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Are Small Donors Polarizing? A Longitudinal Study of the Senate

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ABSTRACT

Current campaign finance law in the United States does little to redress biases in the donor population. One solution proposed by reformers is to expand the donor base to include a broader and more diverse subset of the population. Yet studies on the effects of "small" money in elections suggest that these reforms may polarize politicians. We conduct a longitudinal study of the effects of campaign finance on ideological sorting in the U.S. Senate in order to understand whether money from small donors causes ideological extremism or whether senators adopt polarizing positions as a strategy for raising money from small donors. The Senate provides a unique window into this question, because senators serve six-year terms and thus enjoy periods of time when they are not immediately accountable to their supporters. We find that a senator's receipts from small donors in previous elections have no effect on their future behavior. Rather, causality appears to flow from the politicians to the donors. Senators' voting behavior leading up to reelection has a significant effect on the money raised from small donors during the reelection at the end of the term. These results suggest that further polarization is not an inevitable consequence of campaign finance reforms that aim to improve equality in representation by expanding access to campaign contributions.

Keywords: campaign finance reform, small donors, political polarization, ideological extremism, political representation, legislative behavior

In the United States, a small subset of the electorate shoulders the burden of financing political campaigns. During the 2017–2018 federal election cycle, less than one percent of the adult population gave $200 or more to political candidates.[1] In its current form, the campaign finance system in the U.S. does little to curb the biases in the donor population, a group that is disproportionately wealthy, white, male, and over the age of 50 (Francia et al. 2003). Although Congress enacted major campaign finance reforms in the 1970s and 2000s that limited the political spending of the wealthy, the Supreme Court has invalidated some of these limits on the grounds that they represent impermissible infringements of political speech. In *Buckley v. Valeo* (1976), the Court first rejected political equality as a rationale for limiting independent expenditures by individuals and campaign expenditures by federal candidates. Under Chief Justice Roberts, the Court struck down a ban against independent expenditures by corporations and labor unions in *Citizens United v. FEC* (2010),[2] and it overturned aggregate contribution limits on political spending by individuals

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[1] Center for Responsive Politics (2018): <https://www.opensecrets.org/overview/donordemographics.php>.

[2] The *Citizens United* decision, which was applied in the U.S. Court of Appeals for the District of Columbia decision in *SpeechNOW.org v. FEC* (2010), resulted in the creation of the "SuperPAC."

during a two-year election cycle in *McCutcheon v. FEC* (2014).

Although it is a common misconception that contributions lead to "vote buying" (see Ansolabehere et al. 2003), campaign donors enjoy unique representational benefits, such as special access to candidates (Kalla and Brookman 2016), and they disproportionately influence the candidate selection process during the "invisible primary" (see Bonica 2017). Thus, biases in the donor class undermine equality in representation.[3] The current challenge for reformers is resolving the inequities in the donor population without unconstitutionally restricting the political speech of wealthy donors.

One solution proposed by election law scholar Richard Hasen (2016) is to expand the donor base to include a broader subset of the electorate through campaign financing "vouchers." Unlike public financing programs that award blocks of funds to candidates who agree to certain expenditure limits, this system would provide publicly funded campaign finance vouchers to citizens to allocate freely to candidates of their choosing. It thus represents a "marketplace" alternative to conventional public financing programs. In principle, this system encourages participation by a broader subset of the citizenry because it reduces the "costs" of donating to candidates, which would presumably lead to a more diverse pool of candidates and more responsive elected officials. And importantly, it would not impose further restrictions on the spending of the wealthy or on expenditures by candidates.

Another reform championed by Democrats in Congress provides incentives for federal candidates to seek small-dollar contributions. In their first order of business after retaking control of the House of Representatives in 2019, House Democrats introduced H.R. 1, which includes a provision that provides federal candidates $6 in public matching funds for every $1 raised from donations of under $200. Co-sponsors House Speaker Nancy Pelosi (D-CA) and Rep. John Sarbanes (D-MD) argue this reform will "increase and multiply the power of small donors" and help to "end of the dominance of money in politics" (2018; see also Malbin et al. 2012).

Yet the extant scholarship suggests that these reforms may produce the unintended consequence of polarizing elected officials. For example, several studies have analyzed the effects of "small donors" (those who have given less than $200 cumulatively during an election cycle) on political candidates. In studies of U.S. House elections, Johnson (2010) finds a positive correlation between legislators' dependence upon small-donor support and their ideological extremity in floor votes, while Culberson et al. (forthcoming) find that ideologically extreme incumbents tend to be more successful at raising money from small donors. Bonica and Shen (2014) similarly cite evidence that small donors tend to prefer ideologically extreme candidates, which implies that the wealthy have a moderating influence on politicians.

