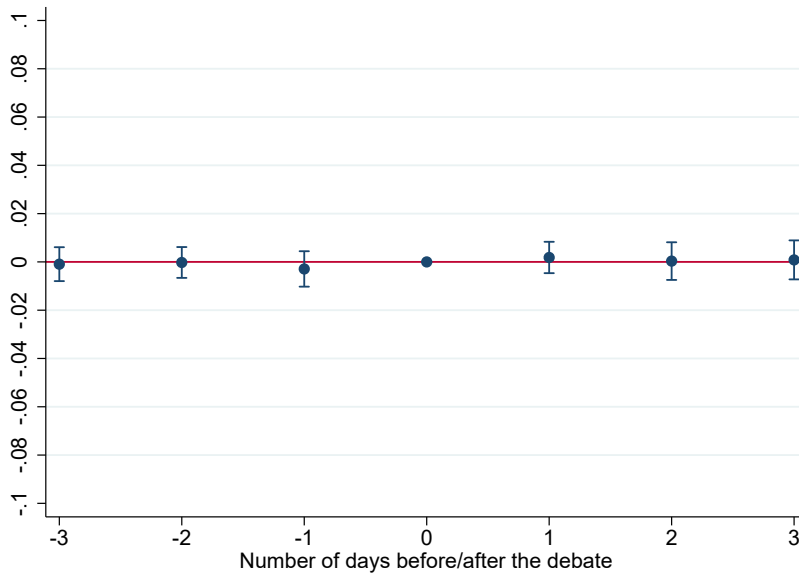
Figure 3: Debates' effects on vote choice consistency



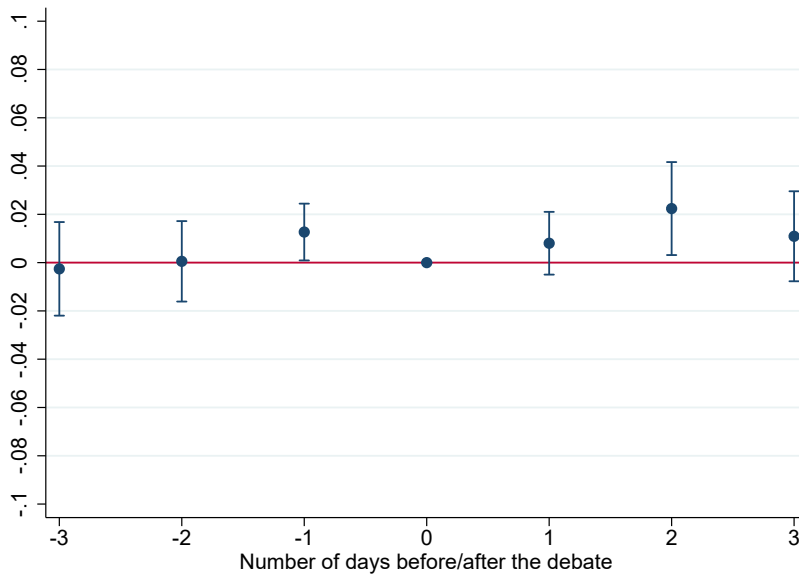
*Notes:* We show point estimates and 95% confidence intervals from regressions of vote choice consistency, vote intention, and conditional vote choice consistency on dummy variables for being surveyed one, two, or three days before the debate, as well as dummies for being surveyed one, two, or three 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 3a and 3c, we also control for fixed effects for the number of days separating the post-electoral survey from the election. For each debate and election, our estimation uses all respondents in samples defined as in Figure 1. Standard errors are adjusted for clustering at the debate level. There are 56 debates, after excluding debates held less than three days from one another.  $N=263,681$ ;  $330,621$ ; and  $240,826$ , respectively.

Figure 4: Debates' effects on aggregate vote shares

(a) Distance between predicted and final vote shares



(b) Daily change in predicted vote shares



*Notes:* We show point estimates and 95% confidence intervals from regressions of the distance between predicted and final vote shares, and daily change in predicted vote shares, 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. We also control for the average number of days separating the post-electoral survey from the election in Figure 4a. We use one observation per election per day. In Figure 1b, vote shares are computed based on the set of respondents used in Figure 1b, 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. In Figure 4b, vote shares are computed based on the set of respondents used in Figure B.3, and 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. Standard errors are adjusted for clustering at the debate level. There are 56 debates, after excluding debates held less than three days from one another.  $N=3,802$  and  $3,749$ , respectively.

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*** (0.0005)
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>	0.799	0.800	0.874	0.874	0.889	0.889	0.774	0.775
Mean at day -1	0.8768	0.8768	0.9157	0.9157	0.9346	0.9346	0.0324	0.0324

*Notes:* Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10 percent, respectively). Time is defined as minus the number of days separating the pre-electoral survey from the election. We use one observation per respondent in columns 1 through 6 and control for election fixed effects as well as fixed effects for the day of the week in which the pre-electoral survey took place. In columns 1, 2, 5, and 6, we also control for fixed effects for the number of days separating the post-electoral survey from the election. 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, in the second (columns 1 and 2); all respondents surveyed before the election who said that they intended to vote (columns 3 and 4); and all respondents surveyed before and after the 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 (columns 5 and 6). We use one observation per election per day in columns 7 and 8 and control for election fixed effects, fixed effects for the day of the week in which the preelectoral survey took place, and the average number of days separating the post-electoral survey from the election. We compute vote shares based on 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. 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.

Table 2: 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>	0.800	0.800	0.800	0.799	0.800	0.800
Mean at day -1	0.8768	0.8768	0.8768	0.8768	0.8768	0.8768

Notes: Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10 percent, respectively). We regress vote choice consistency on a linear time trend and 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 3: Likelihood to vote for lesser-known candidates and vote share concentration

	Support for challenger (1)	Support for small candidate (2)	Support for new candidate (3)	Vote share concentration (4)
Time	0.00046*** (0.00017)	0.00038** (0.00015)	0.00006 (0.00004)	-0.00021** (0.00010)
Observations	189733	190329	187068	3138
R <sup>2</sup>	0.674	0.229	0.161	0.991
Mean at day -1	0.66015	0.14837	0.02083	0.33637

Notes: Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10 percent, respectively). In columns 1 to 3, 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 they intend to vote for a challenger, a small candidate, or a new candidate, and use one observation per respondent. In column 4, 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. We control for election fixed effects as well as fixed effects for the day of the week in which the pre-electoral survey took place.

Table 4: 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
Sociodemographic controls		X		X		X
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 percent, respectively). For each debate and election, our estimation uses all respondents in samples defined as in Table 1. 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 columns 1, 2, 5, and 6 we also control for 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 value of the three pre-debate dummies and the mean value of the three post-debate dummies are also reported, along with their standard errors.

Table 5: 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
Sociodemographic controls		X		X
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 percent, respectively). We use one observation per election per day. In columns 1 and 2, vote shares are computed based on the set of respondents used in Table 1, 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. In columns 3 and 4, vote shares are computed based on the set of respondents used in Table 3, column 4, and 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. 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 columns 1 and 2. Sociodemographic controls are averages of the sociodemographic variables included in Table 4. The mean value of the three pre-debate dummies and the mean value of the three post-debate dummies are also reported, along with their standard errors.



Table 6: 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
Sociodemographic controls	X	X	X	X	X
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 percent, 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 4.

Table 7: 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
Sociodemographic controls	X	X	X	X	X	X	X
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 percent, 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 4.

## Appendix to “Vote Choice Formation and Minimal Effects of TV Debates” (Le Pennec and Pons)

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## A Additional Information on the Data

### A.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-eeec.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.surveydata.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 Research Center, Institute for Social Research, the University of Michigan. 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 Research. 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 Research. 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 Research. 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/>.

## A.2 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 United States) 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.

## A.3 Definition of Key Variables

### A.3.1 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 United States). 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.

### A.3.2 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 converged on their final vote 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.

### A.3.3 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 A.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 [A.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.

#### **A.3.4 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.

### A.3.5 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 United States—"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.

#### **A.4 Sampling Frame**

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

Table A.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) 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

(c) 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

## (d) 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

## (e) 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

## (f) 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

## (g) 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

## (h) 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



## (i) 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

## (j) 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

*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 A.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) 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

## (e) 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

## (f) 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

## (g) 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	None	No	No	No

## (h) 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

## (i) 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

## (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 Table A.1.

Table A.3: List of policy questions by country

(a) 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?
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.

## (b) United States (cont.)

Survey	Year	Question
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.

## (c) 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?

## (d) 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?

## (e) Germany

Survey	Year	Question
GLES	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?
GLES	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?
GLES	2009	To what extent do you agree with the statement: "The German Armed Forces should be pulled out of Afghanistan immediately"?
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?

## (f) 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 Table A.1.

Table A.4: List of belief questions by country

(a) 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 Gerarl Ford on this scale?
ANES	1976	Where would you place Jimmy Carter on this scale?
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?

## (b) 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?



## (c) 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?

## (d) 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?

## (e) Switzerland

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

## (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?

*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 Table [A.1](#).

