Characterizing Chief Executives: Presidential and Congressional Preferences and their Impact on Lawmaking, Agency Budgeting, and Unilateral Executive Action, 1874-2010

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Abstract

Investigating the nature of executive and legislative interactions is critical for understanding the politics and performance of presidential systems. Characterizing the preferences of the elites involved is essential, but it is also challenging because the elites involved often take positions on different issues and they are likely motivated by strategic considerations. To help circumvent these difficulties, we use the electoral connection that is common to elected officials to help measure executives' policy preferences. So doing not only allows us to characterize the policy preferences of executives who do not take public positions - which we demonstrate by estimating the policy preferences of U.S. presidents and their challengers from 1874-2010 and California governors from 1994-2010 - but the resulting measures confirm core intuitions that have been hard to demonstrate using extant measures. Examining the effect of executive-legislative preference congruence on: legislative productivity (1877-1996), agency budgeting (1933-2006), and the issuance of executive orders (1945-2001) refines our substantive understanding of inter-branch relations by providing a more precise account of the nature of executive politics.

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The relationship between the executive and legislative branches has wide reaching consequences for assessing government activity and performance. In studies of American politics, for example, scholars have argued that inter-branch disagreement impedes legislative productivity (e.g., Brady and Volden 1998; Krehbiel 1996,1998; Chiou and Rothenberg 2009), and affects the selection of and delegation to judges (e.g., Rohde and Shepsle 2007; Clark 2011; Bailey and Maltzman 2012) and bureaucrats (e.g., Epstein and O'Halloran 1999; Nokken and Sala 2000; Snyder and Weingast 2000). Such concerns are not restricted to the American context, however, as they are relevant for any government where the executive is institutionally separated from the legislature.

Evaluating the consequences and implications of inter-branch interactions requires locating the policy preferences of chief executives alongside their legislative counterparts. This is no easy task. There are many measures that purport to characterize legislators' policy preferences (e.g., Poole and Rosenthal 1997; Clinton et al. 2004; Bonica 2014), but scholars have yet to agree on how best to measure the preferences of chief executives. Partisanship is too coarse to provide much insight into the policy preferences of executives and legislators because we know that presidents from the same party often differ in their policy views, and presidential preferences are sometimes not shared by co-partisans in the legislature. More nuanced measures attempt to compare executives' public positions on roll call votes (McCarty and Poole 1995) and outcomes (Treier 2010) to votes taken by legislators. This approach is important and it launched a literature focused on "bridging" elites' positions across institutions, but there are reasons to worry about using public presidential positions as a measure of policy preferences. Not only are presidents thought to be strategic in the positions they take (Kernell 1997; Canes-Wrone 2006), but the act of taking a public position may also shift the meaning of the roll call vote by making the vote a partial referendum on the president (Kingdon 1989).

We argue that it is possible to take on this critical issue for studying legislator and executive relations and measure the policy preferences of executives alongside those of legislators by relying on the electoral incentives that legislators and executives are thought to share.

Our approach is generalizable, but we estimate executive ideal points on a common scale with legislators' ideal points without relying on the public positions of executives for United States presidents between 1874 and 2010 and gubernatorial candidates in California between 1994 and 2010.

To demonstrate the predictive validity of our electoral-based measure of executive ideal points, we show that it refines our understanding of executive-legislative relations in the United States in several important domains. Not only are presidents more moderate than analyses of the sparse number of public positions taken by presidents would suggest, but analyses using our measures confirm previously elusive core intuitions about the nature of executive and legislative relations. In particular, we show that divergence in presidential and congressional preferences is correlated with the following government outcomes: (1) decreased legislative productivity between 1877 and 1996; (2) increased differences between presidential budget requests and enacted congressional appropriations between 1933 and 2006; and (3) decreased issuance of executive orders between 1945 and 2001. While these findings are expected, they are notable because extant measures are unable to statistically substantiate them. In contrast, our measure reveals statistically meaningful relationships in each.

Our argument proceeds as follows. In section one, we outline why it is potentially problematic to estimate presidential preferences using only public positions. Section two motivates our alternative approach which involves leveraging an assumption about the nature of the electoral connection to estimate presidential preferences for every Congress between 1874 and 2010, and compares our resulting measures to existing estimates of presidential ideology. Section three provides a validation of our approach by exploring three prominent areas of executive-legislative interaction within the United States - lawmaking, budgeting, and unilateral executive action - to show how our measure refines our substantive understanding of each. Section four highlights the applicability of our approach to alternative political contexts where public positions are not available by predicting the ideal points of presidential challengers between 1874 and 2010 and California governors between 1994 and

2010. Section five concludes, and the online supporting information demonstrates the robustness of the measure and substantive conclusions to a wide variety of alternative tests and specifications.

1 Measuring Presidential Preferences

Given the importance of characterizing the preferences of political elites for both describing and understanding politics in a system with separated powers, it is no surprise that a great deal of attention has been devoted to the measurement of such preferences. Thus, a number of approaches have been used to place the president and Congress on a common scale that permits scholars to explore the level of preference divergence. The simplest measure equates partisanship and preferences - i.e., if the president and Congressional majority belong to the same party, they are assumed to share common preferences. The assumption that partisanship and preferences are synonymous, however, leads to limited characterizations. Unified government is a description of both ideological and institutional components. Periods of unified government certainly indicate periods of greater ideological comity between the president and Congress (though there is variance in the degree of ideological agreement across different periods of unified government), but there is also an institutional feature: when the president's co-partisans control the legislature, he will be more willing to count on leaders of Congress to use their institutional rights (e.g., agenda-setting - see Cox and McCubbins 2005) to support his preferences. When using unified government to proxy for inter-branch ideological proximity, we cannot disentangle the ideological mechanism we are interested in from the confounding and observationally equivalent institutional mechanism. Controlling for the size of the president's party may provide some differentiation, but neither party control nor the size of the president's party necessarily indicates the policy preferences of the political elites involved.

In a similar vein, some try to sidestep the measurement issue by asserting a relationship between legislators' ideal points and the ideal point of the chief executive. For example,

Berry et al. (1998, 2010, 2011) assume that the governor's ideal point in the U.S. states is the mean ideal point of each state's congressional delegation belonging to the same party. For studies focusing on the U.S. national government, scholars sometimes assert that the president is always either interior or exterior to the key pivots in the legislature (Brady and Volden 1998; Krehbiel 1998; Howell et al. 2013). Such assumptions, however, make it difficult to test theories relating the *distance* between branches to policy outputs.[1]

Rather than assume a position of the president vis-à-vis the legislature, others have sought to measure presidential ideal points using public positions. McCarty and Poole (1995), for example, assume that a president's public positions are equivalent to the recorded roll call votes of legislators. If so, these positions can be used to estimate the ideal points of the president and members of Congress by assuming that the president is no different than a frequently absent legislator using any method of analyzing roll call voting behavior (e.g., MacRae 1958; Heckman and Snyder 1997; Poole and Rosenthal 1997; Clinton et al. 2004). Recognizing this possibility was an exceptionally important contribution that permitted tremendous progress on many substantive issues (e.g., veto politics (McCarty and Poole 1995; McCarty and Razaghian 1999)).

The assumption that the executive is a frequently absent legislator is a strong one in several respects given the enormous number of missing votes: for example, President Obama took only 29 positions on the 1649 recorded roll calls in the 111th Congress. Data on public presidential positions come from *Congressional Quarterly* for the post-1948 period and from historical sources in earlier times.[2] Treating the president as a legislator who is frequently

[1] Additional attempts to place the preferences of the president on a common scale generate reliable estimates, but only for the contemporary period. the president For instance, Bonica (2014) uses campaign contributions to infer policy preferences using the assumption that donations are a reflection of expressive giving (e.g., Bonica 2014); this approach is limited when it comes to estimating presidents' preferences historically. Others use expert surveys to place the president in the political space (Segal et al. 2000; Wiesehomeier and Benoit 2009), but generating estimates that are comparable over a long time series requires strong assumptions about the historical knowledge of the experts surveyed.