If broadening the donor base leads to polarized politicians, then there is reason to doubt that a campaign finance voucher system like the one proposed by Hasen would improve responsiveness in government. However, one alternative way to interpret this body of evidence is that politicians position themselves strategically in order to activate ideological donors. In their study of campaign contributors, La Raja and Wiltse (2012, 520) assert that politicians "selectively mobilize ideological donors … depending on the electoral environment" and note that polarization of the donor population "may reflect the simple fact that particular candidates activate the most ideological elements in the donor population." Similarly, Culberson et al. (forthcoming) suspect that "once new members win office, they change their behavior to be more ideologically driven to appeal to ideologically motivated donors." In this view, small donors do not necessarily *cause* legislators to polarize; rather, politicians posture to ideologues as a strategy (among many potential strategies) for securing small-dollar campaign contributions. But the extant scholarship does not offer a definitive answer on whether the correlation between small money and ideological extremism is driven by strategic decision making on the part of politicians, or whether small donors actually polarize politicians. As Culberson et al. (forthcoming) note, "the study of longitudinal effects is a next logical step."

In this article, we observe the behavior of legislators over time in order to understand the effects of small money on elite polarization. Whereas previous studies of small donors have focused on the U.S. House, here we study the U.S. Senate, where members are elected to six-year terms and enjoy prolonged periods of time

[3]As noted, the Court has rejected an equality rationale limiting the political speech of the wealthy, and it appears increasingly hostile to an anticorruption rationale. See Hasen (2016) for a detailed discussion.

during which reelection is distant. Because senators face reelection only once every three congresses (and because voters' attention spans tend to be limited) studying the Senate provides a unique window to observe the effects of small donor support on legislative behavior before and after reelection.

We analyze a longitudinal dataset on campaign financing in federal elections and roll-call vote scaling in Congress and find that the relationship between small-donor receipts and senator extremism reflects strategic decision making by legislators. Before Election Day, the vote positioning of a senator has a positive and significant effect on the amount of small money raised during the final two-year campaign finance reporting cycle of the term. Thus, senators who are more extreme in their roll-call votes subsequently raise more money from small donors, all else equal. But after securing reelection, there is no statistically significant correlation between the small dollars raised and a senator's voting behavior.

Our results challenge the claim that expanding the donor population leads to ideological polarization. Although senators who posture to the extremes in advance of reelection tend to raise more money from small donors, this behavior reflects strategic decision making by legislators operating within the current campaign finance environment. However, once this environment changes (i.e., through campaign finance reform), legislators will respond by adopting new strategies for raising money. Although it is difficult to predict precisely how a campaign finance voucher system would affect democracy, we find no reason to doubt that expanding the donor base to be more inclusive would improve responsiveness in government.

CAMPAIGN DONORS AND LEGISLATIVE BEHAVIOR

Since the 1970s, scholarship has probed the links between campaign money and legislative behavior. Although there is little evidence that donors "buy votes" or exhibit a corrupting influence on politicians, many questions remain about the influence of campaign donors on legislators once they are elected to office. Here we consider three possible explanations for the correlation between small-donor support and legislator extremism that scholars have observed. The primary distinction between these explanatory models centers on a fundamental question about the nature of the donor-candidate relationship: do politicians respond retroactively to the preferences of donors who have supported them in the past? Or, do politicians behave strategically in order to mobilize future support from donors?

The ''dynamic responsiveness'' hypothesis

The simplest explanation for the correlation between small-donor support and candidate extremism is that politicians respond to the preferences of their support bases. In order to win elections and stay in power, legislators must please those who have been most valuable to their electoral success. This model likens the donor-candidate relationship to a principal-agent relationship, in which donors delegate their policy preferences to elected officials. It also assumes that politicians have a "retrospective" lens—that is, their present behavior is informed by past events. As Ladewig (2010) demonstrates in a longitudinal study of the U.S. House, members of Congress who win reelection by larger vote margins tend to be more ideologically extreme, and legislators have a "retrospective temporal lens to their decision-making calculus."

As a subset of the donor population, small donors tend to hold more extreme preferences than "large donors" (Bonica and Shen 2014). According to the "dynamic responsiveness" model, legislators who rely on support from this pool will respond by taking more extreme positions on the legislative floor. Yet legislators are also dynamic in the sense that they adapt to new conditions—for example, when their donor base changes. In the context of the Senate, the model implies that the support received from small donors during a given election cycle will constrain the voting behavior of a senator during subsequent legislative sessions, but a senator's behavior may change if the donor pool changes after the next election. So, if a Senate candidate enjoys robust support from small donors during a given election year (say, 2018), then we would expect to observe extremism in voting during the 116th–118th senates (assuming they have been elected to a full term), but not necessarily after their reelection in 2024 and the senates that follow.

The ''candidate selection'' hypothesis

An alternative explanation for the link between small donors and polarization is that donors choose politicians who are like-minded. As past research suggests, campaign donors disproportionately influence the pool of qualified candidates during the "invisible primary," when nonviable candidates drop out (Bonica 2017). In this vein, those candidates who make it to office with the support of small donors (either before or after the primary) will tend to be biased towards the extremes.

In contrast to the "dynamic responsiveness" model, the "candidate selection" model does not necessarily view politicians as fundamentally retrospective in their behavior. Rather it implies that legislators are relatively stable in their ideological positioning throughout their careers and that their observable behavior reflects sincere (as opposed to strategic) preferences. But like the "dynamic responsiveness" model, the "candidate selection" model assumes the direction of causality flows from donors to politicians, the critical difference being that the mechanism of the effect is not recurring elections but the candidate selection process when nonincumbents compete for the party's nomination.