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

(a) United States 1952-1996

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	No	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
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

## (b) United States 2000-2016

Election date	Election type	Candidate	Incumbent	Small	New
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) 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

## (d) 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

## (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

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
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

## (g) Netherlands

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
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

## (h) Germany

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 Demoratic 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 Demoratic Party of Germany	No	No	No
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 Demoratic Party of Germany	No	No	No

## (i) 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



## (j) New Zealand

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
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

## (k) 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	No	No	No
14-Sept-2014	Lower House	Liberal People's Party	No	No	No
14-Sept-2014	Lower House	Social Democrats	Yes	No	No
14-Sept-2014	Lower House	Sweden Democrats	No	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 A.6: List of TV debates by country

## (a) United States

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	"	"	"
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

## (b) Austria

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

## (c) 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

## (d) 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

## (e) 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

## (f) Germany

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

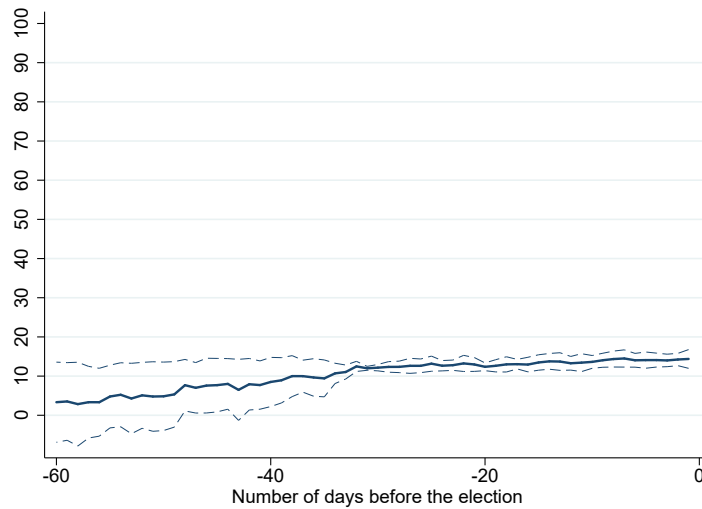
## (g) New Zealand

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. We exclude debates held less than three days from one another, debates held before the beginning of the corresponding survey, and debates held just one day before the election, after which no respondent was surveyed. Other notes as in Table A.1.

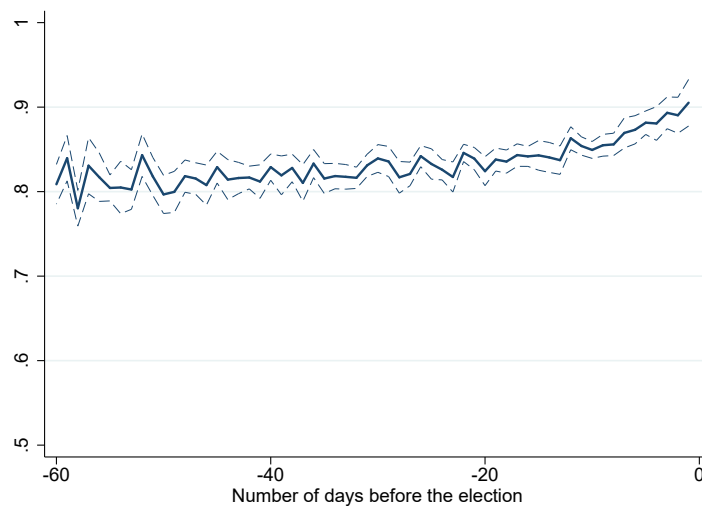
## B The Formation of Vote Choices: Additional Figures and Tables

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



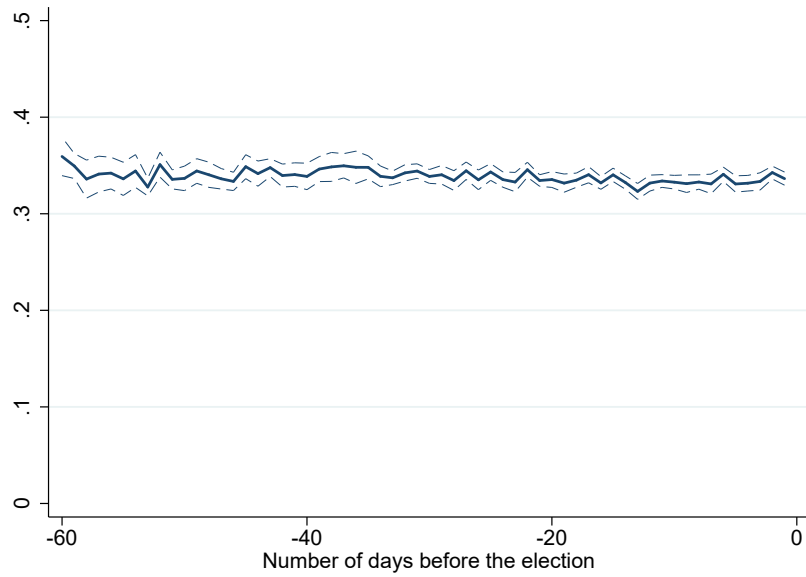
*Notes:* We show the point estimates and the 95% confidence interval from a regression of the number of days separating the post-electoral survey from the election on 60 fixed effects indicating the number of days separating the pre-electoral survey from the election. We control for election fixed effects as well as 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. 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 B.2: Certainty of vote intention



*Notes:* We show the point estimates and 95% confidence interval from a regression of the certainty of the stated vote intention on 60 fixed effects indicating the number of days relative to the election. We control for election fixed effects as well as 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. 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. N=133,022.

Figure B.3: Vote share concentration



*Notes:* We show the point estimates and the 95% confidence interval from a regression of the vote share concentration on 60 fixed effects indicating the number of days relative to the election. 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 B.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)	-0.0235** (0.0112)	-0.0002 (0.0002)	0.0002** (0.0001)	0.0006*** (0.0002)	-0.0008*** (0.0002)
Observations	190719	185834	215968	216542	163850	163850	163850	193301
$R^2$	0.662	0.455	0.503	0.908	0.247	0.264	0.217	0.424
Mean at day -1	0.6134	0.3970	0.4888	49.7849	0.2349	0.2468	0.2462	0.4015

*Notes:* Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10 percent, respectively). Time is defined as minus 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. We control for election fixed effects as well as fixed effects for the day of the week in which the pre-electoral survey took place.

Table B.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
$R^2$	0.847	0.826	0.793
Mean at day -1	0.8519	0.8071	0.7873

*Notes:* Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10 percent, respectively). Time is defined as minus 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. We control for election fixed effects as well as fixed effects for the day of the week in which the pre-electoral survey took place. We also control for fixed effects for the number of days separating the post-electoral survey from the election in column 3.

Table B.3: 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
$R^2$	0.800	0.801
Mean at day -1	0.8768	0.8768

Notes: Same notes as in Table 2. We include an additional dummy for being 25 years old or younger and its interaction with the linear time trend.



Table B.4: Consistency in policy preferences, issue salience, and beliefs on candidates

(a) Policy preferences			
	Consistency (1)	Giving an answer (2)	Conditional consistency (3)
Time	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)
Observations	228562	330843	222785
$R^2$	0.914	0.964	0.936
Mean at day -1	0.8488	0.9615	0.8689
(b) Issue salience			
	Consistency (1)	Giving an answer (2)	Conditional consistency (3)
Time	0.0015** (0.0006)	0.0006* (0.0003)	0.0010** (0.0004)
Observations	46108	60713	44049
$R^2$	0.682	0.919	0.714
Mean at day -1	0.7392	0.9212	0.7676
(c) Beliefs on candidates			
	Consistency (1)	Giving an answer (2)	Conditional consistency (3)
Time	0.0018 (0.0015)	0.0006*** (0.0001)	0.0017 (0.0014)
Observations	478039	809037	440771
$R^2$	0.834	0.856	0.900
Mean at day -1	0.8119	0.8690	0.8601

*Notes:* Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10 percent, respectively). 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. In column 1, the sample includes all respondents surveyed before and after the election who stated a policy preference (Panel a), a salient issue (Panel b), or a belief on candidates (Panel c) in the second survey. In column 2, the sample includes all respondents surveyed before the election. In column 3, the sample includes all respondents surveyed before and after the election who stated a policy preference, a salient issue, or a belief on candidates in both the first and the second surveys. We control for question fixed effects (Panels a and c) or election fixed effects (Panel b), as well as fixed effects for the day of the week in which the pre-electoral survey took place. In columns 1 and 3, we also control for fixed effects for the number of days separating the pre- and post-electoral survey.

Table B.5: 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* (0.0004)
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
$R^2$	0.786	0.786	0.786	0.787	0.783	0.781	0.783	0.784
Mean at day -1	0.8639	0.8639	0.8639	0.8639	0.0376	0.0376	0.0376	0.0376
Socio-demographic controls				X				X

*Notes:* 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). Dummies indicating the election type are not included to avoid multicollinearity with the election fixed effects. The sample is defined as in Table 1 but excludes referenda. Other notes as in Table 1.

