Who Punishes Extremist Nominees?
Candidate Ideology and Turning Out the Base in U.S. Elections[*]

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April 10, 2017

Abstract

Political observers, campaign experts, and academics alike argue bitterly over whether it is more important for a party to capture ideologically moderate swing voters or to encourage turnout among hardcore partisans. We speak to this debate by examining the link between the ideology of congressional candidates and the turnout of their parties' bases in U.S. House races, 2006–2012. Combining a regression discontinuity design in close primary races with survey and administrative data on individual voter turnout, we find that extremist nominees suffer electorally, largely because they *decrease* their party's share of turnout in the general election, skewing the electorate towards their opponent's party. Along with shedding light on questions concerning the interplay of parties, voters, and candidates, the results help address the debate over swing voters and turning out the base. For our sample of elections, turnout appears to be the dominant force in determining election outcomes, but it advantages ideologically moderate candidates because extremists activate the opposing party's base more than their own.

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"The key data is this, and it's important to re-emphasize if only to shut up the useless, overpaid political consultants who idiotically babble about 'moving to the center' or 'compromising with the other side'...What matters is turning out our voters. That's it. The Democrats win when we fire up and turn out our base."

—Blog post on Daily Kos[1]

"Democrats cannot win elections without capturing the votes of independent-minded swing voters."

—Commentary in the Wall Street Journal[2]

1   Introduction

The current state of American politics, characterized by high degrees of legislative polarization, brinksmanship, and gridlock (e.g., McCarty, Poole, and Rosenthal 2006), has raised new questions about the interplay of ideology and electoral success in U.S. elections. Despite the key role that ideology plays in structuring political competition and determining government policy, we still lack consistent answers to basic questions about how and why our elections select candidates of varying ideology for office. In fact, the study of candidate ideology and electoral performance in U.S. elections can be crudely divided into two literatures which seem fundamentally at odds with each other. On one side is what we might call the institutional literature, which uses election data to suggest that there is an electoral advantage for moderate candidates (e.g., Ansolabehere, Snyder, and Stewart 2001; Canes-Wrone, Brady, and Cogan 2002; Erikson 1971; Erikson and Wright 2000; Hall 2015). This literature is often associated with the idea that candidates must appeal to so-called "swing voters" in order to win office. On the other side is what we might call the behavioral literature, which uses survey evidence to suggest that voters are uninformed and ideologically inconsistent, casting doubt on whether swing voters are relevant, or whether they even exist at all (e.g., Campbell et al. 1960; Converse 1964; Lenz 2012; Miller and Stokes 1963). This latter literature is often associated with the idea that turnout among the parties' bases determines election outcomes.[3]

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[1] http://www.dailykos.com/story/2014/11/5/1342347/-CRUSH-the-GOP-don-t-compromise-with-em-how-to-win-in-2016-and-what-not-to-do.

[2] http://www.wsj.com/articles/SB10001424052702304252704575155942054483252

[3] Hill (2016) is one interesting paper at the intersection of these literatures. The paper combines administrative data on individual voter turnout with precinct-level vote returns to estimate swing voting. Under the assumptions of the paper's model, partisan turnout is estimated to determine roughly twice as much of the vote share as swing voters are.

This disagreement rages on in the popular press, too, where pundits and campaign practitioners debate the relative merits of hypothetical moderate candidates who capture swing voters or ideologically committed candidates who "fire up the base." Consider, as a recent example, the 2016 Democratic presidential primary race between Hillary Clinton, widely thought to be the more pragmatic and moderate candidate, and Bernie Sanders, the farther left progressive candidate. Thom Hartmann, the progressive radio host, argued that Sanders would make a better general-election candidate than Clinton, saying: "the truth is, Democrats win when voter turnout is high. And voter turnout is high when voters have real progressive candidates and a truly progressive platform to support."[4] This is a sentiment shared by many progressives, as the colorful Daily Kos quote in the epigraph above suggests. Former member of Congress Barney Frank disagreed with this idea, penning an op-ed telling readers that "Wishful thinking won't win the White House." Frank continued, "[Sanders's] very unwillingness to be confined by existing voter attitudes...is both a very valuable contribution to the democratic dialogue and an obvious bar to winning support from the majority of these very voters in the near term."[5] Similar arguments have been made for Republican candidates and for elections up and down the ballot. While the Clinton-Sanders example concerns the presidency, an office whose elections differ fundamentally from the legislative elections we study, it helps highlight the more general argument about turning out the base vs. appealing to swing voters. Although the argument has gone on for decades, empirical evidence to resolve it has been scant. Do more extreme legislative candidates actually galvanize their own bases, and, if so, do they actually perform better than moderate candidates in elections?

In this paper, we attempt to answer these questions, and in so doing, we find some common ground between the behavioral and institutional literatures. In particular, we combine election data with survey data from the Cooperative Congressional Election Study (CCES), as well as comprehensive administrative data on voters from Catalist, to show that more extreme candidates do worse, electorally, in part because they decrease their party's share of turnout in the general election. As a result, turnout among the parties' bases is a mechanism for the advantage of moderate candidates, rather than a phenomenon at odds with ideological selection.[6] *Extremist candidates*

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[4] http://www.thomhartmann.com/blog/2016/02/if-you-want-win-go-progressive
[5] http://www.politico.com/magazine/story/2015/07/why-progressives-shouldnt-support-bernie-120484
[6] These effects on turnout need not be the result of individual voters carefully processing information about candidates' positions—for example, the effects could instead be the result of purely elite-driven behavior filtered through campaigns (e.g., endorsements, fundraising). We will not take a stance one way or another on whether voters

do worse because, contrary to rhetoric, they fail to galvanize their own base and instead encourage the opposing party's base to turn out more, on average. Our results therefore suggest that the institutional and behavioral literatures on elections are both right, and both wrong. Moderate candidates *do* perform better, electorally, but their success depends largely on their ability to encourage their partisans to turn out—or, similarly, to discourage the other party's partisans from turning out. In fact, as we will show, the estimates from our regression discontinuity design are consistent with the possibility that almost the entire vote-share penalty of extremist nominees comes from changes in turnout (though our tests cannot prove whether or not there are also swing voters at play).

We also link our study to a long political economy literature on candidate ideology and turnout (Adams and Merrill 2003; Adams, Dow, and Merrill 2006; Downs 1957; Glaeser, Ponzetto, and Shapiro 2005; Hinich and Ordeshook 1969; Peress 2011). We make the simple point that, in a typical spatial model where voters have concave utility (and thus convex disutility), so that they receive increasingly large amounts of disutility from candidates further and further from their ideal point, it is the *opposing* party's voters who should care the most about a party nominating an extremist instead of a moderate. While the party's base voters may prefer a more extreme nominee, the opposing party's base voters dislike this extreme nominee more than the party's base likes him or her. Our empirical results are broadly consistent with this idea. While the party's base may or may not turnout more in response to a more extreme nominee, extremist nominees do seem to galvanize turnout in the opposing party.

Documenting these effects empirically requires overcoming a number of issues of omitted variables and selection bias, as well as problems of measurement. Places where more extreme candidates win nomination and stand for office in the general election are sure to vary, systematically, from places where more moderate candidates are nominated. To address this issue, we implement a regression discontinuity design based on close primary elections. This approach ensures, under plausible assumptions, that districts in which a more extreme candidate barely wins nomination and runs in the general election are otherwise identical, in expectation, to those where a more moderate candidate barely wins the primary and runs in the general. Although the identifying

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are informed or rational. However voters themselves behave, the results show that their decision to turnout is systematically related to the ideology of the candidates who stand for office.

assumption of the RD has been challenged in U.S. House general elections (Grimmer et al. 2012; Caughey and Sekhon 2011), our tests, in line with those of Hall (2015), strongly suggest the design is valid in U.S. House primaries.

To implement the RD, we require a way to scale candidates. Previous studies have mainly relied on roll-call votes, which give a clear picture of the ideology of incumbents but cannot tell us anything about candidates who have never served in office. We follow recent work in using the mix of campaign contributions that candidates receive as an indicator of ideology (e.g., Hall 2015; Thomsen 2014, 2016). While this measure is far from perfect (on this point, see Hill and Huber 2015)—and we are careful to consider the many biases that may arise from its use—it is enormously valuable because it allows us to study electoral losers as well as winners. To ensure that some feature of the money-based scalings does not drive our results, we also replicate our main finding using a smaller set of elections in which both the Democrat and Republican candidates have cast roll-call votes in state legislatures. Using the Shor and McCarty (2011) measure of candidate ideology based on these votes, we find the same pattern of results.

The remainder of the paper is organized as follows. In the following section, we discuss the similarities and differences between the institutional and behavioral literatures on elections and ideology, and we briefly discuss formal theories of candidate ideology and turnout. Following that, we discuss the data we use to study these topics empirically. In the next section, we present observational and regression-discontinuity results, respectively, that consistently show that extremist candidates do worse, electorally, in part because they skew general-election turnout away from their own party. Finally, we conclude by discussing how our findings help revise and connect behavioral and institutional studies of elections and enhance our understanding of ideology, electoral performance, and turnout.

2 Theoretical Background: Swing Voters and Turning Out the Base

A large literature on American political institutions finds that legislative candidates measured to have more moderate positions do better, electorally (e.g., Ansolabehere, Snyder, and Stewart 2001; Canes-Wrone, Brady, and Cogan 2002; Erikson and Wright 2000; Hall 2015). An even larger litera-

ture on American voter behavior, however, finds that voters know little about candidates' ideologies (e.g., Broockman 2016; Campbell et al. 1960; Converse 1964; Lenz 2012; Miller and Stokes 1963). Furthermore, in surveys, voters do not seem to express support for candidates based on their ideological proximity (e.g., Tausanovitch and Warshaw 2015). For this reason, the political science literature has long viewed the idea that moderates do better electorally and the idea that individual voters are uninformed and highly partisan as fundamentally at odds. Consider this passage from a recent op-ed by Professors Christopher Achen and Larry Bartels in *The New York Times*:

> Decades of social-scientific evidence show that voting behavior is primarily a product of inherited partisan loyalties, social identities and symbolic attachments. Over time, engaged citizens may construct policy preferences and ideologies that rationalize their choices, but those issues are seldom fundamental.
>
> That is one key reason contemporary American politics is so polarized: The electoral penalty for candidates taking extreme positions is quite modest because voters in the political center do not reliably support the candidates closest to them on the issues.[7]

Building off of these arguments, some scholars and campaign practitioners have concluded that elections are much more about "turning out the base"—encouraging partisans who will vote for the party to turn out and vote—than they are about altering ideological positions to appeal to swing voters.[8] Reviewing precisely these kinds of arguments in 2014, but with a logic that could apply in any year, Professor Lynn Vavreck wrote for *The New York Times* that "The 2014 fight is not over swing voters. It's for partisans."[9]

A first point to make, considering these two literatures, is that each has a clear strength and a clear weakness. The strength of the institutional approach is that it speaks confidently to overall election results. Because these papers study actual elections, they can make clear points about which types of candidates actually win real elections. The weakness, of course, is that finding this aggregate evidence does not give us direct information about the mechanisms underlying it. Although institutional scholars have been tempted to take these empirical patterns as evidence that moderate voters sway elections, there is, to our knowledge at least, no direct evidence for this idea. The strength of the behavioral literature is that it can examine these mechanisms directly.