The "candidate selection" model implies that the effect of small donor polarization will be most pronounced during a senator's first election to the Senate and will be observable throughout their careers. Subsequent electoral cycles and new support bases may or may not affect candidates' behavior, but on average candidates who were propelled to office by extremist donors will trend toward the extremes in their voting.

The ''strategic posturing'' hypothesis

A third explanation for the relationship between small-donor support and candidate extremism is that politicians strategically position themselves to appeal to donors for support. Politicians hoping to raise money from small donors do so by taking extreme positions that resonate with ideologically motivated donors. This basic premise is advanced by La Raja and Wiltse (2012), who conclude that "the direction of causation appears more likely to run from politicians to donors." A number of studies on ideological polarization in Congress support the claim that legislators strategically position themselves to maximize their future electoral success (i.e., Jacobson 1989; Koger and Lebo 2017; Lee 2009, 2016; Mayhew 1974). Frances Lee's (2009, 2016) work reveals that much of the polarization between parties in the Senate during floor voting is driven by the strategic manipulation of the legislative agenda by the majority party in order to posture to voters. In the context of heightened electoral competition since the 1980s, the parties have increasingly used roll-call voting to cast their opponents in an unfavorable light. Similarly, the work of Koger and Lebo (2017) suggests that voters' preference for ideologically principled legislators over partisans informs the decision making of legislators.

A critical distinction with the "strategic posturing" model is that it reverses the direction of causality: rather than donors driving the behavior of politicians, it is politicians who attempt to influence the behavior of donors. Because politicians hope to win reelection, their behavior often reflects strategic calculus, rather than sincere preferences. For example, Lindstädt and Vander Wielen (2014) find that House members moderate their party voting depending on proximity to election day. Because electoral conditions vary over time—particularly for senators who have prolonged election cycles—legislators must on occasion strategically deviate from their sincere preferences in order to appeal to voters as reelection approaches.

For senators who hope to make small money a part of their campaign finance strategy, posturing to the extremes represents a potentially effective tactic for mobilizing support from ideologically motivated donors. As Malbin (2013) notes, many of the politicians who have been successful at raising money from small donors in recent years have done so after making "strident comments" that "gained them national recognition" and an opportunity to "reach out to national fundraising bases" (p.396).

In the Senate, the logical implications of the "strategic posturing" model are that small donors in the future will reward senators who have adopted extreme positions in the past. However, after securing reelection, because senators are not immediately accountable to their past supporters, they may become more moderate.

METHODOLOGY

In order to assess the validity of these hypotheses, it is first necessary to operationalize senators' "ideological extremism," our dependent variable. In recent years, the Database on Ideology and Money in Elections (Bonica 2014a), which measures the ideological sorting of candidates by analyzing the donation patterns of their campaign financiers, has provided scholars of electoral politics valuable insight into candidate ideology. However, because this data does not directly measure how candidates behave in office, it does not provide a "dynamic" measure of a politician's behavior between elections. Another common approach to measuring legislative positioning draws upon the DW-NOMINATE data, developed by Poole and Rosenthal (1997). However, a DW-NOMINATE score reflects a senator's stable positioning throughout their entire career and does not capture the dynamic changes in ideological sorting from one congress to the next. Instead, we employed the first-dimension, "one-Congress-at-a-time" DW-NOMINATE scores compiled by Nokken and Poole (2004), which assigns to all senators for each two-year senate a conservatism score ranging from −1 to 1. Because a senator's score can vary considerably from one senate to the next, it provides insight into the dynamic positioning of senators over time as electoral and institutional conditions change. In order to compare the extremism of senators on both sides of the ideological spectrum, we folded the scores to reflect the absolute distance to the median value of 0. Yet, it is important to note that this measure, too, has drawbacks. Because it sorts legislators based on publicly recorded roll-call votes, it consequently captures only the end point in the legislative process. Moreover, the Nokken-Poole dataset is currently updated through the 113th Congress and thus limits the end range of our analysis to 2013–2014.

Our dataset includes one folded Nokken-Poole score for each senator for each two-year senate in which they served, between the 102nd and 113th senates. The observed values range from a score of 0, which was Maine Republican Senator William Cohen's score during the 104th senate (1995–1997) and signifies the least extreme possible value, to a score of .985, which was New Hampshire Republican Bob Smith's score during the 106th senate (1999–2001) and signifies extreme polarization. For all senators included in all senates in our sample, the mean score was 0.37.