Table B.6: 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
$R^2$	0.694	0.257	0.156
Mean at day -1	0.6656	0.1491	0.0215

*Notes:* 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 control for election fixed effects as well as 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. Other notes as in Table 3

Table B.7: 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	0.0017*** (0.0002)	0.0019*** (0.0003)	0.0024*** (0.0003)	0.0015*** (0.0003)	0.0015*** (0.0003)
Voted for a challenger	-0.0468*** (0.0122)			-0.0202 (0.0125)	-0.0181 (0.0120)
Time * Voted for a challenger	0.0015*** (0.0004)			0.0010*** (0.0003)	0.0010*** (0.0003)
Voted for a small candidate		-0.0834** (0.0322)		-0.0697** (0.0333)	-0.0698** (0.0300)
Time * Voted for a small candidate		0.0049*** (0.0010)		0.0036*** (0.0009)	0.0035*** (0.0009)
Voted for a new candidate			-0.0160 (0.0572)	0.0046 (0.0446)	0.0025 (0.0445)
Time * Voted for a new candidate			0.0038*** (0.0012)	0.0018*** (0.0006)	0.0018*** (0.0006)
Observations	200916	200916	200916	200916	200916
$R^2$	0.801	0.805	0.802	0.806	0.807
Mean at day -1	0.8768	0.8768	0.8768	0.8768	0.8768
Sociodemographic controls					X

*Notes:* Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10 percent, respectively). The linear time trend is interacted 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. 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 control for election fixed effects as well as 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.

# C Impact of TV Debates: Additional Figures and Tables

Figure C.1: Media consumption, political discussions, and partisan communication

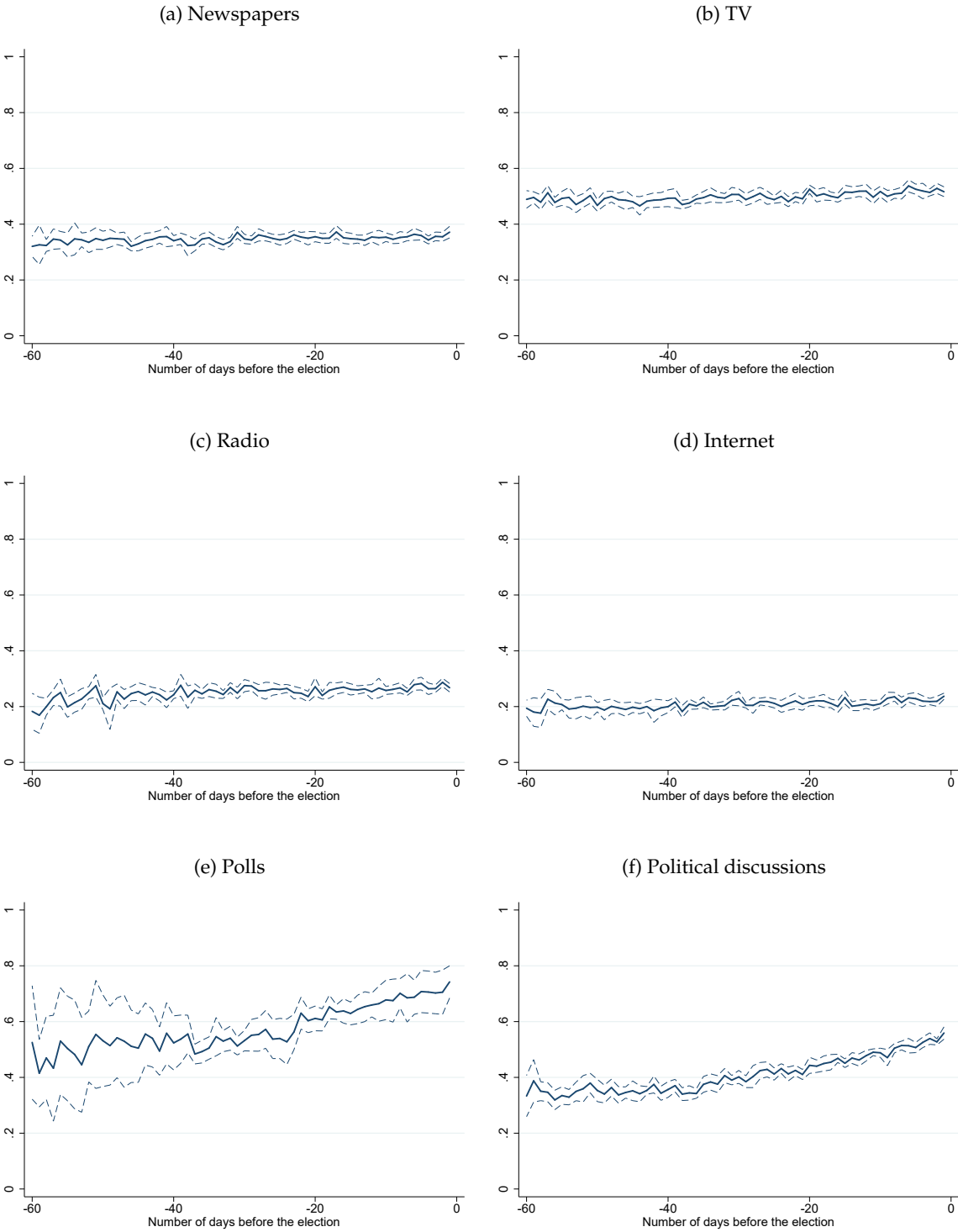
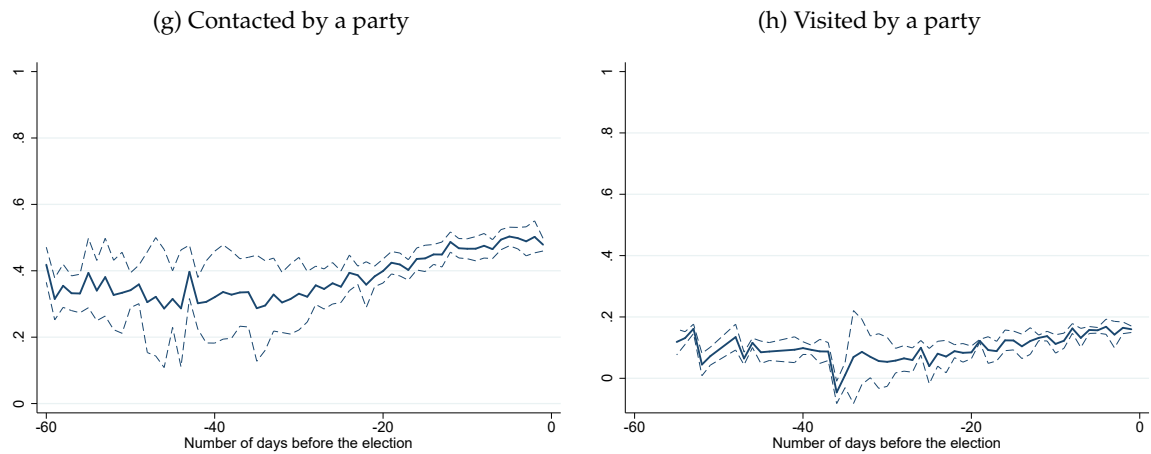
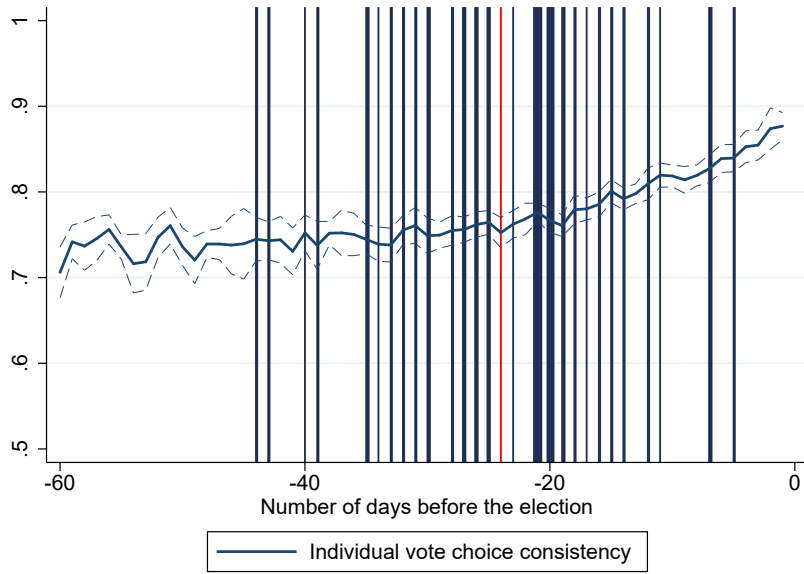


Figure C.1: Media consumption, political discussions, and partisan communication (cont.)



