## Candidate Positions, Responsiveness, and Returns to Extremism\*

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#### Abstract

The concept of candidate positioning is central to the study of U.S. elections, representation, and political behavior. Existing work, however, overwhelmingly relies on indirect measures which may not reflect candidates' stated positions. I analyze foundational relationships between candidate positions and district partisanship, primary electoral success, and primary fundraising performance with existing approaches versus text scaling estimates based on an original collection of campaign platforms from House primary candidates' websites in 2016, 2018, 2020, 2022, and 2024. Directly measuring candidates' positions using campaign platforms leads to conclusions vastly different than those reached with existing measures. While platform-based measures suggest candidates are responsive to their districts, existing measures do not. Within district, however, existing measures show financial and electoral penalties to extremism in primaries, but platform-based measures show no such penalty. These findings have wide-ranging implications for a number of ongoing scholarly debates which involve congressional candidates' positions.

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Candidate positioning is a ubiquitous concept in both theories of elections and ongoing empirical debates in electoral and representation studies.<sup>1</sup> Announced policy platforms are the cornerstone of Downsian formal models of electoral behavior and competition (Banks 1990; Baron 1994; Cameron and Enelow 1992; Downs 1957) and a focus of scholarly debates regarding extremist success, the role of nationalization versus district preferences, and other key topics within the field of legislative elections (Ansolabehere, Snyder, and Stewart 2001; Kujala 2020; Bonica and Cox 2018; Hall 2015; Hall and Snyder 2015; Hopkins 2018; Utych 2020; Woon 2018).

In the American politics context, empirical investigations involving both congressional incumbents and non–incumbents tend to use one of two sets of approaches when measuring candidates' positions along a left–right, unidimensional continuum. The first leverages information sourced directly from candidates, such as surveys soliciting their stances on various issue and policy matters (e.g. Ansolabehere, Snyder, and Stewart 2001; Rogowski 2014) or simply asking them to place themselves on a left–right continuum (Burden 2004).<sup>2</sup> The second measurement approach scales candidates' positions using data on fundraising networks, relying on the assumption that donors contribute to those similar to themselves (e.g. Bonica 2013, 2014; Hall 2015; Hall and Snyder 2015).

On the one hand, information from candidates' own campaigns allows for a relatively unmediated and direct measure of their positioning. However, in recent decades survey response rates have dropped too low to reliably estimate the majority of congressional candidates' positions.<sup>3</sup> As such, scholars have increasingly relied upon Campaign Finance (CF) Scores (Bonica 2014, 2024) — which use readily-available campaign contribution data — to capture candidates' positions in their work (e.g. Bonica and Cox 2018; Carson

<sup>&</sup>lt;sup>1</sup>While terms like *ideology* or *ideal point* are used frequently in studies involving collections of political views, this paper is interested solely in how candidates present themselves during elections and is agnostic about the "truthfulness" of these self-presentations. For this reason, I instead refer to *positioning* and *positions*, although I use descriptors such as *liberal*, *conservative*, and *extreme* that are commonly associated with ideology.

<sup>&</sup>lt;sup>2</sup>A related but less direct approach is surveying experts about candidate locations (e.g. Kujala 2020; Stone and Simas 2010).

<sup>&</sup>lt;sup>3</sup>Only one quarter of nominees responded to Project Vote Smart's surveys by 2010 (Adams et al. 2017).

and Williamson 2018; Kujala 2020). CF Scores offer the invaluable benefit of wide coverage of the universe of congressional candidates, including even those who lost their primary election. Yet, contribution-based measures rely on the observed behavior of campaign donors, not candidates, and recent work casts down on the plausibility of such models' assumptions about donor behavior (Meisels, Clinton, and Huber 2024). Would we reach different conclusions about representation quality and incentives for extremism in the current era if measures were tied more directly to candidates' positions?

I re-examine evidence central to ongoing debates involving candidate positioning by comparing results reached using a measure based on candidates' publicly–stated positions to results reached with existing measures. Combining a text scaling approach with an original dataset of issue platforms from all available campaign websites, I estimate unidimensional positions of House primary candidates in 2016, 2018, 2020, 2022, and 2024. I then address three important and related questions in American politics for which theoretical expectations and empirical evidence are mixed. In each case, my findings suggest that the answers are critically dependent on how candidates' positions are measured.

First, are candidates still responsive to their districts? Although the constituency plays a central role in classic studies of elections and representation (e.g. Canes-Wrone, Brady, and Cogan 2002; Downs 1957; Miller and Stokes 1963), the nationalization of political behavior and media raises questions about whether candidate-district ties have been weakened or severed altogether (Bonica and Cox 2018; Gimpel, Lee, and Pearson-Merkowitz 2008; Hopkins 2018; Martin and McCrain 2019; Moskowitz 2021). Examining the relationship between district partisanship and candidate positions, I find that both Democrats' and Republicans' campaign platforms grow significantly more liberal in more Democratic districts. However, there is no evidence of responsiveness when relying upon existing donation-based measures.

Second, do primary voters reward extremism? As more congressional districts have become safe for one party, polarization and the influence of primaries on electoral outcomes have increased roughly in tandem, making the primary system a frequent target of blame among reformers.<sup>4</sup> While legislators disproportionately fear backlash over political compromise from their primary electorates (Anderson, Butler, and Harbridge-Yong 2020), evidence on the representativeness of and preference for extremists among primary voters is decidedly mixed (Brady, Han, and Pope 2007; Hill 2015; Hirano and Snyder 2019; King, Orlando, and Sparks 2016; Lockhart and Hill 2023; Sides et al. 2020). Employing within-district-party analyses, I contextualize these discordant findings: existing measures of extremism are related to decreased primary vote share, but candidates with more extreme campaign platforms are, if anything, rewarded with a larger share of the primary vote.

Third, do extreme candidates enjoy fundraising advantages in primaries? The lack of party heuristic available to voters within partisan primaries creates an opportunity for moneyed interests to exert disproportionate influence (Bawn et al. 2012). On the one hand, individual donors tend to be much more extreme than voters, legislators, and the affluent, and they prefer to fund extreme candidates, all else equal (Barber et al. N.d.; Barber 2016*a*; Kujala 2020; Meisels, Clinton, and Huber 2024). On the other hand, political organizations have been shown to contribute to moderates and penalize extremism (Bonica 2013; Barber 2016*b*). In line with the electoral performance finding, extremism is related to weaker primary fundraising when using existing measures, yet extreme campaign platforms are not financially penalized whatsoever.

This article makes both substantive and methodological contributions to the study of congressional elections and representation. First, I provide novel evidence that candidates' platforms remain responsive to their prospective constituencies, and I contribute to a growing body of work on the nationalization of donor behavior (Rhodes, Schaffner, and La Raja 2018; Sievert and Mathiasen 2023). Moreover, my analyses help reconcile mixed and piecemeal findings on the advantages of extremism in primaries: while a more

<sup>&</sup>lt;sup>4</sup>*Unite America*, the main funder of Alaska's 2022 nonpartisan primary reform, argues on their website that "the biggest solvable problem fueling political extremism and dysfunction is hiding in plain sight: party primaries" (https://www.uniteamerica.org/book).

extreme donor base — the predominant measure of candidate positions — is associated with weaker electoral and fundraising performance in primaries, there are no such penalties for an extreme campaign platform. By hand-collecting the most comprehensive set of House primary campaign platforms to date, I am able to clarify which aspects of campaigns remain responsive to the district, and how voters and donors in turn respond to extremism expressed in different campaign activities. More broadly, platform-based estimates facilitate the use of multiple high-coverage measures to interrogate questions related to candidate positioning in the current era. The starkly different results reached with platform-based and contribution-based estimates of candidates' positions have wideranging implications for previous studies relying solely on the latter.

## Candidate Positions, Responsiveness, and Primary Success

The importance of (sub-)constituency is all but a given in classic theoretical and empirical studies of elections and representation (e.g. Canes-Wrone, Brady, and Cogan 2002; Downs 1957; Enelow and Hinich 1984; Meirowitz 2005; Miller and Stokes 1963). Whether represented by the median or a distribution, and consisting of voters, constituents, co-partisans, or donors, the key population of interest in candidates' strategic positioning is thought to be district–specific. However, recent evidence on the nationalization of political behavior, media, and donors calls into question whether candidate–district ties have been severed (Ansolabehere, Snyder, and Stewart 2001; Abramowitz and Webster 2016; Gimpel, Lee, and Pearson-Merkowitz 2008; Hopkins 2018; Martin and McCrain 2019; Moskowitz 2021).

Due to existing studies' contradictory findings, it is unclear whether candidates are still incentivized to be responsive to their districts. Bonica and Cox (2018), for example, argue that political parties strategically nationalized congressional elections in response to increased competition for majority control since 1994 (Lee 2016). If elections are primarily fought over national party positions, national donor support, and national media

attention, candidates no longer stand to benefit from tailoring their positions to the district, and instead stand to benefit from adopting the party line and appealing to extreme donors and activists.<sup>5</sup> However, more recent evaluations have not found consistent support for this argument (Canes-Wrone and Kistner 2022; Lockhart and Hill 2023).

In addition to whether candidates are generally incentivized to tailor their positions to their districts, a related question is whether extremism is rewarded at the primary stage of elections. As more congressional districts become safe for one party, primaries have grown to have an outsized influence on electoral outcomes (Abramowitz, Alexander, and Gunning 2006; Jacobson 1990; Hirano and Snyder 2019; Thomsen 2023).<sup>6</sup> Scholars have long argued that primaries contribute to or exacerbate polarization in legislatures because, in comparison to general election voters, partisan primary voters are more extreme and prefer more extreme candidates (Anderson, Butler, and Harbridge-Yong 2020; Aranson and Ordeshook 1972; Brady, Han, and Pope 2007; Hill 2015; King, Orlando, and Sparks 2016). However, other work suggests that the primary electorate is relatively representative of the general electorate or, even if primary voters are more extreme, they may nevertheless strategically support moderates (Adams and Merrill 2014; Hirano et al. 2010; Lockhart and Hill 2023; Sides et al. 2020).

The nature of intraparty nominations is another reason that extreme candidates would potentially thrive in partisan primaries. Whereas general election voters can either vote for the candidate who shares their party identification or use partisanship as a convenient heuristic for candidates' positions and priorities, primary voters must select between candidates who share a party identification. Because voters are likely more persuadable as they "lack the anchoring cue of partisanship" (Bawn et al. 2012, p. 575), intense policy demanders such as donors and interest groups may exert a disproportionate influence

<sup>&</sup>lt;sup>5</sup>Specifically, Bonica and Cox (2018) argue that voters have become more party-centered and therefore no longer penalize candidates for extremism, whereas extremism can benefit candidates via activist and donor support.

<sup>&</sup>lt;sup>6</sup>The number of House races decided within 10% was 33 in 2016, 90 in 2018, 77 in 2020, and 75 in 2022 (https://ballotpedia.org/Congressional\_elections\_decided\_by\_10\_percent\_or\_less,\_2022).

in primaries (Cohen et al. 2008; Kalla and Broockman 2018; La Raja and Schaffner 2015). A natural question in light of congressional polarization, then, is whether these financial contributors disproportionately advantage extreme primary candidates. Individual donors are quite extreme compared to other segments of the population, and they prefer to fund extreme candidates, all else being equal (Barber 2016*a*; Kujala 2020; Meisels, Clinton, and Huber 2024). On the other hand, political organizations appear to favor moderate candidates and financially penalize extremism (Bonica 2013; Barber 2016*b*). Despite the moneyed interests' greater potential influence in primaries, far less is known about the relationship between candidate positions and primary fundraising.<sup>7</sup>

In sum, existing work reaches conflicting conclusions about whether candidates still face incentives to tailor their positions to the district and whether extremism is related to stronger electoral and fundraising performance in primaries. Furthermore, the analyses which address these questions most directly tend to be limited in at least one of two ways. First, it is an open question how well results import to the current era, as the time periods covered generally end well before 2016. Second, it is unclear whether patterns generalize to candidates' stated positions, as results rely primarily, or in many cases, solely on campaign contribution-based estimates of candidate positions.

