# Giving to the Extreme? Experimental Evidence on Donor Response to Candidate and District Characteristics\*

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#### **Abstract**

How does candidate ideology affect donors' contribution decisions in U.S. House elections? Studies of donor motivations have struggled with the confounding of candidate, donor, and district characteristics in observational data and the difficulty of assessing trade-offs in surveys. We investigate how these factors impact contribution decisions with multi-factorial experimental vignettes administered to 7,000 verified midterm donors. While ideological congruence influences the likelihood of contributing to a candidate, district competitiveness and opponent extremity are equally important. Moreover, the response to ideology is asymmetric: donors penalize more moderate candidates five times as heavily as more extreme candidates, with the most extreme donors as willing to support a candidate even more extreme than themselves as an ideologically-aligned candidate. We also find a greater relative preference for extremism among Republicans than Democrats, although partisan differences are smaller than differences by donor extremism. Our findings suggest that strategic considerations matter and donors incentivize candidate extremism even more than previously thought.

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The influence of political contributions and donors in elections is increasingly relevant for understanding politics in the United States. All eligible citizens have a single vote, but the means and desire to financially contribute to campaigns may magnify the voices of some above others. Concerns about the potential consequences of this asymmetry have led scholars to investigate how donors influence which candidates choose to run (Schlozman, Verba, and Brady 2012; Thomsen 2014), candidates' policy positions (Barber 2016b; Canes-Wrone and Gibson 2019; Kujala 2020), and the legislation that is ultimately passed (Barber 2016c; Bartels 2008). Central to understanding these distortionary effects is the question of not just whether, but *how*, candidate ideology shapes donors' willingness to provide financial support, as well the relative impact of candidate ideology vis-à-vis more instrumental considerations.

While the general importance of ideology in donation decisions is well-established (Barber 2016*b*; Barber, Canes-Wrone, and Thrower 2017; Bonica 2014; Kujala 2020; La Raja and Schaffner 2015), current approaches are limited in their ability to identify how and the extent to which donors respond to candidate ideology. Studies using observed donation patterns to infer determinants of donors' decisions (e.g., Ensley 2009; Gimpel, Lee, and Pearson-Merkowitz 2008) struggle to disentangle the effects of election, candidate, and opponent characteristics, especially given strategic entry and increasing use of donor lists to target giving in particular races (Hansen 2016; Koger, Masket, and Noel 2009). For example, Jaime Harrison, the Democratic candidate for Senate in South Carolina in 2020, raising a record-breaking \$130 million in his race<sup>1</sup> may indicate that Democratic donors strongly supported his policy positions — however, it may have also been due to his personal character, the competitive nature of the election, or the presence of his prominent Republican incumbent opponent, Lindsey Graham. The confounding of features poses a prohibitive hurdle to systematically estimating donors' responses to candidate ideology from campaign receipts.

<sup>1</sup>https://www.opensecrets.org/races/summary?cycle=2020&id=SCS2

Given the identification challenges that arise from observational data, others use survey methods to directly question donors about factors affecting their giving decisions (Barber 2016a; Francia et al. 2003). While broadly informative, the inherent ambiguity of survey questions and response options places limits on how much we can learn about the relative importance of such factors. Donors consistently rank ideological agreement as important to their decisions, yet it is unclear whether this means that they solely contribute to like-minded candidates (e.g. Bonica 2014), are less likely to support candidates as they grow ideologically distant (e.g. Barber, Canes-Wrone, and Thrower 2017), prefer more extreme candidates to more moderate candidates (Patty and Penn 2019), or vice versa (Hall 2015). Likewise, the fact that donors report both ideological agreement and influencing election outcomes as important to their decisions does not allow us to assess whether, for example, they would prefer to give to an electorally secure, like-minded candidate or to a candidate running in a toss-up district with whom they disagree on some issues.

To investigate how candidate ideology affects donor decisions, we administer a multifactorial vignette experiment to over 7,000 verified donors from the 2018 midterm elections. We identify the relative effects of several factors that have been hypothesized to affect donation behavior using an experimental approach that circumvents not only the potential endogeneity issues with observational studies, but also the limitations of selfreported donation motivations. Our research design combines the external validity of interviewing verified midterm donors with the internal validity provided by a randomized experiment, allowing us to estimate in a hypothetical scenario donors' responsiveness to multiple factors that are difficult to recreate in surveys and to isolate in observational studies.

Several important findings emerge. First, candidate ideology clearly matters to donors, but strategic electoral considerations — namely, the partisan lean of the district in which the candidate is running and her opponent's ideology — are equally consequential. Con-

trary to the behavioral assumptions of prominent donation-based measurement models (Bonica 2013, 2014; Hall and Snyder 2015), donors do not solely contribute to candidates who share their policy views. Indeed, the impact of running in a competitive district against an extreme opponent rivals the impact of ideological agreement on likelihood of giving.

Second, donors' willingness to give decreases *asymmetrically* as candidates' views are farther from their own. Donors are most likely to contribute to candidates who share their positions, all else equal, but they significantly prefer candidates more extreme than themselves to candidates who are more moderate (Thomsen 2017). Candidates described as somewhat more extreme than the donor were under 5 percentage points less likely to receive a contribution than candidates who share the donor's views, yet candidates described as somewhat more moderate than the donor were almost 20 percentage points less likely.

Third, this asymmetric response to candidate ideology is greatest among the most extreme donors. Although these donors are themselves more extreme than the average donor — who is already more extreme than the average voter (Bafumi and Herron 2010; Barber 2016c) — extreme donors have the largest relative preference for candidates more extreme than themselves. In fact, extreme donors are as willing to contribute to candidates who are more extreme than themselves as to candidates who share their views.

Fourth, we uncover some partisan differences consistent with accounts of asymmetric polarization (Theriault 2006; Grossmann and Hopkins 2016). Republican donors have a greater preference than Democratic donors for extreme candidates over moderates, but these cross-party differences are smaller than within-party effects of donor extremism and the common large penalty to candidate moderation. While extreme Democrats are less likely than non-extreme Republicans to support candidates described as somewhat more moderate than themselves, extreme Republican donors are the least likely to give to such candidates.

Donors' reported intent to support more extreme candidates over more moderate candidates — especially among extreme donors — suggests that contribution-induced incentives for extremism are even greater than currently thought. While existing work argues that candidates financially benefit from adopting donors' (extreme) positions (e.g. Kujala 2020), our results indicate that donors are also much more willing to contribute to candidates with positions more extreme than theirs than to candidates with more moderate positions. However, the large impact of contextual, strategic factors on donors' decisions may attenuate these ideological effects: donors are equally likely to support an extreme candidate in a less competitive district as a moderate candidate in a toss-up district. Overall, the patterns we uncover are consistent with forward-looking donors contributing to help move their legislative party's caucus in a more extreme direction (Cameron and Kastellec 2016; Kedar 2005; Krehbiel 2007).

Our results also have implications for how political scientists study political donors. A comparison of donors' self-reported motivations for giving and the experimental effects of various factors on giving decisions reveals differences that are difficult to reconcile. In particular, donors who report caring more about candidates' positions and donors who report caring more about candidates' chances of winning weigh hypothetical candidates' ideologies and electoral environments no differently in their contribution decisions. The failure of self-reported measures to predict differences in experimental responses highlights the challenges of using direct survey questions to characterize how donors behave in complex multidimensional choice environments. These findings also raise questions about contribution-based measures of ideology: if donors consider multiple factors in their decisions and respond asymmetrically to candidate ideology depending upon the direction of their divergence with a candidate and their own ideological extremity, it is difficult to know what an observed donation reveals about the ideology of either the donor or the candidate.

We substantiate our characterization of donor motivations as follows. Section 1 ex-

plores prominent approaches to identifying the motivations of political donors, which grounds and guides our experimental design. Section 2 introduces the experimental multifactorial vignette design we use to identify the effect of different considerations on donors' likelihood of contributing to several hypothetical candidates. Section 3 explores donors' responses to variation in candidate ideology relative to factors such as district competitiveness and opponent extremity and examines whether ideologically extreme and non-extreme donors respond differently. We also use survey questions to test whether direct elicitation predicts the effects we identify in our experimental vignettes. Section 4 concludes by discussing the implications of our findings for both our understanding of donors' impact on contemporary politics and how we study donors and interpret patterns of observed contributions.

# 1 Why Donors Give

A large body of work argues and empirically demonstrates that candidate ideology is relevant to individual donors' contribution decisions (Barber 2016a, b; Barber, Canes-Wrone, and Thrower 2017; Bonica 2014; Ensley 2009; Francia et al. 2003; Gimpel, Lee, and Pearson-Merkowitz 2008; Kujala 2020), but it is challenging to identify precisely *how* ideology affects donors' willingness to give to candidates.

The extant literature is divided on how donors use candidate ideology when deciding who to support. Some argue that individuals contribute such *de minimis* amounts relative to the possible marginal political gains from influencing elections that donors must support candidates who share their views for the consumption value associated with expressing their views via an additional mode of political participation (Ansolabehere, de Figueiredo, and Snyder 2003).<sup>2</sup> If donors give primarily to express support for likeminded candidates, the distribution of donations across candidates would reflect donors'

<sup>&</sup>lt;sup>2</sup>Ansolabehere, de Figueiredo, and Snyder (2003) name multiple factors that may affect donors' giving decisions, but scholars have since interpreted donation-as-consumption to mean ideology-driven.

ideologies rather than the importance of strategic considerations such as the competitiveness of the election.<sup>3</sup> This behavioral model of ideologically expressive giving is the basis of donation-based measurement models of contributor and recipient ideology (e.g. CFscores [Bonica 2013, 2014] and those developed in Hall and Snyder [2015]).

Others claim that while donors are most likely to contribute to ideologically-aligned candidates, they also give to misaligned candidates with decreasing probability as the ideological distance between them grows (Barber 2016b; Barber, Canes-Wrone, and Thrower 2017; Kujala 2020). Donors are commonly assumed to be indifferent between candidates who diverge in either direction, but they may also care about the direction of the divergence. On the one hand, donors may allocate greater resources to candidates more moderate than themselves if moderates are expected to be more electorally successful than extremists (Hall 2015; but see Utych 2020). Conversely, the greater electoral vulnerability of extremists, all else equal, may lead donors to believe that they are in greater need of financial support than moderates. Donors who give with an eye toward the subsequent lawmaking environment may also prefer to support more extreme candidates who are less likely to compromise with the opposition party (Groseclose and McCarty 2001; Lee 2016) and most likely to move the legislative party median closer to donors' extreme preferences (Barber 2016c; Cameron and Kastellec 2016; Krehbiel 2007; Patty and Penn 2019).

Understanding the importance of candidate ideology relative to other considerations is important for contextualizing the potential effects of donations on the larger political system. Given donors' extreme preferences, those who give solely on the basis of ideological alignment may contribute to elite polarization (Barber 2016b; Kujala 2020; La Raja and Schaffner 2015). However, if donors prioritize strategic factors, such as whether a candidate is running in a competitive district due to the importance of majority control for passing legislation (Cox and McCubbins 1993), then the incentives for candidate ex-

<sup>&</sup>lt;sup>3</sup>In the stark donation-as-consumption story, a donor exhausts her budget on candidates with whom she fully agrees before contributing to candidates with whom she disagrees. This interpretation has been challenged in the context of corporate giving by scholars arguing that strategic giving is calibrated to expected needs and political returns (Gordon, Hafer, and Landa 2007).

tremism may be more muted. Indeed, prior work has found that donors report caring about affecting electoral outcomes (Barber 2016a), are more likely to contribute to Senate candidates in competitive races (Barber, Canes-Wrone, and Thrower 2017), and give to close races out-of-state (Gimpel, Lee, and Pearson-Merkowitz 2008). Issues of endogeneity have made it difficult to assess how important district competitiveness is to donors' decisions compared to the ideology of candidates, and it is also unclear whether donors prefer giving to candidates running in districts that lean toward or against their party.<sup>4</sup>

Donors may also respond to characteristics of a candidate's opponent (Barber 2016a). Those facing an incumbent opponent, for example, may be less likely to receive contributions because incumbents are historically more difficult to defeat (Abramowitz, Alexander, and Gunning 2006; Thomsen 2022; but see Jacobson 2015). At the same time, donors may prefer giving to candidates challenging incumbents because defeating an incumbent of the opposing party shifts the overall chamber margin by two seats. An ideologically extreme opponent may also increase donors' willingness to contribute, similarly to how voters turn out in greater numbers for candidates running against extreme opponents (Hall and Thompson 2018). This would be consistent with a concern that the election of an extreme opponent will push the opposing party's policy even further away from the donor than the election of a more typical opponent (Hill and Huber 2017).