[2] In explaining the construction and limitations of the presidential support scores based upon these data, the *Congressional Quarterly* writes: "Congressional Quarterly's calculation of presidential success measures only how often the House or Senate acts the way the president wanted. CQ looks at every House and Senate floor vote, determines whether the president took a clear position before the vote and notes the outcome. Naturally, the CQ study has limitations. It gives equal weight to all floor votes on which the president took a stand. It does not count voice votes. And it does not reflect whether the president's proposals or legislation

absent allows the president's ideal point to be estimated alongside those of legislators using a statistical roll call model, since we observe both sets of actors taking positions on the same issues. However, note that their ideal points are being estimated using very different subsets of votes: the president's ideal point is calculated using just the positions he takes (e.g., 29 for Obama in the 111th Congress), while legislators' ideal points are based on the full set of roll calls (e.g., approximately 1650). To increase the observed number of presidential positions, Treier (2010) supplements the set of analyzed public stances for a few Congresses by also including presidential support on final passage votes for bills that are enacted into law. This approach allows us to consider far more presidential positions - for instance, in the 111th Congress, we can now take into consideration the 385 bills that President Obama signed into law and the two that he vetoed when calculating his ideal point. Even so, the president is still observed as silent on the vast majority of bills.

Given the extensiveness of missing data, we may wonder whether a president's public positions accurately reflect his policy preferences or whether there are important strategic elements behind the decision to take a position or not. Canes-Wrone (2006) and Kernell (1997), for example, argue that a presidents' decision to "go public" on an issue can be motivated by factors other than policy preferences. The president may take a position to bolster approval for struggling bills that he supports, or he may take a public stance on a particular piece of legislation for the purpose of claiming credit for a popular bill that is likely to pass. Anecdotal evidence supports these claims. In discussing the positions taken by President Bush in 2004, for example, the *Congressional Quarterly* noted, "Perhaps as significant, however is the relative dearth of votes taken in 2004, and the low number of issues where Bush took a stand" (2004, B-4). In reporting why so few positions were taken, CQ cited then-Representative Rob Portman [R-OH] who noted that Bush saves his energy for issues he finds "important enough to expend time, energy and capital on," and that "He uses his direct influence selectively. I think that's important - you can wear out your welcome on the Hill" (2004, B-6). If presidential position-taking is strategically motivated

that he supported were enacted into law" (2004: B-3)

Table 1: Presidential "Votes," 107th - 111th Congresses

	President took position	President did not take position
Number of votes	90.8	1297.2
Rate of passage	0.78	0.74
Percentage of "aye" votes	0.62	0.69
Majority roll rate	0.07	0.03
Minority roll rate	0.46	0.25
Rate of bipartisan votes	0.24	0.46

in these ways, it is unlikely that the president's positions represent a random - and therefore unbiased - sample of his policy preferences; a presidential pronouncement may reflect the larger political context rather than a sincere expression of support or opposition.

Consistent with this possibility, Table 1 examines voting patters in the 107th-111th Congresses, comparing votes on which the president took a position to those on which he did not. We see that presidents take very few public positions - in the average session, presidents took a public position on only 6.6% of the recorded votes. Moreover, the votes on which a president takes a position differ quite dramatically from those on which he does not. Not only are votes with presidential positions more likely to pass, but they are also more likely to be contentious and split along partisan lines - the rates of both majority and minority rolls double, and the average percentage of bipartisan votes decreases from 46% to 24%.

The fact that presidents are more likely to take a public position on votes with higher levels of partisan disagreement is consequential for attempts to estimate presidential ideal points using those public positions. In particular, if presidents are more likely to take positions on partisan issues, then unless we account for that non-random selection of issues, our estimates will characterize the president as being more extreme than they actually are (see, for example, Carrubba et al. 2006; Carruba et al. 2008; Clinton and Jackman 2009; Ho and Quinn 2010). The logic is straightforward - if presidents are more likely to take positions when the parties disagree, then based on the positions we observe, they will be estimated as more extreme in their behavior precisely because we infrequently observe them publicly agreeing with the opposition party. Taken to the extreme, if presidents were to take positions

only on split-party votes, then any analysis of their voting behavior that failed to account for that intentional selection mechanism would reveal the president to be the most partisan and ideologically polarized member of the legislature, even if the percentage of such votes is low relative to more consensual voting behavior. The situation is akin to a test-taking student skipping every difficult question without penalty - the student will have a very high grade on the test, but only because we are ignoring the non-random selection of questions and the fact that the student skipped every tough question.

Focusing only on votes with presidential positions does not fully remedy the issue. If we choose to grade all students on only those questions that the question-skipping student skipped, for example, we will still have an inaccurate assessment because the question-skipping student would still be observed to be getting every question correct. Moreover, we lose any ability to differentiate between students whose performance differs on questions skipped by the question-skipping student. Returning to politics, if presidents were to take positions only on party-line votes - or if by taking a position, they were to make the issue partisan and cause a party-line vote - and we were to only analyze those votes on which the president took a position, all we could say was that every Democrat differs from every Republican. We would have no ability to differentiate between the ideal points of members belonging to the same party because of the lack of votes in which we observe intra-party splits.

Consistent with this argument, we show in the supporting information that employing W-NOMINATE to calculate ideal points for presidents and legislators serving in every Congress between 1991 and 2011 using only those votes on which Presidents Bush, Clinton, Bush II or Obama took a position (and thereby ignoring 90% of the roll calls during this time period) does produce more moderate estimates of presidential ideal points. Whereas there were only an average of 31 legislators more extreme than the president when using all roll calls, the average increases to 71 when only votes with presidential positions are analyzed. However, the within-party correlations of the ideal points estimated using all votes and those estimated using just those votes on which a president took a position are troublingly

low. The correlation between the ideal points of House Democrats on all votes with those estimated using the subset on which the president took a position is only 0.24 (although the correlation ranges considerably from -0.24 to 0.85 over the 10 Congresses), and the corresponding correlation for Republicans is only 0.35 (with a range of -0.32 to 0.89). This discrepancy is consistent with the explanation provided and the fact that Table 1 reveals that votes with presidential positions are more likely to involve inter-party conflict.

While one explanation for the difference in estimated ideal points may be related to the choice of which issues a president chooses to take a position on, a second reason for why the estimates may differ so significantly is the possibility that the president's act of taking a public position may itself affect legislators' preferences and behavior (Kingdon 1989; Kernell 1997; Canes-Wrone 2006). Chief executives occupy a unique position in a separation of powers system that make them very different from a rank-and-file legislator: not only do they possess a veto over much that is done, but they are also often the standard-bearers for their parties. The fact that they are such prominent partisans may provide some reason to doubt whether the behavioral model assumed by current roll call estimation techniques is appropriate. The behavioral models in roll call estimation assume that the probability of a legislator voting "yea" depends only on the distance between that legislator's ideal point and the ideological location of the policy being voted upon. However, by taking a position on an issue, the president may cause that issue to be evaluated on partisan terms - not just on the basis of spatial proximity to legislators' ideal points. Illustrating this point, in a frank admission to the *National Journal*, Senate Majority Leader Mitch McConnell (R-KY) stated, "the single most important thing we want to achieve is for President Obama to be a one-term president" (see Kessler 2012). If so, presidential position taking may change the nature of the voting calculus used by legislators: for example, those from the president's party may be more likely to support the bill, while those from the opposite party become more opposed to it regardless of the policies being voted upon. Focusing only on the issues on which the president takes a position does not solve the problem due to selective presidential position taking, as discussed above.

Finally, and independent of whatever issues that may be in the interpretation of presidential positions as reflective policy preferences, measures based on public positions are obviously limited to elites who take public positions and this limits the sample considerably (e.g., *Congressional Quarterly* started tracking presidential positions in 1948, and the publication obviously does not track the positions of governors or other executives of potential interest). The ability to characterize executive preferences in the absence of public positions over the course of history would facilitate investigations into many critical issues regarding the nature and development of executive-legislative relations in a separation of powers system.