## **Capturing Candidate Positioning**

The introduction of roll-call-based ideological estimation transformed the study of legislative and electoral behavior. These methodologies allowed for systematic characterization of congressmembers' spatial ideal points based on an underlying behavioral model, and, subsequently, testing theories of representation (Bafumi and Herron 2010; Brady, Han, and Pope 2007; Canes-Wrone, Brady, and Cogan 2002; Clinton, Jackman, and Rivers 2004; Poole and Rosenthal 1991; Poole 2005). Over time, however, increasing interest in polar-

<sup>&</sup>lt;sup>7</sup>Meisels, Clinton, and Huber (2024) show experimentally that individual donors respond similarly to candidate extremism in primaries and general elections.

ization called for comparable measures of non-incumbent' positions.

As a result, scholars turned to various sources of data which include both incumbents and non-incumbents, each with its own benefits and drawbacks. Candidate surveys and television advertisements, which capture position information directly from campaigns, nevertheless cover only a small portion of the candidate universe due to low response rates and high costs, respectively (Adams et al. 2017; Herrnson, Panagopoulos, and Bailey 2020; McGhee et al. 2014). Currently, the most ubiquitous approach uses campaign contributions to measure candidates' positions less directly, relying on the assumption that contributors give to candidates with positions similar to their own (e.g. Bonica 2014; Hall and Snyder 2015; Hall 2015). These contribution-based estimates offer unprecedented coverage of the universe of candidates: common-space CF Scores, the most widely-used of these measures, includes over two-thirds of all major-party primary candidates since 2016.

Because they "are free to consider the many ways in which candidates express their ideology" (Bonica 2014, p. 372), donors may in theory draw upon useful private information regarding candidates' positions when making their decisions (Austen-Smith 1995; Hall and Wayman 1990). However, recent work suggests that donations are driven by a myriad of considerations, casting doubt on the behavioral assumption that donors simply give expressively on the basis of ideological proximity. In addition to perceptions of their spatial proximity to candidates — which may or may not be based on candidates' stated positions — donors' giving is motivated by electoral competitiveness, opponent characteristics, and candidates' institutional positions (Barber, Canes-Wrone, and Thrower 2017; Gimpel, Lee, and Pearson-Merkowitz 2008; Meisels, Clinton, and Huber 2024). Accordingly, candidates' contribution networks may reflect factors potentially orthogonal to their public positions. Distinguishing between which patterns do and do not hold across different campaign characteristics allows for more precise identification of the answers to questions for which evidence often appears mixed.

#### **Scaling Campaign Website Platforms**

I estimate the positions of candidates who ran in major-party House primaries from the five most recent election cycles — 2016, 2018, 2020, 2022, and 2024 — using the most comprehensive collection of campaign website policy platforms to date.<sup>8</sup> Scholars have long recognized campaign websites as a valuable medium for studying campaign strategy for a number of reasons (Druckman, Kifer, and Parkin 2009; Druckman et al. 2010; Milita, Ryan, and Simas 2014; Nyhan and Montgomery 2015). Creating and maintaining a website is easy and far cheaper than fundraising, sending mailers, and running television advertisements, resulting in a relatively even playing field with regard to candidates' resources.<sup>9</sup> The vast majority of websites contain a page or section clearly delineated as a collection of issue stances, resembling a stated policy platform more closely than any other campaign materials. Moreover, the priorities and positions found on websites are selected and articulated by campaigns themselves, making them less mediated than media interviews, televised debates, or newspaper write-ups.

I collect all available campaign website policy platforms of the over 7,000 candidates who appeared on a Democratic or Republican primary ballot from 2016 to 2024.<sup>10</sup> For each candidate, I first searched for their on-cycle campaign website with a combination of simple web engine search and cross-checking sources such as Politics1.com and *Ballot-pedia*.<sup>11</sup> I accessed candidates' websites within the week leading up to their primaries in 2022 and 2024, and used *Wayback Machine* to access websites as archived most immedi-

<sup>&</sup>lt;sup>8</sup>Past studies have included only primary winners and/or runners up, or candidates from fewer election cycles.

<sup>&</sup>lt;sup>9</sup>While some candidates host highly professionalized websites clearly created by web designers, many candidates utilize free website creators, which offer easy-to-use interfaces that make website creation accessible to even the least technologically savvy candidate without the aid of campaign staff.

<sup>&</sup>lt;sup>10</sup>I exclude third-party candidates, candidates whose primaries were cancelled, candidates in multi/nonpartisan primaries, and candidates in primaries which were preceded by a nominating convention. Appendix A provides the full list of and rationales for excluded races. However, as shown in Appendix C main results based on CF scores remain highly similar when including all available primary candidates in CA, WA, CT, and UT.

<sup>&</sup>lt;sup>11</sup>I exclude official governmental websites (those ending in .gov), as sitting incumbents maintain separate online presences for their campaign. I also exclude social media pages such as Facebook and Twitter.

ately prior to candidates' primaries for elections prior.<sup>12</sup> Finally, I captured an image and scraped the raw text of the issue content, which was typically on a clearly marked page or section with titles such as "Platform," "Issues," or "Priorities." Appendix A provides further information about the data collection.

All in all, 65% (4,703) of all 7,296 major-party primary candidates from 2016 to 2024 hosted campaign websites with issue content. Because the baseline costs involved in creating a website are so low, "missingness" in the data should be more plausibly related to candidates' decision not to publicly commit to a platform than to factors unrelated to positioning but related to the availability of existing measures (such as insufficient fundraising in the case of contribution based measures, or failure to win election in the case of roll call based measures). I investigate the representativeness of candidates with campaign website platforms in Appendix A, looking separately by incumbency status as non-incumbents' variation in missingness is mainly due to lacking a website altogether whereas incumbents, there is some evidence of a relationship between moderate CF scores and missingness. However, in Appendix C I show that results with all CF scores are qualitatively identical to those with only CF scores of candidates who also have platforms.

I combine the campaign platform texts with an unsupervised machine learning algorithm, wordfish, to scale unidimensional campaign positions at the candidate-year level (Slapin and Proksch 2008). The statistical model is based on item response theory and bears strong resemblance to correspondence analysis, the methodology used to estimate campaign contribution-based CF Scores (Bonica 2014).<sup>13</sup> I follow other scholars in assuming that the frequency and usage of words in political text are informative about authors' positions on what is thought to be a liberal-conservative dimension (Lauderdale and Herzog 2016; Laver, Benoit, and Garry 2003; Lowe et al. 2011; Rheault and Cochrane 2020). As

<sup>&</sup>lt;sup>12</sup>The median was 9 days before the primary, while the mean was 11 days. Overall, about 75% were captured within one month of the primary.

<sup>&</sup>lt;sup>13</sup>Scatterplots in Appendix B demonstrate strong correlations between scaling estimates from wordfish and one-dimensional correspondence analysis (r = 0.988;  $\rho = 0.998$ ).

demonstrated by Grimmer and Stewart (2013), however, the validity of this assumption rests crucially on the dominance of a liberal–conservative dimension within the relevant texts. As I show later, using both candidate and word level parameters to interrogate the underlying dimension structuring the rhetorical space provides strong evidence that this assumption is satisfied.

I prepare the text corpus by constructing an  $N \times M$  sparse document-feature matrix of M term columns and N candidate-year rows, with term frequencies as cell entries. I preprocess the data by removing punctuation, reducing terms to their stem, and removing both highly frequent stopwords and highly infrequent terms to reduce noise in estimation and improve computing performance.<sup>14</sup> To help ensure that the key liberal–conservative dimension is identified and minimize the risk of misspecifying the policy space, I drop terms primarily associated with geographic or incumbency differences between candidates, such as state names and congressional procedure. In addition to all remaining unigrams that meet the above criteria, I also preserve frequently used *n*-grams (e.g. common core, freedom of speech, and right to bear arms).<sup>15</sup> Altogether, this results in nearly 3,000 unique terms across more than 4,700 separate primary campaigns. Further details of the text processing flow and comparisons of estimates with and without scaling refinements are provided in Appendix B.

The wordfish model estimates candidates' year-specific positions as a function of how frequently they use terms associated with different areas of the political spectrum,<sup>16</sup> while also accounting for the fact that some platforms are wordier than others and some terms are more prevalent than others. The rate y at which primary candidate i uses term j in election year t is assumed to be drawn from a Poisson distribution, which is characterized

<sup>&</sup>lt;sup>14</sup>I drop terms that appear in fewer than 100 separate campaign texts. This is an extremely lenient requirement given that the corpus contains almost 5,000 campaign texts, yet this step substantially improves computing time. See Appendix B for further discussion of pre-processing choices.

<sup>&</sup>lt;sup>15</sup>Scatterplots in Appendix B demonstrate high correlations between scaling estimates with and without non-unigram, geographic, and procedural terms (r = 0.997;  $\rho = 0.998$ ).

<sup>&</sup>lt;sup>16</sup>For example, the term gun is neutral and used by candidates all across the political spectrum, whereas the term high-capacity highlights the danger of large firearm magazines and thus predominantly associated with candidates on the left.

by a single parameter  $\lambda$  representing both the expected value and variance. This parameter logarithmically links the probability distribution generating the observed term rate to the systematic components of interest:

$$y_{ijt} \sim \text{Poisson}(\lambda_{ijt}) \text{ where } \lambda_{ijt} = \exp(\alpha_{it} + \psi_j + \beta_j * \omega_{it}).$$
 (1)

The key parameter  $\omega_{it}$  represents candidate *i*'s campaign position in primary *t*, which is scaled to have sample mean 0 and standard deviation 1. As mentioned previously, no special assumption is placed on individuals' positions over time: for candidates who ran in more than one House election between 2016 and 2024, each primary campaign constitutes a separate observation. The term  $\beta_j$  represents word *j*'s weight in discriminating between different campaign positions.<sup>17</sup> A word fixed effect  $\psi_j$  captures the rate at which word *j* is used generally, and a candidate-year fixed effect  $\alpha_{it}$  corresponds to the verbosity of candidate *i*'s campaign position text in election *t*.<sup>18</sup> Appendix B provides technical details of the expectation maximization algorithm used for estimation, as well as further discussion of text pre-processing decisions and alternative scalings using correspondence analysis and unrefined tokens.

#### **Construct Validity**

The distribution of candidates'  $\omega$  parameters are presented in Figure 1. Consistent with well–documented partisan polarization among political elites (Bafumi and Herron 2010; McCarty, Poole, and Rosenthal 2016), platform-based positions are bimodally distributed, with most Republicans substantially to the right of most Democrats. However, a modest

<sup>&</sup>lt;sup>17</sup>This is akin to an IRT discrimination parameter or factor analysis loading score.

<sup>&</sup>lt;sup>18</sup>In the algorithm initialization, start values of  $\psi$  and  $\alpha$  are functions of word frequencies, while start values of  $\beta$  and  $\omega$  are obtained via singular value decomposition of the matrix of word frequency marginals — hence the strong relationship between estimates resulting from correspondence analysis versus wordfish in the Appendix.

Figure 1. Distribution of Campaign Platform Positions by Party, 2016 – 2024



*Note:* Kernel density plots of  $\omega$  estimates from Equation 1, which are scaled to have mean 0 and SD 1. Democratic candidates shown in black and Republican candidates in gray. Negative values indicate more liberal/less conservative.

degree of overlap in Republican and Democratic candidates' positions is also consistent with the frequency with which candidates of both parties choose to campaign similarly on the same issues, such as job creation and veterans affairs.<sup>19</sup> This differs from roll–call estimates of House members' ideal points from recent congresses, which exhibit no partisan overlap partly due to the strategic selection of legislative floor votes that frequently exaggerate differences between parties (Clinton 2012; Bateman, Clinton, and Lapinski 2017; Cox and McCubbins 2005; Lee 2016). Likewise, contribution–based estimates which assume donors contribute to candidates who share their positions may exaggerate partisan polarization due to individual donors' strong partisan loyalties (Li 2018; Meisels, Clinton, and Huber 2024). Distributions appear highly similar when subsetting to viable or incumbent candidates in Appendix B, demonstrating that serious candidates likewise span the range of the spectrum.<sup>20</sup>

Beyond general differences between parties, Figure 2 demonstrates that there is substantial variation in the spread of candidates' positions even within a primary field. While

<sup>&</sup>lt;sup>19</sup>However, only 30 general elections over the entire period featured a Democratic nominee with a platform to the right of the Republican nominee.

<sup>&</sup>lt;sup>20</sup>Distributions of platforms and CF scores are further broken out by year and candidate type in Appendix D, which suggest some increase in polarization over the period.