To measure a legislator's support from small donors, our primary variable of interest, we drew upon data published by the Federal Election Commission (FEC) on campaign financing of Senate elections. Since the 1980 election cycle, all federal candidates are required by law to report information about their financiers to the FEC. Candidates must disclose detailed information about donations from individuals who gave over \$200 cumulatively to political committees (so-called "itemized contributions"). For money received from donors who gave less than \$200, candidates must report the total funds received from all donors in this group ("unitemized contributions"). One problem with this data is that many candidates voluntarily report receipts from small donors as itemized donations, presumably to avoid running afoul of federal campaign finance law. This results in the systematic underreporting of unitemized receipts. In order to gain a more accurate measure of a Senate candidate's receipts from these "small donors," we aggregated data from the "Contributions by Individuals" master file, which is a dataset compiled by the FEC for each two-year election cycle that includes itemized records of all contributions made by "large donors" who gave more than \$200 during an election cycle to candidates and political action committees. Thus, aggregating the individual contributions made to a Senate candidate published in the master data provides an accurate method of estimating a senator's receipts from large donors and thus provides a window into a candidate's actual receipts from small donors.

In calculating a candidate's small-donor receipts for senators who underreported their unitemized receipts, we simply take the difference between the total receipts from all individuals (as reported by a candidate) and the calculated large-donor receipts (aggregated from the FEC master file). As a measure for comparing small-donor receipts between senators, we follow the approach employed by Culberson et al. (forthcoming), taking the natural log of small-donor money received.

Our dataset includes campaign finance records along with a number of institutional and demographic control variables. Because the FEC changed its record keeping method before the 1990 election cycle, our dataset includes all senators who received funding during or after the 1989–1990 election cycle and ends with the 2014 election that occurred during the 113th Senate, which represents the most up-to-date data available in the Nokken-Poole dataset. Although 261 senators served during this time period, only 202 reported receiving money from small donors. Some of the 59 senators who do not report receipts are those senators who retired shortly after the 101st Senate and those who were appointed to office and never raised

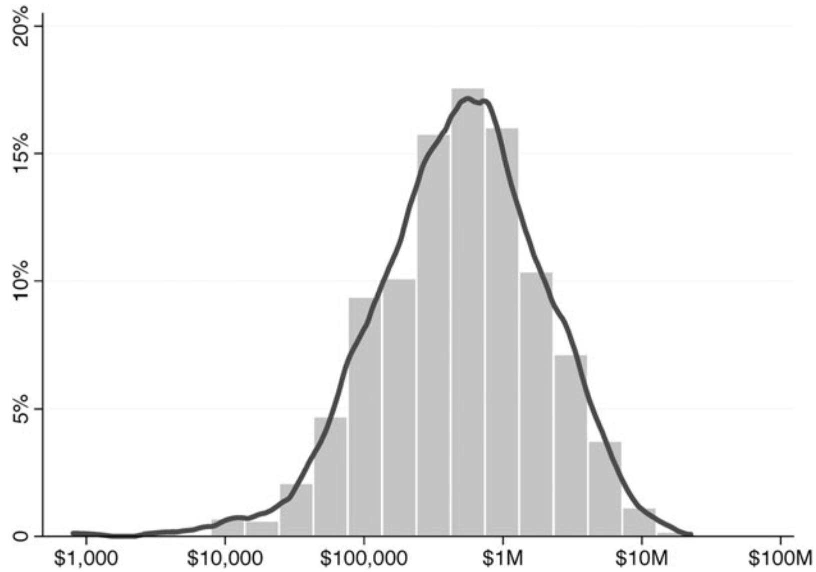

FIG. 1. Distribution of small-donor receipts (1990–2014 U.S. Senate elections).

campaign contributions. Nevertheless, our sample is large enough to permit statistical analyses.

Although the Senate provides a unique opportunity to study the relationship between small money and legislative positioning, it also presents challenges. In contrast to members of the House, who are elected once per two-year congress, members of the Senate typically serve three two-year senates in each election cycle. Although senators are permitted to raise money throughout their six-year terms, senators raise the bulk of their money during the final two years of their term, when they face reelection. Take as an example the contributions reported by Mark Warner (D-VA) during his first term (2009–2015). Although he raised approximately $17 million dollars during this time period, only $4 million of this money was raised before 2013. He raised the vast majority (approximately 76%) in the final two years, leading up to his 2014 reelection. The difference is even more pronounced when we consider small-donor receipts. Out of $1.4 million in unitemized receipts reported between 2009 and 2015, Senator Warner raised less than $53,000 (about 4%) before 2013. For this reason, we limit our analysis to only the small money received during the final two-year reporting period of a senator's term.

Figure 1 shows the distribution of small donor receipts between 1990 and 2014, and indicates that money senators received from small donors follows a log-normal distribution. For senators included in our sample, the average amount received from small donors was about $1.17 million, while the largest amount raised was by Elizabeth Warren (D-MA), who collected over $22 million dollars from small donors during her 2012 campaign. The lowest amount we observed was $804, raised by Daniel Inouye during his 2010 campaign in which he took over 74% of the vote.