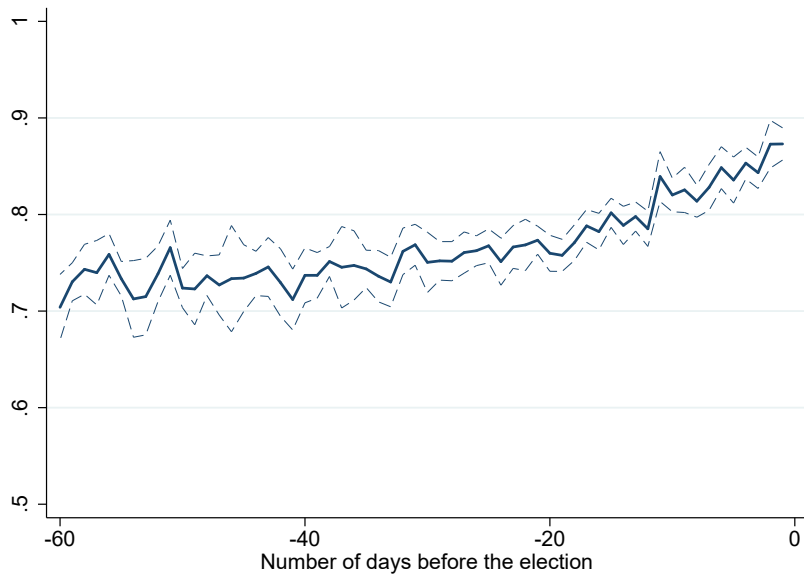
*Notes:* We show the point estimates and the 95% confidence interval from regressions of different forms of media consumption, political discussions, and partisan communication on 60 fixed effects indicating the number of days relative to the election. The sample includes all respondents surveyed before the election who said that they intended to vote. 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. 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 C.2: Vote choice consistency and debate dates



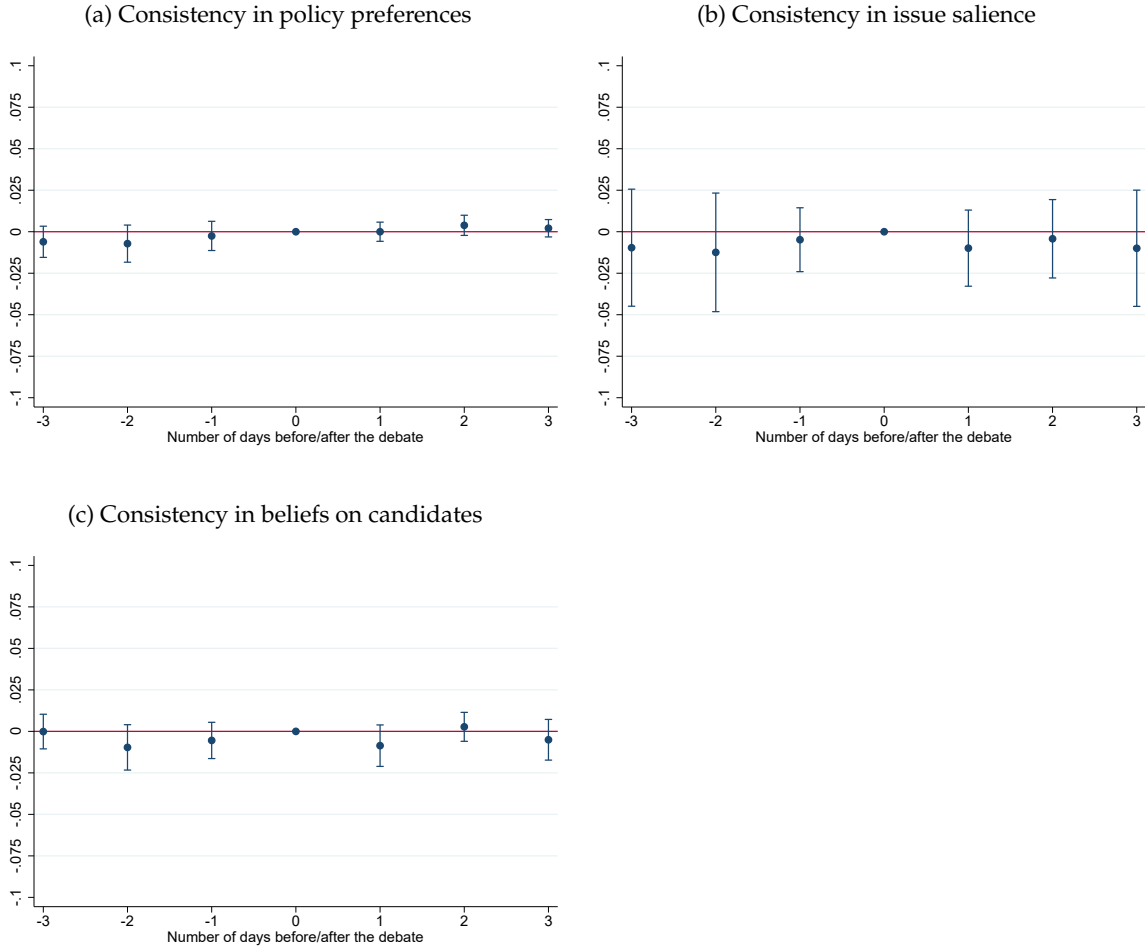
Notes: Each debate is represented by a vertical bar. Thicker bars correspond to dates in which debates were held in multiple elections. On average, debates were held 24 days before the election. This average distance to the election is represented by a red vertical bar. Other notes as in Figure 1a.

Figure C.3: Vote choice consistency in debate sample



Notes: The sample is restricted to the 34 elections included in the debate sample. N=109,754. Other notes as in Figure 1.

Figure C.4: Debates' effects on consistency in policy preferences, issue salience, and beliefs on candidates



Notes: We show point estimates and 95% confidence intervals from regressions of consistency in policy preferences and issue salience 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 fixed effects in Figures C.4a and C.4c and for debate  $\times$  election fixed effects in Figure C.4b, as well as fixed effects for the number of days relative to the election, the day of the week in which the pre-electoral survey took place, and the number of days separating the pre- and post-electoral survey. For each debate and election, our estimation uses all respondents in samples defined as in Figure 2. Standard errors are adjusted for clustering at the debate level. There are 12 debates (N=346,231) in Figure C.4a, seven debates (N=51,821) in Figure C.4b, and 16 debates (N=546,861) in Figure C.4c after excluding debates held less than three days from one another.

Table C.1: 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)	0.0045** (0.0017)	0.0030** (0.0010)
Observations	147119	140040	101015	119596	38355	103805	57634	41301
$R^2$	0.465	0.629	0.360	0.309	0.623	0.472	0.464	0.128
Mean at day -1	0.3715	0.5162	0.2676	0.2372	0.7424	0.5591	0.4787	0.1599

*Notes:* Standard errors clustered at the survey level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10 percent, respectively). Time is defined as minus 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. We control for election fixed effects as well as fixed effects for the day of the week in which the pre-electoral survey took place.



Table C.2: 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
$R^2$	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
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 percent, 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. 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 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 C.3: 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
$R^2$	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
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 Table C.2. 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 C.4: 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
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 percent, 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. 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 fixed effects for the number of days separating the post-electoral survey from the election in column 3. 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 C.5: 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)	-0.009 (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)	-0.005 (0.006)
After +3	-0.005 (0.003)	-0.005 (0.003)	0.001 (0.009)	0.002 (0.009)	0.001 (0.003)	0.001 (0.003)
Observations	346231	346231	51821	51821	546861	546861
$R^2$	0.048	0.054	0.069	0.074	0.093	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
Sociodemographic controls		X		X		X
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)	-0.004 (0.005)	-0.003 (0.005)

Notes: Standard errors clustered at the debate level are in parentheses (\*\*\*, \*\*, \* indicate significance at 1, 5, and 10 percent, respectively). For each debate and election, our estimation uses all respondents in samples defined as in Table B.4. In columns 1 and 2, we use one observation per respondent per policy question and control for debate  $\times$  policy question fixed effects instead of debate  $\times$  election fixed effects. In columns 5 and 6, we use one observation per respondent per belief question and control for debate  $\times$  belief question fixed effects instead of debate  $\times$  election fixed effects. Other notes as in Table 4.

Table C.6: 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
Sociodemographic controls	X	X	X	X	X
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:* 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. We use one observation per debate per day, 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 5 (columns 1 and 2).

Table C.7: 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
Sociodemographic controls	X	X	X	X	X	X	X
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:* 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. We use one observation per debate per day per voter type, 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 5 (columns 1 and 2).

Table C.8: 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
Sociodemographic controls		X		X		X		X
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 percent, respectively). In columns 1 through 6, we use the set of respondents as defined in Table 3, columns 1 through 3. 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 Table 3, column 4, 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. 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. 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. .

## D Additional Robustness Checks

### D.1 Rolling Cross-sections

Table D.1: Vote choice formation 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 <sup>2</sup>	0.800	0.800	0.868	0.868	0.888	0.888	0.818	0.819
Mean at day -1	0.8814	0.8814	0.9166	0.9166	0.9378	0.9378	0.0509	0.0509

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

Table D.2: Vote choice consistency across voter types, rolling cross-sections

	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	0.0027*** (0.0005)	0.0031*** (0.0004)	0.0028*** (0.0005)	0.0027*** (0.0004)	0.0028*** (0.0004)	0.0032*** (0.0006)
College degree	-0.0024 (0.0040)					-0.0020 (0.0047)
Time * College degree	-0.0006*** (0.0002)					-0.0007*** (0.0002)
Above median age		0.0253** (0.0100)				0.0225** (0.0109)
Time * Above median age		-0.0005* (0.0003)				-0.0005* (0.0003)
Male			0.0384*** (0.0064)			0.0353*** (0.0062)
Time * Male			-0.0002 (0.0003)			-0.0002 (0.0003)
Above median income				0.0108** (0.0042)		0.0155*** (0.0047)
Time * Above median income				0.0000 (0.0002)		0.0001 (0.0002)
Not employed					0.0152*** (0.0050)	0.0156*** (0.0050)
Time* Not employed					-0.0002 (0.0002)	-0.0000 (0.0002)
Observations	136211	136211	136211	136211	136211	136211
R <sup>2</sup>	0.800	0.800	0.800	0.800	0.800	0.801
Mean at day -1	0.8814	0.8814	0.8814	0.8814	0.8814	0.8814

Notes: Same notes as in Tables 2 and D.1.