Figure 2. Campaign Platform Variation Within and Across Primaries

*Note:* Circles represent each campaign platform, with lines connecting those of candidates running in the same primary. Districts descending along horizontal axis from highest to lowest two-party Democratic presidential vote share. Primaries with at least two candidates with campaign platforms are included.

the standard deviation is 0.65 across Republicans and 0.60 across Democrats in these multiplatform contests, respective within-primary standard deviations are 0.53 and 0.44. Republican primaries tend to feature greater differentiation, as the average range of positions is 0.96 for Republicans and 0.77 for Democrats, and the standard deviation of these withinprimary ranges is likewise higher for Republican contests (0.65 versus 0.58 respectively). While platform differences even within primary field are substantial, changes in candidates' platforms from election to election are far smaller. Scholars commonly validate the stability of candidates' positions given that, conceptually, there should be a large degree

Party	Candidate	District-Year	Position
(R)	Elise Stefanik	NY-21-2018	-1.00
(R)	George Devolder-Santos	NY-3-2020	-0.20
(R)	Liz Cheney	WY-2022	0.21
(R)	Liz Cheney	WY-2016	0.63
(R)	Andy Ogles	TN-5-2024	1.45
(R)	Marjorie Taylor Greene	GA-14-2020	1.93
(D)	Amy McGrath	KY-6-2018	0.18
(D)	Jim Cooper	TN-5-2020	-0.14
(D)	Seth Moulton	MA-6-2024	-0.50
(D)	Andy Levin	MI-11-2022	-0.83
(D)	Terri Sewell	AL-7-2024	-1.24
(D)	Ayanna Pressley	MA-7-2020	-1.79

Table 1. Campaign Platform Positions of Notable Candidates

of consistency over time (e.g. Bonica 2014). I find a 0.88 correlation between candidates' most liberal and most conservative (i.e. most different) platforms across the entire five year period, suggesting that even the lowest possible bound on within–candidate temporal stability remains exceptionally high. The third quartile of this maximum within-candidate distance is under 0.60, far below the average range of positions taken by candidates running in the same primary field. Taken together, the bimodal distribution, meaningful variation even within primary fields, and individual level temporal stability all suggest the platform measure successfully captures candidates' positions.

#### **Facial Validity**

A selection of well-known candidates from across the political spectrum in Table 1 suggests that the intraparty variation in platform-based positions is likewise facially valid. The 2018 campaign of Elise Stefanik, a Republican representing a rural district in New York's North Country since 2014, fell almost one standard deviation to the left of the mean. Although she has since made headlines for her impassioned defense of President Trump during his first impeachment proceedings,<sup>21</sup> Stefanik campaigned on strengthening trade

<sup>&</sup>lt;sup>21</sup>https://www.reuters.com/world/us/loyalty-trump-catapults-elise-stefanik-into-republican -stardom-2021-05-11/

with Canada, expanding agricultural visa programs, veteran welfare, environmental protection, healthcare access, and affordable education. Because no special assumption is placed on the continuity of candidates' positions from one election to the next, platform changes like Liz Cheney's well-documented shift from 2016<sup>22</sup> to 2022<sup>23</sup> are also reflected in primary campaign position estimates. Tennessean Blue Dog Democrat Jim Cooper, the "man in the middle"<sup>24</sup> and "the last moderate…loathed by Republicans for being in the wrong party, and scorned by Democrats for his fiscal conservatism"<sup>25</sup> fell just to the left of mean 0 during his 2020 primary campaign. Likewise, the campaigns of those widely regarded as the most progressive Democrats and conservative Republicans fall toward the endpoints of the campaign position range. In Appendix B, I discuss examples of platforms estimated to fall on the other side of the scale than candidates' partisanship would predict.

Nevertheless, we still must verify that the dimension of interest — here, a general leftright dimension — is the one structuring estimates of candidates' platforms (Grimmer and Stewart 2013; Egerod and Klemmensen 2020). While this cannot be formally tested, interrogating the underlying substance is relatively straightforward and transparent in the case of text data, as terms included in the scaling likewise receive parameter estimates based upon their ability to discriminate between positions. Table 2 reports the 20 terms with the largest negative (left) and positive (right)  $\beta$  weights from Equation 1, with the full table of corresponding  $\beta$  and  $\psi$  estimates included in Appendix B. Terms related to critical race theory, Christianity, anti-abortionism, illegal immigration, and socialism are strongly associated with conservative campaign platforms, and terms related to inequality, injustice, gender and sexuality, and affordable education are strongly associated with liberal platforms.<sup>26</sup> Importantly, heavily weighted terms related to identity groups and politicians are

<sup>&</sup>lt;sup>22</sup>https://www.washingtonpost.com/politics/another-cheney-rises-in-a-republican-party-led -by-trump/2016/08/15/a2f817a0-6267-11e6-8b27-bb8ba39497a2\_story.html

<sup>&</sup>lt;sup>23</sup>https://www.cnn.com/2022/08/17/politics/why-liz-cheney-lost/index.html

 $<sup>^{24} \</sup>tt https://washingtonmonthly.com/2022/12/13/man-in-the-middle/$ 

<sup>&</sup>lt;sup>25</sup>https://www.nytimes.com/2011/09/06/opinion/the-last-moderate.html

<sup>&</sup>lt;sup>26</sup>Performing scaling separately by year in Appendix D suggests substantial continuity in even the most heavily weighted terms, as well as correlations above 0.90 between candidates' pooled and year-specific scalings.

Left	Right
{community-bas} {renter} {evict} {equit}	{crt} {woke} {tyrann} {indoctrin} {god}
{reproduct} {lgbtqia} {rental} {matern}	{god-given} {christian} {socialist}
{dispar} {underserv} {trauma} {indigen}	{tyranni} {communist} {unborn}
{lewi} {pell} {childcar} {lgbtq} {high-capac}	{sanctiti} {pro-lif} {lawless} {swamp}
{preschool} {low-incom} {pre-k}	{alien} {womb} {pelosi} {islam} {evil}

Table 2. Terms With 20 Most Conservative and Liberal Weights, 2016 – 2024

*Note:* Terms with the largest positive (right) and negative (left)  $\beta$  discrimination parameters from scaling. Appendix B reports corresponding  $\beta$  and  $\psi$  parameters.

overwhelmingly used in ideological or policy contexts. For example, nearly every variant of LGBTQ included in a campaign platform is in the context of candidates advocating for non-discrimination protections for LGBTQ individuals. Overall, these results provide strong evidence that the rhetoric underlying the scaling estimates is structured by recognizable modern divisions along the liberal–conservative spectrum.

#### **Predictive Validity**

Finally, how do platform-based estimates compare to existing measures of candidates' positions? As mentioned earlier, campaign platforms may reflect candidates' true views, strategic appeals, or both, but are ultimately under the purview of candidates themselves. In contrast, NOMINATE is based upon legislators' voting behavior, which occurs in an institutional setting that is relatively opaque and influenced by a strategically–selected roll call agenda not determined by any one individual legislator (Arnold 1990; Clinton 2012; Lee 2016). On the other hand, CF Scores are based on the observed behavior of donors who are assumed to contribute to candidates with positions similar to their own (Bonica 2014). In essence, campaign platforms capture something conceptually distinct from — yet potentially empirically related to — roll call voting and fundraising networks.

Figure 3 presents bivariate relationships between each of the three measures. While pooled correlations are unsurprisingly strong given ideological sorting among partisans, intra-party correlations vary considerably. Consistent with Barber (2022), virtually no



**Figure 3.** Relationship Between Campaign Platform Positions, CF Scores, and DW-NOMINATE

*Note:* Points are individual candidates, with Democrats in black, Republicans in gray, and lines fit separately by party. Pooled and intra-party Pearson's *r* correlations reported.

relationship is present between Democrats' CF and NOMINATE scores, whereas there is a modest relationship between Democrats' platform positions and NOMINATE scores. Intra-party correlations tend to be substantially greater among Republicans than Democrats, especially between CF and NOMINATE. Compared to each of their correlations with NOM-INATE, correlations between campaign platforms and CF scores appear quite modest. However, this may be due to either the measures themselves or the inclusion of non-incumbents who do not have NOMINATE scores. I find that all CF–platform correlations are stronger among candidates captured by NOMINATE, but all campaign platforms' correlations remain larger with NOMINATE than with CF scores, whereas CF scores' intra-Democratic correlation is larger with campaign platforms than with NOMINATE.<sup>27</sup> These results highlight the opportunities for further investigation of relationships between cam-didates' rhetorical positions, donor networks, and legislative behavior facilitated by measuring campaign positions independently of campaign contribution and roll-call data.

<sup>&</sup>lt;sup>27</sup>Respective pooled, Republican, and Democratic correlations are 0.83, 0.40, and 0.16.

## **Empirical Approach**

As shown in Figure 3, there is a relatively weak relationship between candidates' rhetoric and their CF scores, the predominant, contribution based measure of candidates' positions. This raises questions about whether evidence in ongoing debates over questions related to candidate positions is dependent upon the use of a more indirect measure. As discussed previously, there are mixed theoretical expectations and empirical evidence regarding candidate responsiveness to the district and the relationship between extremism and electoral and fundraising success in primaries. Distinguishing between estimates of candidate positions based on platforms versus contributions can further clarify *which* features of campaigns are consistent with different conclusions about the current era of American politics.

First, we can examine basic bivariate relationships by platform-based versus contributionbased measures of candidate positions. Figure 4 plots districts' most recent two-party Democratic presidential vote share against candidates' positions in Panel A, candidates' positions against their share of the primary vote in Panel B, and candidates' positions against their share of direct itemized primary contributions in Panel C. Scatterplots on the left side use platform-based estimates of candidate positions, while plots on the right use existing contribution-based estimates of candidates' positions. I include only candidateyear observations which are covered by both measures in order to maximize comparability, and the plots are further broken out by year in Appendix D.

The trends in all three panels of Figure 4 look quite different across measures of candidate positions. Panel A shows that both Republicans' and Democrats' campaign platforms become more liberal as their districts become more Democratic, consistent with candidate responsiveness. However, evidence of such responsiveness is not present among candidates' CF scores, which become weakly more *conservative* in more Democratic districts. The patterns in Panels B and C look relatively similar, which is unsurprising given the

**Figure 4.** Comparing Responsiveness, Electoral Performance, and Fundraising Strength Across Candidate Position Measures, 2016 – 2024



*Note:* Loess curves fit separately by party, with Republicans in gray and Democrats in black. Includes candidates captured by both measures.

strong relationship between electoral and fundraising success. Democrats' primary vote and fundraising shares decrease quadratically from a campaign platform vertex around -1, which is one standard deviation more liberal than the sample average. Republicans' shares of primary vote and fundraising, however, decrease as their campaign platforms become more conservative, aside from the handful of Republicans with extremely liberal platforms. Finally, Democrats' vote and fundraising shares peak at CF scores of –1 and Republicans' at 1, but shares decrease *more* as CF scores become extreme compared to moderate.