Another challenge with conducting a longitudinal analysis of senators' roll-call voting is the nature of the data: one folded Poole-Nokken score captures the unique behavior of an individual senator serving, as well as the idiosyncratic effects of a two-year senate. As Figure 2 illustrates, a Poole-Nokken score simultaneously reflects ideological polarization at the individual level (i.e., a senator) and at an institutional level (i.e., a senate). As is well documented (i.e., Bonica 2014b; Fleisher and Bond 2004; Keena and Knight-Finley 2018; Lee 2009, 2016; Theriault 2008), senators have generally become more polarized in their roll-call voting since the late 1970s; yet there is also wide variation in roll-call voting between individual senators. For an accurate estimate of the effects of small money on extremism, we must account for both the temporal, idiosyncratic effects of individual senates as well as the individual effects associated with individual senators on a Nokken-Poole score. To overcome these challenges, we estimate the effect of

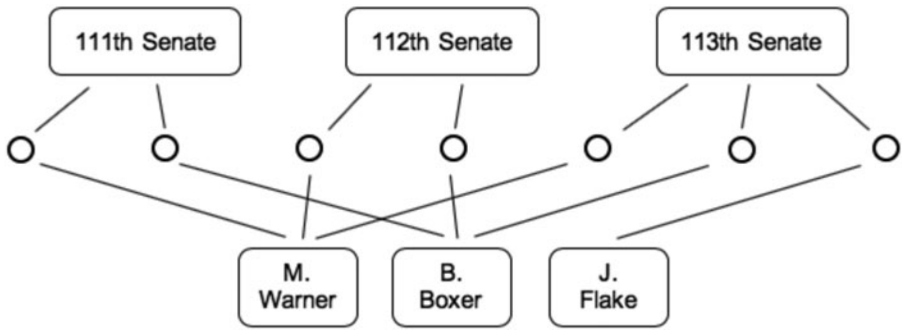

FIG. 2. Nokken-Poole scores (represented by circles) as cross-classified data.

small-donor receipts through the use of a cross-classified regression analysis with random individual and congressional session effects. This model allows us to control both for the unique (and uneven) effects of a given session's dynamics on legislators' behavior and for the violation of the assumption of uncorrelated standard errors that arises from senators serving multiple terms (e.g., observing the same units over time).[4]

In our model, we include a number of control variables in addition to the primary variable of interest, small money, to estimate the unique effects of a senator's statewide constituency and their personal attributes. For constituency controls, we include the variable Partisan Advantage, which represents the vote share (in decimal format) that a senator's presidential candidate received in their state above or below the national average in the most recent presidential election. Thus, a negative value represents a disadvantage, such as Democratic Senator Joe Manchin from West Virginia, who must win reelection in a Republican-leaning state, while a positive value signifies that a senator enjoys an advantage in the state in terms of their party's support, such as Democratic Senator Elizabeth Warren from Massachusetts. The mean Partisan Advantage value is approximately +0.03, and the distribution of all values follows a normal distribution curve.

We also include a variable measuring the percentage of self-reported liberals (for Democrats) or conservatives (for Republicans) within a senator's state, based on Enns and Koch's (2013) database on state political ideology (the sample mean is 30, which indicates that 30% of the senator's statewide constituency shares their ideological identity), as well as state demographic variables measuring the log voting-age population (VAP) and the log median income (both according to the U.S. Census Bureau's Current Population Survey), in order to account for determinants of election cost (see Lee and Oppenheimer 1999).

In order to control for personal effects, we include the variables Senate Experience, which represents the number of whole years that a senator had previously served in the Senate on the first day of the session, and Margin of Victory, which represents the vote percentage that a senator gained above their closest opponent in their most recent election. We include the binary variable Wave Election, to account for senators whose campaign receipts included in the analysis were raised during elections in which one party gained at least 20 seats in the House and did not lose seats in the Senate or the presidency (the elections in 1994, 2006, 2008, and 2010 fell into this category). In order to control for the possibility that senators moderate their positioning during times of electoral vulnerability, we created the variable At Risk for those senators who faced reelection during a given senate and were believed to be in danger of losing their seats, based on the analysis of the University of Virginia's Center for Politics (for the 2004–2014 elections) and CQ's Voting and Elections database (for the 1990–2002 elections). Lastly, we created the binary variable Contested Primary to identify senators who, in their last election, yielded less than 80% of the vote in the primary.

RESULTS

Our first hypothesis, the "dynamic responsiveness" model, holds that politicians respond to the

[4]For reasons detailed by Bell and Jones (2015), we do not believe a fixed-effect model is appropriate.

preferences of their supporters. In the context of campaign donors, it assumes that candidates have a "retrospective" lens and position themselves to serve the interests of donors who supported them in past elections. Insofar as small donors tend to be ideologically extreme, Senate candidates who rely on support from this subset of the donor population will position themselves accordingly. Yet senators are dynamic in the sense that they may modify their behavior if their donor base changes after a new election cycle.