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[7] http://www.nytimes.com/2016/05/23/opinion/campaign-stops/do-sanders-supporters-favor-his-policies.html, Accessed August 15, 2016

[8] We are focused here on the understanding how candidate ideology affects turnout and swing voters—but it is worth noting that this debate also relates to the electoral strategies of parties. A large literature studies the strategic dynamics of parties targeting swing voters or core supporters (Cox and McCubbins 1986; Cox 2009).

[9] http://www.nytimes.com/2014/04/23/upshot/the-myth-of-swing-voters-in-midterm-elections.html, Accessed August 15, 2016.

The main takeaway is that, generally speaking, many voters do not seem informed enough to make systematically ideological choices in whom they support in the voting booth. This forces us to revise electoral theories that depend on swing voters in important ways. The weakness to this approach is that it is difficult to extrapolate from surveys to actual elections. While many respondents may struggle to articulate coherent positions on a survey, we do not know how the electorate as a whole does or does not process ideological information. Even a relatively small number of well-informed voters, for example, could determine most election outcomes if the less informed voters are relatively evenly split between the two parties. One aim of our study is to address these weaknesses by combining data on election outcomes with survey data on individual voters, so that we can attempt to assess both aggregate electoral outcomes and individual-level mechanisms in a single analysis.

The second point we want to make is that the main findings in the two literatures need not be at odds with one another. Moderate candidates may perform better, electorally, even in the extreme hypothetical where swing voters do not exist, and even if most or all voters are not well informed, if turnout is a mechanism for ideological selection. In particular, extremist candidates could turn off their own party's voters from turning out to vote and/or galvanize voters in the opposing party to turn out and vote. Although voter attention is one plausible mechanism for effects of this kind, this idea does not depend on voters being highly informed and learning the ideology of each party's candidate—perhaps, for example, a party coordinates more get-out-the-vote campaigning when it has nominated a more moderate candidate vs. when it has nominated an extremist. Perhaps newspapers cover moderates more favorably than extremists, inducing supporters to turn out more—or, conversely, perhaps newspapers slam extremists, exciting voters in the opposition party. There are many possible reasons that candidates of varying ideology could affect turnout and, as a result, could induce electoral effects even if there are few or no swing voters. As a first contribution, our focus is on understanding the consequences of extreme vs. moderate candidates in the general election, rather than on identifying which of these mechanisms is most responsible for those consequences.

To explain the idea of how candidates of varying ideology can affect turnout in more detail, we turn now to considering formal theoretic ideas about candidate ideology and voter turnout.

Figure 1 – Candidate Ideology and Turnout. With a typical concave utility function, the nomination of an extremist over a moderate affects voters in the opposing party more than voters in the nominee's party. Specifically, voter j, in the opposing party, loses more utility than voter i gains when voter i's party nominates an extremist instead of a moderate.
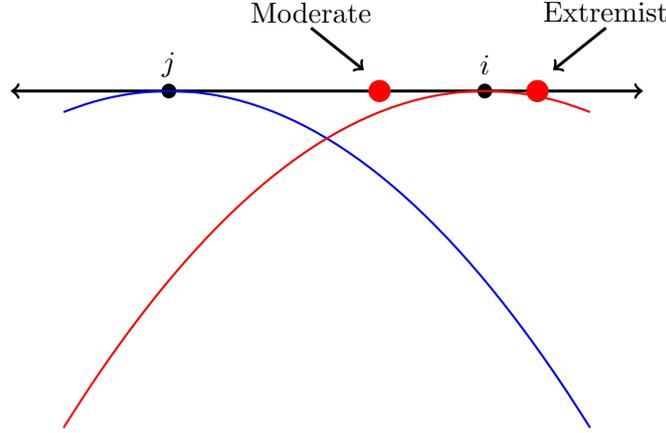
2.1 Formal Theories of Turnout

Although the formal theory literature on elections largely builds on the median-voter theorem's basic foundation, a smaller literature studies the question of candidate ideology and turnout directly (Adams and Merrill 2003; Adams, Dow, and Merrill 2006; Downs 1957; Glaeser, Ponzetto, and Shapiro 2005; Hinich and Ordeshook 1969; Peress 2011). We will not test the predictions of these models directly, but we will make one simple point about how moderate vs. extremist nominees might affect turnout in these theoretical models.

Suppose, as is standard, that voters have concave utility over policy positions, i.e., convex disutility, so that they dislike positions farther from their ideal point more and more. Now imagine a typical voter in each party considering turning out when the Republicans nominate a moderate vs. when they nominate an extremist. Figure 1 presents the situation graphically. The figure considers a base voter in each party—voter j is a Democrat; voter i is a Republican. Each voter is located at their bliss point on the ideological spectrum. The upside-down parabolas represent each voter's utility, which is zero at its maximum when a candidate is at the voter's ideal point, and is decreasing away from the ideal point—and, crucially, following normal assumptions, the rate at which it decreases goes up as the distance grows.

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Suppose that the Republican party nominates either a moderate Republican candidate (labeled on the plot as the moderate) or an extremist (also labeled on the plot). Clearly, voter i is closer to the extremist than the moderate. Her utility is higher at the extremist's point than at the moderate's, so she may be more willing to turnout in the general when the party nominates the extremist. Conversely, though, voter j loses more utility than voter i gains when we consider the switch from the moderate to the extremist. Voter j's utility function makes this clear; because it gets steeper as we get further from voter j's bliss point, and because candidates in the other party are naturally farther away from j than they are from i, voters in the opposing party are likely to be more horrified by an extremist nominee than the party's own base is pleased by one. If this fear drives voter turnout, then extremists will galvanize voters in the opposing party more than those in their own party's base.

The spatial model massively abstracts from the actual electoral process. As we have presented it, it omits all of the non-ideological factors that candidates possess, as well as the effects of media, campaigns, and more. We do not claim it reflects reality, but it helps illustrate the simple point that, while extremists might galvanize their own base, they could just as easily, if not more easily, galvanize voters in the opposing party. Having laid this idea out, we now turn to our empirical analyses of candidate ideology, electoral outcomes, and turnout.

3 Data on Elections, Ideology, and Turnout in the U.S. House

To investigate these topics, we combine three main datasets. The first is a dataset containing all U.S. House primary and general elections, 1980–2012, compiled from primary sources for a series of papers including Ansolabehere et al. (2007) and extended to later years by the same authors. The second dataset contains the ideological scalings of congressional candidates and districts and comes from the DIME database (Bonica 2013, 2014). Details on how we cleaned and merged these datasets can be found in the Appendix.

The third dataset comes from the Cooperative Congressional Election Study (CCES) (Schaffner and Ansolabehere 2015) and measures partisan turnout in U.S. House general elections for the years 2006–2012. For each respondent in the CCES, we rely on the validated turnout indicator rather than the self-reported turnout. For this variable, each respondent's turnout status is validated using

administrative data compiled by Catalist. We define Democrats to be any respondent who reports identifying with the Democratic party in the 7-point party ID item, including strong Democrats, not very strong, and leaners, and we define Republicans analogously. This choice is consistent with the finding that leaners and weak partisans behave in nearly identical ways (Abramowitz 2012; Keith et al. 1992; Pew Research Center 2014).[10] We can then compute two types of turnout rates from the CCES data: the share of validated voters who identify as Democrats, and the share of respondents who turn out broken out by party. This first turnout share variable tells us whether the electorate in the district skews towards one party or another in a given election; the second tells us whether members of a given party turned out more or less than usual. For example, imagine a district in which 250 Democrats and 300 Republicans are sampled, and 100 Democrats and 200 Republicans have validated turnout. In this district, the Democratic share of validated votes is $100/(100+200)$ = 33%, the Democratic turnout rate is $100/250 = 40\%$, and the Republican turnout rate is $200/300$ = 67%.

Response bias from the fact that taking surveys like the CCES is voluntary is certainly a concern. Indeed, validated turnout rates in the CCES are substantially above the population turnout rate (Ansolabehere and Hersh 2012). To attempt to account for these kinds of issues, we do two things. First, we only make comparisons *across* CCES respondents (e.g., turnout for Republicans vs. for Democrats in the same race), to difference out the fixed part of this bias. Second, and more importantly, we replicate our main results using Catalist voter-file data, directly. This alternative data contains full voter files, removing all response bias (although it has other, unrelated issues that we discuss below). We find extremely similar point estimates using this data, suggesting that survey response bias does not affect our conclusions.

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[10]In the Appendix, we report all relevant results using only strong and weak partisans and find that the estimates are consistent with our main findings.

# 4 Candidate Ideology and Election Outcomes: Initial Observational Evidence

Do more extreme candidates do worse in general elections? And if so, do they encourage or discourage turnout among varying types of voters? In this section, we offer preliminary descriptive evidence that suggests the answer is yes.

As we emphasized before, throughout the rest of the paper, the goal is to investigate how candidates of varying ideology affect elections and turnout—the goal is *not* to isolate the "causal effect" of candidate *positions*, themselves.[11] Consider again the rhetoric concerning Bernie Sanders vs. Hillary Clinton. Our goal is to evaluate the consequences of Clinton vs. Sanders running for office in the general election. Is it true that candidates like Sanders do better because they increase turnout among the base? Or is it the case that candidates like Clinton successfully secure swing voters? Clinton and Sanders surely differ from each other in other ways beyond ideology, but by systematically studying these types of choices, we can learn about the electoral and representational consequences of voters' decision to nominate more extreme or more moderate candidates, whatever the myriad mechanisms underlying these consequences.

We begin by exploring these phenomena graphically. Figure 2 presents the relationship between how ideologically extreme a candidate is and (a) how she does, electorally and (b) how much her party turns out to vote in the general election, focusing on contested general-election races to match the analyses below. For this graph, we measure ideological extremism as the absolute difference, in CFScores, between a candidate and the average donor in her district. We are well aware of the fact that the average donor is not the same as the median voter—nevertheless, the distance between candidates and average is likely to be a useful approximation. Below, we consider a variety of other measurement approaches, but this one is simplest to depict visually. Observations to the left of the graph, where the scale is close to zero, are candidates who are unusually close to the average

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[11]In fact, it is not even clear that there is such a thing as a causal effect of candidate positions. Like gender or race, ideology is probably a deep characteristic built throughout one's life; it almost certainly violates the "no causation without manipulation" maxim. Although one can imagine altering the candidate positions that voters see, this is not a clean approximation of actual changes in candidate positions. If candidates with different ideologies differ on other dimensions, then voters may make inferences about these other attributes when they are told that a candidate holds certain positions.