Raw relationships suggest that measuring candidates' positions with their campaign platforms versus contribution networks may lead to conflicting conclusions about responsiveness to the district and electoral and financial returns to extremism in primaries. However, a number of glaring confounders in these bivariate relationships may be driving observed patterns as well as some of the differences between candidates' platforms and CF scores. In the case of candidate responsiveness to the district, there are rarely Republican incumbents in heavily Democratic districts and vice versa. This means that only nonincumbents, who are typically lower quality and less experienced than incumbents, are the only candidates running in districts very unsafe for their party. To account for this while examining responsiveness, I estimate following equation separately for Democrats and Republicans:

$$Position_{idt} = \tau District_{dt} + v Open_{idt} + \kappa GenChall_{idt} + \eta PrimChall_{idt} + \gamma_t + \epsilon_i$$
(2)

where Position<sub>*idt*</sub> stands in for two dependent variables, both of which increase with conservatism and were originally scaled to have mean 0 and SD 1: candidate *i*'s campaign platform score  $\omega$  from Equation 1 during the primary in district *d* in year *t*, and her static recipient CF Score. The key independent variable, District<sub>*dt*</sub>, represents district *d*'s Democratic two-party vote share from the presidential election held in or most immediately before year *t*. To account for differences in the average position across different types of candidates, indicator variables capture whether *i* was an open-seat candidate, a primary challenger, a prospective general election challenger, or an incumbent (omitted category) in primary *dt*. Year fixed effects are included to account for potential trends in extremism or progressivism over time and standard errors are clustered at the candidate level. Next, I investigate whether extremism is rewarded or punished by primary voters by analyzing the relationship between candidates' positions and primary vote share. In doing so, there are a couple of complicating factors. For one, Figure 4b suggests that relationships are non-linear. For another, the relationship between vote share and electoral success will depend entirely on the number of candidates in a primary field: 40% vote share is a loss in a two candidate primary, but potentially a blowout victory in a five candidate primary.<sup>28</sup> Additionally, partisan primary voters across districts may have different preferences for extreme versus moderate candidates. I address factors such as these in the following equation, which I estimate separately for Democrats versus Republicans, and using CF scores versus campaign platforms as the positioning measure:

$$PrimVoteShare_{ipt} = \beta_1 Position_{ipt} + \beta_2 Position_{ipt}^2 + \zeta NumCands_{pt} + \upsilon CandType_{ipt} + \mu (NumCands \times CandType)_{ipt} + \alpha_p + \gamma_t + \epsilon_{pt}.$$
 (3)

The outcome variable PrimVoteShare<sub>*ipt*</sub> is candidate *i*'s share of the vote in primary *p* in year *t*. Given the appearance of non-monotonic relationships in Figure 4b, I include both first and second order polynomial of the key explanatory variable Position<sub>*ipt*</sub>, candidate *i*'s position in primary *p* in year *t*. For the sake of interpretability, positions are demeaned (likewise reducing multicollinearity between linear and quadratic terms) and coded to increase with extremism in all models. The quadratic coefficient  $\beta_2$  captures how the relationship between position and primary vote share depends upon candidates' general deviation — whether extreme or moderate — from their party average, while the linear coefficient  $\beta_1$  estimates the additional change in primary vote share associated with candidates' positions increasing in extremism by one unit. To illustrate, consider two candidates of the same party, where one candidate is one unit more moderate than the party average (-

<sup>&</sup>lt;sup>28</sup>Primary electoral and financial performance results are unchanged when excluding primaries where one candidate received at least 95% of the vote or contribution share (see Appendix C).

1) and the other is one unit more extreme than the party average (1). Since the candidates' mean-centered positions are equidistant from their party's average, the expected change to primary vote share represented by  $\beta_2$  will be the same for both candidates. However, if  $\beta_1$  is negative, the candidate who is more extreme than the party's average will be expected to receive an additional electoral penalty while the candidate who is more moderate than the party's average will receive an advantage, and vice versa if  $\beta_1$  is positive.

By including district-party-census fixed effect  $\alpha_p$ , Equation 3 estimates the effect of candidate positions on primary vote share based only on variation among co-partisans who ran in the same district. This accounts for the time-invariant differences in voter preferences, supply of candidates, and political contexts across primary constituencies. However, I also include fixed effect  $\gamma_t$  to account for potential secular changes such as nationalization and presidential versus midterm years. Additionally, I control for the number of candidates running in a primary and candidate type as well as their interaction. It is challenging to make apples-to-apples comparisons of primary elections due to their highly variable field sizes and contextual dynamics, but these controls help account for the typical valence differences, field sizes, and vote shares expected in incumbent-challenger versus open seat contexts. Standard errors are clustered at the primary level.<sup>29</sup>

Investigating how candidates' positions relate to their share of primary fundraising is analogous to Equation 3, with the only difference being the dependent variable:

$$PrimContShare_{ipt} = \beta_1 Position_{ipt} + \beta_2 Position_{ipt}^2 +$$

 $\zeta \text{NumCands}_{pt} + v \text{CandType}_{ipt} + \mu (\text{NumCands} \times \text{CandType})_{ipt} + \alpha_p + \gamma_t + \epsilon_{pt}.$ (4)

Instead of her share of the primary vote, I calculate candidate i's share of the total direct itemized contributions received by candidates in primary p in year t. Like electoral per-

<sup>&</sup>lt;sup>29</sup>See Appendix C for primary electoral and fundraising performance results without fixed effects and controls.

formance, comparing candidates' primary fundraising performances can be challenging, but this operationalization enhances comparability in a number of ways. Direct contributions are subject to similar limits across sources, which helps to avoid the appearance of candidates dominating fundraising simply by virtue of one super PAC independently expending millions on their behalf. However, direct contribution portfolios can still be quite diverse, ranging from maxed-out contributions from large organizations to many smaller contributions from individual donors. Moreover, focusing on contribution share rather than raw amount minimizes the influence of outliers and more directly captures the relevant aspect of candidates' primary fundraising performance.

## **Conclusions Differ Markedly by Measure**

The findings based on Equation 2 and reported in Table 3 suggest that across districts, candidates' platforms — but not their contribution networks — are responsive to the partisanship of their prospective constituencies. As a district's Democratic presidential vote share increases by 10 percentage points, candidates' platforms are expected to become 10% of a standard deviation more liberal for Democrats and 16% of a standard deviation more liberal (or less conservative) for Republicans. In contrast, Democrats' CF scores actually become 4% of a standard deviation less liberal as district Democratic vote share increases by 10 percentage points, and there is no meaningful relationship between district partisanship and Republicans' CF scores. Republican non-incumbents' campaign platforms appear much more conservative than those of Republican incumbents, while Democratic primary challengers' are more moderate than Democratic incumbents' — but the CF scores of non-incumbents are substantially more extreme than those of incumbents across both parties. In Appendix D, I also show that there is little heterogeneity in platform and CF score responsiveness by year. Despite the fact that campaign platforms are highly responsive to district partisan lean, relying on existing measures would lead to the conclusion

	Campaign Platform Position		Recipient CF Score	
	Democrats	Republicans	Democrats	Republicans
District Dem. Partisanship	-0.010***	-0.016***	0.004***	0.000
	(0.001)	(0.002)	(0.001)	(0.001)
Open Seat Candidate	-0.015	0.425***	-0.102***	0.084***
	(0.039)	(0.045)	(0.029)	(0.023)
Primary Challenger	0.154**	0.503***	-0.105*	0.187***
	(0.048)	(0.049)	(0.045)	(0.036)
Prospective General Challenger	0.014	0.396***	-0.215***	0.161***
	(0.043)	(0.057)	(0.032)	(0.032)
Year Fixed Effects	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Observations	1,837	1,994	1,837	1,994
R-Squared	0.150	0.179	0.164	0.043

**Table 3.** Relationship Between District Partisanship and Candidate Positions,2016–2024

*Note:* Parameters from Equation 2 with candidate-clustered standard errors in parentheses. District partisanship is most recent Democratic two-party presidential vote share, ranging from 0 to 100. Dependent variables both increase with conservatism and were originally scaled to have mean 0 SD 1. \*p<0.05; \*\*p<0.01; \*\*\*p<0.001

that candidates are entirely unresponsive. In reality, candidates' campaign platforms, but not their contribution networks, vary systematically by district partisanship.

Within district, moderation appears more electorally advantageous in primaries than extremism when measured using contribution networks, but not campaign platforms. In Table 4, the coefficient on the quadratic term suggests that Democrats' primary vote share decreases the further their platform deviates from that of the average Democrat. Returning to an example from the previous section, two Democratic candidates with platforms one unit less liberal versus one unit more liberal than their party's average are each expected to receive a primary vote share reduction of 4.6 percentage points associated with their deviation from the average, all else being equal. However, the positive coefficient on the linear term also reveals that more extreme platforms are rewarded relative to more moderate platforms in Democratic primaries. In addition to their identical expected primary vote share penalties for deviating from the party average, the candidate with a platform one unit more liberal than the average Democrat is expected to receive an additional 3.5 per-

Position Measure:	Campaign Platform		Recipient CF Score	
	DV: Primary Vote Share			
	Democrats	Republicans	Democrats	Republicans
Candidate Position	0.035***	0.008	-0.108***	-0.046***
	(0.011)	(0.008)	(0.026)	(0.012)
Candidate Position <sup>2</sup>	-0.046***	-0.008	-0.128***	-0.056***
	(0.012)	(0.007)	(0.038)	(0.009)
District-Party-Census FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Year FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Observations	1,711	1,903	1,711	1,903
R-Squared	0.841	0.874	0.842	0.878

**Table 4.** Relationship Between Candidate Extremism and Primary Electoral Success, 2016–2024

*Note:* Parameters from Equation 3 with primary-clustered standard errors in parentheses. Both candidate position measures were demeaned, increase with extremism, and originally scaled to have mean 0 and SD 1. Controls include candidate type, number of candidates in primary, and their interaction. \*p<0.05;

\*\*p<0.01; \*\*\*p<0.001

centage points of the primary vote share, while the candidate with a platform one unit less liberal than average will receive an additional 3.5 percentage point *penalty*. Taken together, then, in Democratic primaries the expected penalty for adopting a platform one unit more moderate than the party average is 8.1 percentage points compared to a penalty of just 1.1 for a platform one unit more extreme than the party average, all else equal. In Republican primaries, there appears to be little relationship between candidates' platforms and their vote share.

Conversely, Table 4 suggests that candidates of both parties face much stronger primary electoral punishment for relatively extreme CF scores compared to relatively moderate CF scores. In addition to a penalty of 12.8 percentage points for deviating one unit from the average Democratic CF score in either direction, a Democrat who is one unit more liberal than average is expected to receive an additional decrease of 10.8 percentage points while the electoral penalty to a Democrat one unit less liberal than average will be reduced by 10.8 percentage points. Cumulatively, a Democrat with a CF score one unit less liberal than the party average is expected to receive a mere 2 percentage point penalty compared to a

23.6 percentage point penalty for a CF score one unit more liberal than average.<sup>30</sup> Penalties appear somewhat smaller yet analogous for Republicans, with coefficients on the linear and quadratic terms implying that a CF score one unit less conservative than the party average reduces Republicans' primary vote share by 1 percentage point compared to a 10.2 point reduction for a CF score one unit more conservative than average.

In addition to these primary electoral findings, Table 5 demonstrates that the same patterns — greater penalties to relatively extreme CF scores than to relatively moderate CF scores, but no such comparative advantage to adopting a moderate campaign platform — hold in the context of primary fundraising as well. Adding together the linear and quadratic estimates suggests that a CF score one unit more moderate than the party average actually increases candidates' expected contribution share by 3.6 percentage points in Democratic primaries and 1.4 percentage points in Republican primaries. In contrast, a CF score one unit more extreme than average is associated with total decreases in expected contribution shares of nearly 40 percentage points in Democratic primaries and nearly 30 points in Republican primaries. Measuring positions instead based on candidates' platforms paints quite a different picture: there is no significant financial penalty to adopting a relatively extreme platform in Republican primaries, and in Democratic primaries a platform one unit more extreme than average incurs a total 2.6 percentage point decrease in contribution share compared to a total 14.8 percentage point reduction for a platform one unit more moderate than average.

These findings are relatively consistent across subgroups and alternative specifications of the independent and dependent variables, all of which can be found in Appendix C. Consistent with Table 3, I show that even incumbents' and primary winners' CF scores do not grow significantly more liberal in more Democratic districts, nor do the CF scores of candidates in winnable open-seat primaries. Additionally, using indicators for primary winners and top fundraisers — a measure more standardized across primaries — pro-

<sup>&</sup>lt;sup>30</sup>See Appendix C for a graphical representation of the Democratic CF score versus platform results in Table 4.

Position Measure:	Campaign Platform		Recipient CF Score	
	DV: Share	DV: Share of Total Direct Primary Contributions		
	Democrats	Republicans	Democrats	Republicans
Candidate Position	0.061*	-0.002	-0.215***	-0.148***
	(0.024)	(0.017)	(0.052)	(0.030)
Candidate Position <sup>2</sup>	-0.087***	0.002	-0.179***	-0.134***
	(0.023)	(0.015)	(0.040)	(0.020)
District-Party-Census FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Year FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Observations	1,676	1,898	1,676	1,898
R-Squared	0.638	0.704	0.639	0.716

**Table 5.** Relationship Between Candidate Extremism and Primary Fundraising Success, 2016–2024

*Note:* Parameters from Equation 4 with primary-clustered standard errors in parentheses. Both candidate position measures were demeaned, increase with extremism, and originally scaled to have mean 0 and SD

1. Controls include candidate type, number of candidates in primary, and their interaction. \*p<0.05;

\*\*p<0.01; \*\*\*p<0.001

duces results qualitatively identical to those of the shares-based models in Tables 4 and 5.<sup>31</sup> I also find that the relationship between extremism and electoral and financial performance in primaries also does not differ substantially in districts safe versus unsafe for the party. Moreover, I reproduce Tables 3, 4, and 5 using two variations of CF scores which are still reliant on campaign contributions, yet may be more similar to the platform-based measure: dynamic CF, which fixes contributors' positions while re-estimating recipients each cycle, and DW-DIME, which projects candidates into the DW-NOMINATE space by applying machine learning to contributions and roll-call records. While candidates' DW-DIME scores are more responsive to their districts than their CF scores, other results with DW-DIME and dynamic CF scores are qualitatively similar to those obtained with original CF scores. Finally, I show that the results in Table 5 hold for both shares of contributions from individual donors and from PACs.