Table D.3: Likelihood to vote for lesser-known candidates and vote share concentration, rolling cross-sections

	Support for challenger	Support for small candidate	Support for new candidate	Vote share concentration
	(1)	(2)	(3)	(4)
Time	0.00050** (0.00020)	0.00039** (0.00019)	0.00003 (0.00004)	-0.00019* (0.00009)
Observations	121728	121728	119517	1418
$R^2$	0.657	0.226	0.174	0.996
Mean at day -1	0.67300	0.14707	0.02105	0.55664

Notes: Same notes as in Tables 3 and D.1.

Table D.4: Debates' effects on vote choice consistency, rolling cross-sections

	Vote choice consistency		Vote intention		Conditional consistency	
	(1)	(2)	(3)	(4)	(5)	(6)
Before -3	-0.017** (0.007)	-0.017** (0.008)	0.002 (0.006)	0.001 (0.006)	-0.016** (0.007)	-0.017** (0.007)
-3	-0.010 (0.008)	-0.010 (0.008)	0.008 (0.006)	0.008 (0.006)	-0.010 (0.008)	-0.010 (0.008)
-2	-0.001 (0.011)	-0.002 (0.010)	0.007 (0.006)	0.006 (0.006)	-0.002 (0.009)	-0.003 (0.009)
-1	-0.005 (0.010)	-0.006 (0.010)	0.005 (0.008)	0.004 (0.008)	-0.004 (0.006)	-0.005 (0.006)
+1	-0.013 (0.009)	-0.013 (0.009)	0.009 (0.008)	0.009 (0.008)	-0.013 (0.008)	-0.013 (0.008)
+2	-0.015 (0.010)	-0.015 (0.010)	-0.001 (0.006)	-0.002 (0.006)	-0.012 (0.009)	-0.012 (0.009)
+3	-0.005 (0.007)	-0.006 (0.007)	0.010* (0.005)	0.009* (0.005)	-0.009 (0.006)	-0.009 (0.006)
After +3	-0.005 (0.008)	-0.006 (0.008)	0.009 (0.007)	0.008 (0.007)	-0.008 (0.006)	-0.008 (0.006)
Observations	211105	211105	264252	264252	192493	192493
$R^2$	0.074	0.078	0.071	0.078	0.040	0.042
Mean day of the debate	0.810	0.810	0.892	0.892	0.886	0.886
Number of debates	27	27	27	27	27	27
Sociodemographic controls		X		X		X
Average pre-debate dummies -3, -2, and -1	-0.005 (0.008)	-0.006 (0.008)	0.006 (0.005)	0.006 (0.005)	-0.005 (0.007)	-0.006 (0.007)
Average post-debate dummies 1, 2, and 3	-0.011 (0.007)	-0.011 (0.007)	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 4.

Table D.5: 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* (0.004)	0.009* (0.005)	0.011 (0.007)	0.010 (0.007)
-3	0.004 (0.004)	0.006 (0.005)	0.007 (0.010)	0.007 (0.011)
-2	0.004 (0.003)	0.006 (0.004)	0.009 (0.007)	0.008 (0.007)
-1	0.002 (0.004)	0.005 (0.005)	0.019*** (0.006)	0.019*** (0.006)
+1	0.005 (0.004)	0.006 (0.004)	0.007 (0.007)	0.006 (0.007)
+2	0.007 (0.004)	0.008 (0.005)	0.021** (0.010)	0.021** (0.010)
+3	0.006 (0.005)	0.008 (0.006)	0.014* (0.008)	0.014 (0.008)
After +3	0.005 (0.004)	0.005 (0.004)	0.007 (0.005)	0.006 (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
Sociodemographic controls		X		X
Average pre-debate dummies -3, -2, and -1	0.004 (0.003)	0.006 (0.004)	0.012* (0.006)	0.011* (0.006)
Average post-debate dummies 1, 2, and 3	0.006* (0.003)	0.007* (0.004)	0.014* (0.007)	0.014* (0.007)

Notes: Same notes as in Tables 5 and D.4.

Table D.6: Debates' effects on vote choice consistency across debate and election types, rolling cross-sections

	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 (0.009)	-0.010 (0.015)	-0.008 (0.008)	-0.011 (0.009)	-0.020 (0.023)
-2*type-b	0.005 (0.012)	-0.005 (0.018)	0.006 (0.013)	-0.005 (0.012)	-0.022 (0.026)
-1*type-b	0.002 (0.011)	-0.023 (0.017)	0.002 (0.010)	-0.003 (0.011)	-0.014 (0.027)
+1*type-b	-0.000 (0.008)	-0.015 (0.013)	0.001 (0.008)	-0.018 (0.011)	-0.077** (0.030)
+2*type-b	-0.012 (0.011)	-0.009 (0.020)	-0.007 (0.011)	-0.016 (0.012)	-0.076*** (0.024)
+3*type-b	-0.007 (0.008)	-0.000 (0.013)	-0.005 (0.006)	-0.004 (0.008)	-0.016 (0.023)
-3*type-a	-0.009 (0.015)	-0.010 (0.008)	-0.023 (0.018)	-0.006 (0.016)	-0.010 (0.008)
-2*type-a	-0.027** (0.013)	-0.001 (0.012)	-0.029** (0.014)	0.006 (0.019)	-0.001 (0.011)
-1*type-a	-0.029* (0.015)	0.002 (0.010)	-0.031 (0.020)	-0.015 (0.014)	-0.005 (0.010)
+1*type-a	-0.049** (0.020)	-0.012 (0.011)	-0.047** (0.020)	-0.001 (0.019)	-0.005 (0.008)
+2*type-a	-0.025** (0.011)	-0.019* (0.010)	-0.039** (0.016)	-0.015 (0.013)	-0.010 (0.010)
+3*type-a	-0.002 (0.016)	-0.008 (0.008)	-0.008 (0.017)	-0.014 (0.017)	-0.004 (0.007)
Observations	211105	211105	211105	211105	211105
$R^2$	0.079	0.078	0.079	0.079	0.079
Mean day of the debate	0.810	0.810	0.810	0.810	0.810
Number of debates	27	27	27	27	27
Sociodemographic controls	X	X	X	X	X
Average pre-debate dummies for type-b	-0.001 (0.009)	-0.013 (0.015)	-0.000 (0.009)	-0.006 (0.010)	-0.018 (0.023)
Average post-debate dummies for type-b	-0.007 (0.008)	-0.008 (0.012)	-0.004 (0.007)	-0.013 (0.009)	-0.056*** (0.016)
Average pre-debate dummies for type-a	-0.022 (0.013)	-0.003 (0.008)	-0.028* (0.015)	-0.005 (0.012)	-0.005 (0.008)
Average post-debate dummies for type-a	-0.025* (0.013)	-0.013 (0.008)	-0.031** (0.014)	-0.010 (0.014)	-0.006 (0.007)

Notes: Same notes as in Tables 6 and D.4.

Table D.7: Debates' effects on vote choice consistency across voter types, rolling cross-sections

	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	-0.005 (0.023)	-0.005 (0.008)	-0.011 (0.012)	-0.015 (0.012)	-0.004 (0.013)	-0.003 (0.016)	-0.011 (0.010)
-2*type-b	0.014 (0.024)	0.012 (0.014)	-0.001 (0.011)	-0.009 (0.016)	0.015 (0.015)	0.016 (0.015)	-0.011 (0.012)
-1*type-b	0.034 (0.030)	0.005 (0.012)	-0.010 (0.014)	-0.008 (0.016)	0.012 (0.015)	0.002 (0.018)	-0.014 (0.010)
+1*type-b	-0.030 (0.022)	0.005 (0.008)	-0.013 (0.010)	-0.027* (0.015)	-0.008 (0.015)	0.015 (0.017)	-0.027* (0.014)
+2*type-b	-0.020 (0.015)	-0.003 (0.013)	-0.027* (0.014)	-0.012 (0.016)	-0.007 (0.018)	-0.006 (0.016)	-0.025** (0.009)
+3*type-b	0.040* (0.022)	0.012 (0.010)	-0.014 (0.012)	-0.004 (0.010)	0.003 (0.014)	-0.000 (0.019)	-0.012 (0.010)
-3*type-a	0.005 (0.012)	-0.010 (0.010)	-0.008 (0.009)	-0.007 (0.014)	-0.017 (0.011)	-0.014 (0.010)	-0.004 (0.015)
-2*type-a	-0.011 (0.016)	-0.030** (0.013)	0.009 (0.013)	0.002 (0.011)	-0.020* (0.010)	-0.005 (0.014)	0.009 (0.013)
-1*type-a	-0.021 (0.015)	-0.022** (0.011)	0.010 (0.014)	-0.004 (0.011)	-0.024** (0.010)	-0.006 (0.012)	0.013 (0.015)
+1*type-a	0.006 (0.014)	-0.024** (0.012)	0.004 (0.013)	-0.001 (0.010)	-0.017* (0.009)	-0.014 (0.011)	0.007 (0.010)
+2*type-a	0.005 (0.012)	-0.031** (0.014)	0.007 (0.008)	-0.019 (0.012)	-0.024*** (0.008)	-0.013 (0.011)	-0.010 (0.016)
+3*type-a	-0.012 (0.013)	-0.032* (0.016)	-0.003 (0.011)	-0.007 (0.008)	-0.014 (0.008)	-0.014 (0.009)	0.002 (0.015)
Observations	64020	199230	162377	210643	211101	165357	180827
R <sup>2</sup>	0.097	0.099	0.074	0.078	0.078	0.068	0.086
Mean day of the debate	0.811	0.817	0.816	0.810	0.810	0.818	0.807
Number of debates	12	26	21	27	27	24	24
Sociodemographic controls	X	X	X	X	X	X	X
Average pre-debate dummies for type-b	0.014 (0.023)	0.004 (0.010)	-0.008 (0.010)	-0.010 (0.014)	0.008 (0.013)	0.005 (0.015)	-0.012 (0.008)
Average post-debate dummies for type-b	-0.003 (0.013)	0.005 (0.008)	-0.018* (0.010)	-0.014 (0.012)	-0.004 (0.014)	0.003 (0.016)	-0.021** (0.009)
Average pre-debate dummies for type-a	-0.009 (0.012)	-0.021** (0.009)	0.004 (0.010)	-0.003 (0.010)	-0.020** (0.008)	-0.008 (0.010)	0.006 (0.013)
Average post-debate dummies for type-a	-0.000 (0.011)	-0.029** (0.013)	0.003 (0.009)	-0.009 (0.008)	-0.018*** (0.005)	-0.014 (0.009)	-0.001 (0.012)

