

A Common-Space Measure of State Supreme Court Ideology

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Abstract

We introduce a new method to measure the ideology of state supreme court justices using campaign finance records. In addition to recovering ideal point estimates for both incumbent and challenger candidates in judicial elections, the method's unified estimation framework recovers judicial ideal points in a common ideological space with a diverse set of candidates for state and federal office, thus facilitating comparisons across states and institutions. After discussing the methodology and establishing measure validity, we present results for state supreme courts from the early-1990s onward. We find that the ideological preferences of justices play an important role in explaining state supreme court decision-making. We then demonstrate the greatly improved empirical tractability for testing separation-of-powers models of state judicial, legislative, and executive officials with an illustrative example from a recent political battle in Wisconsin that ensnared all three branches.

1 Introduction

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State supreme courts are a uniquely fascinating institution for judicial scholars.¹ Aside from their clear importance as the court of last resort for many legal matters with no federal issue, the institutional diversity arising from the various arrangements that states use to select justices offer a particularly attractive comparative setting for empirical research. Whereas 12 states have fully appointed supreme courts, justices in the other 38 states must face election, either in their initial selection or to retain their seat, and can be partisan or not. Due in large part to this unique infusion of popular political consideration for selecting officials who determine state law as well as administer the state's judicial system, state supreme courts have emerged as a promising area of research for answering questions related to judicial decision-making, judicial independence and accountability, and how courts interact with other branches of government.

Until recently, systematic research of these courts has suffered from a lack of comprehensive, comparable data on their outputs. Each state supreme court issues hundreds (and for some, thousands) of published and unpublished opinions, memorandum opinions, and judicial orders every year. Comprehensive coding of these outputs has been largely intractable. This hurdle has been lowered by the electronic publication and analysis of opinions, data collected by groups like the National Center for State Courts, and undertakings such as the State Supreme Court Data Project. These developments have in turn fueled scholarly interest in this relatively under-

served area of judicial politics.

In conjunction with the increasing supply of data on judicial opinions, robust measures of judicial ideology are essential to fostering quality research on judicial decision-making. Ideal point estimation for federal courts has seen tremendous advances within the last decade (in particular, Martin and Quinn 2002; Bailey 2007; Epstein et al. 2007; Clark and Lauderdale 2010, 2012). Innovation in ideal point estimation for state courts, however, has lagged far behind. The most widely used measure of ideology for state supreme court justices, Brace, Langer, and Hall's (2000) Party-Adjusted Justice Ideology (PAJID), is a second-stage proxy measure imputed from the state elite and citizen ideological scores developed by Berry et al. (1998), which are in turn imputed from ADA interest group ratings of each state's congressional delegation. PAJID has no doubt succeeded in meeting demand for state-level measures of judicial ideology, as evidenced by its extensive use in research on state supreme courts.² However, as we show in this paper, the round-about estimation strategy produces demonstrably unreliable measures that are difficult to justify even by minimal standards of measure validity.

In this paper, we introduce a new method to measure the ideology of state supreme court justices that extends recently developed quantitative methods to estimate ideal points from campaign finance records (McCarty, Poole, and Rosenthal 2006; Bonica 2013*a,b*). We construct measures of judicial ideology from an expansive set of ideal point estimates known as common-space campaign finance scores (CFs-

cores) (Bonica 2013*b*). The common-space CFscores are well-suited for measuring the ideology of judicial candidates. Since judicial candidates raise money from the same general pool of contributors, their ideal points are estimated in the same manner as candidates for any other office. In addition, as it is not necessary to win office to raise campaign funds, the method seamlessly recovers ideal points for judicial challengers, including unsuccessful candidates that never go on to serve on the bench. The measures are not confined to elected judges. Those in positions of political power rarely abstain from making political donations—state judges are no exception. This makes it possible to recover ideal points for most state justices based on their personal contribution records.³ Combined with information on the ideology of appointing officials, we are able to extend estimation to all 52 state supreme courts.⁴

We begin by discussing the role that ideological measurement has played in existing research on state supreme courts and the need for improved measures of judicial ideology. After a brief methodological discussion, we demonstrate measure validity and address issues relating to strategic giving. Finally, we discuss the implications of the measures in facilitating studies that place the state courts within the broader contexts of state and judicial politics.

2 Ideological Influences and State Supreme Courts

Given that states are responsible for establishing their own judiciaries, much of the scholarship on state supreme courts analyzes how cross-state institutional variation

influences case outcomes. Empirical research has linked the variation in selection methods across states to judicial decision-making and various court characteristics. These linkages include outcomes in sex discrimination cases (Gryski, Main, and Dixon 1986), diversity on the bench (Glick and Emmert 1987; Hurwitz and Lanier 2003); the likelihood of dissenting opinions (Boyea 2010; Shepherd 2010); votes on capital punishment cases (Brace and Hall 1995, 1997; Brace and Boyea 2008); rates of litigation (Hanssen 1999); size of tort awards (Tabarrok and Helland 1999); decisions on judicial review cases (Langer 2002, 2003); court responses to search and seizure precedent (Comparato and McClurg 2007); strategic voting to secure retention (Shepherd 2009a,c); the extent to which legislatures constrain judicial behavior (Randazzo, Waterman, and Fix 2010); and quality of opinion writing and productivity (Choi, Gulati, and Posner 2010). The general theme in these studies is that institutional design (i.e., the method of selection) matters.