Figure 2 – Candidate Ideology, Elections, and Turnout in the U.S. House.
More extreme candidates do worse, electorally (left panel), and their party's voters
comprise a smaller share of turnout in the general election (right panel).
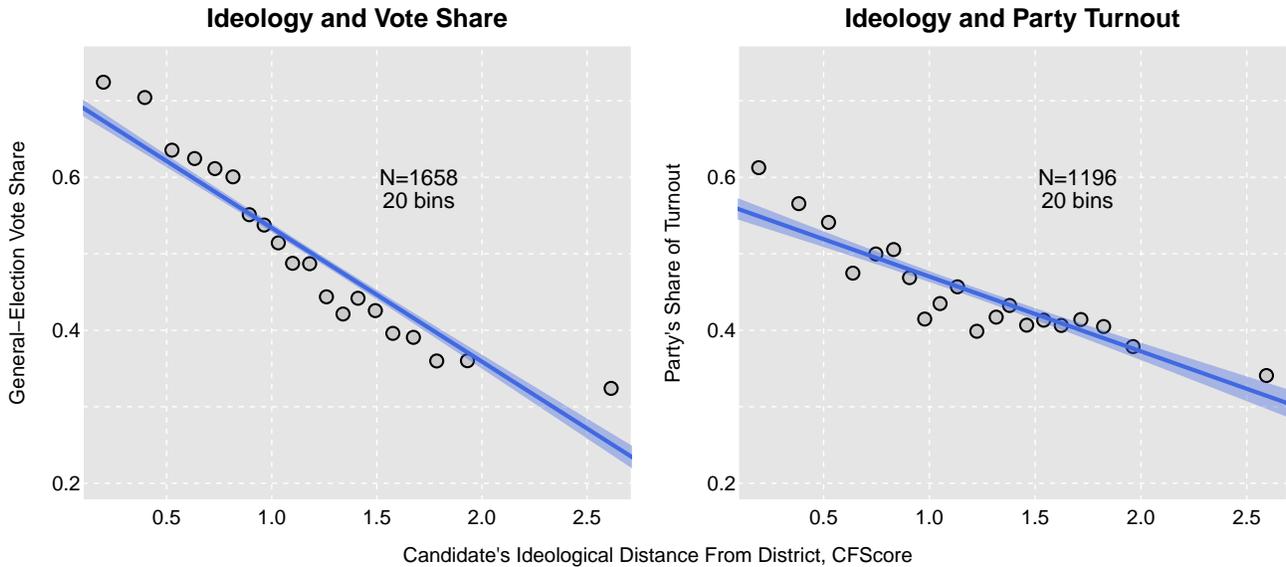
Note: For both panels, the horizontal axis represents candidate extremism as the distance
between the Democratic candidate's CFScore and the average CFScore of donors in the
district. In the left panel, the vertical axis represents the Democratic candidate's vote
share; in the right panel, it represents the share of all voters turning out in the general
election who identify with the Democratic party in the CCES. Points are averages in equal-
sample-sized bins of the horizontal axis variable. Regression lines are from OLS estimated
on raw data (not binned). Shaded area represents 95% confidence interval. Sample size is
smaller in the right panel because election data is available for more years than the CCES.
Both plots focus arbitrarily on Democratic candidates; results are extremely similar for
Republicans (formal analyses consider both parties).

donor; observations to the right, where the scale is positive, are unusually extreme, ideologically
speaking. We arbitrarily focus on the Democratic candidate in each race.[12]

Because there are a large number of data points, the figure presents averages in equal-sample-
size bins of ideological distance. Each bin contains a large number of observations: roughly 83
observations, in the left plot where we have more data, and roughly 60 in the right plot, where we
are limited by the CCES to the years 2006–2012. As the plots show, there is a sharp and noticeable
relationship between ideology, election outcomes, and turnout.

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[12]The graphs look essentially identical if we look instead at Republican candidate extremism and Republican vote
share and turnout. In order to fix the idea that higher values of distance mean more extreme, we omit the rare
cases (17 in total out of almost 1,700 observations) in which the Democratic candidate is estimated to be to the
right of the average donor. Doing so has no material effect on the plots.

Consider the left panel. Here, we see that candidates who are further from their districts, ideologically, do much worse electorally. Each one standard deviation increase in ideological distance seems to be associated with roughly a 10 percentage-point decrease in general-election vote share. In the right panel, we see a similar, though not quite as steep, relationship between ideological distance and the party's turnout in the general election. Here, the vertical axis measures the share of all voters in the election who identify as being members of the party—a proxy for the party's "base." The farther the party's candidate is from the district, ideologically, the smaller the party's share of general-election turnout becomes.

This correlation might suggest that turnout is related to candidate ideology, but if so, it is opposite the claims about firing up the base. More ideologically extreme candidates appear to suffer electorally in part because more of the *other* party's voters turn out and oppose them. Suppose for the moment that elections were decided entirely by swing voters switching their support, rather than by differential turnout. In that hypothetical world, we should see a strong relationship between candidate ideology and vote share but no relationship between candidate ideology and turnout share. Instead, the graphs show a relationship so strong that it suggests that much of the change in vote share related to candidate ideology could be due to turnout alone—though we should be clear that without observing individual's actual vote choices we cannot rule out the possibility that there are changes in turnout composition and swing voters switching sides at the same time. Finally, the patterns also cast some initial doubt on the idea that more extreme candidates galvanize their own base at little cost. If that were the case, we might expect to see more extreme candidates's parties having higher—not lower—turnout in the general election.

Though interesting, clear biases lurk in these simple graphical comparisons. Most obviously, the places where an extreme candidate runs for office will differ, systematically, from the places where a more moderate candidate runs. We might suspect that districts where a party fields an extreme candidate are places where that party has little chance of winning, so that there is a guaranteed link between extremism and electoral outcomes that isn't due to any features of the candidate, but rather due to the underlying district's features.

5 Effects of Extremist Nominees on Turnout: RD Evidence

To isolate the effect of extremists on general-election turnout, we follow Hall (2015) in focusing on close primary elections between a more extreme candidate and a more moderate one. The logic is that, while in general districts that nominate more or less extreme candidates will systematically differ from one another, among the set of districts that have close primary races between an extremist and moderate, the ones that "as-if" randomly see the extremist win will be otherwise identical, in expectation, to the ones where the moderate wins.

In order to implement the design, we need to identify extremist and moderate primary candidates. We again use CFScores. First, we limit the data to contested primary races where the top two candidates in the race both have raised enough money to have a reliable CFScore.[13] Some of these races occur between two candidates who are very distinct, ideologically, where it is clear that one candidate is the extremist and one the moderate. But in other races, the candidates are closer together, ideologically. Following Hall (2015), we define a primary race as being one between an extremist and a moderate if the ideological distance between the candidates, in terms of their CFScores, is at or above the median distance between the top two primary candidates across all races in the sample.

Specifically, we estimate equations of the form

$$Y_{ipt} = \beta_0 + \beta_1 Extremist\ Win_{ipt} + f(V_{ipt}) + \epsilon_{it}, \tag{1}$$

where Y_{ipt} is one of our outcome variables measured for party p in district i at time t, usually either party p's vote share or turnout share. *Extremist Win*$_{ipt}$ is an indicator variable for whether the extremist candidate wins the primary for party p in district i at time t. The quantity of interest is thus β_1, which reflects the RD estimate of the effect of an extremist nomination. Finally, the function $f(V_{ipt})$ is the function used to control for the extremist's vote-share winning margin in the primary, V_{ipt}.

Before looking at the turnout estimates, we first replicate the Hall (2015) estimates on vote share for our smaller sample of years with CCES data. Table 1 presents the estimates. As is standard in

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[13]Following Hall (2015), we require candidates to have raised at least 20 contributions to be included in the sample. In the Appendix, we consider the robustness of the RD estimates to changing this cutoff.

Table 1 – Effect of Extremist Nominee on Party's General-Election Vote Share and Victory, U.S. House, 2006–2012.

|	Vote Share				Victory			
Extremist Nominee	-0.15	-0.08	-0.12	-0.13	-0.53	-0.30	-0.41	-0.55
	(0.05)	(0.04)	(0.04)	(0.05)	(0.19)	(0.13)	(0.15)	(0.17)
N	88	232	232	113	88	232	232	90
Polynomial	1	3	5	CCT	1	3	5	CCT
Bandwidth	0.10	–	–	0.12	0.10	–	–	0.10

Robust standard errors clustered by district in parentheses in columns 1-3 and 4-7; standard errors in columns 4 and 8 come from rdrobust package. The running variable is the extremist primary candidate's vote share winning margin in the primary.

RD studies, we report estimates at a variety of specifications and bandwidths for $f(V_{ipt})$. In the first column, we use a local linear OLS estimated separately on each side of the discontinuity, using only observations where the primary winner won by 10 percentage points are less. In the second column, we use all the data with a 3rd-order polynomial of the running variable. In the third column, we increase this polynomial to 5th-order. In the fourth column, we use the automated bandwidth selection and kernel estimation from Calonico, Cattaneo, and Titiunik (2014). These first four columns are all on general-election vote share; the final four columns replicate these specifications for electoral victory (an indicator) instead of vote share.

As the table shows, we find large effects on vote share and electoral victory, consistent with Hall (2015). Nominating an extremist drastically reduces the party's electoral fortunes in the general election. Although the estimate does move around from specification to specification, likely because of the reduced sample size when only focusing on data from 2006–2012, it is consistently negative and statistically significant.

Having documented the effect of extremist nominees on vote share, we now examine their effect on partisan turnout. Following typical practices, we begin by studying the RD graphically. Figure 3 plots binned averages of the extremist candidate's winning margin in each primary race, on the horizontal axis, against the general-election vote share of the primary winner, on the vertical axis. When the winning margin is above 0, to the right of the vertical line in the plot, the extremist candidate from among the top two primary candidates wins the race, and the party fields an extremist in the general election. When the winning margin is below 0, to the left of the vertical line in the plot, the moderate wins and stands in the general election instead.

Figure 3 – **The Effect of Extremist Nominees on Validated Partisan Turnout in the General Election. U.S. House, 2006–2012.** When a party nominates an extremist in its primary, general-election turnout skews towards the opposing party.
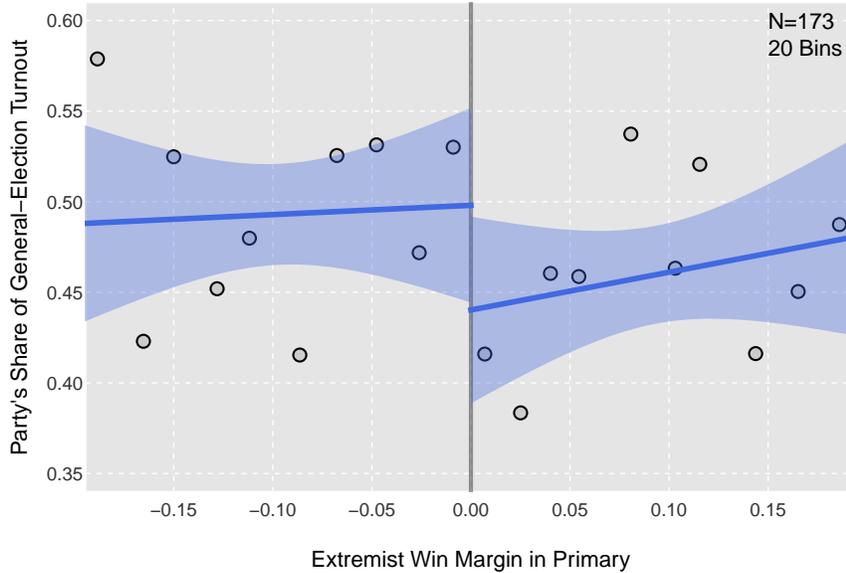
Note: The dependent variable (on the vertical axis) is the share of all CCES respondents who turned out in a given general election who reported being strong, not very strong, or leaning supporters of the party holding the primary election (each observation is a district-year-primary). Points are averages in equal-sample-sized bins of the horizontal axis variable. Regression lines are from OLS estimated on raw data (not binned), separately on each side of the discontinuity. Shaded area represents 95% confidence interval.