These results suggest that capturing candidates' positions with their campaign plat-

<sup>&</sup>lt;sup>31</sup>Plotting the average positions of primary winners versus losers and top versus non–top primary fundraisers over time in Appendix D also suggests that the average positions of all have become somewhat more extreme in more recent elections.

forms versus contribution networks leads to starkly different conclusions about the current era of American politics. However, jointly interpreting the seemingly disparate findings provides new substantive insights regarding nationalization and polarization. The fact that platforms are responsive to the district while contribution networks are unresponsive suggests that candidates' behavior has remained relatively district-tailored despite the nationalization of donor behavior. Within district, electoral and financial penalties to extreme contribution networks but not extreme campaign platforms is consistent with primary voters and donors supporting candidates who enjoy broad support from across the party *despite* their relatively extreme platforms. At the same time, it is relatively unsurprising to uncover large and significant relationships between candidates' CF scores and fundraising or electoral performances, as CF scores are themselves based on a subset of fundraising and money is the best available predictor of electoral success (Thomsen 2023). This endogeneity is a formidable obstacle to using contribution–based measures to assess relationships between candidates' positions and aspects of their performance in elections, highlighting a key benefit of a measure based directly on stated campaign positions rather than fundraising.

## **Discussion and Conclusion**

Candidate positioning has long been a cornerstone of both normative and positive political theory. It is therefore unsurprising that many important debates in American politics continue to revolve around the concept. In our nationalized era where a legislator's first successful election is typically her most difficult, whether the district still matters to candidates has critical implications for quality of dyadic responsiveness. And as primary elections have become increasingly consequential for election outcomes, understanding whether voters and donors reward extremism in primaries can shed light on how partisan primary systems may or may not contribute to congressional polarization. To date, evidence on these questions has been decidedly mixed and relies primarily on one aspect of candidates' activity to estimate their positions: campaign contributions. How responsive are candidates' stated positions to their prospective constituents, and how do candidates who articulate extreme positions fare in primaries?

Leveraging the most comprehensive collection of House campaign website platforms to date, I provide novel evidence that conclusions about the nature of polarization and nationalization in our current era may be highly dependent on how candidates' positions are measured. While the predominant approach of proxying positions with contribution networks suggests that candidates today are unresponsive to the partisan makeup of their districts, measuring positions based directly on campaign platforms shows that both Democrats and Republicans become more liberal as their districts become more heavily Democratic. Moreover, there appear to be major electoral and financial penalties to extremism in primaries when relying upon the predominant measurement approach, whereas candidates platforms suggest greater incentives for extremism than for moderation in primaries.

What exactly accounts for differences in platform-based and contribution-based estimates of candidates' positions, and consequently the results obtained using each? In Appendix E, I take the difference between candidates' platform rank ordering and CF score rank ordering to investigate how the extent of measure disagreement may relate to contextual factors of interest. First, I examine the relationship between candidates' rank difference and their logged contributions from out-of-state donors in federal elections over the course of their career, as nationalized attention from strategic partisan donors may pull candidates' contribution network away from their stated positions (Gimpel, Lee, and Pearson-Merkowitz 2008). Among those who raise up to around \$1 million from out of state, candidates' CF scores become less extreme compared to their platforms as their out of state contributions increase. Beyond \$1 million raised from out of state, however, the relationship reverses. One such case consistent with the latter is Democrat Amy McGrath, whose recent Senate and House challenges of well-known Republican incumbents allowed her to raise millions from outside of Kentucky. Despite adopting a platform in her 2018 run against Rep. Andy Barr which was less liberal than the platforms of 95% of sample Democrats, her CF score is *more* liberal than 70% of sample Democrats' CF scores.

In addition to financial support from out of state, I also examine whether the rank difference between candidates' platforms and CF scores relates to district partisanship and incumbency status in Appendix E. On average, CF scores appear less conservative than campaign platforms in heavily Republican districts and less liberal than campaign platforms in heavily Democratic districts. This comports with the differential district responsiveness of CF scores and platforms reported in Table 3: because platforms, but not CF scores, are systematically responsive to district partisanship, the difference between measures is largest in the most heavily partian districts. Moreover, compared to non-incumbents, incumbents' CF scores appear overwhelmingly more moderate than their platforms, likely due to their higher profile and institutional position attracting broader and more diverse bases of financial support.

While the findings presented here contribute to ongoing debates regarding responsiveness and the role of primary elections in polarization, the disagreement between the positions of candidates' contribution networks and campaign platforms has broader implications for any questions whose answers rely primarily or solely on the former. Estimating candidates' platform positions allows for not just an assessment of "robustness" of results to the use of multiple measures, but a more direct estimate of the concept of public platform announcement found in classic Downsian and Calvert-Wittman formal models of electoral competition. Future work should continue to investigate the factors shaping candidates' strategic platform positions, as well as how other stakeholders respond to candidates' platforms.

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# Appendix

## Contents

Α	Data Collection Details	1
	A.1 Workflow	1
	A.2 Sample Representativeness	4
В	Technical Scaling Details	4
	B.1 Text Processing Flow	4
	B.2 Estimation with wordfish	5
	B.3 Campaign Platforms "Clashing" with Partisanship	6
	B.4 Alternative Scalings	7
	B.5 Candidate Viability	8
	B.6 Top Discriminating Scaling Terms	8
С	Results: Alternative Specifications	9
	C.1 Responsiveness	9
	C.2 Primary Electoral Success	12
	C.3 Primary Fundraising Success	16
D	Change and Continuity Over Time	20
	D.1 Year-Specific Scalings	20
	D.2 Temporal Heterogeneity	21
E	Probing Differences Between Measures	23

## A Data Collection Details

### A.1 Workflow

**Identifying relevant candidates.** I used Ballotpedia.com to identify all candidates who appeared on a Republican or Democratic primary ballot in each district in 2016, 2018, 2020, 2022, and 2024, as well as take down the primary election date and candidate type (incumbent/open seat/challenger). Independent, write-in, and dropout candidates were excluded, as well as candidates who ran in the primaries in the table below.

While there is meaningful variation in ballot access and openness of primaries in included states, primaries held in the excluded locales in Table A1 are in a meaningfully different category than those included. First, I exclude "top-N" candidate primaries as voters and donors in such races must consider not just which candidate of a given party will advance to the general election, but whether a candidate of a given party will advance

Locale	Reason
Alaska, 2022 and 2024	Top-4
California	Top-2
Connecticut	Party Convention
Louisiana	Top-2
Utah	Party Convention
Virginia, 2016, Democratic: Districts 5,7,1,6,9,10	Party Convention
Virginia, 2016, Republican: Districts 3,8,5,11,7	Party Convention
Virginia, 2018, Democratic: District 5	Party Convention
Virginia, 2018, Republican: District 5,8,3,7,6	Party Convention
Virginia, 2020, Democratic: District 9	Party Convention
Virginia, 2020, Republican: District 8,5,10,11,4,7	Party Convention
Virginia, 2022, Republican: District 8,5,10,11	Party Convention
Washington	Top-2

Table A1. Excluded Primary Races

Source: Footnotes of FEC primary date calendars.

at all. This creates a qualitatively different set of strategic considerations for partisan participants, which in turn poses a qualitatively different set of strategic considerations for candidates. Unlike even a completely open primary, where highly strategic voters must nevertheless decide between influencing the selection of one party's nominee or the other, primary voters' decisions in top-N primaries may affect not just the type but the *presence* of both major parties' nominees.

Additionally, primaries which commence with a nominating convention are institutionally and procedurally quite different than the various filing fees and/or signature requirements for appearing on direct partisan primary ballots in other states. Even in states where these requirements are on the more restrictive end of the spectrum, they are common knowledge and relatively straightforward. Selection processes which include party conventions are likely far more amorphous: candidates must garner support from a very small and specific subsample of the broader primary constituency, whereas there are a nearly infinite number of configurations of public support which can satisfy even the most stringent signature requirements.

In Appendix C, I show that the paper's main results based on CF scores remain highly similar when including candidates who competed in primaries in CA, CT, UT, and WA. However, because the paper demonstrates that candidates' campaign platforms and CF scores are related very weakly, the results of the platform measurement model and down-stream models should be understood as characterizations of candidates competing in direct partisan primaries.

**Searching for campaign websites in real time.** As depicted in Figure A1, data on 2022 and 2024 primary candidates were collected in real time. Candidates' web pages were accessed as immediately as possible before their primary, always within a week of the election date. I first performed a web search for "[candidate name] for Congress [election year]". Official governmental websites and social media sites were ignored. If no website appearing to be the candidate's campaign website appeared in the first page of search results, I added the district (e.g. "AL-1") to the search terms. If nothing appeared,

#### Figure A1. Example Data Collection Workflow



I then consulted Politics1.com and Ballotpedia.com, which compile fairly reliable lists of candidates' campaign websites at various levels of government. If no non-social media website or non-governmental campaign website was found, I moved on to the next candidate. Although it is possible that some candidate websites eluded this data collection process, websites that were not found while deliberating searching via numerous steps were not readily accessible to members of the public, activists, or journalists, who would almost certainly devote less effort to find them.

**Searching for archived campaign websites.** For candidates who ran in 2016, 2018, and 2020, the process was identical to that outlined above, with an added step of accessing the archived website as it appeared at the relevant time via the Wayback Machine (archive.org). I first performed a web site for "[candidate name] for Congress [election year]". Some candidates ran in more recent elections and maintained a new website at the same URL which hosted their campaign website during the election year of interest. Because many candidates delete their campaign websites after losing election, I likewise consulted historic versions of Politics1.com and Ballotpedia.com. Once a potential historic campaign website URL was identified, I pasted it into the Wayback Machine and accessed the snapshot of the website most immediately before the date of the primary. While these archives ranged in time from very close to the primary to months before the primary, I also recorded the date of the archive version.

**Identifying issue positions.** The vast majority of campaign websites had clearly delineated pages or sections for policy platforms, issue positions, or candidate priorities. If the area devoted to positions was not readily obvious in the website architecture, I surveyed the entirety of the website for other places where one might find issue positions. I do not consider candidate biographies, endorsement lists, campaign updates, or volunteer/donation pages to be issue positions. Many incumbent candidates (and some candidates with state legislative experience) devoted a section of the website to their legislative achievements, and these were nearly always separate from issue position pages. I excluded pages devoted exclusively to legislative achievements, but some candidates relate positions on their issue pages to legislative achievements, all of which I include as issue positions. If a campaign website with issue position content was successfully accessed, the URL was recorded in a spreadsheet.

**Collecting issue position text.** Once issue position content was identified, I manually copied and pasted all of the associated positioning text — including the section header, issue stances, and candidate quotes — from each sub-issue page or section into one .txt file titled the candidate's name and election year. I also captured the website content exactly as it appeared with a combination of manual screen capture and automated screen capture

via the Awesome Screenshot extension on Google Chrome.

### A.2 Sample Representativeness

The following figure suggests that, aside from some other minor differences, candidates with more moderate CF scores are somewhat less likely to have campaign website platforms. However, in Appendix C I show that the results in the main paper based on CF scores among candidates who had platforms are virtually unchanged when including candidates who did not have platforms.





## **B** Technical Scaling Details

### **B.1** Text Processing Flow

To prepare the text of primary candidates' issue positions for scaling, I build a corpus of documents, or a collection of all individual primary campaign platforms. I then tokenize each document's text with terms standardized to all-lowercase and remove punctuation. Next, I preserve key non-unigram phrases found by compounding the separate terms.