2 Leveraging the Electoral Connection

To avoid the complications created by strategic presidential position taking and the potential lack of public position-taking, we characterize presidential positions vis-à-vis Congress using Achen's (1977) notion of responsiveness. While doing so requires imposing some assumptions about the nature of the relationship - as, in fact, all measurement models must - we show that not only do the resulting estimates predict the public positions of presidents, but they also confirm core intuitions about the nature of executive and legislative interactions that have been hard to validate using existing measures.

The key assumption of our measurement strategy is that members of Congress are as responsive to the preferences of citizens in their districts as presidents are to the nation as a whole. That is, both legislators and executives are subject to the electoral connection (either for their personal benefit or for their party's benefit), but the primary distinction between the two branches of government in terms of their representative role is that members of Congress serve smaller constituencies - districts or states - while presidents must serve the entire nation (Lewis and Moe 2009; Howell et al. 2013). Thus, the same function that maps constituent preferences at the district level onto that district's legislator's ideal point should also map constituent preferences at the national level onto the president's ideal point.

To do so we first predict each legislator's ideal point using her constituents' preferences and her political party. This requires assuming that legislators' preferences are informed by those of their constituents, an assumption well validated in the literature, since legislators have long been postulated to represent their constituents' preferences in an effort to maximize their odds of reelection (e.g., Mayhew 1974; Fiorina 1974). For reasons of comparability, we use the ideal points of members of Congress generated using DW-NOMINATE (Poole and Rosenthal 1997). To proxy for citizens' preferences, we follow the lead of many other scholars (e.g., Schwarz and Fenmore 1977; Erikson and Wright 1980; Downs 1957; Ansolabehere et al. 2001; Canes-Wrone et al. 2002; Carson et al. 2010; Masket 2007; Mayhew 2011) and use presidential vote share from the previous election.[3] Because our analysis covers the 44th through 111th Congresses (1874-2010), for presidential elections from 1872 through 1948 we rely on the district-level estimates of presidential votes derived from county-level election returns used by Snyder et al. (2001) when available.[4]

To allow the relationship between district presidential vote share and DW-NOMINATE scores to vary over time, for each Congress t we estimate the following best linear predictor:[5]

$$\text{DW-NOMINATE}_{it} = \alpha_t + \beta_{1t}\text{District Pres. Vote}_{it} + \beta_{2t}\text{Party}_{it} + \epsilon_{it} \quad (1)$$

where DW-NOMINATE_{it} is the DW-NOMINATE score for the representative elected in year t in district i , ϵ_{it} is a stochastic disturbance term, and α_t, β_{1t} and β_{2t} are Congress-specific parameters to be estimated.[6] Substantively, α_t normalizes the average district presidential vote to have the same mean as the DW-NOMINATE score for the House elected in year t, β_{1t} describes how a change in presidential vote share relates to a change in a DW-NOMINATE

[3]While presidential vote share may itself be an imperfect measure of constituent preferences, it is consistent across all geographic constituencies and all that we require is that the mapping functions for legislators and presidents are similar even if the measure itself is flawed.

[4]These data are incomplete due to difficulties in matching county-level election returns with congressional districts; 18% of districts are missing, primarily in large cities and the Northeast. In addition, we omit the 88th Congress (1963-1964) due to missing data stemming from congressional redistricting in the early 1960s.

[5]Section B of the supporting information re-estimates these equations excluding southern states. The results are unchanged.

[6]Throughout the time series, we estimate high R^2 values, indicating that these models fit the data well. For further details, see the supporting information.

score in year t, and β_{2t} describes how a change in political party relates to a change in a DW-NOMINATE score in year t. In so doing, we rely on the comparability of DW-NOMINATE over time.[7]

Using the 68 sets of regression coefficients from equation (1), we then use the national two-party popular vote in a presidential election and the president's political party to calculate the president's predicted DW-NOMINATE score. That is, at time t we predict the executive's ideal point using the assumed electoral connection specified in equation (2):

$$\text{Predicted Pres. DW-NOMINATE}_t = \hat{\alpha}_t + \hat{\beta}_{1t}\text{National Pres. Vote}_t + \hat{\beta}_{2t}\text{Party}_t \qquad (2)$$

where $\hat{\alpha}_t$, $\hat{\beta}_{1t}$ and $\hat{\beta}_{2t}$ are the estimates of α_t, β_{1t} and β_{2t} for Congress t in equation (1).[8] Because legislators' ideal points change over time, so too will the estimates of α_t and β_t, allowing executives' preferences to also change over the course of their administrations.

The substantive justification for assuming that $\hat{\alpha}_t$, $\hat{\beta}_{1t}$ and $\hat{\beta}_{2t}$ are identical for executives and legislators is based on the electoral connection. While the constituencies differ, this assumption emanates from the claim that presidents feel an equivalent, electorally-motivated compulsion to represent their constituents as do their congressional counterparts either for the sake of themselves (if they are in their first term) or for the sake of their party (if they are in their second term). This is not a contentious claim. Mayhew's proposition that politicians are single-minded seekers of re-election applies to all popularly elected actors in government, not just to legislators. As Mayhew writes, electoral success "has to be the proximate goal of everyone, the goal that must be achieved over and over if other ends are to be entertained" (1974: 16). Presidential scholars provide support for this characterization of

[7]Exploring other functional forms and including higher-order polynomials does not appreciably change the resulting measure. Section C of the supporting information reports the model fit for the 68 regressions.

[8]In *theory*, it is possible to estimate these regressions alongside ideal points in a hierarchical model - i.e., use equations 1 and 2 to define an informative prior for presidential ideal points (and possibly also legislator ideal points). Doing so would allow us to combine electoral information and public positions into a single model. However, such an analysis would not solve any of the issues involving presidential positions noted above and it is not a terribly *practical* solution given the enormous number of parameters that would need to be computed. Moreover, so long as we place an informative prior on presidential ideal points using equation (1), it also seems unlikely that this would greatly affect our results.

electorally motivated executives, arguing that presidents must expend a significant amount of time, energy and resources during their first terms in office in order to secure a second (Light 1999; Shaw 2006; Tenpas 2000). Moreover, this electoral incentive extends to second term presidents, who shift their focus from their individual electoral success to that of their party (Hudak 2012).[9]

The relationship assumed by equation (2) can also be thought of as a model for why the president is likely located near the party mean in the legislature as many assume (e.g., Berry et al. 1998, 2010, 2011). If there is a relationship between legislator and district voting behavior, and the executive's vote share is near the average vote share of the median legislator, the executive will be predicted to be relatively moderate. It is worth noting, however, that our approach allows the president's ideal point to diverge from the party mean depending on the nature of the relationship between district and legislator voting behavior estimated by equation (1).

Equation (1) estimates the president's ideal point as a function of *all* legislators' ideal points, but a president may be more responsive to some constituents than others. Put differently, perhaps not every voter is electorally relevant to the president. To account for this possibility, we estimate a second measure of the president's ideal point using only those districts that elected a legislator belonging to the president's party and where the presidential vote share was within one percentage point of the national presidential vote share (the supporting information shows that our estimate is not sensitive to this cut-off).

For a third measure of presidential preferences, we employ this matching technique using Common Space scores. In short, it is possible to account for different presidential constituencies by adjusting the assumptions used to estimate the electoral connection in equations (1) and (2).[10]

[9]The question of whether electoral incentives fade for presidents in their second terms can be tested with our new measures: if the electoral connection is relevant only in the first term of a presidency, there should be more error in the ideal points of second-term presidents. Then, the relationships we estimate in the subsequent section using our measure should be more precise for first-term presidents than for second-term presidents. In the supporting information, we find preliminary support for this conjecture, though the inference we are able to draw is limited due to the small number of second-term presidents for whom term limits were a constitutional constraint.