A final set of potential considerations for donors emerge from the large literature on "quality challengers." Donors may rely on characteristics related to prior legislative experience, fundraising, and interest group support to identify candidates who are more likely to be electorally successful (Biersack, Herrnson, and Wilcox 1993; Box-Steffensmeier 1996; Jacobson 1989; Maestas and Rugeley 2008). If donors contribute strategically to help their party win or retain seats, they may prefer to support candidates who are thought to be viable based on district enthusiasm, endorsements, strong fundraising, or favorable pre-

<sup>&</sup>lt;sup>4</sup>While greater instrumental returns to giving in toss-up districts is clear, donors have a greater chance to shape their party's legislative coalition in districts that lean toward the party whereas districts that lean toward the opposition present a chance to gain a seat.

vious electoral performance. Although such traits have been associated with winning in the past, so-called "newcomers" may also be increasingly seen as viable given contemporary patterns of candidate recruitment (Bawn et al. 2012; Porter and Steelman 2022).

One complication is that the importance of these considerations, on average, may also vary across donors. Donors differ in many ways, but a question of particular interest for understanding their potential impact on political polarization is whether those who are the most extreme behave differently than those who are more moderate. Even if all donors prefer giving to extreme candidates over moderate candidates to help pull their party caucus closer to donors' comparatively extreme preferences, extreme donors have the most to gain (and lose) from changes in majority control because of their relative extremity (Barber 2016c). It is consequently unclear whether they should support more extreme candidates to try to shift the ideological makeup of the party caucus, or more moderate candidates who are better aligned with rank-and-file voters, presumably making them more electable.

Research on polarization at the mass and elite level that shows greater polarization among Republicans than Democrats (Hacker and Pierson 2015; Mann and Ornstein 2016; Theriault 2006) also suggests that the importance of these considerations may vary by partisanship. While it is impossible to know whether differences reflect variation in partisans' priorities — for instance, recent work argues that the parties differ in the relative importance of "issues" versus "identity" considerations (Grossmann and Hopkins 2016) — or their political context — donors in 2018 were giving to candidates following the 2016 election, where Republicans took control of both the presidency and Congress — arguments about asymmetric polarization make it important to determine whether Democratic and Republican donors respond similarly to candidate and electoral characteristics.

In addition to the fact that donors of different ideologies and parties may weigh considerations differently when deciding whether to support a candidate, it is also plausible that these motivating considerations interact with one another. Estimating the average effect

of a factor while holding all else equal may obscure the conditional nature of the relationship between different considerations, especially among strategic donors. In particular, donors' willingness to give to candidates more extreme or moderate than themselves may depend on whether the candidate is running in a more or less safe district (Baron 1994) or against an extreme opponent (Woon 2018). Understanding whether the impact of certain factors depend on others is important for evaluating both the extent of donors' impact on the political environment and the types of research designs that can be supported in the presence of such selection effects.

# 2 Research Design and Experimental Vignettes

Research on individual donors' contribution decisions largely rely on either aggregate-level donation patterns (e.g. Barber 2016b; McCarty, Poole, and Rosenthal 2008; Stone and Simas 2010) or self-reported motivations from surveys (e.g. Canes-Wrone and Gibson 2019; Rhodes, Schaffner, and La Raja 2018). While such studies provide important insights, both approaches are limited in their ability to isolate relative effects of multiple considerations on donors' decisions.

Consider, for example, the meaning of the above-average level of funding in competitive districts. Does this reflect ideology-driven donors giving to like-minded candidates who happen to run in competitive races? Or are donors giving to help their party win close races, regardless of the candidates' positions? Alternatively, perhaps donors are choosing to support high-quality candidates, who are more likely to be recruited to run in pivotal races. It is even possible that donors know nothing about the candidate they are supporting given contemporary fundraising practices which encourage contributions to races about which an individual may know little. Making strong inferences about motivations using observed donation patterns is — to put it lightly — challenging due to inevitable problems of confounding, omitted variables, and endogeneity caused by the strategic be-

havior of candidates, donors, and parties.

Given the difficulties with observational data, others have chosen to directly question donors about their motivations for contributing (e.g. Barber 2016a; Barber, Canes-Wrone, and Thrower 2017; Francia et al. 2003). In a survey of 2012 Senate donors, for example, Barber (2016a) finds that ideologically extreme donors were more likely to report that a candidate's ideology, the opponent's ideology, and a chance to shape the election outcome were all important reasons for giving. While this clearly demonstrates that donors consider multiple factors in their decisions, it is impossible to determine the *relative* importance of each factor given the complexity of actual choice environments. Moreover, although we can learn whether donors consider a factor — say, candidate ideology — important, it is still unclear how changes in that factor — such as perfect versus imperfect ideological alignment — impact donation decisions.

To examine how candidate, opponent, and district characteristics affect donors' willingness to contribute, we combine the advantages of interviewing verified donors with the causal identification provided by randomization in a multi-factorial experimental vignette. We randomly selected nearly 69,000 verified donors from the 2018 midterm elections using *Targetsmart*'s national database of donors who contributed at least \$200. Each selected donor was sent a letter and half were also sent a follow-up reminder postcard inviting them to participate in an online survey in return for a \$1 charitable contribution made on their behalf. Ultimately, 7,335 verified donors finished the survey (10.6%), which included vignettes asking respondents' likelihood of contributing to a same-party hypothetical candidate whose ideology, viability, electoral context, and opponent characteristics were experimentally manipulated.

Table 1 presents the weighted and unweighted demographics of our donor sample. As expected given prior studies of donor demographics, donors tend to be older, highly educated, very wealthy, and majority male (Hill and Huber 2017). To ensure that our respondents are representative of donors who gave at least \$200 in the 2018 midterm elections, we

construct individual respondent weights to match the distribution of respondent demographics to the demographics of the sampling frame (which was itself a random sample of the population of midterm donors).<sup>5</sup> Democratic donors are overrepresented in the sampling frame itself because more Democrats contributed during the 2018 midterm election than Republicans.<sup>6</sup>

In addition to directly asking about their motivations for giving (see Appendix A), our primary analysis examines donors' likelihood of contributing to hypothetical same-party candidates with particular sets of randomized traits, opponents, and electoral environments. Our experimental vignette approach has three key advantages. First, the independent randomization of candidate and election characteristics in each vignette allows us to isolate their effects without the issues of omitted variable bias, collinearity, and endogeneity present in analyses of observed donations. Second, because we present each donor with several vignettes and include multiple factors in each, we can directly characterize the relative importance of every factor for different subgroups of donors. This also allows us to estimate interaction effects to determine if the importance of certain considerations is conditional on randomized changes in other considerations. In so doing, we minimize potential concerns about design-induced demand effects by providing donors with an entirely new randomized combination of characteristics each time they evaluate a hypothetical candidate. Third, the single-profile design of the vignettes is akin to a candidate soliciting contributions from donors — the context in which most contemporary contributions are made (Magleby, Goodliffe, and Olsen 2018) — while avoiding the selection effects of solicitation that are unavoidable in observational studies.

Of course, no research design is perfect and relying on an experimental vignette introduces a few limitations. First, we must measure self-reported intent to give rather than actual giving. While respondents may overestimate their overall likelihood of contribut-

<sup>&</sup>lt;sup>5</sup>Appendix G details our inverse propensity score and iterative raking weighting approaches, and our results are robust to the exclusion and different choices of weights (Miratrix et al. 2018).

<sup>&</sup>lt;sup>6</sup>Because donor partisanship is only known in party registration states, it is impossible to construct respondent weights based on the partisanship of the sampling frame (see Appendix G).

Table 1: Donor Self-Reported Demographics

<b>.</b>	Unweighted Sample	Weighted Sample
Partisanship	<b>75</b> 0/	CA 107
Democratic	75%	64.1%
Republican	25%	35.9%
Net Worth		
< \$250K	11.4%	11.4%
\$250-500K	11.4%	11.9%
\$500K-1M	10.4%	10.3%
\$1-2M	26.6%	26.1%
\$2 - 5M	26.1%	25.3%
> \$5M	14.1%	15.1%
Education		
< High School	0.1%	0.2%
High School	1.4%	1.6%
Some College	7.3%	8.3%
Associates	3%	3.1%
Bachelors	27.2%	28.5%
Postgraduate	61%	58.3%
Race		
White	93.8%	93.9%
Other	6.2%	6.1%
Gender		
Male	61%	60.4%
Female	39%	39.6%
Age		
< 35	3.7%	4.1%
35 - 48	9.8%	10.6%
49 - 58	15.4%	16.6%
59 - 68	27.5%	27.5%
69 - 78	32%	30.0%
79 - 99	11.1%	10.7%
N	7010	5608

Table includes all respondents who finished the survey and self-identified with a party. Weighted sample is smaller due to missing survey weights based on voter file information. Appendix G reports the raw sample demographics in terms of voter file demographics.

ing due to lack of real cost, it is not obvious that this would induce bias in estimated effects of the randomized factors. Even if donors overstate their average willingness to give, this

should instead bias the intercept rather than the marginal effects of manipulated characteristics. Moreover, there is little reason to expect social desirability biases to affect responses to the characteristics randomized within a vignette. Second, because we present respondents with multiple vignettes composed of randomized components, the vignettes are necessarily generic and abstract. On the one hand, this is desirable because it avoids problems associated with omitted variables arising from information respondents have about real candidates as well as bias that might originate if respondents felt external pressure to report supporting specific candidates. On the other hand, these hypothetical candidates lack other features that might also affect donations, such as public reputation.

All randomized vignette features are described in Table 2. We introduced the vignettes as follows, with text in <<>> indicating randomly assigned features and text in [[ ]] indicating features based on prior survey responses:

We will next present you with 5 different [[OWN PARTY]] candidates who are likely to be running for DIFFERENT House races in the next election cycle. Suppose you were approached by each candidate. How likely would you be to donate to their campaign during the <<RACE TYPE>> election?

While donors who did not identify with either of the major two political parties were randomly assigned [[OWN PARTY]] as either "Democratic" or "Republican", we focus on the 94% of donors who identified as one or the other. For each donor, all five vignettes were randomly assigned <<RACE TYPE>> of either "Primary" or "General" in order to ease cognitive load and minimize confusion. Asking about both general and primary elections allows us to determine whether donors' calculations differ when deciding to contribute to candidates in intra-party versus inter-party contests.

Each vignette had the following structure:

Candidate #1 [NAME WITHELD] is a <<RACE TYPE>> election candidate in [ANOTHER STATE]. The district <<DISTRICT LEAN>>. Your party's candidate <<VIABILITY>>. They hold policy positions that are <<OWN PARTY IDEOLOGY>>. They will likely face <<OUT PARTY IDEOLOGY>> <<OUT PARTY INCUMBENCY>>. What are the chances you would contribute to this candidate?

The outcome of interest is the donor's reported likelihood of contributing to the hypothetical candidate on a five-point labelled scale: I would almost certainly NOT contribute (0-10%), Not very likely (10-35%), Close to even (35-65%), Very likely (65-90%), and I would almost certainly contribute (90-100%). For ease of interpretation, we present results with a binary outcome of whether the donor was very likely or almost certain to contribute (1) or not (0), with parallel specifications using the linear scale reported in Appendix E.

To investigate the effect of candidate ideology on giving, we randomly assign the hypothetical same-party candidate to either share the donor's views on policy, hold views that are somewhat more extreme, hold views that are much more extreme, or hold views that are somewhat more moderate than the donor's. By explicitly defining a candidate's ideology relative to the donor's, we avoid the difficulties associated with trying to locate candidates and donors on a comparable and commonly-understood ideological scale. Recognizing that Democratic and Republican respondents react differently to candidates described as more liberal or conservative than themselves, we also vary the description of the candidate's ideology depending on the donor's partisanship as outlined in Table 2: for Republican donors, for example, we describe the candidate's policy positions as either "about the same as yours", "somewhat more conservative than yours", "much more conservative than yours", or "somewhat more liberal than yours", with the last option corresponding to being more moderate than the donor.

Figure 1 presents the basic relationship between candidate ideology and donors' willingness to give. Consistent with prior findings, the largest percentage of donors (39%) report wanting to contribute when the candidate is described as holding policy views that are "about the same" as their own. More novel, however, is the fact that the willingness to

<sup>&</sup>lt;sup>7</sup>Although it is possible that different results would be obtained by describing candidates' policy positions as more extreme or moderate than the donor's in the vignette wording, describing them as more liberal or conservative is more externally valid and precise. "Extreme" and "moderate" are directionless and may refer to either intensity *or* content of preferences, whereas "liberal" and "conservative" clearly refer to the latter and are used more commonly in media and campaign characterizations of candidates.

Table 2: Randomized Vignette Features

<u>Factor</u>	Possible Assigned Features
< <own ideology="" party="">&gt;</own>	For Democratic candidates: much more liberal than yours somewhat more liberal than yours about the same as yours somewhat more conservative than yours
	For Republican candidates: much more conservative than yours somewhat more conservative than yours about the same as yours somewhat more liberal than yours
< <district lean="">&gt;</district>	leans toward your party
	is a toss-up district leans toward the other party
< <out ideology="" party="">&gt;</out>	a typical
	an extreme
< <out incumbency="" party="">&gt;</out>	new nominee
	incumbent
< <viability>&gt;</viability>	For Democratic candidates:
	is a political newcomer believes there is a great deal of district enthusiasm for the party has raised \$250,000 from both small and large donors has secured key endorsements from local party and labor groups previously lost in a closely contested House primary
	For Republican candidates: is a political newcomer believes there is a great deal of district enthusiasm for the party has raised \$250,000 from both small and large donors has secured key endorsements from local party and industry groups previously lost in a closely contested House primary

Each respondent was randomly assigned either five primary or five general election vignettes. All features were randomly assigned with equal probability in each vignette.

give decreases only slightly (to 36%) for candidates with somewhat more extreme views than the donor's and slightly more (to 30%) for much more extreme candidates, while the largest decline is present for candidates described as somewhat more moderate than the donor (only 21%). Far fewer donors report being willing to support a candidate more moderate than themselves relative to a candidate who is more extreme, providing preliminary evidence of donors penalizing moderation more than extremism.