To improve computing performance, I remove "stop words" such as "and", "for", and "of", which are used very frequently and provide negligible substantive information. I then reduce terms to their stems in order to combine terms that have the same central meaning yet slightly different suffixes and prefixes — for example, "reduce", "reduction", and "reducing" share the stem "reduc".

When utilizing unsupervised scaling methods, it is important to ensure that the dimension of interest — here, a left-right, issue-based dimension — is the dominant dimension structuring rhetorical discourse within the corupus. As such, it is beneficial to discard terms that are irrelevant to the dimension of interest and relevant to an orthogonal dimension within which the algorithm may get "stuck" (Grimmer and Stewart 2013; Egerod and Klemmensen 2020). I discard terms related to congressional procedure, which are overwhelmingly used by sitting legislators, as well as commonly-used geographical terms, in order to protect against identifying an incumbency-based dimension or region-based dimension. In practice, this refinement is inconsequential to the vast majority of primary

#### Table B1. Scaling Refinements

Procedural Terms Dropped	Non-Unigram Terms Included
"hr", "h.r", "co-chair", "congresswoman",	"first amendment", "1st amendment", "second amendment", "2nd
"congressman", "co-sponsor",	amendment", "planned parenthood", "right to bear arms", "mandatory
"reauthor", "codify", "chair",	minimum", "mandatory minimums", "mental health", "clean energy",
"caucus", "introduce", "introduced",	"sexual assault", "student loan", "student loans", "sexual violence",
"passage", "subcommittee","cosponsor",	"critical race theory", "religious freedom", "reproductive freedom",
"committee", "lawmaking", "lawmaker",	"freedom of speech", "freedom of expression", "freedom of religion",
"mayor", "congress", "chairman",	"cancel culture", "debt ceiling", "balanced budget", "common core",
"speaker", "legislature", "re-elect",	"build the wall", "sanctuary city", "sanctuary cities", "covid 19"
"hyperlink","website"	

candidates' position estimates as illustrated by the strong correlation between estimates with and without these terms and the non-unigrams shown in the left panel of Table B1. To improve computing time and drop other terms uninformative of the global dimension, I discard terms used in 100 campaign platforms or fewer — a lenient requirement given that the corpus consists of almost 5,000 campaign platforms.

The resulting  $\mathbf{N} \times \mathbf{M}$  document-feature matrix consists of j = 1, ..., m term columns, it = 1, ..., n candidate-year rows, and term frequencies as cell entries.

#### **B.2** Estimation with wordfish

wordfish (Slapin and Proksch 2008) is an unsupervised machine learning algorithm for scaling political text to infer the source's latent position on a single dimension. Based on a Poisson IRT model, wordfish uses an iterative expectation maximization algorithm due to the need to estimate both term-level and candidate-level parameters as a function of observed term usage.

The rate y at which primary candidate i uses term j in election year t is assumed to be drawn from a Poisson distribution, which is characterized by a single parameter  $\lambda$  representing both the expectation and variance. This parameter logarithmically links the probability distribution generating the observed term rate to the linear predictors of interest to be estimated:

$$y_{ijt} \sim Poisson(\lambda_{ijt})$$
$$\lambda_{ijt} = exp(\alpha_{it} + \psi_j + \beta_j * \omega_{it})$$

The key parameter is  $\omega$ , which stands in for candidate *i*'s latent primary campaign position in election *t*.  $\beta$  represents word *j*'s weight or, put differently, its importance in discriminating between campaign positions. A word fixed effect  $\psi$  captures the rate at which word *j* is used in general, and a candidate-year fixed effect  $\alpha$  captures the verbosity of candidate *i*'s campaign position text in election *t*.

Parameter estimation is initialized with start values consisting of "best guesses" based upon term frequencies. Term fixed effects  $\psi_j$  begin as term j's logged average count, while the fixed effect for the first candidate-year ( $\alpha_1$ ) is set to 0 and  $\alpha_{2,...,n}$  begin as the logged average word count relative to that of it = 1. Start values for term weights  $\beta$  and candidateyear positions  $\omega$  are the left and right singular vectors obtained from an SVD of the matrix of term and candidate-year residuals. Unsurprisingly, final estimates of  $\omega$  correlate highly with nonparametric estimates resulting from a simpler correspondence analysis as shown in the Alternative Scalings subsection. As such, the methodology from which my primary campaign positions derive bears strong resemblance to the augmented CA methodology used for Bonica's (2014) estimates of candidate ideology.

Estimation proceeds iteratively, with term parameters  $\psi$  and  $\beta$  first fixed at their start values and candidate-year parameters  $\omega$  and  $\alpha$  calculated conditionally on the expected term parameters. The following conditional log-likelihood is maximized for each candidate-year:

$$\sum_{j=1}^{m} (-\lambda_{ijt} + \ln(\lambda_{ijt}) * y_{ijt})$$

where

$$\lambda_{ijt} = exp(\alpha_{it} + \psi_j^{prev} + \beta_j^{prev} * \omega_{it}).$$

To identify the global directionality of candidate positions  $\omega$ , a pair of documents (candidate-years) are specified with an inequality constraint. Moreover, the mean of candidate positions across all years is equal to 0 and the standard deviation is set to 1.

Taking the expected values of candidate-year parameters  $\omega$  and  $\alpha$  obtained previously, term parameters  $\psi$  and  $\beta$  are then calculated conditionally with the following log-likelihood maximized for each term:

$$\sum_{it=1}^{n} (-\lambda_{ijt} + \ln(\lambda_{ijt}) * y_{ijt})$$

where

$$\lambda_{ijt} = exp(\alpha_{it}^{prev} + \psi_j + \beta_j * \omega_{it}^{prev}).$$

The overall log-likelihood of the model with the new parameter estimates is then calculated as the sum of the term log-likelihoods conditional upon the candidate-year loglikelihoods:

$$\sum_{j=1}^{m} \sum_{it=1}^{n} (-\lambda_{ijt} + \ln(\lambda_{ijt}) * y_{ijt}).$$

The candidate-year parameters are then re-calculated based upon the new term parameters, and the resulting candidate-year parameters are used to repeat the term parameter calculation. The conditional maximum likelihoods are calculated iteratively until the log-posterior reaches a convergence threshold of a one-millionth and the differences in parameter values from the previous iteration are under a hundred-millionth.

### **B.3** Campaign Platforms "Clashing" with Partisanship

-1: Elise Stefanik, NY-21-2018 (R). This platform focused on fostering US-Canada relations, expanding agricultural visa programs, benefits for veterans, bipartisan geopolitical

statements, diverse energy policy, climate change and environmental conservation, increasing healthcare access, strengthening education, and protecting civil liberties. Stances on key conservative issues, such as deregulating firearms, outlawing or restricting abortion, deporting undocumented immigrants, and advocation of anti-LGBTQ legislation, were notably absent.

**-0.72: Barbara Comstock, VA-10-2018** (**R**). This platform explicitly mentioned pursuing bipartisan policies and focused on increasing R&D in the technology and healthcare sectors, expanding transportation infrastructure, mental healthcare and jobs for veterans, ending sexual harassment inside and outside of Congress, increasing pay and benefits for federal employees, bringing girls and underrepresented students into STEM fields, higher education affordability.

**–0.5: Jeff Van Drew, NJ-2-2020** (**R**). This platform focused on college affordability, civil rights and civil liberties, equal pay for women, lowering healthcare costs, preventing off-shore drilling, and restoring the Voting Rights Act.

**–0.25: Don Young, AK-At large-2016 (R).** In addition to traditional Republican stances on the second amendment and weakening the Environmental Protection Agency, this platform focused on the rights of Native communities, protecting civil liberties, strengthening public education, criticizing elements of the Affordable Care Act while praising others, supporting organized labor, and increasing investments in infrastructure.

**0.19:** Ed Case, HI-1-2024 (D). In addition to traditional Democratic stances on environmental protection and higher education accessibility, this platform focused heavily on bipartisanship and ending partisan gridlock, as well as limited government, defending against terrorism, curtailing illegal immigration, and defending civil liberties.

**0.18:** Peter DeFazio, OR-4-2016 (D). In addition to traditional Democratic stances on consumer protections, this platform advocated for reducing federal spending and against capand-trade energy policies.

## **B.4** Alternative Scalings

The following figures show correlations above 0.95 between the main scaling specification and alternative scalings where tokens are left unrefined, simple unidimensional correspondence analysis is used, nonincumbents are excluded, and incumbents are excluded.



Figure B1. Relationship Between Main and Alternative Scalings

### **B.5** Candidate Viability

The following figures show the campaign platform distributions of incumbents and candidates who raised at least 10% of their primary's total receipts, which are similar to the overall sample distribution shown in the paper.



Figure B2. Platform Position Distributions of Viable Candidates

## **B.6** Top Discriminating Scaling Terms

The following table reports the estimated weights and fixed effects accompanying the top liberal and conservative terms listed in the main paper.

	Conservative	$\beta$ (weight)	$\psi$ (FE)	Liberal	$\beta$ (weight)	$\psi$ (FE)
1	crt	1.711	-3.832	community-bas	-2.073	-4.616
2	woke	1.694	-3.643	renter	-1.966	-4.604
3	tyrann	1.653	-3.961	evict	-1.931	-4.542
4	indoctrin	1.577	-3.159	equit	-1.847	-3.340
5	god	1.569	-2.045	reproduct	-1.688	-2.142
6	god-given	1.525	-3.400	lgbtqia	-1.636	-3.687
7	christian	1.508	-2.777	rental	-1.635	-4.096
8	socialist	1.475	-2.860	matern	-1.600	-3.269
9	tyranni	1.475	-3.310	dispar	-1.581	-3.054
10	communist	1.464	-2.894	underserv	-1.565	-3.565
11	unborn	1.461	-1.966	trauma	-1.514	-3.822
12	sanctiti	1.454	-2.970	indigen	-1.514	-3.952
13	pro-lif	1.449	-1.702	lewi	-1.506	-3.818
14	lawless	1.399	-3.970	pell	-1.485	-3.642
15	swamp	1.398	-3.349	childcar	-1.484	-2.799
16	alien	1.388	-2.339	lgbtq	-1.467	-2.102
17	womb	1.384	-3.799	high-capac	-1.459	-4.410
18	pelosi	1.359	-3.158	preschool	-1.448	-4.334
19	islam	1.358	-2.765	low-incom	-1.440	-2.569
20	evil	1.350	-3.107	pre-k	-1.420	-3.114

Table B2. Top 20 Most Conservative and Liberal Terms

## **C** Results: Alternative Specifications

#### C.1 Responsiveness

The following table modifies the main specification by interacting district partisanship with candidate type. While some nonincumbent types are significantly more unresponsive to the district than the omitted category of incumbents, even incumbents' CF scores do not become significantly more liberal as their districts grow more Democratic.

	Campaign Platform Position		Recipien	t CF Score
	Democrats	Republicans	Democrats	Republicans
District Dem. Partisanship	-0.009***	-0.016***	-0.001	-0.003
_	(0.002)	(0.004)	(0.002)	(0.002)
Open Seat Candidate	0.142	0.623***	-0.480***	0.048
-	(0.178)	(0.171)	(0.141)	(0.095)
Primary Challenger	0.402	-0.091	-0.777**	-0.149
	(0.263)	(0.208)	(0.252)	(0.205)
General Challenger	-0.086	0.337	-0.464***	-0.176
	(0.178)	(0.227)	(0.135)	(0.128)
District $\times$ Open	-0.003	-0.005	0.006**	0.001
	(0.003)	(0.004)	(0.002)	(0.002)
District $\times$ Prim. Chall.	-0.004	0.015**	0.010**	0.009
	(0.004)	(0.005)	(0.004)	(0.005)
District $\times$ Gen. Chall.	0.003	0.001	0.004	0.007**
	(0.003)	(0.005)	(0.002)	(0.002)
Year Fixed Effects	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Observations	1,837	1,994	1,837	1,994
R-Squared	0.152	0.186	0.175	0.049

Table C1. District Partisanship and Candidate Positions with Interactions

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following table modifies the main specification by replacing candidate type with an indicator for whether the candidate ran in an open seat primary in a district competitive or safe for their party, also interacted with district partisanship. Only the Republican platform model suggests especially strong responsiveness in winnable open seat primaries, as the overall effect of district partisanship in the Democratic CF score model remains positive (unresponsive) despite a significant negative interaction effect.