[10]Though beyond the scope of this paper, future work could use the same technique to estimate the

Figure 2 presents the time-series of our three estimates of the president's preferences alongside the estimates that McCarty and Poole (1995) generate using public presidential positions. *Linearly Projected* refers to the estimate of the president's ideal point calculated using equations (1) and (2). *Matched DW-NOMINATE* and *Matched Common Space* are the estimates of presidential preferences obtained from our matching estimators using DW-NOMINATE scores and Common Space scores, respectively. Finally, *McCarty-Poole* shows the president's ideal point derived from his public positions on roll-call votes.

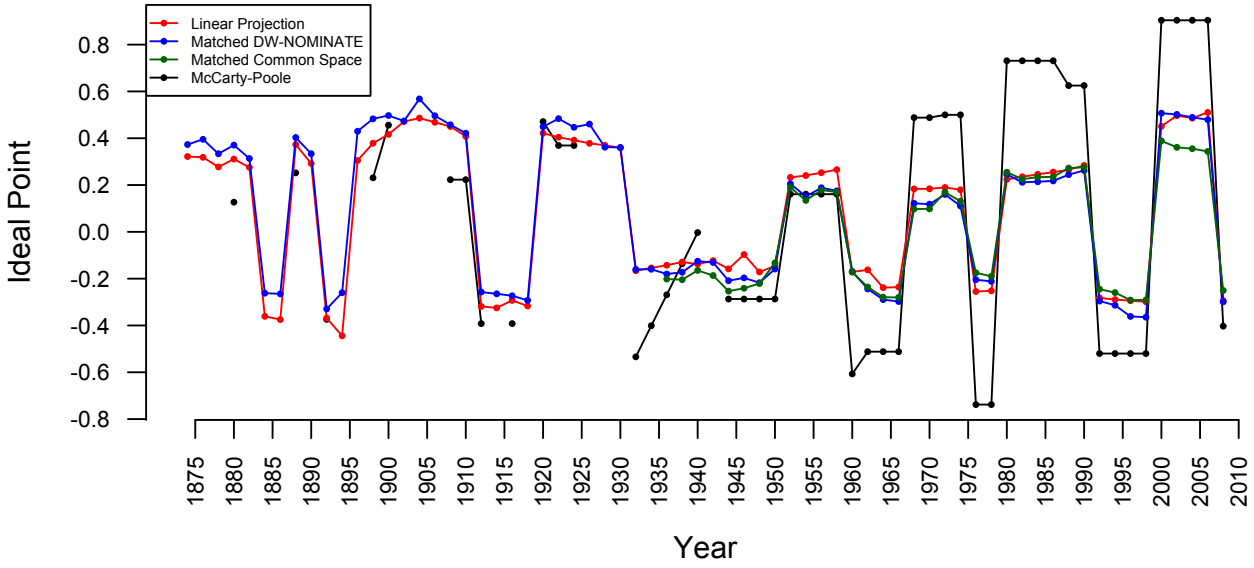

Figure 1: Placing the President, 1874-2010

Several interesting patterns emerge when comparing the four measures. First, our estimates are strikingly similar to one another regardless of the method used to related electoral support to position-taking behavior. *Linearly Projected* and *Matched DW-NOMINATE* align throughout the entire time series and correlate at 0.989 level. *Common Space* is only available starting in 1936, but this measure, too, correlates highly with our other two measures in

president's ideology based on an alternative understanding of the electoral connection (for example, looking exclusively at swing states).

excess of 0.97. The only visible discrepancy between *Common Space* and our other measures is during the George W. Bush administration, and even this distinction is minor, as these estimates differ by approximately 0.1. As we might suspect, the assumption of linearity in the prediction equation (2) is inconsequential.

Second, Figure 1 highlights a number of advantages to our measures. First and most basic, we are able to generate more estimates than was previously possible when relying on the president's public position taking. While McCarty-Poole cannot estimate ideal points for 18 of 68 Congresses, we can estimate ideal points for every president in every Congress because we are not dependent on presidential position taking behavior. Second, our recovered estimates place presidents in a way that is consistent with our expectations (e.g., George W. Bush is shown to be more extreme than Ronald Reagan). While this is generally true for the McCarty-Poole measure as well, some of their estimates do not have the same level of face validity - for instance, Franklin D. Roosevelt is shown as shifting from a left wing extremist to a slightly right leaning centrist over his tenure in office according to the McCarty and Poole scores. Third, our measures show consistent levels of within-administration variation throughout the entire time series, portraying presidents as largely ideologically stable over the course of their administrations while allowing for some within-administration ideological drift. In contrast, the McCarty-Poole measure has either high within-administration ideological variance (from 1874-1948) or no variance (from 1949-2010) depending on whether the data on public position-taking is from *Congressional Quarterly* (post-1948) or from scholars' efforts to identify public position-taking behavior (pre-1948).

Third, whereas measures of presidential preferences based on public positions suggest that presidents are ideologically extreme relative to Congress, our measures identify presidents as much more moderate. This is true not only on average, but also when we compare individuals who have served in both institutions. For example, comparing our ideal point estimates for Presidents Ford and Johnson to their DW-NOMINATE scores while they served in the U.S. Congress provides not only another check on the validity of our measures, but it is also revealing about how the different constituencies associated with the different offices may

matter. Critically, there is nothing in our method that requires them to have the same ideal point and we would not expect their revealed preferences to stay constant across their tenures if their behavior is responsive to the constituents to which they are attempting to appeal. Our approach is premised on the idea that individuals may adjust their positions when serving as president in order to represent a broader constituency and it allows for the relationship to change over time. If nominees are chosen partially on the basis of the national appeal of their extant records, however, then we should expect some consistency between the ideal points of individuals who served both in Congress and the White House. This is exactly what we find using our measure. As a legislator, Gerald Ford's ideal points ranged from 0.21 to 0.28, averaging a DW-NOMINATE score of 0.25. Based on his public positions, his ideal point as president is 0.51, more than double his average ideal point while in Congress. On the other hand, leveraging the electoral connection, we estimate that, as president, his ideal point was 0.18, consistent with our expectations that presidents moderate their preferences in order to serve the nation as a whole rather than a geographically specific Congressional district. Lyndon B. Johnson reveals a similar, although less dramatic difference - his average DW-NOMINATE score was -0.12 in the Senate, and -0.23 in the House. While serving as president, our linearly projected estimate of his ideal point is -0.21, but the McCarty-Poole measure suggests that he was slightly more ideologically polarized with a presidential ideal point of -0.26. Given the national constituency and the fact that presidents are the public faces of their parties, we believe that the finding of presidential moderation likely better fits our prior belief about the incentives for presidential position-taking.

Finally, to further evaluate the plausibility of our estimates, we assess the ability of our estimates to correctly predict the public presidential positions we observe. Because each roll call has an estimated cutpoint in DW-NOMINATE space that can be used to predict whether an individual with a given ideal point votes "yea" or "nay" on the bill, we use the estimated cutpoints for those votes on which a president took a position to assess how well our estimates predict the president's observed public positions. We are particularly interested in evaluating how well our estimates perform relative to the estimates of McCarty and Poole

that are constructed to maximize the likelihood of observing those public positions.

The percent of presidential positions in a Congress that are correctly predicted averages 81.6% for DW-NOMINATE and 76.8% for our measure. The fact that DW-NOMINATE has a slightly higher classification rate is unsurprising because presidential DW-NOMINATE estimates are based on maximizing the likelihood of observing these very same votes. That said, it is reassuring that estimating presidential positions using an assumption about the electoral connection obtains a similarly high level of classification success *even though our approach does not account for any of these presidential positions*. Our measure based on an assumption about the electoral connection can account for the presidential public positions nearly as well as an estimator based on those public positions.