As the notation below illustrates, the small receipts raised during an election cycle should have an effect on the positioning of senator during legislative sessions that follow, until a new electoral cycle is concluded. For example, if a senator raises small money for reelection during the 105th senate, the effect of this small money on their behavior will be observable during each of the 106th–108th senates (assuming they are elected to a full six-year term). This means that for each election cycle, there is one observation for small-donor receipts and as many as three observations for legislative positioning in the Senate, the implication being that a senator's folded Nokken-Poole score in each of the subsequent senates correlates with the small-donor receipts from the preceding election.

$$\$_{1997-1998\text{ election cycle}} \rightarrow \text{behavior}_{106\text{th, }107\text{th, }108\text{th senates}}$$

Note that a key assumption of this model is that causality flows from the donors to the politicians. In order to test the empirical implications of this model, we include in our baseline model the Senator Extremism variable (which represents a senator's Nokken-Poole score for a given two-year senate) as the dependent variable and the Small-Donor Receipts variable (which represents the small-donor receipts in log dollars raised during their last election) as the primary independent variable. If the "dynamic responsiveness" model is valid for explaining the correlation between small money and polarization, small money raised in a previous election cycle should have a positive and significant effect on extremism in the senates that follow the election.

The results of this analysis, which are reported in Table 1, do not provide support for this claim: the amount of money raised from small donors during the previous election cycle has a negligible impact on a senator's positioning, and this effect falls beyond the range of statistical significance.[5] The model estimates that each one-log increase in the money received from small donors (an increase of about 172%) is associated with an additional increase in extremism of less than .5 percent (on a scale from 0 to 1), although the standard error associated with this effect is too large to draw conclusions about the precise magnitude of the effect. Overall, our model appears to perform well and our control variables are consistent with our expectations. For example, the partisan and ideological features of a senator's state are each associated with a positive and statistically significant impact on extremism, as is a senator's margin of victory in the previous election. By contrast, when a senator is at risk of losing reelection, the model predicts a decrease in extremism, as we would expect.

For an additional window into the substantive impact of small money on a legislator's vote positioning, we conducted a dominance analysis by estimating Proportional Reduction of Error. We estimate that, compared to the baseline model, the inclusion of

Table 1. Senator Extremism (folded Nokken-Poole scores), 102nd–113th Senate

	Dynamic responsiveness model (a)	*Candidate selection model (b)*
Log small-donor receipts	0.004 (0.003)	
Log small-donor receipts, first election		0.010 (0.013)
Partisan advantage	0.370* (0.071)	0.343* (0.112)
State ideology	0.003* (0.01)	0.003* (0.001)
State population (log VAP)	0.002 (0.010)	–0.009 (0.014)
Log state median income	0.024 (0.023)	–0.079 (0.043)
Wave election	0.002 (0.006)	–0.002 (0.009)
At risk	–0.048* (0.010)	–0.053* (0.012)
Senate experience	–0.0002 (.001)	0.002 (0.001)
Margin of victory	–0.0003 (.0002)	–0.0001 (0.0003)
Contested primary	0.009 (0.007)	0.013 (0.010)
Constant	–0.037 (0.246)	1.059* (0.464)
N observations	1,061	574
N senators	202	122
N senates	12	12
Log likelihood	1,156.3	563.3
AIC	–2,285	–1,099
BIC	–2,215	–1,038

$^{*}p < 0.05$.
VAP, voting-age population; AIC, Akaike information criterion; BIC, Bayesian information criterion.

[5]We also explored the possibility that the effect varies by senate across a senator's term, but our results were largely the same. We found no significant effect associated with small-donor receipts.

the Small-Donor Receipts variable contributes about one percent to the marginal r-squared of the model. In short, small-donor support does not provide much traction in explaining variation in the positioning of senators during floor votes.

Next, we consider our second hypothesis, the "candidate selection" model. Like the "dynamic responsiveness" hypothesis, this model assumes the causal direction flows from campaign donors to politicians, but it does not rely on the assumption that politicians are necessarily retrospective in their behavior, or that politicians respond dynamically to changes in their donor base in subsequent elections. Rather, donors exert the most influence during the candidate selection process, when outsiders compete for the party's nomination. Beyond the choosing of candidates who are like-minded, donors do not necessarily influence the behavior of candidates after they enter office.

If this model is a valid explanation of the relationship between small donors and polarized politicians, then candidates who relied upon support from small donors during their first successful election to the Senate will have a general bias toward the extremes, and this bias will be observable throughout legislators' careers.

$$\$_{\text{1st election cycle}} \rightarrow \text{behavior}_{\text{1st}-\text{nth senate}}$$

In assessing the validity of the "candidate selection" hypothesis, we include in our baseline model the dependent variable, Senator Extremism (which represents a senator's folded Nokken-Poole scores for each two-year senate), as well as the independent variable, Small Receipts, First Election, which represents the log small dollars raised by a senator during their very first election to the Senate. This model implies that there will be a positive correlation between money raised in a senator's first successful election cycle and their behavior in the senates that follow. Therefore, we would expect to see a positive and statistically significant effect associated with the Small Receipts, First Election variable. Yet as Table 1b reports, this is not the case. The money received from small donors in a senator's first election to the Senate is not associated with a statistically significant effect on extremism during two-year senates that follow. However this model outperforms the "dynamic responsiveness model," in terms of the Proportional Reduction in Error: the small donor variable explains about two percent of the total variation in Senator Extremism (compared to one percent in the previous model).

In sum, the above analyses do not lend support for either the "dynamic responsiveness" or "candidate selection" hypotheses. We do not find evidence that the amount of money a senator received from small donors measurably affects their behavior in the future, nor does it explain much of the variation among senators' positions in floor votes. However, we caution that these results do not refute either hypothesis outside of the context of small donors.