The plot also includes OLS lines fit to each side of the discontinuity, separately. These lines, as well as their 95% confidence intervals, are estimated from the underlying data, not the binned averages. As the lines show, there appears to be a noticeable drop at the discontinuity; when the party goes from just barely nominating a moderate to just barely nominating an extremist, its share of turnout in the general election drops by almost 5 percentage points in the graph.

Table 2 presents the formal estimates, using the same specifications as in the vote share RD. No matter the specification, we find strong, negative effects of extremist nominees on their party's share of turnout in the general election. Consider the first column. Here, we estimate that nominating an extremist instead of a moderate causes a party's voters to constitute 14 percentage-points less of turnout in the general election. Although the second column's estimate is smaller (though still fairly large in magnitude), the third and fourth column estimates also show large and statistically

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Table 2 – Effect of Extremist Nominee on Party's General-Election Turnout, U.S. House, 2006–2012.

	Partisan Share of Turnout			
Extremist Nominee	-0.14	-0.06	-0.10	-0.12
	(0.04)	(0.03)	(0.04)	(0.05)
N	88	231	231	110
Polynomial	1	3	5	CCT
Bandwidth	0.10	–	–	0.12

Robust standard errors clustered by district in parentheses in columns 1-3; standard errors in column 4 come from rdrobust package. The running variable is the extremist primary candidate's vote share winning margin in the primary.

significant effects. All together, we find strong evidence that extremist nominees depress their party's share of turnout in the general election.

It is worth restating this finding in the context of the RD, to make clear the things that are *not* driving this effect. We can think of the effect in the context of a hypothetical identical district. In one world, this district receives a more extreme nominee—let's say it's a Democratic extremist. In the other world, this district receives a more moderate Democratic nominee. Everything else, including the identity of the Republican opponent and the partisanship of the district, are exactly the same across these two worlds. In the case where the extremist now runs in the general election, our findings say that the pool of people who turn out to vote in the general will have a lower proportion of Democratic voters—that is, Democrats will make up a smaller share of the electorate—than in the case where the moderate runs in the general election instead.

5.1 Validating the RD's Identifying Assumption

For the RD results above to be valid, and not confounded by unobserved differences in the potential outcomes of the districts that nominate extremists vs. those that nominate moderates, it must be the case that candidates cannot "sort" across the discontinuity. Past research has raised questions about the validity of this assumption in U.S. House general elections, offering evidence that candidates who just barely win differ in observable ways (most notably, in terms of incumbency status) from those that barely lose (Grimmer et al. 2012; Caughey and Sekhon 2011; Snyder 2005). However, Eggers et al. (2015) presents evidence that these concerns do not typically apply to most

Table 3 – Effect of Extremist Nominee on Party's General-Election Turnout, U.S. House, 2006–2012, Catalist Data.

	Partisan Share of Turnout			
Extremist Nominee	-0.15	-0.08	-0.14	-0.09
	(0.06)	(0.04)	(0.06)	(0.05)
N	92	234	234	76
Polynomial	1	3	5	CCT
Bandwidth	0.10	–	–	0.08

Robust standard errors clustered by district in parentheses in columns 1-3; standard errors in column 4 come from rdrobust package. The running variable is the extremist primary candidate's vote share winning margin in the primary.

electoral RD designs, finding no evidence of such sorting in any other electoral case.[14] Hall (2015), using the same close primaries RD design as the present study, finds no evidence of sorting, either. Following these studies, in the Appendix we present balance tests that suggest there is no sorting in close U.S. House primary elections. Specifically, we re-estimate the RD specifications above but using *lagged* turnout share as the dependent variable (since this is our main outcome variable of interest). We find no evidence that treated and control districts differ from each other, on average, in terms of lagged turnout share.[15]

5.2 Replicating the RD With Administrative Data on Turnout

The CCES data is useful because it provides a wealth of additional information about individual voters, such as their self-reported ideology and partisanship, which we will exploit below. Before doing so, though, we need to make sure that our results are not driven by some of the undesirable aspects of the CCES sample. In particular, we might worry that the set of people who are willing to answer an exhaustive survey about politics are especially engaged individuals. Effects documented on this unusual sample of people may not generalize to the whole electorate, especially since the number of voters per district in the CCES sample is not particularly large.

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[14]For further discussion of these issues, also see de la Cuesta and Imai (2016), Erikson and Rader (2013), and Skovron and Titiunik (2015).

[15]Generally, researchers present balance tests on additional variables in addition to the lagged outcome variable (although this is obviously the most important to show). Because Hall (2015) already presents an exhaustive set of balance tests using the same data and same design, finding no evidence of imbalance, we do not do so here.

To address this issue, we now re-estimate the RD, but using data on turnout by party from Catalist, which assembles voter files for all fifty states. We estimate turnout by party for 2012 using a one-percent random sample of the Catalist database drawn in the September 2013. We estimate turnout by party for 2006 through 2010 using a one-percent random sample drawn in November 2011. A few important peculiarities of the samples bear mentioning. First, both samples are random samples of registered voters in a given state. This means that voters who move across state borders are over represented in our data. The 2013 sample includes all observations for any sampled individual, so we can re-weight the turnout statistics to remove this bias for the 2012 estimates, but we are unable to use this technique in earlier years. Second, 20 states do not include party information as a part of their voter registration process. For these states, we use a modeled Democratic party propensity variable that Catalist constructed to classify registrants in these states as Republicans and Democrats. We also observe similar results when we leave the non-party registration states out of the analysis. Lastly, Catalist began gathering voter files between 2006 and 2008, so some voters who moved between 2006 and 2008 may be missing in the 2006 analysis.

Table 3 presents the results. We find remarkably similar estimates when we use the full voter file instead of the CCES sample.

5.3 RD Results Not Driven By Using Money-Based Scaling

All of the results so far have depended on using CFScores, based on campaign contributions, to estimate candidate ideology. As we have discussed, CFScores are a useful and informative way to learn about the ideology of both winning and losing candidates, which makes it ideal for our purposes. Nevertheless, we may have lingering concerns about its accuracy. We might especially be worried about scenarios in which candidates appear extreme based on their campaign contributions not because they are actually ideologically extreme but rather because they are not viable candidates. This could happen particularly if we think that interest group donors are especially attuned to electoral probabilities and tend to donate to both parties, making viable candidates look "moderate."

There are several reasons to think this is not a major issue. First, we are already removing from the sample the truly non-viable candidates, because we throw out candidates who do not receive

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at least 20 donations over the course of their careers.[16] Second, we know that the donor-based scalings do a good job of predicting roll-call ideology for those who serve in the legislature (Bonica 2013, 2014). And finally, the scalings are not driven by interest-group donors; in fact, the majority of donations come from individuals (e.g., Ansolabehere, de Figueiredo, and Snyder 2003).

That said, we have also re-estimated the RD results on turnout using a completely separate method for scaling candidates. We take advantage of close primary races for the U.S. House that take place between two state legislators, whom we can scale on the basis of their roll-call votes in the state legislature. Although there are not many of these cases—so we don't entirely trust the RD designs and put little stock in the standard errors—the coefficient estimates are remarkably similar to those we report in the paper using CFScores. These results are available in the Appendix. As a result of this test and the arguments above, we are confident the results are not driven by bias in the money-based scalings.

5.4   Considering the Local Nature of the RD

In order to identify the effects of extremist nominees, the RD necessarily focuses on close primary races, which make the resulting estimates "local" to this context. In the present study, we have good reasons to think that this local estimate is more generalizable than is often possible. As Hall (2015) shows, close primary elections occur in a variety of districts. Unlike general-election RDs, which by definition only take place in competitive districts, primary election RDs are able to utilize both competitive districts and safe districts, because the dominant party in safe districts often has competitive primaries. In the Appendix, we offer some descriptive evidence to suggest that the RD sample is similar to the broader set of contested primary races, so we suspect that our estimates are not particularly local. Finally, since we also present similar results using the panel analysis, which relies on a much broader set of elections, we are relatively confident in the generalizability of the RD estimates.

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[16]As noted before, in the Appendix we consider the robustness of the RD results to using other donor cutoffs.

6 Who Punishes Extremists? Evaluating Mechanisms.

6.1 Is the Penalty to Extremists Driven Mostly By Turnout and Not Swing Voters?

How much of the overall electoral penalty that extremists receive comes purely from the overall turnout effect, and how much comes from voters switching sides? There is no way to answer this conclusively without observing individual vote choices, but we can conduct a suggestive test. If the effects on partisan turnout are very different from the effects on vote share, then we might have more reason to think swing voting is occurring. Suppose, for example, there was a large effect on vote share and no effect on turnout; then we might suspect swing voting is the main explanation. If, on the other hand, the effects are quite similar, we might suspect that turnout and not swing voting is the main explanation.

Figure 4 plots the RD estimates on vote share and partisan turnout side-by-side for each specification. As we see, the estimates are highly similar. Though we stress that this is not a dispositive test, it is consistent with the hypothesis that most of the effect of extremist nominees on electoral outcomes is driven by changes in turnout, with voters fixed in their partisan loyalty. In fact, because the effects are so similar, the results are consistent with a world in which most, if not all, of the vote-share penalty to extremists is driven by turnout.

6.2 Extremists Appear to Galvanize the Opposing Party's Base

Who turns out in response to extremist vs. moderate nominees? Thus far, we know that extremist nominees skew the electorate away from the party. This could be due to a number of possible compositional effects. For example, extremists could increase turnout in their own base but increase turnout in the opposing party's base more, or extremists could depress turnout in their own base but depress it less (or increase it) in the opposing party's base. And so on.

Although we are inevitably limited by the amount of data we have, we can carry out two simple tests to see which party's base seems to be affected more by extremist nominees. Specifically, we re-estimate the RD with two new sets of outcome variables. The first is the rate at which members of each party turn out—so, in an observation corresponding to a Republican primary, for example, one outcome variable would be the fraction of all CCES respondents identifying with the

Figure 4 – RD Effect of Extremist Nominees on Vote Share and Partisan Share of Turnout, U.S. House, 2006–2012. The estimated vote-share penalty to extremists is extremely similar to the estimated effect of extremists on their party's share of turnout in the general, suggesting that most of the penalty to extremists may be driven by differential turnout.
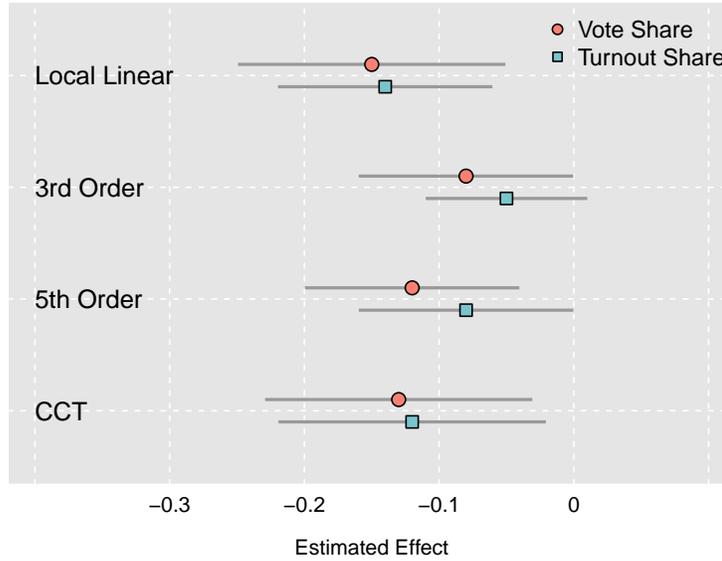
Note: Estimates are labeled based on the RD specifications from Table 2.