Despite a similar ability to predict the public positions we observe presidents taking, it is important to emphasize that the reliance on presidential positions means it is impossible to apply to instances in which presidents fail to take a public position on congressional roll calls. As Figure 1 reveals, of the 68 Congresses we examine between 1874 and 2011, DW-NOMINATE cannot estimate presidential ideal points in 18 of them because of insufficient votes.[11] As a result, relying on the electoral connection yields estimates that explain observed presidential positions nearly as well as those estimates that are designed to maximize the likelihood of observing those same positions while also providing an ability to characterize executive preferences in instances in which we do not observe public position taking by the executive.

3 Presidential and Congressional Interactions in Three Arenas

While our ideal point estimates conform to our expectations when it comes to placing the president in the policy space and predict the public positions that we observe presidents taking, we have yet to demonstrate that they can be profitably used to test theories of inter-branch relations. This section explores three intuitive relationships involving inter-branch

[11] Common Space scores are able to avoid some of this by pooling across time.

relations for which we have strong theoretical expectations. Testing these expectations using our estimates of presidential ideal points is a hard test for the predictive validity of our measure because we rely on variation in the president's ideal point *within* administrations. We show that not only are we able to confirm core intuitions about fundamental issues involving legislative and executive relations, but we are often able to estimate these relationships more precisely than is possible if extant measures are used.

Our measure validates expectations related to executive-legislative relations in three critical arenas - lawmaking, budgeting and unilateral executive action. The fact that our measure is able to produce these conclusions when existing measures are not highlights the substantive importance of the measure for the study of executive and legislative relations, and the potential for further insights when applied to other important questions.

3.1 Legislative Productivity, 1877-1994

As a starting point, we use the ideological distance between the president and Congress to predict the volume of legislation produced by the government. Many argue that as the preferences of the president and the median member of Congress diverge, the number of policies on which they agree will decrease, resulting in increased gridlock (e.g., Brady and Volden 1998; Krehbiel 1998; Binder 2003). By extension, as the distance between these actors' preferences decreases, more legislation should get passed. Hence, as the ideological distance between the president and Congress decreases, there will be greater legislative productivity.

Testing this hypothesis requires measures of legislative productivity, as well as the ideological position of the president and Congress. To measure the former, we use Clinton and Lapinki's (2006) data on the enactment of significant domestic legislation. For each Congress from 1877 to 1996, they estimate the significance of every enacted bill. We focus on domestic legislation, since disagreements in this domain must be predominantly resolved in the legislative arena.[12] Our measure of lawmaking activity is simply the total number of

[12]By contrast, it is less clear what effect the ideological distance between the two branches should have on the volume of foreign policy legislation. In the domain of foreign policy, inter-branch disagreements can be more easily resolved through extra-legislative processes, such as unilateral action by the president. Therefore,

domestic policy bills passed during each Congressional session weighted by the significance of each bill. Thus, a low value should accurately measure governmental gridlock, while a high value conveys the absence of gridlock.

We follow the convention in the literature and measure inter-branch alignment as the ideological proximity of the president to the median legislator in the House (e.g., Kiewiet and McCubbins 1991; Howell et al. 2013). The median legislator's ideal point is calculated using DW-NOMINATE. The president's ideal point is measured using: (1) our linearly projected measure, (2) our matched estimate based on DW-NOMINATE, and (3) McCarty and Poole's ideal point based on public positions.

To mitigate concerns of omitted variable bias, we include a number of additional controls. First, we control for unified government, since, as previously discussed, it may affect legislative output above and beyond the effect of ideological disagreement between the two branches. Polarization in the House is also included to explore whether preference divergence within the chamber - rather than between the House and the president - is a significant determinant of legislative gridlock. We also control for war, as the volume of domestic legislation often declines when the government is pre-occupied with military conflict. Finally, because presidential administrations may differ in their propensity for legislative productivity, we include presidential fixed effects, as is the convention within the literature. Thus, identification comes from within administrations, allowing us to control for unobserved heterogeneity across presidencies. However, in the supporting information, we show that the results do not dependent on the inclusion of presidential fixed effects in the model.[13] The models we estimate are ordinary least squares, with standard errors clustered by presidency.

The results are shown in Table 2. When using our two measures of presidential ideal points to calculate the distance between the president and median legislator, columns (1) and (2) reveal a negative, statistically significant relationship between the ideological distance

a low raw count of significant foreign policy bills passed by Congress may not be indicative of government gridlock on foreign policy.

[13]We have estimated the model including additional controls - such as the percentage of Democrats in the House and an indicator for election years - and the results are unchanged.

	(1)	(2)	(3)
Distance btwn pres. and med. leg.			
Linearly projected	-238.699*		
	(112.083)		
Matched (DW-NOMINATE)		-225.068†	
		(125.524)	
McCarty-Poole			-272.769
			(243.387)
Unified government	-66.039†	-60.842	-72.993
	(36.425)	(38.483)	(58.658)
House polarization	1273.281	1132.618	1293.329
	(761.237)	(719.687)	(1142.907)
War	-58.012**	-58.386**	-63.109
	(19.408)	(20.579)	(43.616)
Constant	-731.915	-619.879	121.312
	(560.202)	(527.404)	(518.265)
R^2	0.923	0.921	0.910
Observations	59	59	42

Table 2: Predicting Significant Legislation, 1877-1994: The dependent variable is the number of public laws dealing with domestic politics weighted by their significance using the scores of Clinton and Lapinski (2006). OLS regressions include presidential fixed effects and robust standard errors clustered by presidential administration. Sample size differences are due to missingness in the McCarty-Poole estimates. Two-tailed significance levels are denoted as follows: $^{\dagger}p < 0.10$; $^{*}p < 0.05$; $^{**}p < 0.01$.

between the two branches and the amount of significant legislation produced. That is, when using our ideal point measures, we find support for the common-sense proposition that increased ideological alignment between the president and Congress results in the creation of more legislation; conversely, when the two branches diverge more in their preferences, Congress enacts fewer significant domestic bills.

In contrast, the relationship between the divergence in congressional and presidential preferences and legislative enactments cannot be precisely estimated using McCarty and Poole's estimates of presidential preferences.[14] The coefficient on the distance variable in column (3) is negatively signed and similar in magnitude to the coefficients reported in columns (1) and (2), but the relationship is indistinguishable from zero. Figure 1 suggests a reason for this imprecision: there is almost no within administration variation since 1944

[14]The number of observations drops from 59 when using each of our two measures (columns (1) and (2)) to 42 when using the McCarty-Poole measure. This is due to frequent missing data on the McCarty-Poole measure prior to the 1930s.

according to the McCarty-Poole measure.[15] Consequently, at least in this case, our measures are more useful for testing models of inter-branch relations than are measures based on presidential position taking.[16]

To be clear, the claim we are making is that our measurement strategy provides for a more precise estimation of the relationship between the impact of preference divergence between the legislature and the executive than extant measures. Both predict a negative relationship as we would expect, but only when we measure the preferences of the president using the electoral connection rather than the public positions taken by the executive can we distinguish the effect from zero.

3.2 Agency Budgeting, 1933-2006

Ideological disagreement between the president and Congress may lead to less overall legislation, but does it also affect the substance of enacted policies when the two branches have no choice but to legislate? To answer this question, we test how preference divergence between the president and Congress affects appropriations. Since the Budget and Accounting Act of 1921, the president has been required to submit an annual budget proposal to Congress, which while not legally binding, serves as guidelines for Congress to determine final appropriations (Schick 2007). Moreover, if Congress wishes to avoid a government shutdown, it must pass a budget each year. As such, the distance between the dollars requested by the president and the dollars allotted by Congress arguably provides a clean, continuous mea-

[15]Section E of the supporting information analyzes the time series separately for the pre and post 1948 period and reveals that whereas our measure produces a consistent negative relationship, the relationship predicted using the McCarty and Poole measure greatly varies across the two time periods.