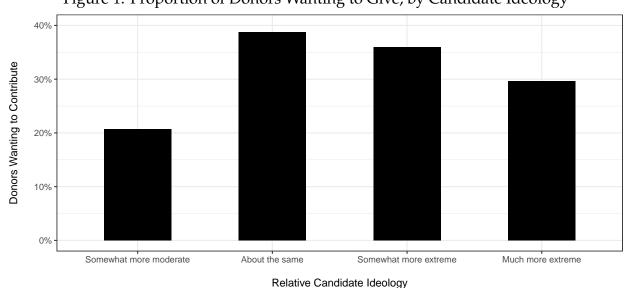


Figure 1: Proportion of Donors Wanting to Give, by Candidate Ideology

Horizontal axis is randomized candidate ideology, described relative to the donor's own positions. Vertical axis is percentage of donors who indicated being very likely or

almost certain to contribute to the candidate.

As Table 2 details, we also randomize other features of the race. This allows us to evaluate the average impact of candidate ideology on donors' decisions relative to the impact of other considerations, as well as whether donors respond differently to candidates' ideologies depending on these other race features. The partisan "lean" of the district in which the candidate is running is said to lean toward the respondent's party, lean toward the opposition party, or be a pure toss-up. We also vary the extremity and incumbency status of the candidate's opponent. Finally, the same-party candidate is described as either a political newcomer, having received key endorsements, raising a good deal of money, having barely lost a prior election, or running in a district that is enthusiastic about the candidate.

To allow for non-linear treatment effects, we estimate the relationship using indicator variables for every value of the randomized traits. For expositional ease, we focus on an additively separable specification that models the likelihood of donor i contributing to the candidate described in vignette v using:

$$Pr(Y_{iv} = 1) = \alpha + \beta_1 Candidate I deology_{iv} + \beta_2 District Lean_{iv}$$
 
$$+ \beta_3 Opponent Extreme_{iv} + \beta_4 Opponent Incumbent_{iv}$$
 
$$+ \beta_5 Candidate Viability_{iv} + \gamma Primary Race_i + \delta_v + \epsilon_i$$

where  $Y_{iv}=1$ ) denotes whether respondent i reported that they were either very likely or certain to contribute to the candidate as described in vignette v. In accordance with Table 2, CandidateIdeology includes indicators for whether the candidate is described as being somewhat more moderate, somewhat more extreme, much more extreme, or has about the same ideology (base condition) as respondent i. For DistrictLean, the district either leans toward the respondent's party, leans toward the other party, or is a toss-up (base condition). OpponentExtreme indicates whether the opponent is extreme rather than typical (base condition) and OpponentIncumbent designates whether they are an incumbent rather than a new candidate (base condition). CandidateViability is a set of indicators for whether the candidate has either received key endorsements, raised money, believes that the district is enthusiastic about the candidate, barely lost last time, or is a newcomer (base condition). We include vignette order fixed effects ( $\delta_v$ ) and cluster standard errors at the respondent level.<sup>8</sup>

The specification also includes an indicator for whether respondent i was assigned primary or general election vignettes to allow for differences in the willingness to contribute by election type  $(\gamma)$ . Although campaigns may believe that donors' motivations differ in the primary versus general elections (Hassell 2011), Appendix D reveals similar average estimated conditional effects for primary and general election vignettes. Donors

<sup>&</sup>lt;sup>8</sup>We use a linear probability model for ease of interpretation, but using a logit or probit (or even an ordered logit on the full scale) reveals substantively similar conclusions with the added interpretative costs.

<sup>&</sup>lt;sup>9</sup>Whereas we might expect donors to penalize ideologically misaligned candidates more in a primary, we find that, if anything, the opposite is true. This may reflect donors' dual lack of enthusiasm about the prospect of electing a candidate more moderate than themselves and skepticism about the chances of successfully electing a candidate more extreme than themselves.

were less likely to report a willingness to contribute to candidates running in primary elections overall, but the estimated incremental effects of the randomized considerations on donors' willingness to give did not vary across election type. Consequently, we pool analyses across primary and general election vignettes.

Although we focus on an additively separable specification, there is reason to think that effects of various factors are interdependent. Existing research suggests that donors' response to candidate ideology may have an interactive effect with district competitiveness (Baron 1994) or the presence of an extreme opponent (Woon 2018). To account for strategic interactions, we investigate differences in the effects of candidate ideology by district and opponent treatments in Appendix D. Regardless of whether the candidate was described as running in more or less competitive districts or facing an extreme opponent, donors reacted similarly to the same-party candidate's relative ideology.

#### 3 Results

To estimate the relative impacts of candidate, opponent, and district characteristics on verified donors' contribution decisions, Figure 2 plots the average effect of each consideration relative to the baseline category on donors' reported likelihood of contributing to a same-party candidate. To help compare the relative effects of candidate ideology, district competitiveness, and opponent extremism, Table 3 summarizes the predicted probabilities.

If donors are only willing to give to candidates who are ideologically aligned with themselves (baseline category), we should observe large negative coefficients for other values of candidate ideology in Figure 2. While donors are most willing to contribute to candidates who share their views, all else equal, they also express some willingness to contribute to candidates of every ideological description, including those who are *much* more extreme than themselves. Table 3 helps interpret the magnitude of these effects. The

Table 3: Predicted Likelihood of Giving

Baseline: same ideology, toss-up district, typical opponent		Prob. of Giving 34%	pp. change –	% change –
	Somewhat more moderate	16%	-18%	-54%
All else equal	Somewhat more extreme	31%	-3%	-8%
	Much more extreme	25%	-9%	-27%
All else equal	District leans toward a party	27%	-7%	-20%
All else equal	Extreme opponent	43%	+10%	+27%

Baseline represents model intercept. Percentage point change is raw difference between baseline and the likelihood of giving to candidate with stated feature. Percentage change is percentage point change divided by baseline.

probability of expressing a willingness to give to a like-minded candidate with all other factors at their baseline is 0.34 on the [0,1] scale, or a 34% probability. All else equal, the probability of giving to a somewhat more moderate candidate is only 16% - 18 percentage points lower. Donors are therefore 54% less likely to support a candidate who is somewhat more moderate than themselves relative to an ideologically-aligned candidate.

In contrast, donors' predicted probability of giving to a candidate described as somewhat more extreme than themselves is still 31% — just a 3 percentage point penalty (8% decrease). This suggests that, on average, donors penalize candidates more moderate than themselves over *five times* as heavily as candidates more extreme than themselves. Finally, although donors are less willing to contribute to a *much* more extreme candidate (25%), this difference relative to a like-minded candidate is only 9 percentage points — less than half of the penalty associated with a *somewhat* more moderate candidate.

These results also make clear that considerations beyond candidate ideology strongly influence contribution decisions. If donors were solely motivated by ideological alignment, we would observe null effects of candidate viability, district competitiveness, and opponent characteristics. Instead, donors have a strong preference for giving to candi-

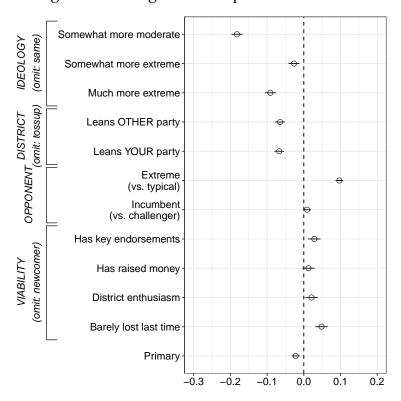


Figure 2: Average Effect of Vignette Manipulations on Likelihood of Contributing

Effect on Reported Likelihood of Contributing (0-1)

Whiskers are 95% confidence intervals. Outcome is 1 if "Very Likely" or "Almost Certain" to contribute, and 0 otherwise. Intercept is 0.34.

dates running in toss-up districts relative to districts that lean toward one party. A candidate is 7 percentage points (or 20%) less likely to receive a contribution if they are in a district that leans in either direction than in a toss-up district. In fact, the estimated difference in giving between more and less competitive districts rivals the difference between ideologically-aligned and much more extreme candidates, and is far larger than the difference between somewhat more extreme and ideologically-aligned candidates. This suggests that electoral context is as influential on donors' decisions as candidate ideology.

We also find a substantial effect of the opponent's ideology on the decision to contribute: donors are about 10 percentage points more likely to give to a same-party candidate running against an ideologically extreme opponent. The relative magnitudes associated with same-party and opposing candidate ideology imply that donors are as willing to

support a same-party candidate who is much more extreme than themselves but running against an extreme opponent as they are to a candidate who shares their ideology but is facing a typical opponent. Additionally, Figure 2 shows that opponent incumbency and common proxies for candidate viability have modest effects on donors' decisions.

#### 3.1 Variation by Self-Reported Motivation

Perhaps the average effects discussed above mask important variation among donors who are motivated to contribute for different reasons. To explore this possibility, we re-examine the effect of the vignette considerations while allowing effects to vary based on donors' self-reported motivations for giving. Specifically, we leverage donors' responses to a survey question asked prior to the experimental vignettes:

Which better characterizes your decision to contribute to a specific << OWN PARTY>> House candidate?

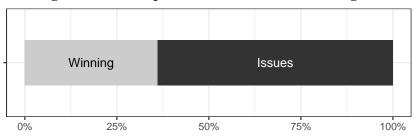
- I care more about the candidate's positions
- I care more about the candidate's chances of winning the election

Consistent with prior work on the importance of ideology in contribution decisions, Figure 3 reveals that donors report caring more about the candidate's positions than the candidate's chances of winning by nearly a two-to-one margin (62% versus 38%). To evaluate whether different self-reported motivations predict different responses to factors implies by those motivations, we separately estimate effects of the vignette manipulations on likelihood of contributing among donors who report caring more about candidates' positions versus candidates' chances of winning.

Figure 4 plots regression results by self-reported motivation and reveals that they are nearly identical to the pooled results in Figure 2. Donors who report caring most about

<sup>&</sup>lt;sup>10</sup>In Appendix D, we also investigate differences by donors' total contribution number, amount, and wealth, finding substantively similar results.

Figure 3: Self-Reported Motivation for Giving



Proportion of Respondents

Weighted proportions of responses to: Which better characterizes your decision to contribute to a specific <<OWN PARTY>> House candidate?

candidates' positions are not significantly less responsive to district characteristics than donors who purport to prioritize winning. And although we might expect donors who care more about candidates' positions to penalize incongruence more than donors who care more about winning, this is not borne out: if anything, issue-motivated donors only further penalize moderation, and the difference between issue- and winning-driven donors is both substantively small and statistically insignificant. While the  $\frac{1}{3}$  of donors who report caring most about winning are less willing to contribute in primaries than general elections overall compared to issue-based donors, the overall pattern of results we find suggests that donors react to candidate ideology and other factors similarly regardless of their self-reported motivations for giving.

These results show a lack of mapping between donors' self-reported priorities and responses to the factors relevant to such priorities. Donors who report caring about candidates' positions more than their chances of winning do not respond more strongly to candidates' ideologies nor district context in their decisions than donors who report caring about candidates' chances of winning more than positions. The inability of directly-elicited motivations to predict variation in relative effects of key ideological and strategic contribution considerations highlights the difficulty of capturing complex choice environments with straightforward survey questions. Although our experimental vignettes are likewise limited, they allow for simultaneous randomization of multiple election charac-

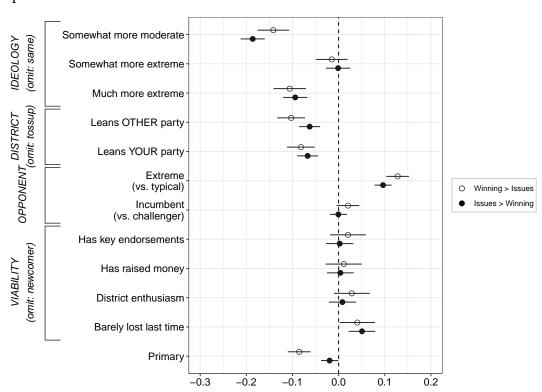


Figure 4: Average Effect of Vignette Manipulations on Likelihood of Contributing, by Self-Reported Donation Motivation

Effect on Reported Likelihood of Contributing (0–1)

Hollow circles report prioritizing winning over issues when contributing and filled circles prioritize issues over winning. Whiskers are 95% confidence intervals. Outcome is 1 if "Very Likely" or "Almost Certain" to contribute, and 0 otherwise. Intercept is 0.38 for Winning and 0.35 for Issues.

teristics that donors must weigh in the real world, which better captures the trade-offs associated with donation decisions.