**Table C2.** Relationship Between District Partisanship and Candidate Positions by Primary Type, 2016–2024

	Campaign Platform Position Democrats Republicans		Recipient CF Score	
			Democrats	Republicans
District Dem. Partisanship	-0.009***	-0.010***	0.007***	0.003***
Ĩ	(0.001)	(0.001)	(0.001)	(0.001)
Winnable Open Seat	0.014	0.673***	0.278**	0.172
-	(0.163)	(0.134)	(0.096)	(0.093)
District $ imes$ Winnable Open	-0.002	-0.011***	-0.004**	-0.004
Ĩ	(0.003)	(0.003)	(0.002)	(0.002)
Year Fixed Effects	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Observations	1,837	1,994	1,837	1,994
R-Squared	0.145	0.121	0.128	0.019

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following table shows that a lack of CF score responsiveness to district partianship persists even after subsetting to primary winners.

	Campaign Platform Position		Recipient CF Score	
	Democrats	Republicans	Democrats	Republicans
District Dem. Partisanship	-0.010***	-0.017***	0.003*	0.000
	(0.002)	(0.002)	(0.001)	(0.001)
Open Seat Candidate	-0.074	0.332***	-0.098**	0.048
-	(0.052)	(0.063)	(0.038)	(0.026)
Primary Challenger	0.004	0.660***	-0.007	0.228**
, 0	(0.127)	(0.081)	(0.130)	(0.078)
General Challenger	-0.013	0.350***	-0.235***	0.185***
0	(0.054)	(0.077)	(0.040)	(0.032)
Year Fixed Effects	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Observations	933	925	933	925
R-Squared	0.157	0.120	0.299	0.126

Table C3.	Relationship	Between	District	Partisanship	and Position	of Primary
Winner, 20	16–2024			-		-

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following table shows that dynamic CF score responsiveness is similar to the responsiveness of static CF scores reported in the main paper.

Table C4.	Relationship	Between	District	Partisanship	and (	Candidate	Positions
with Dyn	amic CF Score	S					

	Campaign Pl	atform Position	Dynamic CF Score		
	Democrats	Republicans	Democrats	Republicans	
District Dem. Partisanship	-0.010***	-0.016***	0.003***	0.000	
1	(0.001)	(0.002)	(0.001)	(0.001)	
Open Seat Candidate	-0.015	0.425***	-0.103***	0.124***	
1	(0.039)	(0.045)	(0.028)	(0.024)	
Primary Challenger	0.151**	0.515***	-0.101*	0.227***	
, ,	(0.048)	(0.049)	(0.047)	(0.038)	
General Challenger	0.016	0.393***	-0.225***	0.205***	
0	(0.043)	(0.056)	(0.032)	(0.032)	
Year Fixed Effects	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Observations	1,834	1,984	1,834	1,984	
R-Squared	0.149	0.182	0.156	0.055	

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following table shows that DW-DIME is more responsive than the static CF scores reported in the main paper.

	Campaign Platform Position		DW-DIME Score		
	Democrats	Republicans	Democrats	Republicans	
District Dem. Partisanship	-0.009***	-0.015***	-0.005***	-0.006***	
-	(0.001)	(0.002)	(0.001)	(0.001)	
Open Seat Candidate	-0.073	0.466***	-0.016	0.077*	
1	(0.038)	(0.047)	(0.019)	(0.030)	
Primary Challenger	0.035	0.513***	-0.042	0.226***	
, 0	(0.049)	(0.063)	(0.026)	(0.044)	
General Challenger	-0.007	0.353***	-0.061**	0.150***	
Ū	(0.044)	(0.065)	(0.023)	(0.043)	
Year Fixed Effects	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Observations	1,522	1,340	1,522	1,340	
R-Squared	0.156	0.180	0.122	0.064	

**Table C5.** Relationship Between District Partisanship and Candidate Positions with DW-DIME Scores

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following table shows that CF score responsiveness reported in the main paper is highly similar when including the CF scores of candidates who did not have campaign platforms.

Table C6. Relationship Between District Partisanship and All CF Scores

	Democrats	Republicans
District Dem. Partisanship	0.004***	0.000
_	(0.001)	(0.001)
Open Seat Candidate	-0.110***	0.102***
-	(0.026)	(0.021)
Primary Challenger	-0.126**	0.172***
	(0.039)	(0.034)
General Challenger	-0.207***	0.147***
0	(0.029)	(0.030)
Year Fixed Effects	$\checkmark$	$\checkmark$
Observations	2,602	2,686
R-Squared	0.149	0.034

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following table shows that including primary candidates in CA, WA, CT, and UT does not meaningfully change the main CF score responsiveness results.

Table C7. CF Score Responsiveness Including CA, WA, CT, and UT, 2016–2024

	Democrats	Republicans
District Dem. Partisanship	0.001**	0.001*
	(0.000)	(0.000)
Open Seat Candidate	-0.115***	0.084***
-	(0.023)	(0.022)
Primary Challenger	-0.121***	0.178***
	(0.035)	(0.035)
General Challenger	-0.265***	0.154***
0	(0.020)	(0.021)
Year Fixed Effects	$\checkmark$	$\checkmark$
Observations	2,399	2,430
R-Squared	0.132	0.042

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

### C.2 Primary Electoral Success

The following figure graphically depicts the relationships between extremism and primary vote share among Democrats reported in Table 4. Candidates' primary vote share decreases exponentially as their platform deviates far from the party average in either direction, yet this penalty is far steeper for platforms less extreme than average compared to more extreme than average, as highlighted by the expected penalty to platforms one unit more extreme versus one unit less extreme than average at the dashed lines. Conversely, candidates' primary vote share penalty is much steeper for CF scores which are more extreme than average compared to less extreme than average.

Figure C1. Graphical Representation of Democratic Results from Table 4



The following table shows that replacing the primary vote share dependent variable with an indicator for primary victory results in less precise estimates for platform models, but qualitatively similar results overall.

Table C8.	Relationship	Between	Candidate	Extremism	and	Primary	Victory,
2016-2024							

Position Measure	Campaign Platform		Recipient CF Score		
		DV: Won Pr	imary (0/1)		
	Democrats	Republicans	Democrats	Republicans	
Candidate Position	0.062	-0.023	-0.257*** (0.068)	-0.111*** (0.033)	
Candidate Position <sup>2</sup>	-0.080* (0.032)	0.005 (0.019)	-0.281*** (0.079)	$-0.144^{***}$ (0.024)	
District-Party-Census FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Year FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Observations	1,711	1,903	1,711	1,903	
R-Squared	0.531	0.610	0.537	0.619	

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following table shows that excluding primaries where one candidate received at least 95% of the vote does not meaningfully change the original results.

Position Measure:	Campaign Platform		Recipient CF Score	
		DV: Primary	Vote Share	
	Democrats	Republicans	Democrats	Republicans
Candidate Position	$0.034^{**}$	0.005	-0.111*** (0.025)	-0.044*** (0.012)
Candidate Position <sup>2</sup>	(0.011) -0.049*** (0.012)	-0.008 (0.006)	(0.023) $-0.124^{***}$ (0.035)	-0.055*** (0.009)
District-Party-Census FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Year FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Observations	1,527	1,729	1,527	1,729
R-Squared	0.782	0.824	0.783	0.830

**Table C9.** Relationship Between Candidate Extremism and Primary Electoral Success, Excluding Primaries w/Candidate Receiving  $\geq$  95% Vote, 2016–2024

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following table shows that using dynamic CF scores instead of static CF scores makes little difference for the primary electoral success results.

**Table C10.** Relationship Between Candidate Extremism and Primary Electoral Success with Dynamic CF Scores, 2016–2024

Position Measure:	Campaign Platform		Dynami	Dynamic CF Score	
	DV: Primary Vote Share				
	Democrats	Republicans	Democrats	Republicans	
Candidate Position	0.035*** (0.011)	0.008 (0.008)	-0.107*** (0.024)	-0.039*** (0.011)	
Candidate Position <sup>2</sup>	-0.046*** (0.012)	-0.008 (0.007)	-0.102*** (0.025)	-0.050*** (0.008)	
District-Party-Census FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Year FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Observations	1,708	1,894	1,708	1,894	
R-Squared	0.841	0.875	0.842	0.878	

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following table shows that using DW-DIME instead of CF scores weakens the primary electoral results somewhat, but this may be partly due to differences in sample coverage as platform results also weaken somewhat among the DW-DIME sample.

Position Measure:	Campaig	Campaign Platform		DW-DIME Score		
		DV: Primar	Vote Share			
	Democrats	Republicans	Democrats	Republicans		
Candidate Position	0.028	0.005	-0.155*	0.005		
Candidate Position <sup>2</sup>	-0.050** (0.017)	(0.011) -0.002 (0.009)	-0.299 (0.173)	-0.026 (0.021)		
District-Party-Census FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		
Year FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		
Observations	1,419	1,267	1,419	1,267		
R-Squared	0.863	0.902	0.862	0.902		

**Table C11.** Relationship Between Candidate Extremism and Primary Electoral Success with DW-DIME, 2016–2024

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following table shows that including CF scores of candidates without campaign platforms makes little difference for the primary electoral results.

Table C12. Relationship Between All CF Scores and Primary Electoral Success, 2016–2024

	Democrats	Republicans
Candidate Position	-0.101***	-0.058***
	(0.019)	(0.010)
Candidate Position <sup>2</sup>	-0.107***	-0.066***
	(0.020)	(0.008)
District-Party-Census FE	$\checkmark$	$\checkmark$
Year FE	$\checkmark$	$\checkmark$
Controls	$\checkmark$	$\checkmark$
Observations	2,415	2,554
R-Squared	0.812	0.859
*	. 0.001	

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following table shows that including CF scores of candidates who ran in CA, WA, CT, and UT makes little difference for the primary electoral results.

**Table C13.** Relationship Between CF Score Extremism and Primary Electoral Success Including CA, WA, CT, and UT, 2016–2024

	DV: Primary Vote Share		
	Democrats	Republicans	
CF Score	-0.097***	-0.045***	
	(0.020)	(0.010)	
CF Score <sup>2</sup>	-0.107***	-0.058***	
	(0.025)	(0.008)	
District-Party-Census FE	$\checkmark$	$\checkmark$	
Year FE	$\checkmark$	$\checkmark$	
Controls	$\checkmark$	$\checkmark$	
Observations	2,273	2,339	
R-Squared	0.848	0.875	

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following figure shows that primary voters respond similarly to extremism in safe and competitive/unsafe districts.



**Figure C2.** Relationship Between Candidate Extremism and Primary Electoral Success by District Safety

The following figure suggests that the main primary electoral success results (FE + controls) are relatively robust to dropping FEs (controls only), but dropping controls changes results substantially, especially in CF score models. This is expected given the consequentiality of number of candidates and candidate type for primary vote share.

**Figure C3.** Relationship Between Candidate Extremism and Primary Electoral Success by Model Specification



### C.3 Primary Fundraising Success

The following table suggests that replacing the dependent variable with a binary indicator for top direct primary fundraiser slightly weakens estimates of the relationships between extremism and primary fundraising performance.

Position Measure:	Campaign Platform		Recipient CF Score	
	DV: Raised	Most in Direct P	rimary Contri	butions (0/1)
	Democrats	Republicans	Democrats	Republicans
Candidate Position	0.063	-0.008	-0.233**	-0.175***
	(0.034)	(0.023)	(0.073)	(0.039)
Candidate Position <sup>2</sup>	-0.107***	0.008	-0.190***	-0.152***
	(0.031)	(0.020)	(0.048)	(0.024)
District-Party-Census FE	√	$\checkmark$	√	$\checkmark$
Year FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Observations	1,676	1,898	1,676	1,898
R-Squared	0.495	0.574	0.495	0.586

**Table C14.** Relationship Between Candidate Extremism and Top PrimaryFundraiser, 2016–2024

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following table suggests that dropping primaries where one candidate raised at least 95% of the total direct contributions does not meaningfully change the primary fundraising results.