[16]In contrast to our expectations, unified government carries a negative sign in all three models, and is statistically significant in the first one (and close to it in the second). While difficult to reconcile with the previous literature (e.g., Howell et al. 2000; Binder 2003), this may highlight an inherent ambiguity in the meaning of "significant legislation." Because they rely on journalists and historians to identify important bills, Clinton and Lapinski's (2006) counts may be affected by changing definitions of what constitutes significant legislation. For example, in a period of divided government, the passage of any legislation may register as significant, but historians and journalists may only note legislation of great substantive importance during periods of unified government. In the first two models, we also find a statistically significant relationship between war and legislative productivity: as expected, we see fewer bills passed when the nation is engaged in foreign conflict. We fail to estimate a statistically significant relationship between polarization in the House and legislative productivity.

sure of the level of agreement between the two branches that is comparable across years and agencies.

Intuitively, a number of scholars suggest that if the president and Congress are ideologically aligned, then proposed and allocated appropriations will converge (Canes-Wrone 2006; Howell et al. 2013; Kiewiet and McCubbins 1991). If so, as the ideological distance between the president and Congress increases, so too will the gap between the president's appropriations requests and Congress's enacted budget.

To test this prediction, we measure budgetary proposals and allotments using Howell et al.'s (2013) data on presidential budget estimates and final appropriations for 77 agencies and programs from 1933 to 2006. In total, we have data for 3201 agency years.[17] The dependent variable is the discrepancy between the president's proposed budget and the enacted appropriations for each agency in each year. To correct for the right skew of this variable, we take its natural log, so that the final variable is $ln(|Proposed_{it} - Appropriated_{it}| + 1)$, where i indexes the agency and t the year.

Much like in the significant legislation application of the previous subsection, we control for additional variables to minimize the risk of omitted variable bias. First, we again condition our estimates on the presence or absence of unified government. Second, we control for the amount of money that the president requests for a given agency or program. Scholars note that, regardless of his ideal point, the president generally wants to give more money to agencies than do legislators (Fenno 1966; Schick 2007). When the president requests a smaller budget for a particular agency, there is less available budget for Congress to cut, producing an artificial appearance of budgetary agreement, when in fact, the agency just requires a smaller operating budget. As a result, we expect that the difference between proposed and adopted appropriations will be smaller if the president requests less funds at the outset. Since the president's proposed appropriations are right skewed, we take the natural

[17]Though our data spans 74 years, we lose some observations since not all agencies exist for the entire time series, and because budgetary data is simply missing for a handful of particular agency years. Additionally, we exclude the first year of each president's first term from the analysis - and thus lose 468 observations - since the official budget in those years reflects the previous president's proposal. In other words, our sample isolates the last three years of each president's first term, and all four years of any subsequent terms.

log of this variable and include it in all model specifications.

Third, we account for economic performance with the expectation that a poor economy may generate less support for the president's budget in Congress. In particular, we include three indicators of the economy in each model specification: the average logged unemployment rate during the year when appropriations are proposed and set; the national growth rate since the previous year; and the total budget deficit from the previous year. To account for unobserved heterogeneity across presidential administrations and agencies, we include both president and agency fixed effects in all of our models. Identification, therefore, comes from changes in proposed and adopted appropriations within a particular agency during a single presidential administration. We estimate the models using ordinary least squares; to account for serial correlation, we present standard errors that are clustered on agencies.

	(1)	(2)	(3)
Distance b/w pres. and med. leg.			
Linearly projected	1.307†		
	(0.734)		
Matched (DW-NOMINATE)		1.784*	
		(0.708)	
McCarty-Poole			0.885
			(0.594)
Unified government	-0.536**	-0.437**	-0.560**
	(0.150)	(0.155)	(0.150)
ln(Proposal)	1.056**	1.053**	1.062**
	(0.104)	(0.103)	(0.107)
ln(Unemployment)	-0.263*	-0.247*	-0.396**
	(0.111)	(0.107)	(0.144)
Real deficit	0.146*	0.165*	0.143*
	(0.066)	(0.068)	(0.067)
Real GDP growth	-2.396*	-2.004†	-2.298*
	(1.023)	(1.030)	(1.104)
Constant	-4.626**	-4.917**	-4.455**
	(1.423)	(1.435)	(1.608)
Observations	3201	3201	3121
R^2	0.748	0.748	0.746

Table 3: Predicting Presidential Budgetary Success, 1933-2006: The dependent variable is $ln(|Proposed_{it} - Appropriated_{it}| + 1)$. OLS regressions include agency and presidential fixed effects and robust stand errors clustered by agency. Sample size differences are due to missingness in the McCarty-Poole estimates. Two-tailed significance levels. $^{\dagger}p < 0.10$; $^{*}p < 0.05$; $^{**}p < 0.01$.

In Table 3, we estimate the effect of ideological disagreement between the president and

median House legislator on Congress's willingness to adopt the president's proposed budget. Each model uses a different estimate of the president's ideal point to calculate his distance from the median legislator. The first two columns use our two measures of the president's ideal point - column (1) uses our linearly projected measure, and column (2) uses our non-parametric matched estimate. Meanwhile, column (3) uses the McCarty and Poole measure to calculate the gap between the two branches.

Across all three models in Table 3, results are as expected. Even controlling for the distance between the president and the median legislator, there is a negative, highly significant effect of unified government that suggests that alignment with the majority party in the House and Senate has value for the president above and beyond decreasing his distance from the pivotal legislator in Congress. Additionally, we find that Congress is more likely to acquiesce to smaller budgetary requests, an effect that is substantively large and highly significant. Congress is more likely to accommodate the president's request when national growth rates are high, and less likely to do so when available revenue (measured as the real deficit and unemployment) is scarce.

Turning now to our main variable of theoretical interest, in columns (1) and (2), we demonstrate that an increase in the ideological gap between the president and median legislator corresponds to a greater discrepancy between proposed and final appropriations. While the McCarty-Poole measure of distance between the president and Congress is similarly signed, it does not provide a precise estimate of the relationship and it is impossible to conclude whether there is any statistically distinguishable impact of preference divergence on budgetary agreements between the two branches as is shown in column (3). This discrepancy is likely due to the lack of within-presidency variation in McCarty-Poole ideal points.

3.3 Executive Orders

The previous two examples focus on how the ideological distance between the president and Congress affects the policies that the legislature adopts. However, Congress does not have a monopoly over policy change. The president, too, can move policy outcomes through

unilateral actions. Now, we turn to how the preferences of the president vis-à-vis Congress affect his proclivity to act unilaterally.

Just as Congress can pass legislation to change the status quo policy, the president can issue executive orders to achieve the same effect. Much in the same way that it is harder for Congress to pass legislation without the president's approval, so too is it harder for the president to issue executive orders without the support of Congress (Howell 2003). As such, the number of executive orders issued should be decreasing as the ideological distance between the president and Congress grows. That is, as the ideological distance between the president and Congress increases, the president will issue fewer significant executive orders.

To test this hypothesis, Howell (2003, 2005) uses an indicator for divided government as a proxy for inter-branch ideological disagreement.[18] We replicate his model in column (1) of Table 4, where we use a negative binomial regression to predict the quarterly number of significant executive orders issued by the president from 1945-2001 (Howell 2005, 432). In addition to divided government, we follow Howell in controlling for majority party size because a larger congressional majority should be able to pass more legislation and decrease the need for executive orders. Howell also controls for the linear and quadratic measurements of the average number of articles mentioning non-ceremonial executive orders on the front page of the *New York Times*. Finally, the model includes fixed effects for the president, term, and quarter, and clusters standard errors within presidential administrations.

As Howell predicts, there is a negative, statistically significant effect of divided government; the issuance of significant executive orders decreases when the branches of government are held by different parties.

Our measure of presidential ideal points allows us to avoid the need to proxy for inter-branch ideological disagreement using an indicator for divided government. Columns (2) and (3) re-estimate the model using our estimates to measure the preference divergence between the president and median legislator in the House. Column (2) uses the linear projection of

[18] In the previous applications, we use an indicator that equals one for unified government, while here it equals one for divided government. We accept this inconsistency in order to fully replicate Howell's results in column (1) of Table 4.