### 3.2 Variation by Donor Ideological Extremity

Because donors are, on average, more extreme than voters (Bafumi and Herron 2010) and incumbent senators (Barber 2016c), investigating whether those who are relatively more and less extreme make their contribution decisions differently is important for understanding the potential incentives that they create for candidates. In particular, identifying the extent to which the most extreme donors give on the basis of candidates' ideologies,

as well as how these donors respond to candidates of different ideologies, can provide insight into how they could exacerbate elite polarization. If the most extreme donors have a preference for candidates who are even more extreme than themselves, this essentially implies a preference for *the* most extreme candidates in the entire political system.

Expectations about the giving behavior of more versus less extreme donors are unclear. On the one hand, especially extreme donors may be willing to support candidates more moderate than themselves if they are aware that their views are out of line with those of voters, and more moderate candidates may be required for the party to win elections (Hall 2015). On the other hand, extreme donors may prefer supporting candidates who are even more extreme than themselves in hopes of moving their party's platform and caucus composition closer to their own more extreme positions (Patty and Penn 2019).

We employ several measures of extreme ideology to assess whether more and less extreme donors respond differently to election features when making their decisions. First, we classify donors as extreme if they self-identified as either "Extremely Liberal" (for Democrats) or "Extremely Conservative" (for Republicans) on a standard 7-point ideology scale. Nearly 20% of donors in our sample identified as such.

To alleviate concerns that each donor may use the 7-point ideology scale differently, we also perform principal components analyses using 49 issue questions asked elsewhere in the survey to construct issue-based ideology scores. We create a summary measure using all issue questions, as well as dimension-specific measures using 11 questions related to domestic social issues, 13 questions related to domestic economic issues, and 13 questions dealing with globalism issues following Broockman and Malhotra (2020). For comparability, we classify the Democrats with the most liberal scores and the Republicans with the most conservative to match the proportion of self-reported extremists in each party.

Although ideological scales may reflect both issue extremity and consistency (Broock-

<sup>&</sup>lt;sup>11</sup>Appendix F demonstrates strong relationships between all four measures, the weakest correlation being 0.71.

 $<sup>^{12}</sup>$  To ensure comparability between measures, we classified as issue-based extremists the same proportion of partisans who self-identified as extremists ( $\sim15\%$  of Republicans and  $\sim19\%$  of Democrats).

man 2016), the fact that donors' views are more constrained than the average voter suggests that the variation we recover is related to extremity rather than consistency. In Appendix F, we detail this estimation and demonstrate the robustness of the results to using social, economic, or globalism issue-specific measures where consistency across questions is more easily satisfied, suggesting that the summary measure captures meaningful ideological variation. To demonstrate that measurement differences are not driving our results, Figure 5 plots the relationship between self-reported and issue-based scores. The measures track closely: as donors' issue scores become more extreme, a larger proportion self-identify as extreme.

Figure 6 plots the estimated effects of the aforementioned vignette features on likelihood of contributing separately for self-reported (left) and issue-based (right) extreme and non-extreme donors. Across both classifications, two differences between extreme and non-extreme donors are especially noteworthy. First, even though extreme donors are, by definition, among the most extreme individuals participating in politics, they are even less likely than non-extreme donors to support a candidate described as somewhat more moderate than themselves. Second, extreme donors are actually more likely than non-extreme donors to support candidates who are described as even more extreme than themselves. In fact, by both measures of extremism, extreme donors are at least as willing to support a candidate who is somewhat more extreme than themselves as they are to support a candidate who shares their views.

Despite already holding views that are more ideologically extreme than other donors, politicians, and voters in their party, these results suggest that extreme donors are also the least willing to penalize those more extreme than themselves while harshly penalizing those who are more moderate. To quantify the magnitude of extreme donors' relative preference for extremism over moderation, we can compare their reported behavior to that of non-extreme donors. Compared to the likelihood of contributing to a candidate who shares the donor's ideology, non-extreme donors are 17 percentage points less likely to

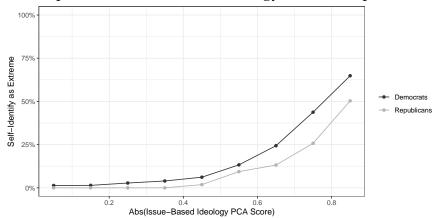


Figure 5: Relationship Between Issue-Based Ideology and Self-Reported Ideology by Party

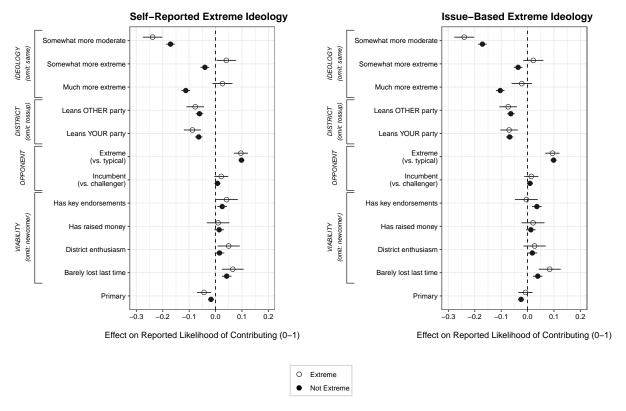
Horizontal axis is absolute scaled issue-based PCA score. Vertical axis is proportion of donors in bin who identified as "Extremely Liberal" or "Extremely Conservative". Bin intervals span 0.1 on absolute PCA scale.

support a somewhat more moderate candidate and 4 percentage points less likely to support a somewhat more extreme candidate. In contrast, extreme donors are 24 points less likely to support a somewhat more moderate candidate and at least 2 percentage points *more* willing to support a somewhat more extreme candidate. Given differences in effect sizes, these estimates suggest that extreme donors are 26 points less likely to give to a more moderate candidate relative to a more extreme candidate — double the 13 point relative penalty to more moderate candidates among less extreme donors.

### 3.3 Variation by Donor Ideological Extremity & Partisanship

Beyond differences due to donor extremity, are there partisan differences in how donors give? Recent work has highlighted asymmetric partisan polarization at both the mass and elite level (Grossmann and Hopkins 2016; Theriault 2006; Thomsen 2014), which suggests that Republican and Democratic donors may respond to candidate characteristics differently. In fact, some have argued that contemporary Republican donors and other party elites have a lower tolerance for moderation (Hacker and Pierson 2015). To investigate variation by donor partisanship, we re-estimate the relationships in Figure 6 separately for extreme and non-extreme Democratic and Republican donors. Figure 7 reports the

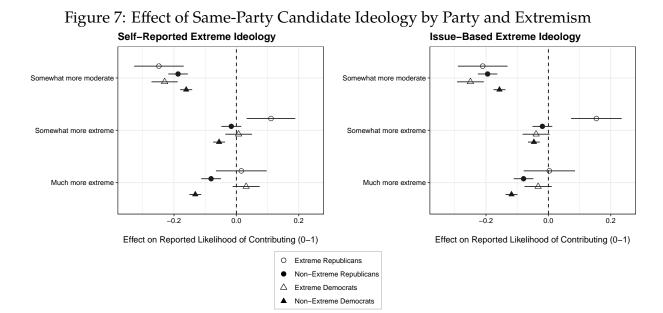
Figure 6: Average Effect of Vignette Manipulations on Likelihood of Contributing, by Ideological Extremism



*Left:* Extreme identified as extremely liberal or conservative. Baseline is 0.39 for Extreme and 0.33 for Non-Extreme. *Right:* Extreme falls in equivalent quantiles of issuebased PCA scores. Baseline is 0.40 for Extreme and 0.33 for Non-Extreme. Whiskers are 95% confidence intervals. Outcome is 1 if "Very Likely" or "Almost Certain" to contribute, and 0 otherwise.

estimated effects of candidate ideology on donors' willingness to contribute by party and extremity. To formally test for partisan differences using a nested model, Table 4 reports partisan interactions from a pooled model.

The results of Figure 7 reveal that extreme and non-extreme donors do not differ substantially by party. In general, extreme Democratic donors and extreme Republican donors are less willing to support more moderate candidates and more willing to support candidates who are somewhat more extreme or much more extreme than themselves. The cross-party similarities between extreme and non-extreme donors suggests that donors in both parties likely play a part in incentivizing extremism, and within-party differences



Models include all vignette manipulations. *Left:* Extreme identified as "Extremely Liberal" or "Extremely Conservative". *Right:* Extreme falls in equivalent quantiles of issue-based PCA scores. Whiskers are 95% confidence intervals. Outcome is 1 if "Very Likely" or "Almost Certain" to contribute, and 0 otherwise.

in ideological extremism appear more consequential than between-party differences for donor behavior.

Although there are similarities between more and less extreme donors across parties, there is also some evidence that Republican donors are less willing than Democratic donors to support candidates more moderate than themselves. Consistent with arguments suggesting that ideological moderates are less welcome in the Republican Party than the Democratic Party, the partisan interaction terms reported in Table 4 for the pooled specification (1) reveals that Republican donors are a few percentage points more more likely to report wanting to contribute to candidates who are more extreme than themselves than are Democratic donors, and they may be even less willing to support more moderate candidates as well.

To further probe the partisan asymmetry in relative preference for extremism, we separately estimate the interaction model by donor extremism. First, comparing the differences in main effects between specification (2) versus (3) and (4) versus (5) makes clear that

Table 4: Party-Interacted Effect of Candidate Ideology on Giving

	All (1)	Self-Reported Extreme (2)	Self-Reported Non-Extreme (3)	Issue-Based Extreme (4)	Issue-Based Non-Extreme (5)
Somewhat more moderate	-0.173***	-0.230***	-0.161***	-0.250***	-0.157***
	(0.010)	(0.023)	(0.010)	(0.023)	(0.010)
Somewhat more extreme	-0.045***	0.007	-0.055***	-0.039	-0.046***
	(0.010)	(0.023)	(0.010)	(0.024)	(0.010)
Much more extreme	-0.105***	0.031	-0.132***	-0.033	-0.118***
	(0.010)	(0.024)	(0.010)	(0.024)	(0.010)
Republican*	-0.024	-0.018	-0.026	0.040	-0.038*
Somewhat more moderate	(0.016)	(0.040)	(0.017)	(0.041)	(0.017)
Republican*	0.052**	0.104**	0.039*	0.193***	0.027
Somewhat more extreme	(0.016)	(0.040)	(0.017)	(0.042)	(0.017)
Republican*	0.038*	-0.015	0.051**	0.036	0.039*
Much more extreme	(0.016)	(0.042)	(0.017)	(0.042)	(0.017)
N	28,090	4,823	3,192	4,754	23,336
$\mathbb{R}^2$	0.044	0.085	0.042	0.073	0.043

<sup>\*</sup> p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001. Models include all vignette manipulations. Respondent-clustered standard errors in parentheses. Outcome is 1 if "Very Likely" or "Almost Certain" to contribute, and 0 otherwise.

extremity explains donors' response to candidate ideology better than partisanship. In general, partisan differences captured by the Republican interaction terms in each model are smaller than differences between the same coefficients in extreme versus non-extreme models. Second, there is some evidence that Republicans are willing to support more extreme candidates than Democrats even conditional on donor extremity. While not always distinguishable from zero, the interaction effects estimated in Table 4 reveal that Republicans are generally less likely to support moderates than Democrats and more likely to support somewhat or much more extreme candidates than similarly situated Democrats.

## 4 Conclusion and Implications

Understanding what affects donors' decisions to contribute to a candidate is a prerequisite for understanding the nature of donor influence in contemporary politics. A substantial body of work has established the general importance of candidate ideology to contribution decisions, but identifying its importance relative to other considerations is challeng-

ing. Because of the difficulty of disentangling characteristics of candidates, districts, and donors in observational studies and the ambiguity inherent in direct survey questions that fall short of capturing the complex choice environment, our current knowledge of *how* ideology fits into donors' decisions is limited.

We contribute to this important effort by conducting the largest-ever survey of verified midterm donors, administering a multi-factorial vignette experiment to over 7,000 donors to estimate the impact of candidate, opponent, and district characteristics on likelihood of supporting a hypothetical candidate. Independently randomizing each of these factors in every vignette allows us to identify their relative effects, as well as whether those effects vary across donor traits and election contexts.

Our findings provide compelling evidence that donors respond strongly to a sameparty candidate's ideology, the competitiveness of the district in which they are running, and the extremity of their opponent. All else equal, donors are significantly more likely to contribute if a candidate is running in a toss-up district, facing an extreme candidate, or shares their views. Donors are about as willing to give to an ideologically divergent candidate running in a competitive district against an extreme opponent as they are to an ideologically-aligned candidate running against a typical opponent in a district that leans toward one party. The fact that multiple considerations affect donors' decisions means that we cannot easily interpret patterns of observed donations as simply a reflection of donors' policy positions.