Republican party in that district and year who are validated to have turned out, and the other would be the analogous fraction for Democratic voters in the district. As we discussed in the Data section, we define Democrats as those on the 7-point scale who report being strong, not very strong, or leaning Democrats (and likewise for Republicans). The second set is to look instead at those CCES respondents who rank themselves at the extremes of the 5-point ideological spectrum (most liberal or most conservative), and calculate the turnout rates for those groups.

Table 4 presents the results. In the first row, we compare the effects of extremist nominations on the turnout rate of the nominee's party to the effects on the turnout rate of the opposing party. Clearly, we are asking a lot of the data at this point, and the estimates are noisy. Nevertheless, in every specification the estimate on opposing party turnout is bigger than for the nominee's party. Consider the first two columns. Here we estimate that an extremist nominee reduced the party's turnout rate in the general by 1 percentage point while it increases the opposing party's turnout rate by 8 percentage points. We cannot reject the null hypothesis that the two effects are equal, since they are both quite imprecise, but the pattern does suggest that the reason we see such

Table 4 – Effect of Extremist Nominee on Rates of Partisan General-Election Turnout, U.S. House, 2006–2012. Although results are noisy, extremist nominees appear to increase the turnout rate of voters in the opposing party, but do not appear to increase the turnout rate of voters in their own party. The impacts appear to be more exagerated among extreme respondents.

	Party	Opp Party	Party	Opp Party	Party	Opp Party	Party	Opp Party
All Respondents	-0.01	0.08	-0.02	0.04	-0.00	0.04	-0.01	0.07
	(0.06)	(0.07)	(0.04)	(0.05)	(0.05)	(0.06)	(0.06)	(0.07)
Extreme Respondents	-0.04	0.14	-0.05	0.11	0.01	0.12	-0.03	0.14
	(0.09)	(0.08)	(0.06)	(0.06)	(0.07)	(0.07)	(0.08)	(0.09)
N	87	87	231	231	231	231	-	-
Polynomial	1	1	3	3	5	5	CCT	CCT

Robust standard errors clustered by district in parentheses in columns 1-6; standard errors in column 7 and 8 come from rdrobust package. The 'all repsondents' row captures the estimated treatment effect for all survey respondents and the 'extreme repsondents' row captures the estimated treatment effect for survey respondents with self-reported ideology at the ends of a 5-point scale. The rdrobust package selected 148 and 124 races for columns 7 and 8 and all respondents. The rdrobust package selected 127 and 100 races for columns 7 and 8 and extreme respondents. The running variable is the extremist primary candidate's vote share winning margin in the primary.

noticeable effects of extremist nominees on partisan turnout share is because the opposing party is galvanized while the nominee's party is not.

The second row of Table 4 presents the same analysis but using the turnout rates of CCES respondents who rank themselves as extreme—that is, as either self identifying as "Very Liberal" or "Very Conservative." We estimate the effect of extremist nominations on turnout among your own party's extremists, i.e., among very liberal voters when we examine Democratic primaries, and among very conservative voters for Republican primaries, and vice-versa. Again, we find the same pattern of results. Consider the first two columns. Here, we estimate that an extremist nomination causes a 4 percentage-point decrease in the turnout rate of the nominee's party's extremist voters (first column), but a 14 percentage-point increase in the turnout rate for the opposing party's extremist voters. These results are consistent across specifications, though they do not reach the conventional 0.05 level of statistical significance. Although more work with more data will be needed in the future to confirm this pattern, extremist nominees appear to galvanize the opposing party's base.

Table 5 – Effect of Extremist Nominee on Candidate Expenditures, U.S. House, 2004–2012. Extremists spend considerably less in the general election, but they appear to increase advertising expenditures.

	Overall Log Total	Advertisement Share	Advertisement Total Spent	Administrative Share	Administrative Total Spent
Extremist Nominee	-0.44	0.14	126.07	-0.00	-46.63
	(0.25)	(0.06)	(137.49)	(0.05)	(102.84)
Intercept	13.99	0.13	194.27	0.14	195.68
N	271	271	271	271	271
Polynomial	3	3	3	3	3

Robust standard errors clustered by district in parentheses. The running variable is the extremist primary candidate's vote share winning margin in the primary.

6.3 Effects on Expenditures

One possible mechanism to explain why extremist candidates fail to encourage their own base to turnout, and instead see the opposing party's base turn out more, is that they simply do not campaign very well. Extremists may exert less effort campaigning, and they may have trouble fundraising in the general election. Seen another way, moderates might be especially good at campaigning to raise turnout. One possible way for moderates to increase turnout is to raise money to spend on campaign efforts. Alternatively, moderates might spend the same amount of money more effectively or perform better despite having the same spending patterns as extremists. The Federal Election Commission requires campaigns to report spending across multiple categories and makes this data publicly available. More than half of the spending reported goes uncategorized, but we can run some simple tests on the self-reported distribution of spending across categories as well as the overall spending by campaigns and parties in a district when that party narrowly nominated an extremist. Table 5 reports the results of this analysis.

We find that extremists spend roughly 44% less overall on campaigns. Despite this lower spending, extremists appear to spend more on advertising than moderates, suggesting that they spend a different amount of money on their campaigns and allocate their money differently. Moderate candidates do not spend considerably more on administrative expenses, such as staff salaries and office space. Given the potential for post-treatment response bias in which candidates accurately

report their expenditures, our findings here are only suggestive and provisional, but the solid data on total expenditures implies that moderates develop considerably more active campaigns.

7   Conclusion

This paper engages with a longstanding debate over the relative strengths of extreme legislative candidates, thought to boost turnout among their party's base, and moderate candidates thought to attract hypothetical moderate swing voters. Academics, political practitioners, and pundits have long disagreed about how candidates of varying ideologies perform electorally, as well as about the mechanisms that determine these electoral outcomes. While the institutional literature suggests that more moderate candidates tend to do better, survey-based behavioral work has gone so far as to suggest ideology is entirely irrelevant, with moderate candidates receiving no electoral advantage whatsoever. Resolving these disagreements is key for understanding how the electoral process contributes to the gridlock and polarization among our elected officials.

We have added to this debate by examining how general-election voters respond to the nomination of more or less extreme candidates. Using several different empirical strategies, we have found consistent evidence that extremist nominees do poorly in general elections in large part because they skew turnout in the general election away from their own party and in favor of the opposing party. On the one hand, this result seems to be in keeping with the institutional literature's findings that moderate candidates outperform, electorally speaking, and contrary to claims in the behavioral literature that candidate ideology is irrelevant. On the other hand, the results suggest that much of moderate candidates' success may actually be due to the turnout of partisan voters, rather than to swing voters who switch sides. In fact, our regression discontinuity estimates are consistent with the possibility that the entire vote-share penalty to extremist nominees is the result of changes in partisan turnout. Seen in this light, the results are more consistent with the behavioral literature's focus on turnout than they are with the institutional literature's theoretical focus on swing voters. As such, we see this paper as helping to link the behavioral and institutional literatures together, suggesting that moderate candidates do possess an electoral advantage, but that this advantage may depend heavily on turnout-based mechanisms.

The paper can also help revise formal theories that consider this same question of turning out the base. We have made the simple point that, under the standard kinds of utility functions these theories suppose voters possess, voters in the opposite party should actually have a stronger incentive to turn out when an extremist is nominated, because the extremist is so far away from them, ideologically. Our follow-up analyses on turnout among base voters and among self-identified extremist voters are consistent with our claim. Extremists appear to do little to galvanize turnout in their own party—although the precision of these estimates does not rule out the possibility that they increase own-party turnout—but they do seem to galvanize the opposing party and especially the ideologically extreme voters among the opposing party.

In considering our results, we should be clear that they do not resolve the debate over how informed or "rational" voters are. It is entirely possible that extremist nominees increase the opposing party's turnout because voters in the opposing party are aware of the extremist, are turned off by the extremist's positions and other attributes, and turn out to vote as a result. But it is equally possible that other mechanisms are at play. Elites, party organizations, campaigns, and the media all play a role. Voter turnout is not only the result of individuals' rational calculations but, we know, responds to the strategic activities of canvassers, advertisers, and others (e.g., Green and Gerber 2008). Separating out these mechanisms is, we suspect, a very promising avenue for future research. But whatever the mechanism, more extreme candidates do worse than more moderate candidates in U.S. House elections in large part because they fail to galvanize their own base and instead encourage voters in the opposing party to turn out and vote against them.

References

Abramowitz, Alan. 2012. "Forecasting in a Polarized Era: The Time for Change Model and the 2012 Presidential Election." *PS: Political Science & Politics* 45(04): 618–619.

Adams, James, and Samuel Merrill, III. 2003. "Voter Turnout and Candidate Strategies in American Elections." *Journal of Politics* 65(1): 161–189.

Adams, James, Jay Dow, and Samuel Merrill, III. 2006. "The Political Consequences of Alienation-Based and Indifference-Based Voter Abstention: Applications to Presidential Elections." *Political Behavior* 28(1): 65–86.

Ansolabehere, Stephen, and Eitan Hersh. 2012. "Validation: What Big Data Reveal about Survey Misreporting and the Real Electorate." *Political Analysis* 20(4): 437–459.

Ansolabehere, Stephen, James M. Snyder, Jr., and Charles Stewart, III. 2001. "Candidate Positioning in US House Elections." *American Journal of Political Science* 45(1): 136–159.

Ansolabehere, Stephen, John M. de Figueiredo, and James M. Snyder, Jr. 2003. "Why is There So Little Money in US Politics?" *The Journal of Economic Perspectives* 17(1): 105–130.

Ansolabehere, Stephen, John Mark Hansen, Shigeo Hirano, and James M. Snyder, Jr. 2007. "The Incumbency Advantage in U.S. Primary Elections." *Electoral Studies* 26(3): 660–668.

Bonica, Adam. 2013. "Ideology and Interests in the Political Marketplace." *American Journal of Political Science* 57(2): 294–311.

Bonica, Adam. 2014. "Mapping the Ideological Marketplace." *American Journal of Political Science* 58(2): 367–386.

Broockman, David E. 2016. "Approaches to Studying Representation." *Legislative Studies Quarterly* 41(1): 181–215.

Calonico, Sebastian, Mattias D. Cattaneo, and Rocío Titiunik. 2014. "Robust Nonparametric Confidence Intervals for Regression-Discontinuity Designs." *Econometrica* 82(6): 2295–2326.