	(1)	(2)	(3)	(4)
Divided government	-0.643†	-0.144	-0.171	-0.172
	(0.458)	(0.262)	(0.323)	(0.316)
Distance b/w Pres. and Med. Leg.				
Linearly projected		-4.018**		
		(0.473)		
Matched (DW-NOMINATE)			-3.121**	
			(0.703)	
McCarty-Poole				-3.704**
				(0.986)
Majority size	-3.926**	-2.374	-3.146*	-4.131*
	(1.628)	(2.267)	(1.896)	(2.401)
New York Times size	-4.392†	-4.081†	-4.302†	-4.407†
	(3.239)	(3.122)	(3.158)	(3.116)
(*New York Times* size)^2	0.182†	0.161	0.170†	0.179†
	(0.134)	(0.128)	(0.128)	(0.128)
Constant	29.042†	28.697†	30.383†	31.338†
	(19.582)	(19.217)	(19.681)	(19.263)
ln(alpha)	-1.187**	-1.322**	-1.260**	-1.264**
	(0.367)	(0.380)	(0.380)	(0.357)
Observations	228	228	228	228

Table 4: Predicting the Issuance of "Significant" Executive Orders, 1945-2001: The dependent variable consists of the total number of non-ceremonial executive orders that are mentioned on the front page of the New York Times between 1945 and 2001. Negative binomial regressions include president, term, and quarter fixed effects and robust standard errors clustered by presidential administration. Two-tailed significant tests. tests are one-tailed. $^{\dagger}p < 0.10$; $^{*}p < 0.05$; $^{**}p < 0.01$.

the president's ideal point, while column (3) uses the non-parametric matched estimate. In both cases, we recover a negative, highly statistically significant relationship between inter-branch ideological disparity and the issuance of executive orders. This means that, as the two branches' preferences grow farther apart, we see fewer significant executive orders issued by the president. These results strengthen support for Howell's theory, as the coefficients on our measures are far more precisely estimated than that on divided government in column (1). Importantly, by including a direct measure of the preferences of the two branches, we nullify the effect of the proxy indicator variable of divided government.

In column (4), we repeat the analysis using the McCarty-Poole estimate of the president's ideal point to measure the distance between the president and Congress and obtain results that mimic the results reported using our measures. We lose some cases due to the absence of presidential ideal points, but in exploring the effect of inter-branch disagreement on the

issuance of significant executive orders, all three ideal point measures outperform an indicator variable for divided government.

In sum, we have presented three tests of straightforward hypotheses relating the ideological distance between the president and Congress to important government outputs - including legislative productivity, budgeting, and executive orders. In all three cases, when using our measures of the president's ideal point, we obtain estimates that comport with our theoretical expectations. On the other hand, when the models are estimated with previous measures of presidential preferences - including unified government and presidential ideal points based on public position taking - they do not consistently yield the same intuitive results. Thus, our measure of presidential ideal points refines our understanding of the relationship between inter-branch preference congruence and government activity.

4 Locating Other Chief Executives

So far, we have focused on estimating the preferences of one chief executive - the president of the United States. However, our method can be generalized to estimate the preferences of other political actors who previously have been difficult to place in the policy space. For example, we can measure the preferences of defeated presidential candidates so that they can be compared to those of the elected president as well as members of Congress. Doing so simply requires that we reestimate equations (1) and (2), substituting the challenger's political party and vote share for the president's.

Figure 3 plots the location of presidential candidates and median House members for each presidential election from 1876-2008. With these new data, several intuitive patterns are apparent regarding the relationship between the winning presidential candidate, the losing one, and the median legislator. Insofar as the location of the median House member provides a sensible measure of what it means to be moderate, in forty of sixty-eight election years, the president's ideal point is estimated to be closer to the median legislator's than is the challenger's. For instance, in 1988, George H.W. Bush was more moderate than his

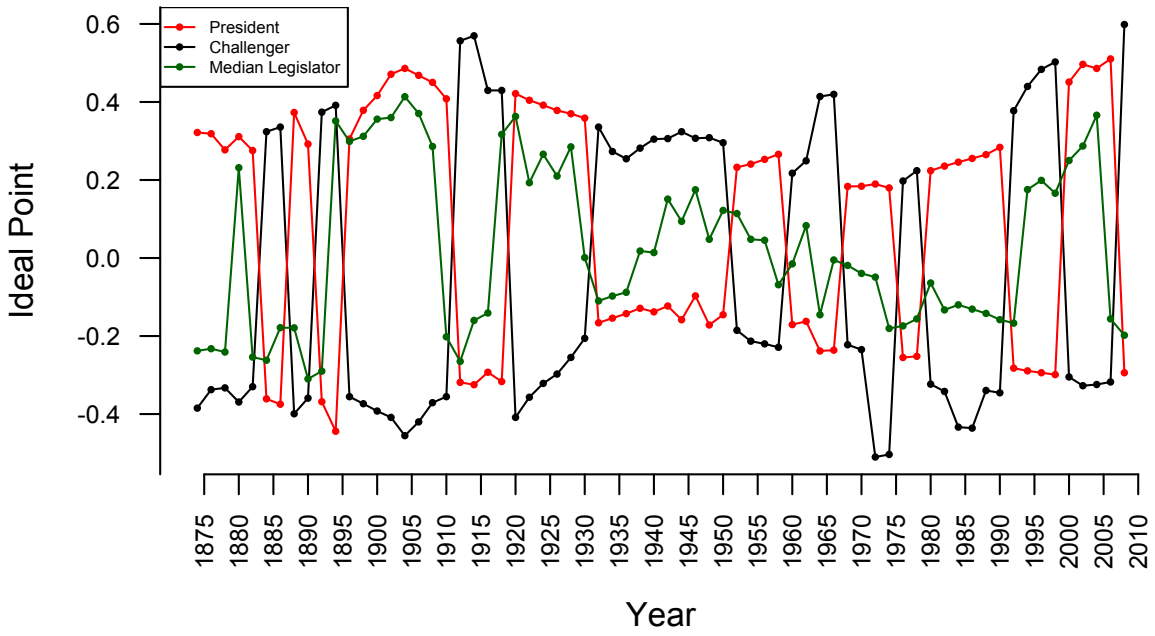

Figure 2: Placing the President, the Challenger, and the Median Legislator, 1876-2010

competitor, Michael Dukakis, and he did, in fact, win; then, four years later, Clinton proved to be closer to center, and he was able to unseat Bush. Indeed, in two-thirds of elections, the elected president is the more moderate of the two candidates. Moreover, the positions of individual candidates appear reasonable - the location of Richard Nixon as a challenger in his unsuccessful campaign for president in 1960 (0.217) is nearly identical to the ideal point that is estimated when he was elected in 1968 (0.183).

We can further extend our empirical strategy to estimate the ideal points of chief executives outside the context of the U.S. federal government. One such extension is to the U.S. states, where we can estimate the ideal points of governors. To wit, we calculate the ideal point of California governors from 1995-2010. To calculate equation (1), we use the W-NOMINATE ideal points of members of the California State Assembly, their political party affiliations, and the two party gubernatorial vote share in their district. For each Assembly,

we use the governor's statewide vote share and the resulting parameter estimates to project the governor's ideal point into that space.[19] Because we use the `WNOMINATE` package in `R` to estimate ideal points, one limitation of this approach is that the resulting estimates are comparable within a State Assembly, but not across time.