Although donors most prefer supporting like-minded candidates, donors also strictly prefer supporting more extreme candidates over more moderate candidates. Moreover, this asymmetry is largest among the most extreme donors, despite the fact that are already more extreme than others in their party. Republican donors also appear less likely to support moderate candidates, but the effect of ideological positions in each party is more consequential than the partisan differences we detect. While Republicans may have a greater relative preference for extreme over moderate candidates compared to Democrats,

the difference in relative preferences is greater between extreme and non-extreme donors across parties.

While we cannot directly test why donors vastly prefer contributing to candidates who are more extreme than themselves over candidates who are more moderate, the finding is consistent with strategic, forward-looking behavior. Akin to the results regarding voter preferences from Patty and Penn's (2019) formal model, donors may likewise have an "induced taste for extremism" (744) due to successfully elected candidates' ability to play only a small part in influencing final policies. Because most representatives can do little more than vote on agenda items, donors may give to candidates who are extreme, running in key districts, or facing extreme opponents in order to help "move the median" in their preferred (extreme) direction and prevent the out-party from doing the same (Cameron and Kastellec 2016; Kedar 2005; Krehbiel 2007).

Our analyses also have implications for the study of contributions and donor motivations. The asymmetric and heterogeneous relationships we find between donor ideology, candidate ideology, and likelihood of giving suggests complications for interpreting observed donations as reflecting donors' policy priorities and preferences. Donors' responsiveness to electoral conditions and opposing candidate characteristics, their willingness to contribute to non-aligned candidates, and their preference for more extreme candidates over more moderate candidates call into question not only the assumption that donors solely support candidates who share their ideology, but even the more limited assumption that support is a simple function of ideological distance. Insofar as donors contribute to candidates for different reasons — and insofar as donors respond to candidate ideology differently (and asymmetrically) depending upon their own ideology — using donations to "bridge" candidates and donors into a common space runs the risk of substantial bias.

Likewise, the inability of self-reported donation motivations to predict the patterns we identify in our experimental vignettes is also concerning. Although surveys are exceptionally valuable for characterizing donors' policy views, their usefulness for determining the

motivations for and implications of donors' giving may be more limited due to complexity of donors' choice environment — a complexity that our vignettes seek to capture, albeit imperfectly. While we cannot directly translate the effects from our hypothetical, experimental setting into the implied effect on actual giving, the persistence and robustness of the overall patterns of effects that we find across the multiple within-donor vignettes are reassuring.

# **5** Competing Interests

The authors declare none.

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# Appendix

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## A Survey Information and Question Wording

Before beginning the survey, participants were presented with an informed consent statement which named the research study, the individuals conducting the study, and their respective institutions. Respondents were told that the survey explores individuals' political views and behavior, and that they were randomly selected from a publicly available list. Additionally, they were informed of the estimated length of the survey, that their answers are completely confidential, that their participation is completely voluntary, and that they may skip any question. Participants were also informed that risks for participation in the study are minimal, and the benefits are the researchers increasing their knowledge of citizens' opinions. To provide answers to any questions that respondents had about the survey, we provided our contact information, a web page with answers to additional questions about the survey, as well as the phone number for the appropriate Institutional Review Board.

We asked all respondents a series of direct questions about their motivation for giving as well as a series of multifactorial vignettes. Every respondent was asked to self-report their partisanship and the answer was used to insert either "Democratic" or "Republican" in the OwnParty variable. The variable OutParty is defined by the opposite party to OwnParty.

In choosing OwnParty primary candidates to contribute to in House races, which is more important to you?

- Making sure that the OwnParty Party nominates candidates who can win elections
- Making sure that the OwnParty Party nominates candidates who represent my views on important issues

Which better characterizes your decision to contribute to a specific OwnParty House candidate in the general election?

- I care more about the candidate's positions
- I care more about the candidate's chances of winning the election

## **B** Vignette Wording

All respondents were presented with five hypothetical same-party House candidates and asked how likely they would be to contribute to each candidate using a five-point scale. For respondents who identified as partisans (94% of our sample), the candidate was assigned to match their stated partisanship, with partisanship randomly assigned for non-partisans. Respondents were assigned five primary election vignettes or five general election vignettes with equal probability. See 2 for description of vignette features.

#### **B.1** Primary Vignettes

Respondents were introduced to the task using the following lead-in:

We will next present you with 5 different OwnParty candidates who are likely to be running for DIFFERENT House races in the next election cycle.

Suppose you were approached by each candidate. How likely would you be to donate to their campaign during the PRIMARY election?

For each candidate, we will ask you to tell us your chances of contributing on a scale from 0 to 100, where 100 means you would certainly give, 0 means you would not give, and 50 means it is a coin toss.

After this explanation, each respondent was shown 5 hypothetical comparisons. Each comparison appeared on a separate page of the survey so a respondent was looking at a single race at a time. Each of the listed variables refers to a randomized choice of feature listed previously: DistrictChar1, CandViability1, CandIdeo1, OpponentChar1, OutParty, and OppenentType1.

Candidate 1 [NAME WITHELD] is a primary election candidate in [ANOTHER STATE]. The district DistrictChar1. Your party's candidate CandViability1. They hold policy positions that are CandIdeo1. The will likely face  $OpponentChar1\ OutParty\ OppenentType1$ . What are the chances you would contribute to this candidate?

- I would almost certainly NOT contribute (0-10%)
- Not very likely (10-35%)
- Close to even (35-65%)
- Very likely (65-90%)
- I would almost certainly contribute (90-100%)

#### **B.2** General Vignettes

We will next present you with 5 different OwnParty candidates who are likely to be running for DIFFERENT House races in the next election cycle.

Suppose you were approached by each candidate. How likely would you be to donate to their campaign during the GENERAL election?

For each candidate, we will ask you to tell us your chances of contributing on a scale from 0 to 100, where 100 means you would certainly give, 0 means you would not give, and 50 means it is a coin toss.

Each respondent was shown 5 candidates with randomized features:

Candidate 1 [NAME WITHELD] is a general election candidate in [ANOTHER STATE]. The district DistrictChar1. Your party's candidate CandViability1. They hold policy positions that are CandIdeo1. The will likely face  $OpponentChar1\ OutParty\ OppenentType1$ . What are the chances you would contribute to this candidate?

- I would almost certainly NOT contribute (0-10%)
- Not very likely (10-35%)
- Close to even (35-65%)
- Very likely (65-90%)
- I would almost certainly contribute (90-100%)

## C Vignette Regression Tables

Due to the number of covariates associated with our treatment conditions and our focus on comparing heterogeneous effects, we present our regression results graphically throughout the paper.

The numbers that correspond to the point estimates and standard errors from all of our coefficient plots are presented in the following tables. Each column represents a separate regression run on the relevant group, including vignette order fixed effects and standard errors clustered by respondent.

Table A1: Average Effect of Vignette Manipulations on Likelihood of Giving, by Motivation and Extremism

	Pooled	Motivation Issues Wir	ation Winning	Self Extreme	Self-Report ne Non-Extreme	Issu Extreme	Issue-Based ne Non-Extreme
(Intercept)	0.338***	0.345***	0.381***	0.388***	0.329***	0.399***	0.326***
District leans other party	(0.011) $-0.064***$ $(0.007)$	(0.019) $-0.063***$ $(0.012)$	(0.020) $-0.103***$ $(0.015)$	(0.028) $-0.077***$ $(0.017)$	$(0.012) \\ -0.061*** \\ (0.007)$	(0.028) $-0.074***$ $(0.017)$	(0.012) -0.063***
District leans your party	-0.067*** (0.000)	_0.067***					-0.068*** (0.007)
Has key endorsements	0.029***	$\begin{pmatrix} 0.012 \\ 0.002 \\ 0.015 \end{pmatrix}$	0.020 $0.020$	0.042 $0.042$ $0.022$	0.025**	(0.017) $(0.005)$	0.035** 0.035***
Has raised money	0.013 $0.009$	0.004 $0.015$	$\begin{pmatrix} 0.020 \\ 0.011 \\ 0.020 \end{pmatrix}$	0.009 $0.022$	0.014 $0.009$ )	$\begin{pmatrix} 0.022 \\ 0.021 \\ 0.022 \end{pmatrix}$	0.012 $0.009$
District enthusiasm	0.021*	0.008	0.029	0.050*	0.015	0.026	0.018
Barely lost last time	(0.009) 0.048***	(0.013) 0.051***	(0.020) $0.041*$	0.065**	(0.009) $0.042***$	0.084**	(0.003) 0.039**
Somewhat more moderate	(0.009) $-0.182***$	(0.015) $-0.186***$	(0.020) -0.142***	(0.021) $-0.238***$	(0.009) $-0.171***$	(0.021) -0.240***	(0.009) $-0.171***$
Somewhat more extreme	(0.008) $-0.027***$	(0.013) $-0.001$	(0.018) $-0.015$	(0.019) $0.041*$	(0.008) $-0.040***$	(0.019) $0.022$	(0.008) $-0.036***$
Much more extreme	(0.008) $-0.091***$	(0.013) -0.094***	(0.018) $-0.106***$	(0.019) $0.026$	(0.008) $-0.113***$	(0.019) $-0.022$	(0.008) $-0.104***$
Taccacca Consont.	(0.008)	(0.013)	(0.018)	(0.019)	(0.008)	(0.020)	(0.008)
extreme opponent	(0.005)	(0.000)	(0.013)	(0.014)	(0.006)	(0.014)	(900.0)
Incumbent opponent	0.009	-0.001	0.020	0.021	0.007	0.014	0.009
Primary	(0.003) -0.022***	-0.020*	(0.013) -0.085***	(0.014) -0.044**	(0.000) -0.017**	(0.014)	-0.025***
Vignette 2	$(0.005) \\ 0.026**$	$(0.010) \\ 0.016$	$(0.013) \\ 0.060**$	$(0.014) \\ 0.041$	$(0.006) \\ 0.021*$	$(0.014) \\ 0.024$	$(0.006) \\ 0.026**$
Vignette 3	(0.009)	(0.015)	(0.020)	(0.021)	(0.009)	(0.022)	(0.009)
2000191	(0.00)	(0.015)	(0.020)	(0.021)	(0.00)	(0.022)	(0.000)
Vignette 4	0.045	0.045**	0.086***	0.035	0.046**	0.042	0.045***
:	(0.009)	(0.015)	(0.020)	(0.021)	(0.009)	(0.022)	(0.009)
Vignette 5	(0.009)	0.0447 $(0.015)$	(0.020)	$0.064^{\pi x}$ $(0.021)$	$0.040^{23}$ $(0.009)$	0.047 $(0.022)$	(0.009)
Num.Obs.	28090	9148	5614	4823	23 192	4754	23 336
R2	0.041	0.046	0.054	0.076	0.039	0.066	0.039
* $p < 0.05$ , ** $p < 0.01$ , *** $p$	*** $p < 0.001$						

Table A2: Average Effect of Vignette Manipulations on Likelihood of Giving, by Partisanship and Extremism

	Self-ID E Republicans	Extreme Democrats	Self-ID Non-Extreme Republicans Democra	ا-Extreme Democrats	Issue Extreme Republicans Demo	treme Democrats	Issue Non-Extreme Republicans Democi	Extreme Democrats
	-		1		-		-	
(Intercept)	0.402***	0.388***	0.319***	0.336***	0.401***	0.395***	0.312***	0.335***
	(0.057)	(0.032)	(0.024)	(0.014)	(0.057)	(0.033)	(0.023)	(0.014)
District leans other party	-0.086*	-0.076***	-0.062***	***090.0—	-0.134**	-0.046*	-0.052***	-0.069***
	(0.036)	(0.019)	(0.014)	(0.008)	(0.036)	(0.019)	(0.014)	(0.008)
District leans your party	-0.083*	-0.094**	-0.072***	***090.0—	-0.116**	-0.051**	-0.065***	-0.070***
4	(0.035)	(0.019)	(0.014)	(0.008)	(0.035)	(0.019)	(0.014)	(0.008)
Has key endorsements	-0.006	$0.063^{*}$	-0.007	0.044**	-0.027	0.010	-0.001	0.057***
'n	(0.046)	(0.025)	(0.018)	(0.011)	(0.046)	(0.025)	(0.018)	(0.011)
Has raised money	-0.009	0.020	0.011	0.015	0.030	0.024	0.009	0.014
•	(0.046)	(0.025)	(0.018)	(0.011)	(0.047)	(0.025)	(0.018)	(0.011)
District enthusiasm	0.023	0.061*	0.000	0.022*	0.015	0.035	0.004	0.026*
	(0.047)	(0.024)	(0.018)	(0.011)	(0.047)	(0.024)	(0.018)	(0.011)
Barely lost last time	0.036	0.081***	0.034	0.046***	0.067	0.089***	0.028	0.044**
	(0.043)	(0.024)	(0.018)	(0.011)	(0.043)	(0.025)	(0.018)	(0.011)
Somewhat more moderate	-0.248***	-0.230***	-0.187***	-0.161***	-0.210***	-0.250***	-0.195***	-0.157***
	(0.041)	(0.021)	(0.016)	(0.010)	(0.041)	(0.022)	(0.016)	(0.010)
Somewhat more extreme	0.111**	0.007	-0.016	-0.055***	0.154***	-0.039	-0.019	-0.046**
	(0.040)	(0.022)	(0.016)	(0.010)	(0.041)	(0.022)	(0.016)	(0.010)
Much more extreme	0.016	0.031	-0.081***	-0.132***	0.003	-0.033	-0.080**	-0.118***
	(0.042)	(0.022)	(0.016)	(0.010)	(0.042)	(0.022)	(0.016)	(0.010)
Extreme opponent	0.116***	0.084***	0.078***	0.110***	0.115***	0.087***	0.082***	0.109***
	(0.029)	(0.015)	(0.011)	(0.007)	(0.029)	(0.016)	(0.011)	(0.007)
Incumbent opponent	0.007	0.024	0.005	0.008	-0.023	0.030	0.010	0.008
	(0.029)	(0.015)	(0.011)	(0.007)	(0.029)	(0.016)	(0.011)	(0.007)
Primary	-0.136**	-0.002	-0.011	-0.022**	-0.034	0.002	-0.030**	-0.022**
	(0.029)	(0.015)	(0.011)	(0.007)	(0.029)	(0.016)	(0.011)	(0.007)
Vignette 2	0.047	0.034	0.015	0.024*	0.031	0.020	0.021	0.027*
	(0.046)	(0.024)	(0.018)	(0.011)	(0.046)	(0.025)	(0.018)	(0.011)
Vignette 3	0.074	0.024	0.033	0.029**	0.073	0.041	0.038*	0.027*
	(0.045)	(0.024)	(0.018)	(0.011)	(0.046)	(0.025)	(0.018)	(0.011)
Vignette 4	0.064	0.018	0.057**	0.039***	0.058	0.033	0.060***	0.036***
)	(0.046)	(0.024)	(0.018)	(0.011)	(0.046)	(0.025)	(0.018)	(0.011)
Vignette 5	0.088	0.047	0.048**	0.035**	0.090	0.026	0.051**	0.038***
)	(0.046)	(0.024)	(0.018)	(0.011)	(0.046)	(0.025)	(0.018)	(0.011)
Num.Obs.	1031	3792	5861	17331	1047	3707	5860	17476
R2	0.122	0.066	0.043	0.039	0.107	0.057	0.046	0.039
* $p < 0.05$ , ** $p < 0.01$ , *** $p$	*** p < 0.001							