Notes: Same notes as in Tables 7 and D.4.

## D.2 Sociodemographic Controls

Table D.8: 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>	0.801	0.801	0.875	0.875	0.889	0.889	0.775	0.776
Mean at day -1	0.8768	0.8768	0.9157	0.9157	0.9346	0.9346	0.0324	0.0324

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

Table D.9: Likelihood to vote for lesser-known candidates and vote share concentration, with sociodemographic controls

	Support for challenger	Support for small candidate	Support for new candidate	Vote share concentration
	(1)	(2)	(3)	(4)
Time	0.00043** (0.00017)	0.00035** (0.00014)	0.00005 (0.00004)	-0.00019** (0.00009)
Observations	189733	190329	187068	3138
R <sup>2</sup>	0.676	0.233	0.162	0.991
Mean at day -1	0.66015	0.14837	0.02083	0.33637

Notes: Same notes as in Tables 3 and D.8.

### D.3 Including Unlikely Voters

Table D.10: Vote choice formation 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>	0.783	0.783	0.850	0.850	0.882	0.882	0.789	0.790
Mean at day -1	0.8633	0.8633	0.8961	0.8961	0.9280	0.9280	0.0329	0.0329

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 D.11: Vote choice consistency across voter types, including unlikely voters

	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	0.0026*** (0.0003)	0.0031*** (0.0003)	0.0027*** (0.0003)	0.0028*** (0.0003)	0.0027*** (0.0003)	0.0032*** (0.0005)
College degree	0.0052 (0.0066)					0.0103* (0.0057)
Time * College degree	-0.0005** (0.0002)					-0.0004** (0.0002)
Above median age		0.0273*** (0.0078)				0.0211** (0.0089)
Time * Above median age		-0.0007*** (0.0002)				-0.0008*** (0.0003)
Male			0.0380*** (0.0048)			0.0360*** (0.0043)
Time * Male			-0.0001 (0.0002)			-0.0001 (0.0002)
Above median income				0.0001 (0.0078)		0.0027 (0.0079)
Time * Above median income				-0.0003 (0.0002)		-0.0003 (0.0002)
Not employed					0.0255*** (0.0052)	0.0274*** (0.0058)
Time* Not employed					0.0000 (0.0002)	0.0002 (0.0002)
Observations	218269	218269	218269	218269	218269	218269
R <sup>2</sup>	0.783	0.784	0.784	0.783	0.783	0.785
Mean at day -1	0.8633	0.8633	0.8633	0.8633	0.8633	0.8633

Notes: Same notes as in Tables 2 and D.10.

Table D.12: Likelihood to vote for lesser-known candidates and vote share concentration, including unlikely voters

	Support for challenger	Support for small candidate	Support for new candidate	Vote share concentration
	(1)	(2)	(3)	(4)
Time	0.00041** (0.00016)	0.00035** (0.00016)	0.00005 (0.00004)	-0.00017* (0.00010)
Observations	214137	214757	210885	3140
$R^2$	0.673	0.232	0.165	0.992
Mean at day -1	0.65852	0.14933	0.02273	0.33192

Notes: Same notes as in Tables 3 and D.10.

Table D.13: 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
Sociodemographic controls		X		X		X
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 4.

Table D.14: 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
Sociodemographic controls		X		X
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 Tables 5 and D.13.



Table D.15: Debates' effects on vote choice consistency across debate and election types, including unlikely voters

	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	-0.010 (0.007)	-0.013 (0.012)	-0.007 (0.007)	-0.014* (0.008)	-0.033 (0.021)
-2*type-b	0.003 (0.010)	-0.016 (0.010)	-0.000 (0.011)	-0.010 (0.010)	-0.025 (0.023)
-1*type-b	-0.002 (0.009)	-0.013 (0.010)	-0.007 (0.009)	-0.010 (0.010)	-0.020 (0.023)
+1*type-b	-0.003 (0.008)	-0.017 (0.014)	-0.003 (0.008)	-0.016 (0.011)	-0.058* (0.032)
+2*type-b	-0.010 (0.011)	-0.007 (0.011)	-0.009 (0.011)	-0.018 (0.012)	-0.049** (0.024)
+3*type-b	-0.008 (0.007)	0.006 (0.011)	-0.005 (0.007)	-0.008 (0.008)	-0.021 (0.020)
-3*type-a	-0.010 (0.013)	-0.008 (0.007)	-0.015 (0.013)	0.005 (0.012)	-0.007 (0.006)
-2*type-a	-0.025** (0.011)	0.002 (0.010)	-0.015 (0.012)	0.007 (0.012)	-0.003 (0.009)
-1*type-a	-0.021* (0.011)	-0.005 (0.009)	-0.010 (0.014)	-0.001 (0.010)	-0.007 (0.008)
+1*type-a	-0.027 (0.018)	-0.006 (0.009)	-0.021 (0.016)	0.002 (0.012)	-0.004 (0.007)
+2*type-a	-0.013 (0.012)	-0.012 (0.012)	-0.011 (0.013)	0.006 (0.011)	-0.006 (0.009)
+3*type-a	-0.005 (0.014)	-0.012 (0.008)	-0.007 (0.012)	-0.000 (0.009)	-0.005 (0.006)
Observations	284942	284942	284942	284942	284942
$R^2$	0.079	0.079	0.079	0.080	0.079
Mean day of the debate	0.795	0.795	0.795	0.795	0.795
Number of debates	56	56	56	56	56
Sociodemographic controls	X	X	X	X	X
Average pre-debate dummies for type-b	-0.003 (0.008)	-0.014 (0.009)	-0.005 (0.008)	-0.011 (0.008)	-0.026 (0.019)
Average post-debate dummies for type-b	-0.007 (0.007)	-0.006 (0.010)	-0.006 (0.007)	-0.014 (0.009)	-0.043** (0.017)
Average pre-debate dummies for type-a	-0.019* (0.010)	-0.004 (0.008)	-0.013 (0.011)	0.003 (0.008)	-0.006 (0.006)
Average post-debate dummies for type-a	-0.015 (0.012)	-0.010 (0.008)	-0.013 (0.011)	0.003 (0.009)	-0.005 (0.006)

Notes: Same notes as in Tables 6 and D.13.

Table D.16: Debates' effects on vote choice consistency across voter types, including unlikely voters