Figure 4 plots the location of three California governors relative to the sitting legislators in the State Assembly (the ideal points for all governors from 1995-2010 are presented in the supporting information). In the top panel, Republican Governor Pete Wilson is placed to the right of center during the 1995-1996 Assembly, but is predicted to be more moderate than most of his congressional co-partisans. The 2003-2004 legislative session presents an interesting case. In October 2003, Governor Gray Davis was recalled and subsequently replaced by Arnold Schwarzenegger. To estimate the ideal points of each Governor, we create two subsets of roll call data from that legislative session, one for votes taken pre-November 17, 2003 (the day Schwarzenegger was sworn in), and one for votes taken after this date. Then, we use the first subset to estimate Davis's ideal point, and the second to calculate Schwarzenegger's. The results are shown in the lower two panels of Figure 4. In 2003, Davis's ideal point is almost exactly the same as that of the median member of his party, which is very extreme in the highly polarized California Assembly. By contrast, and perhaps consistent with his status as a political outsider, Schwarzenegger's ideal point is estimated to be a good deal more moderate than the median Republican member of the Assembly in 2004.

These extensions demonstrate the versatility of our method for measuring the preferences of chief executives (and aspiring chief executives) in a variety of contexts. Similar strategies could be used to estimate the ideal points of governors in additional states, or chief executives in other presidential governments worldwide in order to test theories of inter-branch relations both cross-nationally and sub-nationally.

[19] This data is provided by Jeff Lewis (see `http://adric.sscnet.ucla.edu/california/`).

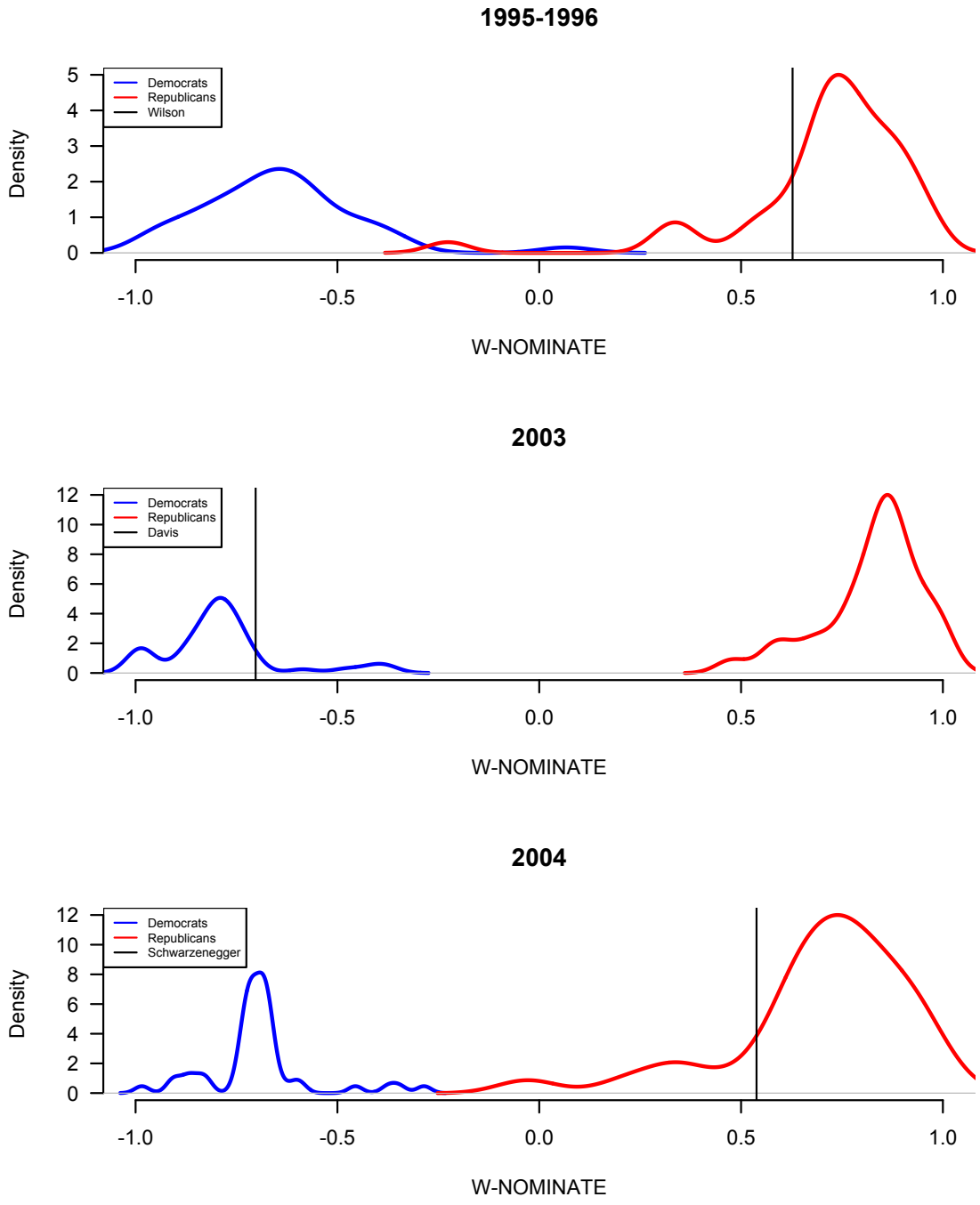

Figure 3: Placing the California Governor

5 Conclusion & Implications

Measurement is critical to social science; to explore fundamental questions of relevance to politics we must often first be able to identify and characterize the relevant determinants and

consequences. When it comes to measuring the preferences of political elites, much progress has been made in the task of translating the observed behavior of legislators into estimates that presumably reflect their policy preferences. Our ability to do the same for chief executives is far less certain. This difficulty is problematic given the prominence of executives in presidential systems and their unique influence over policy outcomes. Moreover, it is a problem without a clear solution. Chief executives occupy a very different position in the political system than an individual legislator - a legislator is rarely pivotal for government action, but the chief executive is almost always so. As a result, interpreting the behavior of chief executives may be difficult and the behavioral assumptions that we make when analyzing the meaning of legislators' behavior may not be appropriate for interpreting executives' behavior.

Scholars of American politics have suggested a variety of approaches to measuring the preferences of the president vis-à-vis Congress, but none are without shortcomings: party affiliation is too coarse, simply asserting a relationship between the president and Congress is theoretically unsatisfying, and behavioral models based on public positions taken by the president likely encounter problems of selection bias. Given the difficulties of trying to use observed behavior to estimate the preferences of such a prominent and uniquely situated elected official, we argue for an alternative approach. Assuming that presidents and representatives are equally responsive to their constituents, we use election returns to estimate presidential ideal points between 1874 and 2010 to find the best linear predictor between the voting behavior of voters and elected officials. The resulting estimates possess strong face validity - unlike previous measures that depict an ideologically extreme president (McCarty and Poole 1995), ours show the president to be moderate relative to his core congressional delegation. In addition, they correctly predict the positions we observe presidents taking on roll call votes.

To evaluate the predictive validity of our measure, we explore three arenas in which congressional and presidential interactions loom large - lawmaking, agency budgeting, and the decision of an executive to act unilaterally. When using our measures of presidential pref-

erences, we confirm strong theoretical expectations about the nature of these relationships that are obscured by the limitations of existing measures. We also show how our strategy can be used to estimate the location of previously hard-to-measure elites such as presidential candidates and governors.

Given the centrality of preferences for assessing the nature of executive-legislative relations, the characterizations and conclusions we provide suggest that testing *any* theory of inter-branch relations may depend on the measure of executive preferences that is used. Measuring executive policy preferences is therefore consequential for not only describing the nature of executive and legislative relations, but also for answering a vast array of questions relevant to scholars of politics at the national level within the United States - e.g., testing theories of lawmaking in which the president is a relevant actor; tests of the separation-of-powers model that orients court, congressional and executive preferences; tests of agency policy-making; and the politics of appointments and nominations.

To be clear, the concerns we raise likely also apply to the estimation of any non-random position-taking by prominent elites in the political system (e.g., the Solicitor General, the Speaker of the House). Whenever participation is voluntary, relying only on the positions that are taken and ignoring the decision of whether a position is taken is likely to yield problematic results. This is particularly the case when the strategic implications of taking a public position differs - the implications of a single legislator among a legislature of hundreds taking a public position is far different from the implications of a president who wields tremendous unilateral power and influence.

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