6

Table A3: Average Effect of Vignette Manipulations on Likelihood of Giving, by Extremism with Party Interaction

	All	Self-Reported Extreme	Self-Reported Non-Extreme	Issue-Based Extreme	Issue-Based Non-Extreme
(Intercept)	0.394***	0.451***	0.382***	0.421***	0.392***
Populican	(0.016)	(0.038)	(0.018)	(0.044)	(0.017)
Republican	-0.008 $(0.028)$	-0.126 $(0.067)$	0.018 $(0.030)$	-0.015 $(0.055)$	-0.031 (0.036)
District leans other party	-0.088***	-0.110***	-0.083***	-0.089***	-0.090***
The second secon	(0.010)	(0.023)	(0.011)	(0.026)	(0.010)
District leans your party	-0.087*** $(0.010)$	-0.141*** $(0.022)$	-0.077*** $(0.011)$	-0.078** (0.026)	-0.091*** $(0.010)$
Has key endorsements	0.057***	0.062*	0.055***	0.023	0.063***
	(0.013)	(0.029)	(0.014)	(0.035)	(0.013)
Has raised money	0.012	-0.020	0.019	0.019	0.011
District enthusiasm	(0.012) 0.036**	(0.029) 0.067*	$(0.014) \\ 0.027*$	$(0.035) \\ 0.047$	(0.013) 0.029*
District criticisms in	(0.012)	(0.029)	(0.014)	(0.033)	(0.013)
Barely lost last time	0.065***	0.082**	0.062***	0.108**	0.055***
	(0.012)	(0.029)	(0.014)	(0.033)	(0.013)
Somewhat more moderate	-0.211***	-0.275***	-0.196***	-0.279***	-0.197***
Somewhat more extreme	(0.011) $-0.055***$	(0.025) $0.015$	(0.012) $-0.069***$	(0.029) $-0.020$	(0.012) $-0.061***$
	(0.011)	(0.026)	(0.012)	(0.030)	(0.012)
Much more extreme	-0.133***	0.031	-0.166***	-0.019	-0.152***
E.	(0.011)	(0.026)	(0.012)	(0.031)	(0.012)
Extreme opponent	0.128*** (0.008)	0.101*** (0.018)	0.136*** (0.009)	0.093*** (0.021)	0.135*** (0.008)
Incumbent opponent	0.014	0.032	0.011	0.034	0.011
11	(0.008)	(0.018)	(0.009)	(0.021)	(0.008)
Primary	-0.012	-0.004	-0.014	0.031	-0.021*
77: 44.0	(0.008)	(0.018)	(0.009)	(0.021)	(0.008)
Vignette 2	0.031* $(0.012)$	0.040 $(0.029)$	0.029* (0.014)	0.029 $(0.034)$	0.032* (0.013)
Vignette 3	0.035**	0.024	0.036**	0.032	0.035**
Ü	(0.012)	(0.029)	(0.014)	(0.034)	(0.013)
Vignette 4	0.042***	0.025	0.047***	0.047	0.041**
Vignette 5	$(0.012) \\ 0.044***$	(0.029) 0.058*	(0.014) 0.041**	$(0.034) \\ 0.022$	(0.013) 0.048***
vignette 5	(0.013)	(0.029)	(0.014)	(0.034)	(0.013)
Republican*District leans other party	0.005	0.038	-0.001	0.026	-0.015
	(0.017)	(0.041)	(0.018)	(0.033)	(0.021)
Republican*District leans your party	-0.001	0.109**	-0.024	-0.011	0.001
Republican*Has key endorsements	(0.016) $-0.053*$	(0.040) $-0.009$	(0.018) $-0.057*$	(0.033) $-0.026$	(0.021) $-0.049$
Republican Tias key chaorsements	(0.021)	(0.053)	(0.023)	(0.043)	(0.028)
Republican*Has raised money	0.022	0.060	0.016	0.032	0.009
n the species of a	(0.021)	(0.052)	(0.023)	(0.043)	(0.028)
Republican*District enthusiasm	-0.024 $(0.021)$	-0.010 $(0.053)$	-0.022 $(0.023)$	-0.022 $(0.042)$	-0.023 $(0.028)$
Republican*Barely lost last time	-0.046*	-0.067	-0.043	-0.095*	-0.027
	(0.021)	(0.050)	(0.023)	(0.042)	(0.028)
Republican*Somewhat more moderate	-0.054**	-0.053	-0.056**	-0.039	-0.003
Republican*Somewhat more extreme	$(0.019) \\ 0.020$	$(0.045) \\ 0.101*$	$(0.021) \\ 0.001$	$(0.037) \\ 0.062$	(0.025) $-0.046$
Republican Somewhat more extreme	(0.019)	(0.046)	(0.021)	(0.038)	(0.024)
Republican*Much more extreme	0.035	-0.002	0.047*	-0.047	0.017
	(0.019)	(0.048)	(0.021)	(0.038)	(0.025)
Republican*Extreme opponent	-0.012	0.028	-0.023	0.015	-0.014
Republican*Incumbent opponent	(0.013) $0.001$	$(0.033) \\ -0.014$	(0.015) $0.004$	(0.027) $-0.016$	(0.018) $0.000$
nepublican incumbers oppositing	(0.013)	(0.033)	(0.015)	(0.027)	(0.018)
Republican*Primary	-0.024	-0.060	-0.015	-0.082**	0.005
D	(0.013)	(0.033)	(0.015)	(0.027)	(0.018)
Republican*Vignette 2	0.006 $(0.021)$	0.031 $(0.052)$	-0.004 $(0.023)$	0.004 $(0.042)$	0.015 $(0.028)$
Republican*Vignette 3	0.023	0.076	0.010	0.041	0.004
1 0	(0.021)	(0.052)	(0.023)	(0.042)	(0.028)
Republican*Vignette 4	0.046*	0.080	0.033	0.051	0.025
Popublican*Vignotto 5	(0.021) $0.035$	(0.052)	(0.023)	(0.042)	(0.028)
Republican*Vignette 5	(0.035) $(0.021)$	0.058 $(0.052)$	0.025 $(0.023)$	0.058 $(0.042)$	0.024 $(0.028)$
Num.Obs.	21 105	3803	17 262	5281	15 824
R2	0.064	0.122	0.061	0.104	0.060

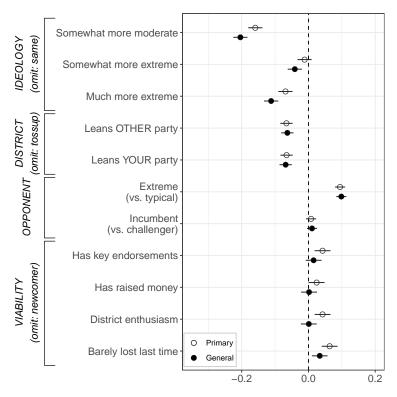
<sup>\*</sup> p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

## D Vignette Results by Other Subsets

#### D.1 Primary and General Election

For our main analyses, we pooled across primary election and general election vignettes for reasons of statistical power after finding little difference by contest type. Indeed, an F-test determined that contest-type interaction terms from an unrestricred model were jointly insignificant (F=1.1022, p=0.3494). The vignette regression results by primary and general election types are presented below.

Figure A1: Average Effect of Vignette Manipulations on Likelihood of Contributing, by Type of Contest

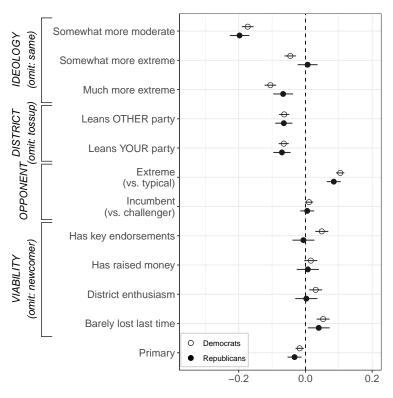


Effect on Reported Likelihood of Contributing (0-1)

*Note*: Models include vignette order fixed effects and robust standard errors clustered at the respondent level. Whiskers are 95% confidence intervals. District context, opponent ideology, and all covariates are randomized. Outcome is 1 if respondent was "Very Likely" or "Almost Certain" to contribute, and 0 otherwise.

#### D.2 Partisanship

Figure A2: Average Effect of Vignette Manipulations on Likelihood of Contributing, by Respondent Partisanship



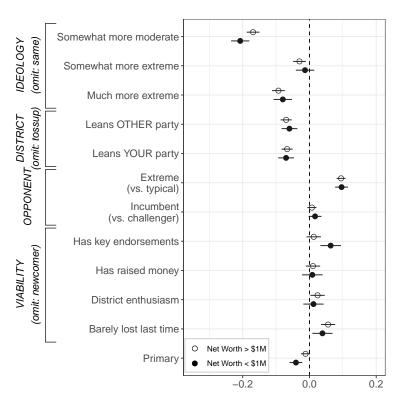
Effect on Reported Likelihood of Contributing (0–1)

*Note*: Models include vignette order fixed effects and robust standard errors clustered at the respondent level. Whiskers are 95% confidence intervals. District context, opponent ideology, and all covariates are randomized. Outcome is 1 if respondent was "Very Likely" or "Almost Certain" to contribute, and 0 otherwise.

#### D.3 Net Worth

We compare the effects of the vignette treatments on likelihood of contribution among donors with a net worth above and below \$1 million.

Figure A3: Average Effect of Vignette Manipulations on Likelihood of Contributing, by Net Worth



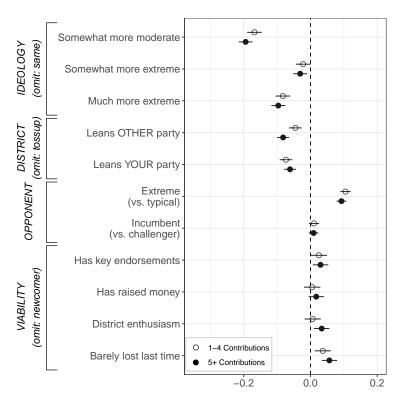
Effect on Reported Likelihood of Contributing (0–1)

*Note*: Models include vignette order fixed effects and robust standard errors clustered at the respondent level. Whiskers are 95% confidence intervals. District context, opponent ideology, and all covariates are randomized. Outcome is 1 if respondent was "Very Likely" or "Almost Certain" to contribute, and 0 otherwise.

#### **D.4** Number of Contributions

We compare the effects of the vignette treatments on likelihood of contribution among those whom the FEC reported making five or fewer contributions in the 2018 election cycle versus those who made six (the median number) or more contributions.