	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	0.007 (0.027)	-0.007 (0.008)	-0.008 (0.010)	-0.018* (0.010)	-0.006 (0.011)	0.002 (0.013)	-0.012 (0.010)
-2*type-b	0.018 (0.025)	0.014 (0.012)	-0.007 (0.009)	-0.013 (0.011)	0.004 (0.013)	0.010 (0.013)	-0.014 (0.011)
-1*type-b	0.026 (0.024)	0.002 (0.010)	-0.008 (0.009)	-0.017 (0.012)	0.001 (0.011)	-0.002 (0.014)	-0.013 (0.009)
+1*type-b	-0.028 (0.020)	0.005 (0.009)	-0.008 (0.009)	-0.021* (0.012)	-0.004 (0.013)	0.013 (0.015)	-0.021* (0.011)
+2*type-b	-0.006 (0.018)	-0.003 (0.013)	-0.016 (0.012)	-0.013 (0.013)	-0.004 (0.015)	-0.009 (0.015)	-0.016* (0.008)
+3*type-b	0.029 (0.022)	0.011 (0.011)	-0.012 (0.009)	-0.008 (0.010)	-0.000 (0.011)	-0.010 (0.014)	-0.010 (0.009)
-3*type-a	-0.011 (0.011)	-0.008 (0.009)	-0.007 (0.008)	-0.003 (0.011)	-0.013 (0.009)	-0.007 (0.009)	-0.005 (0.013)
-2*type-a	-0.029** (0.011)	-0.025* (0.013)	0.009 (0.012)	0.001 (0.009)	-0.015* (0.008)	-0.006 (0.010)	0.007 (0.012)
-1*type-a	-0.032** (0.012)	-0.017* (0.009)	0.007 (0.010)	0.000 (0.010)	-0.016* (0.009)	-0.005 (0.009)	0.005 (0.013)
+1*type-a	0.004 (0.011)	-0.020* (0.011)	-0.001 (0.012)	-0.000 (0.009)	-0.016* (0.008)	-0.008 (0.010)	0.002 (0.011)
+2*type-a	-0.001 (0.009)	-0.027** (0.013)	0.008 (0.008)	-0.009 (0.011)	-0.017* (0.009)	0.000 (0.011)	-0.008 (0.015)
+3*type-a	-0.021* (0.011)	-0.027* (0.015)	-0.004 (0.011)	-0.004 (0.008)	-0.012 (0.008)	-0.007 (0.007)	-0.004 (0.013)
Observations	94204	235472	227323	284003	284837	221522	233383
R <sup>2</sup>	0.094	0.098	0.077	0.079	0.079	0.072	0.089
Mean day of the debate	0.790	0.800	0.805	0.796	0.795	0.802	0.795
Number of debates	28	41	50	56	56	50	47
Sociodemographic controls	X	X	X	X	X	X	X
Average pre-debate dummies for type-b	0.017 (0.023)	0.003 (0.009)	-0.008 (0.008)	-0.016 (0.010)	-0.000 (0.010)	0.003 (0.012)	-0.013* (0.008)
Average post-debate dummies for type-b	-0.002 (0.015)	0.004 (0.009)	-0.012 (0.008)	-0.014 (0.009)	-0.003 (0.011)	-0.002 (0.013)	-0.016** (0.007)
Average pre-debate dummies for type-a	-0.024** (0.009)	-0.017* (0.009)	0.003 (0.008)	-0.000 (0.008)	-0.015** (0.007)	-0.006 (0.008)	0.002 (0.011)
Average post-debate dummies for type-a	-0.006 (0.009)	-0.025** (0.012)	0.001 (0.008)	-0.005 (0.007)	-0.015** (0.006)	-0.005 (0.008)	-0.003 (0.011)

Notes: Same notes as in Tables 7 and D.13.

## D.4 Event Study with Five-Day Window

Table D.17: 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
$R^2$	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
Sociodemographic controls		X		X		X
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 4.

Table D.18: 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
Sociodemographic controls		X		X
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 Tables 5 and D.17.

Table D.19: Debates' effects on vote choice consistency across debate and election types, five-day window

	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)
-5*type-b	-0.009 (0.009)	0.004 (0.010)	-0.016* (0.009)	-0.019* (0.011)	-0.012 (0.021)
-4*type-b	-0.003 (0.010)	-0.004 (0.012)	-0.008 (0.009)	-0.024** (0.012)	-0.052*** (0.016)
-3*type-b	-0.005 (0.008)	-0.008 (0.013)	-0.003 (0.008)	-0.011 (0.009)	-0.027 (0.025)
-2*type-b	0.010 (0.011)	-0.003 (0.014)	0.008 (0.011)	-0.005 (0.011)	-0.020 (0.025)
-1*type-b	0.008 (0.007)	-0.001 (0.009)	0.003 (0.007)	0.003 (0.007)	-0.007 (0.024)
+1*type-b	-0.002 (0.007)	-0.007 (0.010)	-0.002 (0.007)	-0.011 (0.010)	-0.032 (0.030)
+2*type-b	-0.007 (0.011)	0.006 (0.014)	-0.006 (0.011)	-0.009 (0.011)	-0.014 (0.018)
+3*type-b	-0.002 (0.007)	0.002 (0.010)	-0.001 (0.007)	-0.005 (0.008)	-0.027 (0.022)
+4*type-b	-0.001 (0.008)	0.010 (0.011)	0.003 (0.008)	-0.003 (0.008)	0.002 (0.019)
+5*type-b	-0.010 (0.008)	-0.004 (0.014)	-0.002 (0.007)	-0.013 (0.011)	-0.035 (0.028)
-5*type-a	-0.020 (0.016)	-0.028** (0.011)	-0.012 (0.017)	-0.004 (0.013)	-0.014 (0.009)
-4*type-a	-0.033** (0.014)	-0.024** (0.009)	-0.031** (0.013)	0.001 (0.009)	-0.009 (0.008)
-3*type-a	-0.011 (0.014)	-0.006 (0.007)	-0.018 (0.015)	0.003 (0.013)	-0.004 (0.007)
-2*type-a	-0.024** (0.011)	0.002 (0.010)	-0.020 (0.013)	0.009 (0.013)	0.002 (0.009)
-1*type-a	-0.015 (0.011)	0.002 (0.008)	-0.006 (0.012)	-0.002 (0.010)	0.001 (0.006)
+1*type-a	-0.019 (0.015)	-0.008 (0.009)	-0.017 (0.016)	-0.001 (0.011)	-0.004 (0.007)
+2*type-a	-0.006 (0.012)	-0.016 (0.009)	-0.008 (0.014)	-0.002 (0.011)	-0.005 (0.009)
+3*type-a	-0.009 (0.013)	-0.008 (0.008)	-0.011 (0.014)	-0.001 (0.010)	-0.001 (0.006)
+4*type-a	0.005 (0.012)	-0.004 (0.007)	0.001 (0.014)	0.012 (0.010)	0.002 (0.008)
+5*type-a	-0.004 (0.017)	-0.011 (0.008)	-0.019 (0.018)	0.002 (0.007)	-0.005 (0.007)
Observations	225519	225519	225519	225519	225519
$R^2$	0.068	0.068	0.068	0.069	0.068
Mean day of the debate	0.827	0.827	0.827	0.827	0.827
Number of debates	45	45	45	45	45
Sociodemographic controls	X	X	X	X	X
Average pre-debate dummies for type-b	0.000 (0.007)	-0.002 (0.009)	-0.003 (0.007)	-0.011 (0.008)	-0.024 (0.017)
Average post-debate dummies for type-b	-0.005 (0.007)	0.001 (0.009)	-0.002 (0.006)	-0.008 (0.008)	-0.021 (0.015)
Average pre-debate dummies for type-a	-0.021** (0.010)	-0.011 (0.007)	-0.017 (0.011)	0.001 (0.008)	-0.005 (0.006)
Average post-debate dummies for type-a	-0.007 (0.011)	-0.009 (0.006)	-0.011 (0.012)	0.002 (0.007)	-0.003 (0.006)

Notes: Same notes as in Tables 6 and D.17.

Table D.20: Debates' effects on vote choice consistency across voter types, five-day window

	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)
-5*type-b	0.001 (0.027)	-0.017 (0.011)	-0.012 (0.010)	-0.018 (0.013)	0.006 (0.013)	-0.004 (0.016)	-0.015 (0.010)
-4*type-b	0.007 (0.022)	-0.011 (0.011)	-0.020** (0.009)	-0.028* (0.014)	-0.016 (0.012)	-0.003 (0.015)	-0.022** (0.010)
-3*type-b	-0.011 (0.023)	-0.006 (0.008)	-0.011 (0.011)	-0.020* (0.012)	0.001 (0.012)	0.002 (0.015)	-0.011 (0.009)
-2*type-b	0.002 (0.022)	0.014 (0.013)	-0.009 (0.009)	-0.008 (0.014)	0.016 (0.014)	0.017 (0.013)	-0.008 (0.011)
-1*type-b	0.013 (0.025)	0.010 (0.009)	-0.002 (0.009)	-0.003 (0.014)	0.016 (0.010)	0.007 (0.015)	-0.001 (0.008)
+1*type-b	-0.033 (0.023)	0.005 (0.009)	-0.011 (0.009)	-0.021 (0.013)	0.001 (0.012)	0.014 (0.015)	-0.011 (0.010)
+2*type-b	-0.010 (0.016)	0.000 (0.013)	-0.021* (0.012)	-0.005 (0.015)	0.004 (0.015)	-0.000 (0.014)	-0.013 (0.009)
+3*type-b	0.015 (0.022)	0.010 (0.011)	-0.010 (0.009)	-0.007 (0.011)	0.007 (0.012)	0.002 (0.015)	-0.007 (0.011)
+4*type-b	0.021 (0.020)	0.003 (0.010)	-0.006 (0.011)	0.002 (0.013)	0.011 (0.011)	0.019 (0.012)	0.000 (0.010)
+5*type-b	-0.031 (0.023)	0.004 (0.009)	-0.018 (0.011)	-0.023* (0.013)	0.008 (0.012)	0.007 (0.016)	-0.017 (0.010)
-3*type-a	0.006 (0.013)	-0.002 (0.009)	-0.001 (0.008)	0.003 (0.011)	-0.015 (0.010)	-0.003 (0.011)	0.004 (0.013)
-2*type-a	-0.009 (0.012)	-0.004 (0.010)	0.018 (0.011)	0.006 (0.010)	-0.017** (0.008)	-0.000 (0.012)	0.012 (0.013)
-1*type-a	-0.018 (0.013)	-0.006 (0.008)	0.013 (0.010)	0.004 (0.008)	-0.016** (0.007)	0.002 (0.011)	0.012 (0.012)
+1*type-a	0.006 (0.013)	-0.012 (0.010)	0.010 (0.010)	0.004 (0.009)	-0.016* (0.009)	-0.004 (0.010)	0.006 (0.011)
+2*type-a	0.010 (0.009)	-0.016 (0.010)	0.018** (0.008)	-0.007 (0.010)	-0.017* (0.009)	-0.001 (0.011)	0.002 (0.014)
+3*type-a	-0.012 (0.014)	-0.012 (0.011)	-0.005 (0.011)	-0.001 (0.007)	-0.014 (0.009)	-0.011 (0.009)	-0.001 (0.014)
+4*type-a	0.013 (0.010)	-0.007 (0.008)	0.012 (0.009)	0.002 (0.009)	-0.008 (0.007)	-0.001 (0.013)	0.006 (0.014)
+5*type-a	-0.001 (0.009)	-0.012 (0.010)	-0.006 (0.011)	0.003 (0.012)	-0.025** (0.010)	-0.008 (0.012)	-0.013 (0.015)
Observations	76951	188908	176539	224902	225425	171399	186778
R <sup>2</sup>	0.089	0.086	0.056	0.068	0.068	0.055	0.076
Mean day of the debate	0.799	0.833	0.839	0.827	0.827	0.834	0.825
Number of debates	26	34	39	45	45	39	39
Sociodemographic controls	X	X	X	X	X	X	X
Average pre-debate dummies for type-b	0.002 (0.019)	-0.002 (0.008)	-0.011 (0.007)	-0.016 (0.011)	0.005 (0.010)	0.004 (0.013)	-0.011 (0.007)
Average post-debate dummies for type-b	-0.008 (0.013)	0.004 (0.008)	-0.013* (0.008)	-0.011 (0.011)	0.006 (0.011)	0.009 (0.012)	-0.010 (0.007)
Average pre-debate dummies for type-a	-0.008 (0.011)	-0.007 (0.007)	0.002 (0.006)	-0.000 (0.008)	-0.019*** (0.006)	-0.004 (0.009)	0.004 (0.011)
Average post-debate dummies for type-a	0.003 (0.009)	-0.012 (0.008)	0.006 (0.007)	0.000 (0.008)	-0.016** (0.006)	-0.005 (0.009)	-0.000 (0.010)