Campbell, Angus, Philip E. Converse, Warren E. Miller, and Donald E. Stokes. 1960. *The American Voter.* University of Chicago Press.

Canes-Wrone, Brandice, David W. Brady, and John F. Cogan. 2002. "Out of Step, Out of Office: Electoral Accountability and House Members' Voting." *American Political Science Review* 96(1): 127–140.

Caughey, Devin M., and Jasjeet S. Sekhon. 2011. "Elections and the Regression Discontinuity Design: Lessons from Close US House Races, 1942–2008." *Political Analysis* 19(4): 385–408.

Converse, Philip. 1964. "The Nature of Belief Systems in Mass Publics." In *Ideology and Discontent*, ed. David E. Apter. New York: Free Press.

Cox, Gary W. 2009. "Swing Voters, Core Voters, and Distributive Politics." In *Political Representation*, ed. Ian Shapiro, Susan C. Stokes, Elisabet Jean Wood, and Alexander S. Kirshner. Cambridge University Press pp. 342–357.

Cox, Gary W, and Mathew D McCubbins. 1986. "Electoral Politics as a Redistributive Game." *The Journal of Politics* 48(2): 370–389.

de la Cuesta, Brandon, and Kosuke Imai. 2016. "Misunderstandings About the Regression Discontinuity Design in the Study of Close Elections." *Annual Review of Political Science* 19: 375–396.

Downs, Anthony. 1957. *An Economic Theory of Democracy.* New York: Harper and Row.

Eggers, Andrew, Anthony Fowler, Jens Hainmueller, Andrew B. Hall, and James M. Snyder, Jr. 2015. "On the Validity of the Regression Discontinuity Design for Estimating Electoral Effects: Evidence From Over 40,000 Close Races." *American Journal of Political Science* 59(1): 259–274.

Erikson, Robert, and Kelly Rader. 2013. "Much Ado About Nothing: RDD and the Incumbency Advantage." Working Paper.

Erikson, Robert S. 1971. "The Electoral Impact of Congressional Roll Call Voting." *American Political Science Review* 65(4): 1018–1032.

Erikson, Robert S., and Gerald C. Wright. 2000. "Representation of Constituency Ideology in Congress." In *Continuity and Change in House Elections*, ed. David W. Brady, John F. Cogan, and Morris P. Fiorina. Stanford University Press.

Glaeser, Edward L, Giacomo AM Ponzetto, and Jesse M Shapiro. 2005. "Strategic Extremism: Why Republicans and Democrats Divide on Religious Values." *The Quarterly Journal of Economics* 120(4): 1283–1330.

Green, Donald P., and Alan S. Gerber. 2008. *Get Out the Vote: How to Increase Voter Turnout.* Brookings Institution Press.

Grimmer, Justin, Eitan Hersh, Brian Feinstein, and Daniel Carpenter. 2012. "Are Close Elections Random?" Presented at the 2012 Annual Meeting of the Midwest Political Science Association. http://stanford.edu/ jgrimmer/CEF.pdf.

Hall, Andrew B. 2015. "What Happens When Extremists Win Primaries?" *American Political Science Review* 109(1): 18–42.

Hill, Seth J. 2016. "Changing Votes or Changing Voters? How Candidates and Election Context Swing Voters and Mobilize the Base." Working Paper.

Hill, Seth J., and Gregory A. Huber. 2015. "Representativeness and Motivations of the Contemporary Donorate: Results from Merged Survey and Administrative Records." *Political Behavior* pp. 1–27.

Hinich, Melvin J, and Peter C Ordeshook. 1969. "Abstentions and Equilibrium in the Electoral Process." *Public Choice* 7(1): 81–106.

Keith, Bruce E, David B Magleby, Candice J Nelson, Elizabeth A Orr, and Mark C Westlye. 1992. *The Myth of the Independent Voter.* Univ of California Press.

Lenz, Gabriel S. 2012. *Follow the Leader? How Voters Respond to Politicians' Performance and Policies.* University of Chicago Press.

McCarty, Nolan M., Keith T. Poole, and Howard Rosenthal. 2006. *Polarized America: The Dance of Ideology and Unequal Riches.* MIT Press Cambridge, MA.

Miller, Warren E., and Donald E. Stokes. 1963. "Constituency Influence in Congress." *American Political Science Review* 57(1): 45–56.

Peress, Michael. 2011. "Securing the Base: Electoral Competition Under Variable Turnout." *Public Choice* 148(1): 87–104.

Pew Research Center. 2014. "Political Polarization in the American Public.".

Schaffner, Brian, and Stephen Ansolabehere. 2015. "2010-2014 Cooperative Congressional Election Study Panel Survey." doi:10.7910/DVN/TOE8I1, Harvard Dataverse, V6.

Shor, Boris, and Nolan McCarty. 2011. "The Ideological Mapping of American Legislatures." *American Political Science Review* 105(3): 530–51.

Skovron, Christopher, and Rocío Titiunik. 2015. "A Practical Guide to Regression Discontinuity Designs in Political Science." Working Paper.

Snyder, Jason. 2005. "Detecting Manipulation in US House Elections." Unpublished Manuscript, University of California, Los Angeles. `http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.335.6505&rep=rep1&type=pdf`.

Tausanovitch, Chris, and Christopher Warshaw. 2015. "Does the Spatial Proximity Between Legislators and Voters Affect Voting Decisions in U.S. House Elections?" Working Paper.

Thomsen, Danielle M. 2014. "Ideological Moderates Won't Run: How Party Fit Matters for Partisan Polarization in Congress." *The Journal of Politics* 76(7): 786–797.

Thomsen, Danielle M. 2016. "Gender and Ideology in U.S. House Elections: Reassessing the Conventional Wisdom." Working Paper.

Online Appendix

Intended for online publication only.

Contents

A.1   Additional Statistical Results

In this section, we present a variety of additional statistical analyses.

A.1.1   Characteristics of the RD Sample

Table A.1 – Characteristics of Districts in the RD Sample, U.S. House, 2006–2012.

	Full Sample	Sample Near Discontinuity
% Dem	0.52	0.49
Lag Dem Pres Vote Share	0.54	0.52
Safe District	0.41	0.38
% Open Races	0.31	0.39
% Presidential Elections	0.48	0.44
N	232	88

Sample near the discontinuity includes races in which the extremist won or lost the primary by less that 10%.

In order to assess the locality of the RD estimates, we compare cases near the RD threshold—that is, primary races where the top two candidates were within 10% of each other in top two vote share—to the full sample of contested primaries between two ideologically distinct candidates (i.e., cases where the top two candidates' distance, in terms of ideology, was at or above the median distance across all cases). The table above compares the full sample to the close races. As we see, both the full sample and the RD sample are quite evenly split in terms of Democratic and Republican primary elections and in terms of partisanship, as measured using lagged presidential vote. Defining "safe" districts to be those where the lagged presidential vote share was above 60% for one party or the other, we see that the RD sample is slightly skewed towards competitive places, but still contains a large share of safe districts (in contrast to a general-election RD, which would mostly contain competitive and not safe districts). The RD sample is tilted more towards open-seat races, because these are when many of the most competitive primaries occur. And the RD sample appears to be slightly tilted towards midterm races, although not substantially so.

A.1.2   RD Balance Tests

The key assumption to the RD is that candidates cannot sort across the discontinuity. If such sorting occurs, then the districts that just barely nominate an extremist will be systematically different from those that nominate a moderate. Technically speaking, this will create a discontinuity in district covariates at the RD cutoff. To test for this, we exactly replicate the specifications from the RD table in the paper, except using *lagged* turnout instead of turnout. If a violation of the RD assumption is driving our estimates, we should see that the estimated treatment effect in these lag tests is large and negative. Instead, as the table shows, we find small coefficients and we cannot reject the null of no difference.

A.1.3   Alternative RD Specifications

In the paper, we already present the RD at a variety of bandwidths and specifications, including at the "optimal" bandwidth using the CCT procedure. In this section, we present more evidence that

Table A.2 – Differences In Party's Lagged General-Election Turnout, U.S. House, 2006–2012.

	Partisan Share of Turnout, $t-1$			
Extremist Nominee	-0.02	0.00	0.01	-0.01
	(0.04)	(0.04)	(0.04)	(0.04)
N	49	124	124	93
Polynomial	1	3	5	CCT
Bandwidth	0.10	–	–	0.11

Robust standard errors clustered by district in parentheses in columns 1-3; standard errors in column 4 come from rdrobust package. The running variable is the extremist primary candidate's vote share winning margin in the primary.

our conclusions are robust to the choice of bandwidth and specification. The figure above plots the local linear and 3rd-order polynomial estimates across bandwidths ranging from 5 (i.e., races where the vote-share distance between the winning candidate and the 50% threshold was below 5 percentage points) to 50 (i.e., including all races). As the plot shows, we consistently find large, negative results for all plausible choices. Although the local linear estimate attenuates at extremely large bandwidths, we would never use the local linear specification with a bandwidth that large.

A.1.4   RD Results Across Minimum Donor Threshold

In the paper, we only included in the RD analysis races in which both of the top two candidates in the primary received at least 20 donations over the course of their careers as candidates. to make sure our results do not depend on this arbitrary choice, in the figure above, we re-plot the RD estimate at every donor threshold from 0 to 500. We focus on the 3rd-order polynomial estimates because these are generally the smallest estimates already (so as to be conservative). The plot shows the estimates, 95% confidence intervals, and the sample size. As we see, the estimate does not vary much across cutoffs. Across almost all possible cutoffs, it is large and negative. There are a few regions where the estimate attenuates (around cutoffs of 120 and 220), but these seem to be blips and are at cutoffs where the sample size is already quite small. For any reasonable cutoff (e.g., between 0 and 100) the estimate barely changes at all. Of course, as we increase the cutoff and the sample size decreases, the estimate does become noticeably noisier. But it is clear that the results in the draft are not driven by our choice of 20 as the cutoff.