**Table C15.** Relationship Between Candidate Extremism and Primary Fundraising Success, Excluding Primaries w/Candidate Raising  $\geq$  95% Funds, 2016–2024

Position Measure:	Campaign Platform		Recipien	t CF Score
	DV: Sha	re of Total Direc	t Primary Con	tributions
	Democrats	Republicans	Democrats	Republicans
Candidate Position	0.055* (0.025)	-0.006 (0.020)	-0.239*** (0.057)	-0.182*** (0.038)
Candidate Position <sup>2</sup>	-0.084** (0.026)	-0.001 (0.017)	-0.173*** (0.037)	-0.159*** (0.025)
District-Party-Census FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Year FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Observations	900	1,037	900	1,037
R-Squared	0.422	0.466	0.429	0.498

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following table suggests that results among Republicans weaken when replacing static CF scores with dynamic CF scores, although Democratic results are unchanged.

Position Measure:	Campaign Platform		Dynamic CF Score	
	DV: Sha	re of Total Direc	t Primary Con	tributions
	Democrats	Republicans	Democrats	Republicans
Candidate Position	$0.061^{*}$ (0.024)	0.000 (0.017)	-0.235*** (0.050)	-0.043 (0.026)
Candidate Position <sup>2</sup>	-0.088*** (0.023)	0.002 (0.015)	-0.171*** (0.037)	0.001 (0.015)
District-Party-Census FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Year FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Observations	1,673	1,890	1,673	1,890
R-Squared	0.638	0.705	0.641	0.706

**Table C16.** Relationship Between Candidate Extremism and Primary Fundraising Success with Dynamic CF Scores, 2016–2024

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following figure shows that extremism is not significantly more financially advantageous in primaries held in safe districts compared to competitive/unsafe districts.

**Figure C4.** Relationship Between Candidate Extremism and Primary Fundraising Success by District Safety



The following table suggests that results weaken slightly when using DW-DIME instead of CF scores, however this may be due to sample differences as platform results among candidates with DW-DIME scores are likewise weaker.

Position Measure:	Campaign Platform		DW-DI	DW-DIME Score	
	DV: Share of Total Direct Primary Contributions				
	Democrats	Democrats Republicans Democrats Republi			
Candidate Position	0.017	-0.007	-0.370** (0.128)	-0.131**	
Candidate Position <sup>2</sup>	-0.071* (0.032)	0.015 (0.022)	(0.123) -0.390 (0.332)	(0.043) $-0.129^{*}$ (0.058)	
District-Party-Census FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Year FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Observations	1,402	1,294	1,402	1,294	
R-Squared	0.687	0.763	0.692	0.769	

**Table C17.** Relationship Between Candidate Extremism and Primary Fundraising Success with DW-DIME, 2016–2024

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following table shows that including CF scores of candidates who did not have campaign platforms does not meaningfully alter original CF score results.

**Table C18.** Relationship Between All CF Scores and Primary Fundraising Success, 2016–2024

	Democrats	Republicans
Candidate Position	-0.205***	-0.158***
Candidate Position <sup>2</sup>	(0.044) -0.180*** (0.034)	$-0.115^{***}$ (0.014)
District-Party-Census FE	(0.001)	(0.011)
Year FE	$\checkmark$	$\checkmark$
Controls	$\checkmark$	$\checkmark$
Observations	2,377	2,551
R-Squared	0.594	0.702

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following tables show that the main fundraising results are relatively consistent when broken out by individual or PAC contributions.

**Table C19.** Relationship Between Candidate Extremism and Fundraising Success Among Individual Donors, 2016–2024

Position Measure:	Campaign Platform		Recipie	Recipient CF Score	
	DV: Share of	Total Direct Inc	dividual Prima	ry Contributions	
	Democrats	Republicans	Democrats	Republicans	
Candidate Position	$0.057^{*}$	-0.002	-0.229*** (0.053)	$-0.150^{***}$	
Candidate Position <sup>2</sup>	-0.083*** (0.024)	0.006 (0.015)	-0.187*** (0.039)	-0.137*** (0.019)	
District-Party-Census FE	√	$\checkmark$	$\checkmark$	$\checkmark$	
Year FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Observations	1,667	1,895	1,667	1,895	
R-Squared	0.620	0.686	0.623	0.699	

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Position Measure:	Campaign Platform		Recipient CF Score	
	DV: Share	of Total Direct P	C Primary Contributions	
	Democrats	Democrats Republicans		Republicans
Candidate Position	0.105*** (0.030)	-0.024 (0.018)	-0.215*** (0.059)	-0.139*** (0.032)
Candidate Position <sup>2</sup>	-0.074* (0.030)	-0.002 (0.017)	-0.194*** (0.054)	-0.124*** (0.022)
District-Party-Census FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Year FE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Controls	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Observations	1,384	1,640	1,384	1,640
R-Squared	0.651	0.733	0.650	0.740

**Table C20.** Relationship Between Candidate Extremism and Fundraising Success Among PACs, 2016–2024

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following table shows that the primary fundraising results using CF scores are similar when including the CF scores of candidates in CA, WA, CT, and UT.

**Table C21.** Relationship Between CF Score Extremism and Primary Fundraising Success Including CA, WA, CT, and UT, 2016–2024

	DV: Share of Total Direct Primary Contributions		
	Democrats	Republicans	
CF Score	-0.205***	-0.163***	
	(0.044)	(0.028)	
CF Score <sup>2</sup>	-0.179***	-0.146***	
	(0.036)	(0.019)	
District-Party-Census FE	$\checkmark$	$\checkmark$	
Year FE	$\checkmark$	$\checkmark$	
Controls	$\checkmark$	$\checkmark$	
Observations	2,231	2,304	
R-Squared	0.671	0.701	

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

The following figure suggests that the main primary fundraising success results (FE + controls) are relatively robust to dropping FEs (controls only), but dropping controls leads to exaggerated effect sizes. This is expected given the consequentiality of number of candidates and candidate type for primary fundraising share.

**Figure C5.** Relationship Between Candidate Extremism and Primary Fundraising Success by Model Specification



## D Change and Continuity Over Time

### **D.1** Year-Specific Scalings

The following figure shows correlations above 0.95 between platforms positions scaled separately by year and pooled across elections.

Figure D1. Relationship Between Pooled and Year-Specific Scaling



The following tables show substantial continuity as well as new issue emergence in the top liberal and conservative terms from year-specific scaling.

			•	
2016	2018	2020	2022	2024
community-bas	pre-k	renter	evict	community-bas
pell	disproportion	equit	renter	underserv
pre-k	apprenticeship	tran	pell	socioeconom
childhood	low-incom	lgbtqia	equit	dispar
seeker	good-pay	evict	rental	equit
hub	pell	bodili	community-bas	caregiv
broadband	matern	lgbtq	mortal	insulin
public-priv	childcar	dispar	reproduct	literaci
lewi	pathway	rental	lgbtqia	tailor
nanci	reproduct	cancel	matern	public-priv
underserv	woman'	reproduct	dental	evict
reproduct	color	detent	apprenticeship	preschool
servicememb	lgbtq	community-bas	tuition-fre	tuition-fre
matern	bump	low-incom	indigen	disord
absente	inclus	juli	underserv	contracept
good-pay	high-qual	racial	corridor	diabet
opioid	priorit	incarcer	good-pay	holist
contracept	epidem	disproportion	high-capac	collabor
scholarship	violenc	racism	nutrit	childcar
high-spe	women'	inequ	low-incom	reproduct

Table D1. Top 20 Most Liberal Terms by Year

2016	2018	2020	2022	2024
militia	god	god	woke	ronald
tyrann	unborn	swamp	tyrann	woke
indoctrin	properti	womb	god-given	crt
pro	obamacar	unborn	crt	keyston
articl	liberti	pro-lif	tyranni	lawless
christian	shall	sanctiti	indoctrin	xl
unalien	amnesti	christian	god	islam
claus	pro-lif	socialist	evil	god-given
dr	china	god-given	censorship	socialist
womb	liber	tyrann	pelosi	tyrann
gold	said	tyranni	alien	evil
socialist	infring	alien	sanctiti	radic
god	concept	patient-cent	communist	joe
deem	bureaucrat	pro	christian	god
sovereign	illeg	creator	socialist	unalien
founder	bear	shall	nanci	unborn
unconstitut	constitut	bless	unborn	alien
alien	realli	islam	liber	reagan
shall	happi	communist	lawless	christian
sovereignti	word	infring	speech	pour

Table D2. Top 20 Most Conservative Terms by Year

## D.2 Temporal Heterogeneity

The following figures show the party-specific distributions of platforms and CF scores by candidate type and year, with averages marked by dashed lines. Some modest patterns are present. Campaign platforms and CF scores capture small increases in partisan polarization of incumbents and open seat candidates over the period. Democratic primary challengers' platforms became more liberal after 2018 and their CF scores became more liberal after 2016. While there do not appear to be dramatic and and durable differences between the distributions of campaign platforms across candidate types, the CF score distributions of Democrats running in Republican incumbent races (Democratic general election challengers) appear to have far less spread than the CF score distributions of other candidate types.



Figure D2. Distribution of Positions by Party, Year, and Candidate Type

The following figure reports coefficients on terms interacting district partisanship with year indicators as a modification of the main district responsiveness specification. The results show that, overall, there were not major differences in responsiveness of platforms or CF scores from election to election. Relative to the omitted year of 2016, the only significant interactions suggest that Republicans' CF scores were especially unresponsive to the district in 2020 while their platforms were significantly more responsive to the district in 2024.



Figure D3. Responsiveness Year Interaction Terms

The following figures break Figure 4 out by year. CF score and platform responsiveness appears highly stable over time while relationships between candidate positioning and primary success are more variable, especially with platform-based measures.







Figure D5. CF Score Responsiveness, Primary Performance, and Fundraising

Because it is difficult to interpret the relationships between candidate positions and primary success in the previous figures due to wide variation in primary field size and more, the following figures provide a simpler interpretation by showing how the average primary winner and top fundraiser positions changed over the period. The platforms and CF scores of primary winners and top fundraisers appear to have become increasingly polarized by party over the period. However, this also appears to be true of non-winners and non-top fundraisers, although they are not a perfect baseline due to their varying degrees of success and different number of cases from winners.

Figure D6. Average Positions Among Winners and Losers Over Time



## **E** Probing Differences Between Measures

The results in the paper make it clear that campaign platform-based positions and CF scores are sufficiently different to lead us to different conclusions about responsiveness and primary returns to extremism in the current era. Determining precisely why and how these measures differ is extremely challenging for a number of reasons. First, they rely on different sources of data which are also not really comparable. CF scores are based on contribution amounts, while platform positions are based on word usage. Second, there is no measure constituting the ground truth of candidate positions. While NOMINATE is often treated as the gold standard of ideal points due to its primacy and being based on an

actual legislative behavior, it is not without its own measurement issues. Moreover, it need not be the case empirically that campaign behavior is predictive of legislative behavior.

Because they cannot be directly compared vis-a-vis a ground truth, the best that can be done to compare candidates' positions based on their campaign platforms versus contribution networks is to examine how each measure — or their difference — relates to other variables of interest. In this way, the substantive results in the paper also contribute to our understanding of the differences between campaign platform positions and CF scores: platforms are highly responsive to district partisanship while CF scores are not, and CF score moderation is associated with stronger electoral and financial performance in primaries than CF score extremism while the same is not true of campaign platforms.

The following figures build on these insights by attempting to further clarify what explains differences between the measures. Because the two measures cannot be directly compared, I subtracted candidates' rank based on campaign platform from their rank based on CF score. Candidates with positive rank differences have CF scores which are ranked as more conservative than their platforms while a negative rank difference indicates a CF score which is more liberal than their platform, and the absolute value of the rank difference grows as candidates' CF scores and platforms become more different.

The first figure suggests that, until candidates raise around \$1M in funds from out of state over their career, their platform becomes more liberal/less conservative relative to their CF score as their funds from out-of-state donors increase. However, past this threshold the relationship reverses such that CF scores become more liberal/less conservative relative to platforms as their out-of-state contributions increase. The second figure suggests that rank difference is strongly related to district presidential vote, with the CF scores of candidates in heavily Democratic districts appearing much less liberal/more conservative than their platforms suggest while the CF scores of candidates in heavily Republican districts appear much more liberal/less conservative than their platforms suggest. The third figure demonstrates that incumbents' CF scores (especially among Democrats) tend to look much more moderate than their platforms suggest.



**Figure E1.** Out-of-State Contributions and Rank Difference Between CF Score and Platform

**Figure E2.** Relationship Between District Partisanship and Ranking Difference Between CF Score and Platform



**Figure E3.** Density of Ranking Differences Between CF Score and Platform by Party and Incumbency Status