Notes: Same notes as in Tables 7 and D.17.

## D.5 Event Study with Balanced Panel on Three-Day Window

Table D.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
Sociodemographic controls		X		X		X
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 4.

Table D.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
Sociodemographic controls		X		X
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 Tables 5 and D.21.



Table D.23: Debates' effects on vote choice consistency across debate and election types, balanced panel

	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	-0.015 (0.010)	-0.011 (0.010)	-0.008 (0.013)	-0.022* (0.013)	-0.010 (0.021)
-2*type-b	-0.003 (0.013)	-0.016 (0.012)	-0.003 (0.016)	-0.032** (0.015)	-0.010 (0.023)
-1*type-b	-0.000 (0.013)	-0.021 (0.013)	-0.001 (0.013)	-0.028 (0.020)	-0.019 (0.024)
+1*type-b	0.001 (0.009)	-0.018* (0.010)	-0.003 (0.011)	-0.038*** (0.012)	-0.049** (0.021)
+2*type-b	-0.019* (0.009)	-0.008 (0.011)	-0.032*** (0.009)	-0.050*** (0.014)	-0.042* (0.023)
+3*type-b	-0.024** (0.011)	-0.017* (0.009)	-0.039*** (0.010)	-0.037** (0.014)	-0.022 (0.016)
-3*type-a	-0.009 (0.013)	-0.006 (0.012)	-0.006 (0.011)	0.008 (0.013)	-0.011 (0.010)
-2*type-a	-0.032** (0.014)	-0.008 (0.018)	-0.016 (0.010)	0.006 (0.014)	-0.014 (0.012)
-1*type-a	-0.028* (0.014)	0.002 (0.013)	-0.017 (0.014)	0.007 (0.012)	-0.010 (0.012)
+1*type-a	-0.037*** (0.011)	-0.006 (0.011)	-0.021** (0.011)	0.014 (0.011)	-0.007 (0.009)
+2*type-a	-0.023* (0.012)	-0.033*** (0.011)	-0.007 (0.012)	0.009 (0.012)	-0.017* (0.009)
+3*type-a	-0.021** (0.010)	-0.028*** (0.009)	-0.009 (0.011)	0.000 (0.010)	-0.023** (0.009)
Observations	41536	41536	41536	41536	41536
$R^2$	0.066	0.066	0.066	0.066	0.066
Mean day of the debate	0.814	0.814	0.814	0.814	0.814
Number of debates	54	54	54	54	54
Sociodemographic controls	X	X	X	X	X
Average pre-debate dummies for type-b	-0.006 (0.010)	-0.016 (0.010)	-0.004 (0.011)	-0.027* (0.014)	-0.013 (0.019)
Average post-debate dummies for type-b	-0.014* (0.007)	-0.015* (0.008)	-0.025*** (0.008)	-0.042*** (0.010)	-0.037*** (0.012)
Average pre-debate dummies for type-a	-0.023* (0.012)	-0.004 (0.012)	-0.013 (0.010)	0.007 (0.010)	-0.012 (0.009)
Average post-debate dummies for type-a	-0.027*** (0.009)	-0.022*** (0.008)	-0.012 (0.009)	0.008 (0.009)	-0.016** (0.008)

Notes: Same notes as in Tables 6 and D.21.

Table D.24: Debates' effects on vote choice consistency across voter types, balanced panel

	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	-0.027 (0.040)	-0.011 (0.012)	-0.005 (0.014)	-0.015 (0.012)	0.002 (0.013)	0.001 (0.016)	-0.002 (0.011)
-2*type-b	-0.011 (0.038)	0.013 (0.016)	-0.007 (0.012)	-0.016 (0.014)	0.011 (0.014)	0.001 (0.015)	-0.011 (0.011)
-1*type-b	-0.002 (0.025)	0.001 (0.018)	-0.002 (0.011)	-0.010 (0.015)	0.011 (0.015)	-0.001 (0.019)	-0.009 (0.012)
+1*type-b	-0.017 (0.023)	0.003 (0.010)	-0.008 (0.010)	-0.023** (0.011)	-0.002 (0.012)	0.010 (0.014)	-0.016 (0.011)
+2*type-b	-0.036 (0.035)	-0.016 (0.014)	-0.029** (0.013)	-0.020* (0.011)	-0.013 (0.014)	-0.025 (0.015)	-0.023** (0.011)
+3*type-b	0.014 (0.032)	-0.009 (0.014)	-0.013 (0.009)	-0.018 (0.011)	-0.007 (0.012)	-0.027 (0.017)	-0.018 (0.013)
-3*type-a	-0.005 (0.028)	-0.012 (0.012)	-0.007 (0.011)	-0.003 (0.014)	-0.014 (0.012)	-0.003 (0.012)	-0.002 (0.018)
-2*type-a	-0.020 (0.033)	-0.029 (0.022)	-0.000 (0.015)	-0.003 (0.014)	-0.023* (0.013)	-0.011 (0.014)	-0.003 (0.018)
-1*type-a	-0.044* (0.021)	-0.021 (0.017)	0.011 (0.014)	-0.005 (0.015)	-0.022 (0.013)	0.002 (0.013)	0.001 (0.016)
+1*type-a	0.015 (0.025)	-0.023* (0.013)	0.001 (0.012)	0.001 (0.010)	-0.019* (0.010)	-0.003 (0.012)	-0.001 (0.012)
+2*type-a	0.001 (0.034)	-0.039** (0.016)	0.003 (0.013)	-0.025* (0.014)	-0.028** (0.012)	-0.016 (0.012)	-0.023 (0.017)
+3*type-a	-0.025 (0.034)	-0.045** (0.017)	-0.010 (0.014)	-0.022** (0.010)	-0.029** (0.011)	-0.028** (0.013)	-0.020 (0.014)
Observations	11785	35069	31201	40676	40622	31843	31728
R <sup>2</sup>	0.068	0.089	0.071	0.065	0.065	0.060	0.078
Mean day of the debate	0.814	0.817	0.820	0.815	0.814	0.821	0.810
Number of debates	16	38	43	52	50	45	40
Sociodemographic controls	X	X	X	X	X	X	X
Average pre-debate dummies for type-b	-0.013 (0.029)	0.001 (0.012)	-0.005 (0.010)	-0.013 (0.012)	0.008 (0.012)	0.001 (0.015)	-0.007 (0.009)
Average post-debate dummies for type-b	-0.013 (0.026)	-0.007 (0.010)	-0.016* (0.009)	-0.020** (0.009)	-0.007 (0.011)	-0.014 (0.014)	-0.019** (0.009)
Average pre-debate dummies for type-a	-0.023 (0.025)	-0.020 (0.014)	0.001 (0.010)	-0.004 (0.012)	-0.020* (0.010)	-0.004 (0.011)	-0.002 (0.015)
Average post-debate dummies for type-a	-0.003 (0.030)	-0.036** (0.014)	-0.002 (0.010)	-0.015 (0.010)	-0.025*** (0.008)	-0.015 (0.011)	-0.015 (0.012)

Notes: Same notes as in Tables 7 and D.21.