ARE LEGISLATORS STRATEGIC IN THEIR POSITIONING?

A third hypothesis holds that the correlation between small-donor support and candidate extremism is driven by politicians, who strategically posture to the extremes in order to mobilize support from small donors. Rather than viewing donors as the catalyst for elite polarization, this model sees legislators as playing an active role in cultivating donor networks. This model assumes that legislators are "forward thinking" in their behavior and position themselves strategically when necessary to maximize their electoral security. Insofar as small donors represent an ideologically extreme subset of the population, a legislator may mobilize this support by polarizing before Election Day, but may deviate from the preferences of this support base after achieving electoral security. When applied to the Senate, this model implies that a senator's behavior before reelection affects their campaign receipt outcomes. Senators who take extreme positions will receive more support from small donors, all else equal. Yet after Election Day, a senator may alter their behavior to reflect a new reelection calculus. This means that behavior in the preceding senates affects small donor receipts in the next election cycle.

$$\text{behavior}_{\text{106th,107th,108th senates}} \rightarrow \$_{\text{2003}-\text{2004 election cycle}}$$

In order to test the "strategic posturing" hypothesis we need to modify our baseline model to reverse the relationship between money and positioning. Thus, the variable Senator Extremism is now our primary independent variable of interest.

Table 2. Senators' Small Donor Receipts (log USD), 1990–2014

Senator extremism	1.960*	(0.444)
Partisan advantage	–5.305*	(1.066)
State ideology	–0.010	(0.007)
State population (log VAP)	0.571*	(0.090)
Log state median income	0.851*	(0.288)
Wave election	–0.304*	(0.091)
At risk	0.397*	(0.134)
Senate experience	–0.020*	(0.008)
Margin of victory	0.007*	(0.002)
Contested primary	0.130	(0.133)
Constant	–0.490	(3.039)
N observations	744	
N senators	153	
N senates	12	
Log Likelihood	–1049.7	
AIC	2127.5	
BIC	2192.0	

$*p<0.05$.

For our dependent variable, we created Future Small-Donor Receipts, which represents the log small dollars a Senate candidate received during the election cycle that occurred at the end of their term. Thus, the model estimates the degree to which the positioning of a senator during each of the preceding three senates explains variation in the small-donor money received at the end of the term.

Table 2 reports the findings of this analysis. In this model, the Senate Extremism variable is associated with a positive and statistically significant effect on future small-donor receipts. The model estimates that a deviation from the median position (i.e., a folded Nokken-Poole score of 0) to a polar extreme (a score of 1) results in an $e^{1.96}$ increase in small-donor receipts (an increase of about 600%). The marginal effect is such that a senator who shifts from the median point to a pole will yield an additional $1.2 million in small donations, all else equal.

This analysis shows that senators who posture to the extremes are rewarded with small donor receipts in subsequent elections. Take as an example Senator Mark Warner (D-VA), who has had relatively limited support from small donors. Given our findings, we would not expect that a sudden influx of small money would fundamentally alter his floor voting behavior in the Senate. However, if Senator Warner began mirroring the voting behavior of his more liberal colleague, Senator Bernie Sanders (I-VT), our model predicts that Warner would receive a substantial increase in small donor money during the next election cycle in 2019–2020. Of course, that is not to say that Virginia voters would not punish him for his sudden change in behavior. In all likelihood, the temporary windfall of small-donor money would come at the cost of increased electoral vulnerability. It is also important to note the limitations of senator extremism as an explanation for the variation in senator's small-donor receipts. A dominance analysis estimates that the Senator Extremism variable explains approximately three percent of the variation in small-donor receipts, and that the performance of the model is largely driven by the control variables for electoral circumstance and state demography.

For an additional window into the relationship between senate extremism and small-donor receipts, we ran a version of our baseline model to include an interaction between the binary variable Reelection (which identifies senators who face reelection at the end of a two-year senate) and our Senate Extremism variable. This provided us a means of directly comparing the correlation between small-donor receipts and senator posturing before reelection and after reelection. Although we report the full results of this model in the Appendix, Figure 3 shows the marginal effects of each group. As is evident, when senators face reelection during a given senate, we observe a strong positive and statistically significant correlation between their positioning and their small-donor receipts. Yet after reelection, in the senates that follow, a senator's positioning does not provide value in explaining the variation among small-donor receipts. In short, while senators appear sensitive to the preferences of small donors when they face reelection, after they have secured reelection they appear to disregard these preferences.