Figure A4: Average Effect of Vignette Manipulations on Likelihood of Contributing, by Number of Contributions



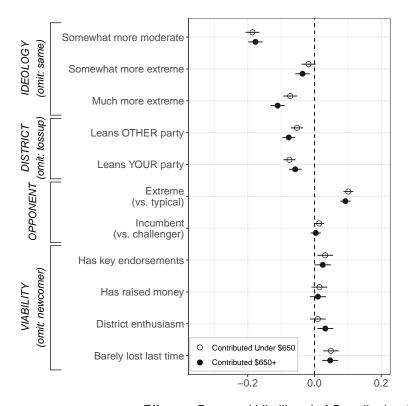
Effect on Reported Likelihood of Contributing (0–1)

*Note*: Models include vignette order fixed effects and robust standard errors clustered at the respondent level. Whiskers are 95% confidence intervals. District context, opponent ideology, and all covariates are randomized. Outcome is 1 if respondent was "Very Likely" or "Almost Certain" to contribute, and 0 otherwise.

#### **D.5** Contribution Amount

We compare the effects of the vignette treatments on likelihood of contribution among those whom the FEC reported contributing a total of under \$650 (the median amount) in the 2018 election cycle versus those who contributed \$650 or more.

Figure A5: Average Effect of Vignette Manipulations on Likelihood of Contributing, by Total Contribution Amount



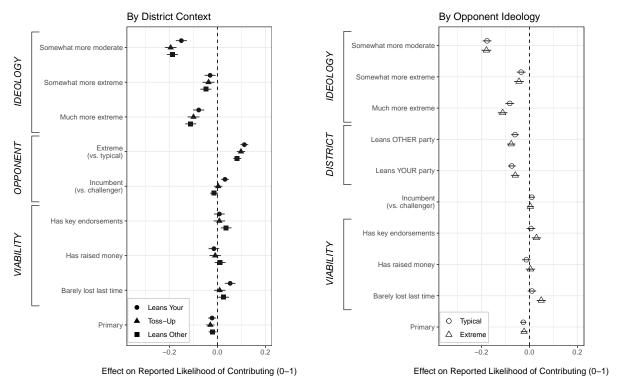
Effect on Reported Likelihood of Contributing (0–1)

*Note*: Models include vignette order fixed effects and robust standard errors clustered at the respondent level. Whiskers are 95% confidence intervals. District context, opponent ideology, and all covariates are randomized. Outcome is 1 if respondent was "Very Likely" or "Almost Certain" to contribute, and 0 otherwise.

#### **D.6** Treatment Interaction

We partition the sample by district lean treatment and opponent extremism treatment to identify whether district competitiveness or ideological extremity of the opponent changes how donors react to other candidate and electoral considerations.

Figure A6: Average Effect of Vignette Manipulations on Likelihood of Contributing, by District and Opponent Characteristics



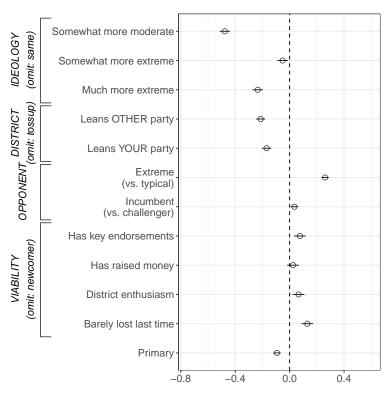
*Note:* Models include vignette order fixed effects and robust standard errors clustered at the respondent level. Whiskers are 95% confidence intervals. District context, opponent ideology, and all covariates are randomized. Outcome is 1 if respondent was "Very Likely" or "Almost Certain" to contribute, and 0 otherwise.

## E Vignette Results with 5-point Linear DV

Our experimental vignettes asked donors how likely they were to contribute to a given candidate, with response options on a 5-point labeled scale: I would almost certainly NOT contribute (0-10%), Not very likely (10-35%), Close to even (35-65%), Very likely (65-90%), and I would almost certainly contribute (90-100%).

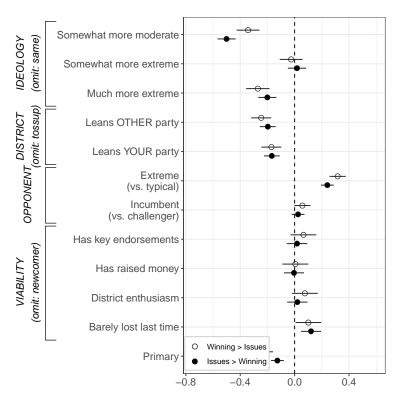
In our vignette results for the sake of interpretation, we recoded these responses into a binary contribution variable where a response of Very Likely or Almost Certain is a 1, and 0 otherwise. Below, we replicate the vignette coefficient plots with the full 5-point linear scale, and produce a regression table with the 5-point DV results presented numerically.

Figure A7: Average Effect of Vignette Manipulations on Likelihood of Contributing



Effect on Reported Likelihood of Contributing (0-4)

Figure A8: Average Effect of Vignette Manipulations on Likelihood of Contributing, by Self-Reported Donation Motivation



Effect on Reported Likelihood of Contributing (0-4)

Figure A9: Average Effect of Vignette Manipulations on Likelihood of Contributing by Extremism

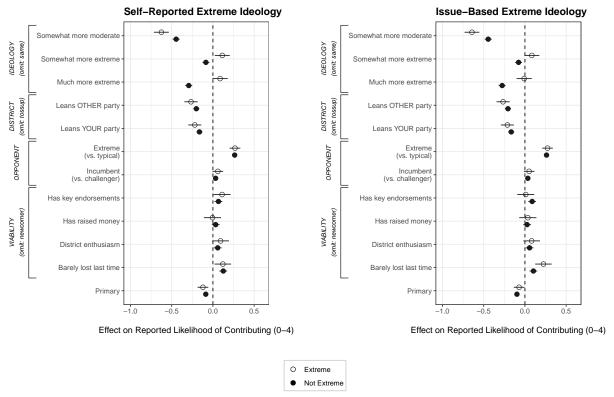


Figure A10: Average Effect of Vignette Manipulations on Likelihood of Contributing by Extremism and Party

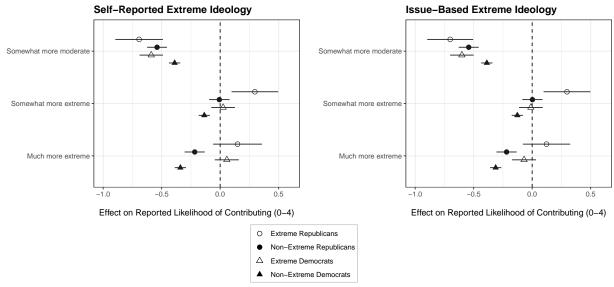


Table A4: Average Effect of Vignette Manipulations on Linear Likelihood of Giving, by Motivation and Extremism

		MOUNTAIN	ation		Jen-inepont	neer	Issue-Dased
	Pooled	Issues	Winning	Extreme	Non-Extreme	Extreme	Non-Extreme
(Intercept)	1.885***	1.898***	2.049***	2.092***	1.845***	2.093***	1.847***
`	(0.029)	(0.049)	(0.063)	(0.067)	(0.031)	(0.067)	(0.031)
District leans other party	-0.213***	-0.197***	$-0.246^{***}$	$-0.265^{***}$	$-0.201^{***}$	$-0.265^{***}$	$-0.206^{***}$
1	(0.017)	(0.030)	(0.038)	(0.041)	(0.019)	(0.041)	(0.019)
District leans your party	-0.170***	-0.168***	-0.171***	-0.219***	-0.163***	-0.213***	-0.166***
	(0.017)	(0.030)	(0.037)	(0.040)	(0.019)	(0.040)	(0.019)
Has key endorsements	0.075***	0.018	0.065	0.111*	0.067**	0.010	0.088***
	(0.022)	(0.038)	(0.048)	(0.053)	(0.024)	(0.053)	(0.024)
Has raised money	0.025	-0.005	0.005	-0.005	0.034	0.035	0.026
	(0.022)	(0.038)	(0.049)	(0.053)	(0.024)	(0.053)	(0.024)
District enthusiasm	0.066**	0.020	0.075	0.093	0.058*	0.081	0.056*
	(0.022)	(0.038)	(0.048)	(0.052)	(0.024)	(0.051)	(0.024)
Barely lost last time	0.130***	0.121**	0.101*	0.121*	0.126***	0.224***	0.103***
,	(0.022)	(0.038)	(0.048)	(0.051)	(0.024)	(0.051)	(0.024)
Somewhat more moderate	-0.477***	-0.501***	-0.342***	-0.625***	-0.446***	-0.642***	-0.445**
	(0.020)	(0.034)	(0.043)	(0.046)	(0.022)	(0.046)	(0.022)
Somewhat more extreme	-0.052**	0.018	-0.026	0.114*	-0.085***	0.084	-0.077***
	(0.020)	(0.034)	(0.043)	(0.046)	(0.022)	(0.046)	(0.022)
Much more extreme	-0.235***	-0.201***	-0.270***	0.087	-0.293***	-0.009	-0.276***
	(0.020)	(0.034)	(0.044)	(0.047)	(0.022)	(0.047)	(0.022)
Extreme opponent	0.261***	0.241***	0.316***	0.267***	0.264***	0.274***	0.262***
	(0.014)	(0.024)	(0.031)	(0.033)	(0.015)	(0.033)	(0.015)
Incumbent opponent	0.035*	0.025	0.057	0.060	0.033*	0.051	0.036*
	(0.014)	(0.024)	(0.031)	(0.033)	(0.015)	(0.033)	(0.015)
Primary	-0.093***	-0.127***	-0.220***	-0.121***	-0.087***	-0.071*	-0.097***
	(0.014)	(0.024)	(0.031)	(0.033)	(0.015)	(0.033)	(0.015)
Vignette 2	0.069**	0.062	0.111*	0.082	0.064**	0.079	0.067**
	(0.022)	(0.038)	(0.048)	(0.052)	(0.024)	(0.052)	(0.024)
Vignette 3	0.116***	0.114**	0.160***	0.090	0.119***	0.147**	0.110***
	(0.022)	(0.038)	(0.048)	(0.052)	(0.024)	(0.052)	(0.024)
Vignette 4	0.140***	0.151***	0.189***	0.076	0.150***	0.097	0.145**
	(0.022)	(0.038)	(0.048)	(0.052)	(0.024)	(0.052)	(0.024)
Vignette 5	0.129***	0.136***	0.158**	0.154**	0.124**	0.140**	0.126***
	(0.022)	(0.038)	(0.048)	(0.052)	(0.024)	(0.052)	(0.024)
Num.Obs.	28090	9148	5614	4823	23 192	4754	23 336
R2	0.047	0.053	0.055	0.091	0.044	0.091	0.043

Table A5: Average Effect of Vignette Manipulations on Linear Likelihood of Giving, by Partisanship and Extremism

	Self-ID E Republicans	Extreme Democrats	Self-ID Non-Extreme Republicans Democra	-Extreme Democrats	Issue Extreme Republicans Demo	treme Democrats	Issue Non-Extreme Republicans Democi	Extreme Democrats
(Intercept)	2.060***	2.128***	1.768***	1.898***	2.030***	2.124***	1.765***	1.900***
District leans other party	(0.146) -0.309**	(0.075) -0.247**	(0.064) $-0.235***$	(0.036) $-0.179***$	(0.141) -0.414**	(0.077) -0.197***	(0.064) -0.212***	(0.036) -0.197**
District Jeans vour narty	(0.092) -0 235**	(0.046) $-0.221***$	(0.038) $-0.152***$	(0.021) $-0.172**$	(0.089)	(0.046) $-0.188**$	(0.038) $-0.140***$	(0.021) $-0.181***$
from Lorent Lorent	(0.090)	(0.044)	(0.038)	(0.021)	(0.087)	(0.045)	(0.038)	(0.021)
Has key endorsements	0.009	0.159**	-0.020	0.121***	-0.033	0.045	-0.010	0.148***
Has raised money	(0.118) -0.054	$(0.058) \\ 0.023$	$(0.049) \\ 0.017$	$(0.027) \\ 0.043$	$(0.112) \\ 0.053$	(0.060) $0.050$	$(0.049) \\ 0.009$	$(0.027) \\ 0.037$
Dietwick authorisiscom	(0.119)	(0.059)	(0.049)	(0.027)	(0.116)	(0.060)	(0.049)	(0.027)
Distinct entitidistabili	(0.119)	(0.057)	(0.049)	(0.027)	(0.116)	(0.057)	(0.024)	(0.027)
Barely lost last time	0.016	0.187**	0.126*	0.126***	0.185	0.246***	0.091	0.111***
Somewhat more moderate	(0.109) -0.693***	(0.058) $-0.589***$	(0.049) -0.539**	(0.027) $-0.389***$	$(0.107) \\ -0.701***$	(0.058) $-0.601***$	(0.049) -0.542**	(0.027) $-0.387***$
•	(0.104)	(0.051)	(0.043)	(0.025)	(0.100)	(0.051)	(0.043)	(0.024)
Somewhat more extreme	0.297**	0.025	-0.007	-0.136**	0.298**	-0.011	0.002	-0.127***
Much more extreme	$(0.102) \\ 0.149$	$(0.052) \\ 0.057$	(0.044) -0.218**	(0.024) $-0.340***$	$(0.102) \\ 0.123$	(0.052) -0.069	$(0.044) \\ -0.219***$	(0.024) -0.312**
	(0.106)	(0.052)	(0.044)	(0.024)	(0.103)	(0.052)	(0.044)	(0.024)
Extreme opponent	0.331***	0.229***	0.215***	0.295***	0.330***	0.243***	0.220***	0.290***
,	(0.074)	(0.037)	(0.031)	(0.017)	(0.072)	(0.037)	(0.031)	(0.017)
Incumbent opponent	0.016	0.073* $(0.037)$	0.005	0.045** (0.017)	-0.054 (0.072)	0.101**	0.016	0.041* (0.017)
Primary	-0.252***	-0.072*	-0.068*	-0.107**	-0.088	-0.078*	**790.0—	-0.105***
	(0.074)	(0.037)	(0.031)	(0.017)	(0.072)	(0.037)	(0.031)	(0.017)
Vignette 2	0.068	0.076	0.029	0.082**	0.114	0.054	0.026	0.087**
Vignette 3	0.137	(0.058) $0.058$	0.128**	(0.021) $0.114***$	0.286*	(0.038) $0.094$	$(0.049) \\ 0.111*$	0.109***
	(0.116)	(0.058)	(0.049)	(0.027)	(0.113)	(0.058)	(0.049)	(0.027)
Vignette 4	0.113	0.047	0.168***	0.141***	0.164	0.054	0.155**	0.139***
	(0.116)	(0.058)	(0.049)	(0.027)	(0.114)	(0.058)	(0.049)	(0.027)
Vignette 5	0.191	0.124*	0.133**	0.118***	0.263*	0.075	0.123*	0.126***
	(0.117)	(0.058)	(0.049)	(0.027)	(0.113)	(0.058)	(0.049)	(0.027)
Num.Obs.	1031	3792	5861	17331	1047	3707	5860	17476
R2	0.134	0.077	0.052	0.045	0.146	0.072	0.051	0.044
* $p < 0.05$ , ** $p < 0.01$ , *** $p$	*** $p < 0.001$							