A.1.5   RD Results Using State Legislative Roll-Call Votes

As we discussed in the draft, it is important to make sure the results are not driven by the use of CFScores. In this section, we re-estimate the main RD result on turnout share with a completely different way of scaling candidates. Specifically, we use the Shor and McCarty (2011) data, which scales state legislators in terms of their roll-call votes, to study close primary races between two state legislators. Given these scalings, we carry out precisely the same analysis as before; we focus on primary races where the distance between the top two candidates is at or above the median distance across all the races we have between two state legislators. The table below presents the RD estimates. Clearly, the sample sizes are small, so these results should be taken with a grain of salt. But, it is remarkable that the coefficient estimates are so similar to those in the paper. Even

Figure A.1 – RD Estimates Across Bandwidths and Specifications
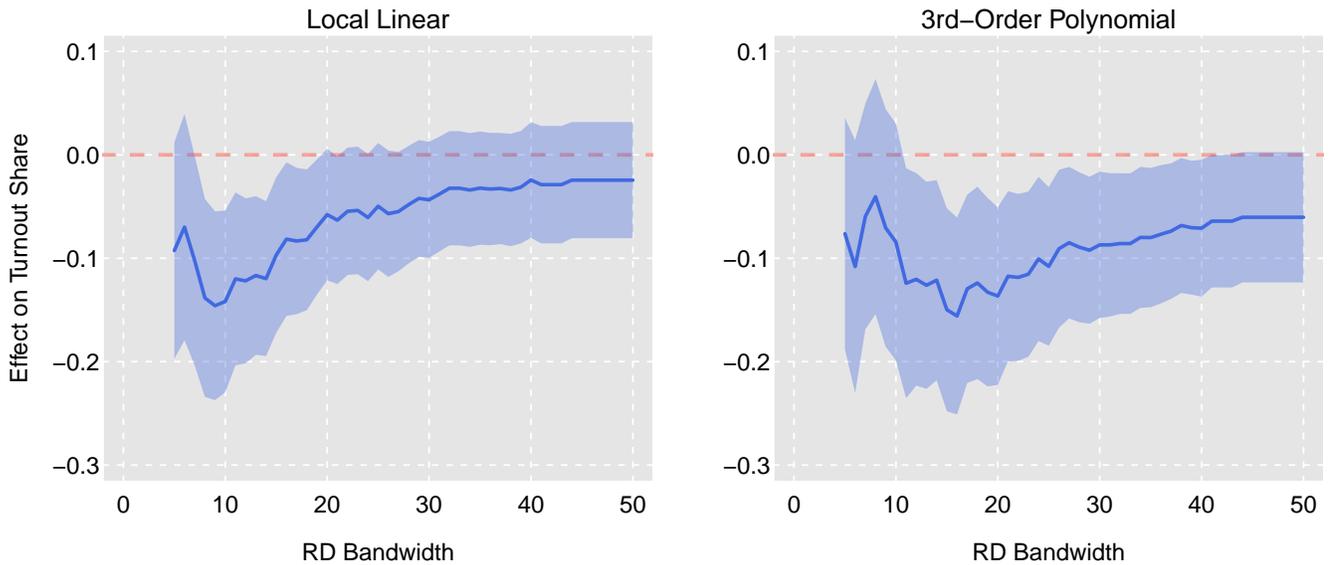
with small samples, this entirely separate scaling strategy again shows that extremist nominees decrease their party's share of turnout in the general election. Given this entirely independent test, we are confident the results in the paper are not driven by bias in the CFScore measure.

Table A.3 – Effect of Extremist Nominee on Party's General-Election Turnout, U.S. House, 2006–2012, Using Shor Legislator Scores.

	Partisan Share of Turnout			
Extremist Nominee	-0.31	-0.14	-0.31	-0.31
	(0.18)	(0.12)	(0.15)	(0.25)
N	19	49	49	20
Polynomial	1	3	5	Kernel
Bandwidth	0.10	–	–	0.11

Robust standard errors clustered by district in parentheses in columns 1-3; standard errors in column 4 come from rdrobust package. The running variable is the extremist primary candidate's vote share winning margin in the primary.

A.1.6   Panel Results Using Republican Turnout

When presenting the panel model results in the paper, we arbitrarily chose the Democratic turnout measure as the outcome. In this section, we present the same model output using Republican turnout measures instead. The results are consistent with the findings we reported above; when the Democratic general election candidate is more extreme, Republicans make up a larger percentage of voters who turnout in that election. When the Republican general election candidate is more

Figure A.2 – RD Estimates Across Minimum Donor Cutoff
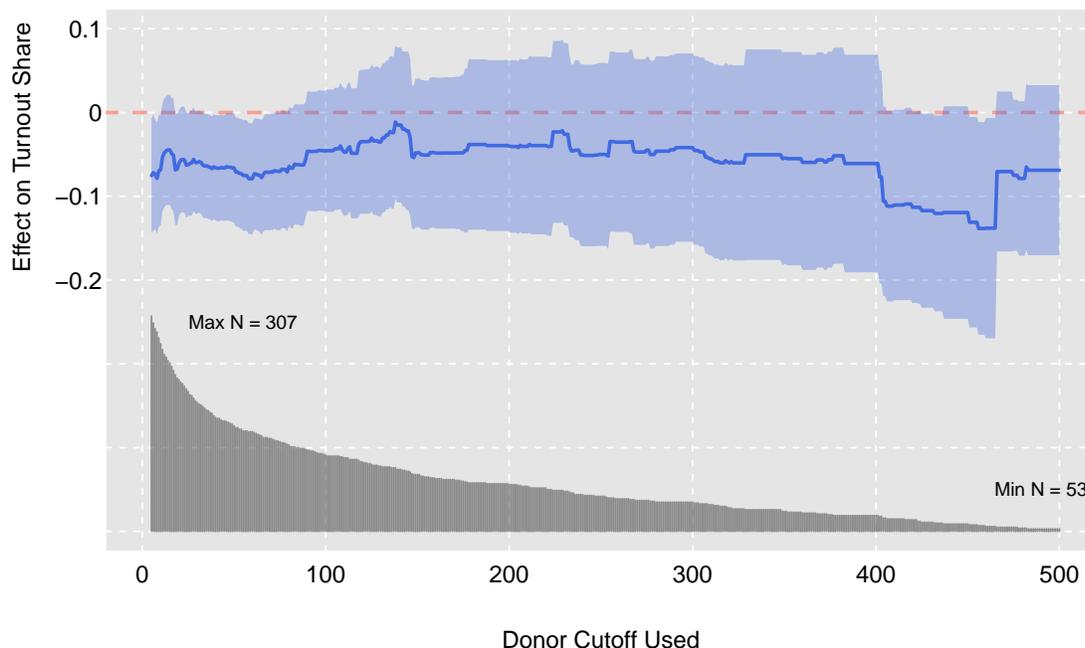
extreme, Republicans make up a smaller share of voters who turnout in that election. This finding is consistent across all three panel models, as it is in the main paper.

A.1.7 RD Results Omitting Leaners

Our regression discontinuity analysis labeled a respondent a Republican if they reported themselves as "Strong Republican", "Not Very Strong Republican", or "Lean Republican". We used the same convention when dealing with Democratic respondents. We believe this is consistent with best practice, but we also constructed a table of the main results leaving the leaners out of either party. As we expected, the results are quite similar to the results that we included in the main paper; the impact of nominating an extremist on that party's general election turnout share appear to be slightly smaller when leaners are excluded, but it is well within the range of expected results do to noise. The impact of nominating an extremist again appears to have no meaningful effect on that party's general election turnout rate, but meaningfully increases the opposing party's turnout rate, though the effect is quite noisy.

A.1.8 RD Results on CCES Reported Vote Choice

Table A.4 – Candidate Ideology and Partisan Turnout, U.S. House, 2006–2012.

Method:	Outcome: Rep Turnout Percentage (0-100)					
	CFScore		Canes-Wrone et. al.		Ansolabehere et. al.	
Dem Distance	2.60	0.66				
	(0.47)	(0.42)				
Rep Distance	-5.78	-0.55				
	(0.52)	(0.61)				
Dem Extremism			0.53	0.61		
			(0.44)	(0.34)		
Rep Extremism			-0.54	-0.42		
			(0.54)	(0.45)		
Midpoint					-0.65	-0.70
					(0.50)	(0.45)
Average Donor CFScore		3.30		2.55		3.27
		(0.42)		(0.51)		(0.42)
Lag Presidential Vote		-6.39		-6.39		-6.40
		(0.43)		(0.43)		(0.43)
Open Seat		-2.18		-2.17		-2.16
		(1.37)		(1.36)		(1.36)
Rep Inc		-3.23		-3.18		-3.17
		(1.99)		(1.97)		(1.97)
Dem Inc		-1.83		-1.83		-1.84
		(1.93)		(1.91)		(1.91)
# Donors, Rep		-0.05		-0.04		-0.04
		(0.24)		(0.24)		(0.24)
# Donors, Dem		0.44		0.46		0.46
		(0.24)		(0.24)		(0.24)
Dist Between Cands					-0.00	0.03
					(0.45)	(0.31)
N	961	961	961	961	961	961

All explanatory variables are standardized to have mean 0 and standard deviation 1. Extremism is defined as the absolute value of the candidate's CFScore. Distance is measured as the absolute distance between each candidate and the district's average donor, in CFScores. Midpoint is average between the Dem and Rep's CFScores in each race. Robust standard errors in parentheses.

Table A.5 – Effect of Extremist Nominee on Party's General-Election Turnout, U.S. House, 2006–2012, Leaners Not Included.

	Partisan Share of Turnout			
Extremist Nominee	-0.11	-0.03	-0.08	-0.09
	(0.04)	(0.03)	(0.04)	(0.04)
N	88	231	231	92
Polynomial	1	3	5	CCT
Bandwidth	0.10	–	–	0.11

Robust standard errors clustered by district in parentheses in columns 1-3; standard errors in column 4 come from rdrobust package. The running variable is the extremist primary candidate's vote share winning margin in the primary.

Table A.6 – Effect of Extremist Nominee on Rates of Partisan General-Election Turnout, U.S. House, 2006–2012, Leaners Not Included. Although results are noisy, extremist nominees appear to increase the turnout rate of voters in the opposing party, but do not appear to increase the turnout rate of voters in their own party.

	Party	Opp Party	Party	Opp Party	Party	Opp Party	Party	Opp Party
Extremist Nominee	-0.01	0.06	0.01	0.05	0.00	0.03	-0.00	0.05
	(0.06)	(0.06)	(0.04)	(0.04)	(0.05)	(0.05)	(0.05)	(0.06)
N	88	87	232	231	232	231	119	131
Polynomial	1	1	3	3	5	5	CCT	CCT
Bandwidth	0.10	0.10	–	–	–	–	0.13	0.15

Robust standard errors clustered by district in parentheses in columns 1-6; standard errors in column 7 and 8 come from rdrobust package. The running variable is the extremist primary candidate's vote share winning margin in the primary.

Table A.7 – Effect of Extremist Nominee on Party's General-Election CCES-Reported Vote Share, U.S. House, 2006–2012.

	Vote Share			
Extremist Nominee	-0.12	-0.06	-0.07	-0.10
	(0.04)	(0.03)	(0.03)	(0.05)
N	88	231	231	106
Polynomial	1	3	5	CCT
Bandwidth	0.10	–	–	0.12

Robust standard errors clustered by district in parentheses in columns 1-3; standard error in column 4 comes from rdrobust package. The running variable is the extremist primary candidate's vote share winning margin in the primary.

A.2 Panel Results

Now we attempt a variety of observational approaches all intended to help hold the underlying features of the district constant. We replicate two main observational strategies from the literature, and add one new adaptation of our own that takes advantage of recent data releases.

In the Canes-Wrone, Brady, and Cogan (2002) specification, we estimate

$$Y_{it} = \beta_0 + \beta_1 Dem\ Extremism_{it} + \beta_2 Rep\ Extremism_{it} + X_{it} + \epsilon_{it}, \tag{2}$$

where Y_{it} is either the two-party vote share or a measure of turnout in district i at time t. We mainly focus, arbitrarily, on the Democratic vote share and turnout share, though in the Appendix we show these effects for Republican outcomes as well. In Canes-Wrone, Brady, and Cogan (2002), the authors use a measure of roll-call extremism that is simply the absolute value of the incumbent's DW-NOMINATE score. To generalize this to all candidates, instead of using DW-NOMINATE, we define $Dem\ Extremism_{it}$ and $Rep\ Extremism_{it}$ as $|Dem\ CFScore_{it}|$ and $|Rep\ CFScore_{it}|$, respectively. Higher values of this variable generally indicate more extreme ideological positioning. To account for the partisanship of the district, Canes-Wrone, Brady, and Cogan (2002) use a variety of controls including presidential vote share. The vector X_{it} stands in for these controls. Although we first present results without controls, when we include them, they are: lagged presidential vote share; the estimated CFScore for the average donor in the district; an indicator for Dem and Rep incumbency, respectively; an indicator for whether the race is an open-seat race; and the number of donations received by the Democratic and Republican candidates, respectively, over all of the campaigns they run in.