DISCUSSION

Our analysis informs a fundamental question about the representational consequences of campaign contributions: do campaign donors dictate the behavior of politicians? Or do politicians influence the behavior of donors? The findings here suggest that causation flows from the politicians to the donors. We find that a senator's behavior *before* Election Day impacts the amount of money they receive from small donors. Because small donors tend to be ideologically motivated, posturing to the extremes represents a viable tactic for mobilizing support from this subset of the electorate. However, *after* Election Day this money does not have a

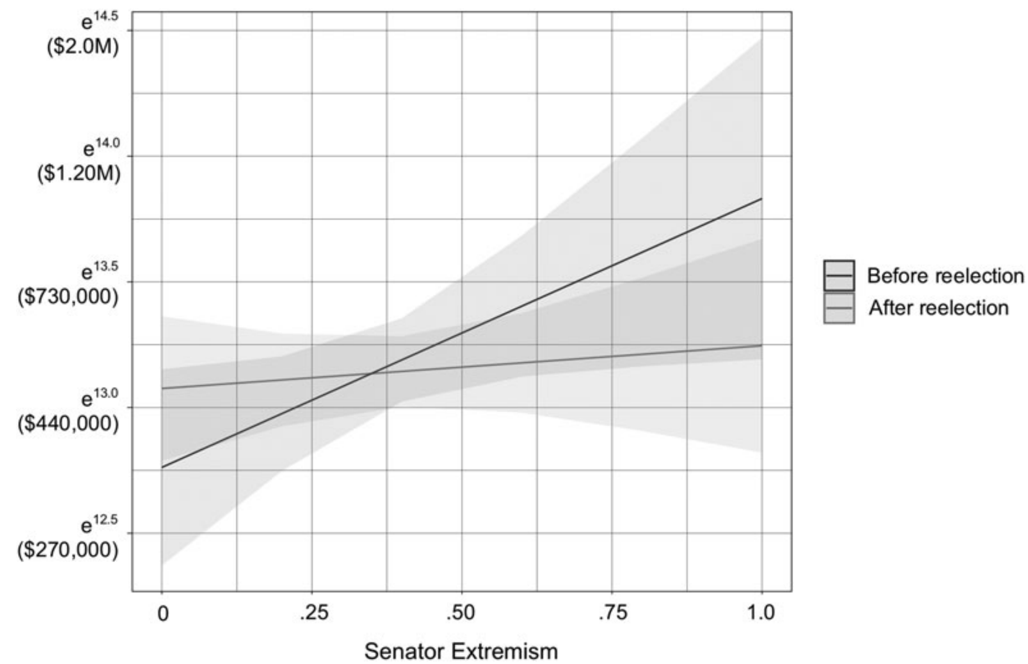

FIG. 3. Small-donor receipts (log USD), U.S. senators, 1990–2014 election cycles.

discernable effect on a senator's behavior. Thus, small donors do not necessarily *cause* a senator to polarize; but senators often strategically polarize to raise money from small donors. As La Raja and Wiltse (2012) assert, "ideology matters when political elites want it to matter."

Yet these links between legislative behavior and small money should be understood within their proper contexts. Under the current campaign finance regulatory framework, in the context of increasingly costly campaigns, many elected officials see a viable strategy in appealing to ideologically motivated donors for financial support. However, because politicians behave strategically to win elections, changing the "rules of the game" through campaign finance reform will also alter the tactics that politicians employ to raise money.

Our findings thus illuminate the effects of campaign finance reform. We find no evidence that increased participation by small donors (i.e., through a campaign finance voucher system, or through a small donor matching system) causes politicians to become polarized or selects for ideologically extreme candidates. Notwithstanding, predicting the effects of campaign finance reform comes with challenges. The intuition behind the voucher system proposed by Hasen (2016), as well as the small-donor matching system endorsed by congressional Democrats, is that candidates could broaden their appeals to larger and more diverse donor networks. Because the costs of "giving" to a campaign would decrease for most citizens, candidates would not need to pander to ideological donors or resort to polarization as a fundraising tactic. In this regard, there are compelling reasons to believe that these reforms would improve equality in democratic representation.

One potentially fruitful area of future study is on the effects of the campaign finance voucher model currently in place in Seattle municipal elections, which was implemented during the 2017 election cycle.

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(*Appendix follows* →)

APPENDIX

Appendix Table A1. Senators' Small-Donor Receipts (log USD), 1990–2014 Election Cycles

Senator extremism	0.170	(0.333)
Reelection	–0.373	(0.242)
Partisan advantage	–1.309	(0.801)
State ideology	–0.004	(0.005)
Wave election	0.120	(0.076)
Senate experience	–0.024***	(0.006)
Margin of victory	–0.012***	(0.002)
Contested primary	–0.084	(0.093)
Log state median income	0.826***	(0.195)
State population (log VAP)	0.490***	(0.070)
Senator extremism * reelection	0.899*	(0.451)
Partisan advantage * reelection	–4.077***	(1.111)
State ideology * reelection	0.001	(0.006)
Wave election * reelection	–0.391**	(0.126)
Senate experience * reelection	–0.002	(0.006)
Victory * reelection	0.012***	(0.003)
Contested primary * reelection	0.119	(0.161)
Constant	1.125	(2.019)
N observations	1,069	
N senators	208	
N senates	12	
Log likelihood	–1,410	
AIC	2,863	
BIC	2,967	

*$p < 0.1$; **$p < 0.05$; ***$p < 0.01$.

VAP, voting-age population; AIC, Akaike information criterion; BIC, Bayesian information criterion.