<sup>19</sup> 

## F Measuring Donor Ideology with Issue Questions

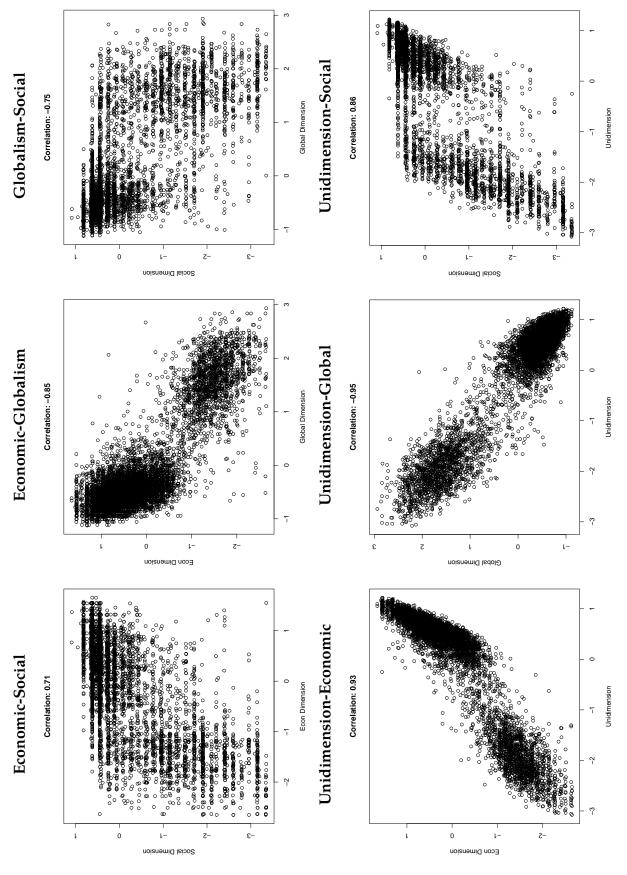
To check the robustness of our finding that donors who identified as Extremely Liberal or Extremely Conservative on a 7-point ideology scale are significantly less likely to contribute to a moderate candidate than those who did not identify as extreme (Figure 6), we employ an alternative measure of extremism.

Elsewhere in the survey, we asked respondents their positions on 49 issue questions such as the top marginal tax rate, fuel emissions standards, and more. Given the missingness that plagues survey data and traditional principal component analysis' inability to handle missing data, we performed a Bayesian principal components analysis using bpca in the pcaMethods package in R.

First, we pre-processed the data by pulling out the issue position survey items, recoding responses to consistently range from most liberal to most conservative where possible, and de-meaning and standardizing the scales of the survey items. We then calculated a single principal component: the liberal-conservative dimension dominant in studies of public opinion and political elites. With these scores, we classified issue-based extremists as those in the top quantiles of the within-party proportions of self-reported extreme donors. About 15% of Republicans reported their ideology as "extremely conservative" and about 19% of Democrats reported their ideology as "extremely liberal", so we used these precise proportions to classify issue-based extremists as those in the equivalent quantiles of the PCA scores.

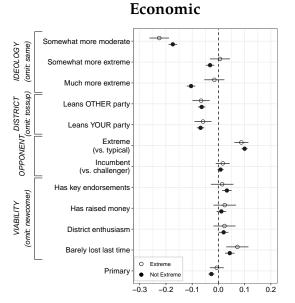
Given evidence that donors' positions may diverge more or less from the public's depending on issue area, we also re-run the PCA for separate social, economic, and globalism issue domains. Following the issue classification scheme used in Broockman and Malhotra (2020), we include 13 questions about guaranteed jobs, government spending, healthcare, minimum wage, TANF, and taxes in the economic dimension, 11 questions about abortion and gun control in the social dimension, and 13 questions about national defense, Trans-Pacific Partnership, immigration, isolationism, sanctions, and trade. As seen in Figure A16, relationships between the three domain-specific issue scales are very strong as are the relationships between each of them and the unidimensional scale. In Figure A17, we replicate our analysis on extreme and non-extreme donors on each of the domain-specific scales. Aside from some differences using the globalism issue scale, the results are similar across issue domain and strongly consistent with the original results pooling across all issue questions.

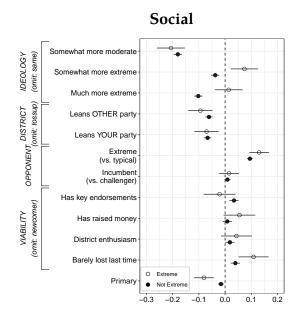
Figure A11: Relationships Between Issue-Based Ideology Measures



Note: Subfigures are scatterplots showing relationships between each dimension-specific and unidimensional PCA-based issue ideology measures with Pearson correlations above. Top plots are dimension-specific issue scores and bottom plots' x-axes are unidimensional issue scores with dimension-specific issue scores on y-axes. See beginning of Appendix F for PCA scaling details.

Figure A12: Average Effect of Vignette Manipulations on Likelihood of Contributing, by Issue Position Extremism

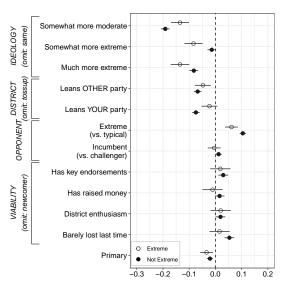




Effect on Reported Likelihood of Contributing (0-1)

Effect on Reported Likelihood of Contributing (0-1)

#### Globalism



Effect on Reported Likelihood of Contributing (0-1)

*Note:* Models include vignette fixed effects and robust standard errors clustered at the respondent level. Hollow circles are above the equivalent self-reported quantile of extreme positions based on a Bayesian principal components analysis of survey questions associated with the issue dimension using bpca from the pcaMethods package in R. Filled circles are respondents below the specified quantile of issue extremism. Whiskers are 95% confidence intervals. Covariates are randomized district, same party candidate, and opposing party candidate traits. Outcome is 1 if respondent was "Very Likely" or "Almost Certain" to contribute, and 0 otherwise.

## G Details on Donor/Respondent Weighting

To help ensure that our conclusions about the opinions of donors are representative we create post-stratification weights to correct for non-response. We contacted 69,062 donors who were verified as donating to a Congressional campaign in 2018 using the services of TargetSmart. The list of contacted donors was a random sample of records with valid mailing addresses from the file of verified donors (FECbase) of individuals.

Because the sampling frame is a random sample of the universe of donors (who are able to be matched to a voter file), we are able to compare the demographics of the donors who complete our survey to those who do not. For example, our letters and reminder postcards were able to obtain 7,335 completes (10.6%) but there was a partisan difference in who responded. Among registered Democrats, 13.6% of the contacted donors responded, but only 6.9% of registered Republicans completed the survey. Consistent with other work (e.g., Clinton 2021), differential partisan non-response affected our survey.

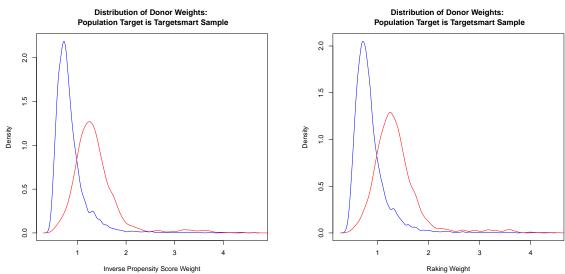
Because our sampling frame is a random sample of the target population, we use the parameters of the sampling frame to create weighting targets to create individual level weights so that the weighted sample of respondents matches the overall population of donors. This is important for ensuring that the relationships we find are not being driven by having a disproportionate number of Democrats in the sample, for example. The fact that we have voter file information on respondents and non-respondents allows us to use this information to construct the weights.

Table A6 reports the demographics of the Sampling Frame – i.e., the random sample of 69,000 verified donors with known addresses – and the sample of respondents to reveal the factors that were related to non-response. As noted, the largest difference is among partisanship – using either official party registration status or a measure of imputed partisanship based on demographics and precinct voting behavior – although other minor differences are also evident.

To create respondent weights that ensure that our analyses are representative of the larger population we create post-stratification weights using both iterative raking and the inverse of the propensity score. Iterative raking adjusts the weights so that the marginal distribution of each variable in the sample matches the marginal distribution in the population by adjusting the weights one-at-a-time and iterating until the weights are relatively stable. In other words, a sample weight is created for age – where "missing" is included as a weighting category - so that the weighted sample matches the age distribution in the sampling frame. A new weight is then created by making the age-weighted sample match the distribution of percentage registered Democrats in the sampling frame, that new weight is then used when making the age-Democrat-reweighted sample match the distribution of registered Republicans and so on. This process iterates over every marginal distribution until the weights are "stable." Figure A18 plots the resulting distribution for self-reported Republican and Democrat donors.

Reassuringly, the two weights correlate at 0.99 – indicating that the precise method of adjustment does not matter. Substantively, the effect of either weight is to increase the influence of Republican donors and decrease the influence of Democratic donors given the differential response rates noted at the outset.

Figure A13: Distribution of Respondent Weights by Self-Identified Partisanship Figure 1: Inverse Propensity Score Weight Figure 2: Raking Weight



Data is weighted to the sampling frame by party registration, wealth, gender, age, voter file partisanship, number of contributions, race, and turnout in 2016 primary general, 2016 general, and 2018 general.

Table A6: Sampling Frame and Respondent Demographics

Category	Sampling Frame	Donor Respondents
Sample Size	69,062	7,335
Age (Quartiles)		
< 53	18.8%	15.6%
53-63	20.1%	18.9%
64-73	19.3%	23.8%
73-100	21.5%	22.9%
Missing	20.3%	18.8%
Registered Democrat		
Yes	28.8%	36.8%
No	71.2%	63.2%
Registered Republican		
Yes	18.8%	12.4%
No	81.1%	87.6%
Imputed Partisanship (Quartiles)		
< 5	26.1%	18.1%
5-66	23.8%	17.9%
67-97	20.5%	23.1%
98+	29.5%	40.9%
Gender		
Male	54.2%	56.1%
Female	37.1%	36.0%
Missing	8.7%	7.9%
Race: Black?	0.7 70	1.5 / 0
Yes	4.7%	3.9%
No	95.3%	96.1%
Wealth	70.070	70.170
< \$100k	14.9%	13.9%
\$100k - \$199k	12.1%	12.3%
\$200k - \$499k	10.9%	12.3%
\$500k - \$999k	11.3%	12.1%
\$1 mil – \$2.5 mil	13.8%	15.4%
\$2.5 mil +	19.2%	18.2%
Missing	17.8%	15.8%
Voted in 2016 general?	17.070	13.070
Yes	94.2%	97.2%
No	5.8%	2.8%
	3.6 /6	2.0 /0
Voted in 2016 primary? Yes	26.4%	30.3%
No	73.6%	69.7%
Voted in 2018 general?	01.00/	07.00/
Yes	91.9%	97.0%
No Name to a Constitution of Constitutions	8.1%	3.0%
Number of Contributions	4.20/	2 (0/
0	4.3%	2.6%
1	16.6%	16.0%
2	11.2%	11.5%
3	8.2%	8.0%
4	6.5%	6.8%
5-9	19.4%	20.6%
10-19	15.4%	16.6%
20-49	13.1%	12.7%
50+	5.2% -25	5.2%