The key assumption to the Canes-Wrone, Brady, and Cogan (2002) approach is that DW-NOMINATE scores further from zero correspond to more extreme positions, once the partisanship of the district is accounted for. While this may be a plausible assumption, there is no guarantee that this is the case—if an incumbent is more moderate than the median voter in her district, then by increasing the absolute value of her DW-NOMINATE score or her CFScore, she could actually become less extreme relative to her district. To account for this possibility, we also implement an alternate approach in which we attempt to directly measure how far away candidates are from their districts. In particular, we define $Distance_{pit} = |CFScore_{pit} - AvgDonorCF_i|$, where $CFScore_{pit}$ is the CFScore of party p's general-election candidate in district i in the election at time t and $AvgDonorCF_i$ is the average CFScore of all the donors in district i. We call these variables $Dem\ Distance$ and $Rep\ Distance$, respectively.

Needless to say, the average donor is not the median voter. Donors are more politically active than voters and appear to hold more extreme political views (Hill and Huber 2015). Despite this issue, the distance between candidates and the average donor is still likely to inform us about how non-median the candidate is. As long as the bias in the average donor score relative to the median voter is relatively fixed across districts, computing candidate distances will cancel the bias out. At a bare minimum, the approach offers a nice alternative to existing approaches—if it comes to similar conclusions, we can be more confident that we are finding the correct answer.

Armed with this distance variable, we then estimate simple equations of the form

$$Y_{it} = \beta_0 + \beta_1 Dem\ Distance_{it} + \beta_2 Rep\ Distance_{it} + X_{it} + \epsilon_{it}, \tag{3}$$

where all variables are defined as before.

Finally, we also use a third approach which avoids attempting to measure the median voter in each district directly but explicitly accounts for the problem that not all shifts away from 0

in CFScores will necessarily indicate extremism. Ansolabehere, Snyder, and Stewart (2001) hold fixed the distance between the candidates and the partisanship of the district and instead look at changes in the *midpoint* between the candidates. No matter where the median voter is located, a shift right in the midpoint between the candidates always benefits the left-wing candidate in the spatial model—so long as the distance between the candidates is held fixed. Again, we use CFScores to operationalize this technique. Using OLS, we estimate equations of the form

$$Y_{it} = \beta_0 + \beta_1 Midpoint_{it} + \beta_2 CandDistance_{it} + X_{it} + \epsilon_{it}, \tag{4}$$

where $Midpoint_{it} = \frac{CFScore_{pit} + CFScore_{-p,it}}{2}$ is the midpoint between the Democratic and Republican candidates' CFScores and $CandDistance_{it} = |CFScore_{pit} - CFScore_{-p,it}|$ is the distance between them. Like in the Canes-Wrone, Brady, and Cogan (2002) approach, we present these results with and without the control variables (the same ones listed above when we discussed the first approach).

Table A.8 presents these estimates on Democratic vote share for all three approaches, with and without optional controls. In all cases, we replicate previous work's finding that more moderate candidates do better, electorally. To aid in interpretability, all explanatory variables are standardized to have mean 0 and standard deviation 1.

In the first two columns, we use the new CFScore approach in which we calculate distance to the average donor in the district. In the first column, we see a substantial association between a candidate being more distant from the average donor and the candidate doing worse, electorally. A one standard deviation increase in the Democratic candidate's distance from the average donor (first row) is associated with an almost 7 percentage-point decrease in the Democratic party's share of the two-party vote. Likewise, a one standard deviation increase in the Republican candidate's distance from the average donor (second row) is associated with an almost 8 percentage-point increase in the Democratic party's share of the two-party vote, or, equivalently, an almost 8 percentage-point decrease for the Republican party. These estimates do become smaller when we control for district and race characteristics, but they remain substantial and very precisely estimated.

Estimates for the other two approaches are highly similar. In the middle two columns, we see that more extreme Democratic candidates, where extreme is now measured using the Canes-Wrone et. al. approach, are associated with lower Democratic vote shares, while more extreme Republican candidates are associated with higher Democratic vote shares. In the final two columns, we see that shifts right in the midpoint between the two candidates—which can be interpreted as making the Republican candidate more extreme and/or the Democratic candidate more moderate—are associated with an increase in Democratic vote share, too. All in all, we find clear evidence that moderate candidates do better than more extreme candidates in U.S. House elections.

We now turn to the estimates on the Democratic party's share of turnout in the general election, estimated from the CCES as discussed in the Data section. Table A.9 presents these results in exactly the same format as the previous table.

Here, results all point in the same direction but are not always as precise as the vote share estimates. In the very first column, we see that a one standard deviation increase in the distance between the Democratic candidate and the average donor in the district is associated with almost a 3 percentage-point decrease in the Democratic party's share of turnout in the general election; a corresponding increase in the Republican candidate's distance likewise increases the Democrat turnout share in the general election by more than 5 percentage points. However, these estimates attenuate noticeably when control variables are added. While the resulting estimates are still sizable, we can no longer reject the null of no relationship.

When we turn to the Canes-Wrone estimates, we find more stable estimates, at least for Democratic candidates. In the final two columns, we see that shifts right in the midpoint, corresponding

to more moderate Democratic candidates and/or more extreme Republican candidates, are associated with an increase in the Democratic turnout share. Again, these results are somewhat noisy but, again, in the same direction.

Taken as a whole, the panel estimates *suggest* that more extreme candidates are associated with their parties voters making up a smaller part of general-election turnout. In every case, the estimated coefficients are in this direction, and in most cases, the magnitude of the coefficients is meaningful (around 1 percentage-point per standard deviation, or larger). But the estimates are not particularly precise—of the 10 estimates of interest, 5 are statistically significant at the 0.05 level. In addition, the fact that the estimates move around with the inclusion of control variables makes us hesitant to draw any strong conclusions.

We suspect that the results here are imprecise in large part because of the difficulty of modeling underlying district partisanship. The panel approach leaves us vulnerable to all the usual problems of model dependence, with results dependent on the precise set of control variables included in the regression. To address this problem, we turn now to a design-based approach. As we will show, this regression discontinuity design shows consistent and clear evidence that extremist candidates do indeed affect turnout, decreasing their party's share of turnout in the general election.

Table A.8 – Candidate Ideology and Electoral Outcomes, U.S. House, 2006–2012.

| | Outcome: Dem Vote Percentage (0-100) | | | | |
Method:	CFScore		Canes-Wrone et. al.		Ansolabehere et. al.	
Dem Distance	-6.78	-3.67				
	(0.62)	(0.49)				
Rep Distance	7.72	3.23				
	(0.47)	(0.45)				
Dem Extremism			-4.62	-3.00		
			(0.46)	(0.39)		
Rep Extremism			3.45	2.48		
			(0.55)	(0.31)		
Midpoint					5.79	3.95
					(0.53)	(0.42)
Average Donor CFScore		-5.07		-0.80		-4.98
		(0.28)		(0.40)		(0.29)
Lag Presidential Vote		3.26		3.29		3.31
		(0.32)		(0.33)		(0.33)
Open Seat		-2.59		-2.61		-2.63
		(1.13)		(1.15)		(1.16)
Rep Inc		-5.42		-5.51		-5.57
		(1.65)		(1.69)		(1.71)
Dem Inc		-1.23		-1.21		-1.21
		(1.61)		(1.64)		(1.66)
# Donors, Rep		-0.52		-0.51		-0.50
		(0.21)		(0.21)		(0.21)
# Donors, Dem		1.13		1.10		1.11
		(0.39)		(0.39)		(0.38)
Dist Between Cands					-0.42	-0.08
					(0.56)	(0.30)
N	982	978	982	978	982	978

All explanatory variables are standardized to have mean 0 and standard deviation 1. Extremism is defined as the absolute value of the candidate's CFScore. Distance is measured as the absolute distance between each candidate and the district's average donor, in CFScores. Midpoint is average between the Dem and Rep's CFScores in each race. Robust standard errors in parentheses.

Table A.9 – Candidate Ideology and Partisan Turnout, U.S. House, 2006–2012.

Method:	CFScore		Canes-Wrone et. al.		Ansolabehere et. al.	
	Outcome: Dem Turnout Percentage (0-100)					
Dem Distance	-2.81	-0.99				
	(0.45)	(0.42)				
Rep Distance	5.30	0.34				
	(0.53)	(0.61)				
Dem Extremism			-0.85	-0.86		
			(0.43)	(0.34)		
Rep Extremism			0.55	0.30		
			(0.54)	(0.46)		
Midpoint					0.86	0.74
					(0.51)	(0.46)
Average Donor CFScore		-2.93		-2.13		-2.90
		(0.42)		(0.52)		(0.42)
Lag Presidential Vote		6.27		6.28		6.28
		(0.45)		(0.45)		(0.45)
Open Seat		1.87		1.86		1.85
		(1.42)		(1.41)		(1.40)
Rep Inc		3.50		3.45		3.44
		(2.07)		(2.05)		(2.05)
Dem Inc		2.33		2.33		2.33
		(2.01)		(1.99)		(1.99)
# Donors, Rep		0.04		0.04		0.05
		(0.25)		(0.25)		(0.25)
# Donors, Dem		-0.45		-0.46		-0.46
		(0.24)		(0.24)		(0.24)
Dist Between Cands					-0.19	-0.26
					(0.45)	(0.31)
N	952	952	952	952	952	952

All explanatory variables are standardized to have mean 0 and standard deviation 1. Extremism is defined as the absolute value of the candidate's CFScore. Distance is measured as the absolute distance between each candidate and the district's average donor, in CFScores. Midpoint is average between the Dem and Rep's CFScores in each race. Robust standard errors in parentheses.

A.3 Details on Datasets

A.3.1 Cleaning the Ansolabehere et al. (2007) Election Data

We use the Ansolabehere et al. (2007) election data as the source of primary, general, and speical election outcomes in US House races. The data serves two main purposes by providing information on the two-party vote share which we use an outcome explained by candidate positioning, while also providing data on close primary elections and their outcomes for the forcing variable in the regression discontinuity design. We limited the outcome data to cases in which two candidates of opposing parties ran in the election that determined the office holder – either a special or general election. We limited the primary election data on the RD forcing variable to the top two candidates in terms of vote share within their party's primary.

A.3.2 Cleaning the DIME Data

We use the DIME data as the primary source of ideological scalings throughout the paper. Accordingly, we limit the panel data analyses to cases in which we have ideological scalings for the two candidates of opposing parties who ran in the general election. We use the static CFScore as our ideological scaling throughout. We also use the average donor CFScore as our approximate measure of the median voter in a district. In cases where the DIME data erroneously reports a changing average donor CFScore for a given state, district, and year, we remove that race from the database.