As much of this cross-institutional variation is likely associated with justices' ideological preferences, it is crucial that a robust measure of ideology be included in any such analysis to disentangle the roles of ideology and institutional structure. Several of the studies above use PAJID scores to control for judicial ideology.⁵ PAJID scores also appear in numerous other studies analyzing a wide variety of phenomena related to state supreme courts, including incumbent challenges (Bonneau and Hall 2003); recruitment of chief justices (Langer et al. 2003); use of state constitutional protections for criminal defendants (Howard, Graves, and Flowers 2006); connection

between retention rules and the ideological direction of justices' votes (Savchak and Barghothi 2007); the influence of attorney contributions on justices' voting patterns in Wisconsin and Georgia (Williams and Ditslear 2007; Cann 2007); courts' adoption of rules on expert testimony (Kritzer and Beckstrom 2007); justices' votes in criminal cases as a function of gender (McCall and McCall 2007; McCall 2008); decisions to allow Ralph Nader on state ballots in 2004 (Kopko 2008); the influence of justices' race on decisions in criminal cases (Bonneau and Rice 2009); how judicial independence relates to staffing of state administrative agencies (Scott 2009); and the effect of interest group contributions on judicial voting patterns (Shepherd 2009c).⁶ Older studies on state supreme courts often controlled for the partisan affiliation of justices (Kilwein and Brisbin 1997; Gryski, Main, and Dixon 1986; Glick and Emmert 1987; Brace and Hall 1995, 1997). Yet a few more recent studies opted to use simple partisan indicators instead of PAJID scores citing concerns about measure validity (McCall 2003; Canes-Wrone, Clark, and Park 2012).

The developers of PAJID claim that the preferences of justices can not be measured directly, a claim they use to justify creating a "surrogate" measure of ideology. Their particular surrogate is constructed from the state elite and citizen ideological scores developed by Berry et al. (1998), which are in turn based on interest group ratings of states' congressional delegations. PAJID is constructed using either the state citizen or elite ideology measure at the time of the justice's selection (depending on whether justices in the state are elected or appointed), weighted by the degree that

the justice's partisan affiliation (or the partisan affiliation of the appointing individual or body) fails to explain the variance in the state's ideology score. The justification offered for measuring judicial ideology as a derivative of the Berry et. al. scores is "that the justices' preferences reflect, to a large extent, a combination of their partisan affiliations and the ideology of their states at the time of their initial accession to office" (Brace, Langer and Hall 2000, 388).

Although the authors point to a battery of robustness checks as support for use of their measure, they find that the PAJID measures account for a tiny percentage of the variation in voting records.⁷ Their explanation for the lack of predictive power is puzzling. In finding what appears to be a null result (or, at best, weak support) in a test of measure validity, they interpret the results as confirming the hypothesis that personal preferences play a small role in explaining state supreme court decision-making. A far more plausible interpretation is that a noisy measure has masked its influence. We find that the inference about the limited influence of ideology on judicial decision-making in the state supreme courts is fundamentally misleading. In the following sections we demonstrate that when quality measures are used, ideology is no less important for explaining judicial decision-making in many state supreme courts than it is for the U.S. Supreme Court.

3 Data and Methods

3.1 Measurement Strategy

In this section, we present a method to construct ideological measures for state supreme court justices from campaign finance records. McCarty and Poole (1998) were the first to develop a scaling method applied to federal political action committee (PAC) contribution data. Their PAC-NOMINATE method adapted the spatial model of voting to incumbent-challenger pairs, where each PAC contribution represented a vote for or against the incumbent. Building on the conceptual groundwork of McCarty and Poole, Bonica (2013*a*) develops a simple model of spatial giving. Rather than structure the contributor's choice problem as a series of binary votes, the model uses contributor-candidate pairs as the unit of observations and assumes that contributors prefer ideologically proximate candidates to those who are more distant and will—at least in part—distribute funds according to their evaluations of candidate ideology.

Bonica developed two methods for scaling contribution data. The first method is an item response theory (IRT) count model designed to scale federal PAC contribution data while controlling for relevant non-spatial candidate characteristics. The second, on which we base our measures, is the common-space CFscore method designed to scale the much larger campaign finance dataset that encompasses over 104 million contributions made by individuals and organizations to state and federal can-

didates and committees between 1979 and 2012. The method relies on the numerous donors that give to candidates running for a variety of different offices to identify the scaling across institutions and levels of politics. In any given state, between 70-90% of contributors who fund state campaigns also give to federal campaigns, providing an abundance of bridge observations which is far in excess of what is needed to reliably identify the scaling. Candidates that run for both state and federal office provide additional bridge observations. As a result, the model is able to simultaneously recover common-space ideal points for thousands of PACs and organizations, tens of thousands of candidates, and millions of individual contributors.⁸

The common-space CFscores have shown to be reliable measures of ideology at both the state and federal levels. Bonica compares the common-space CFscores for members of Congress to their DW-NOMINATE scores and finds that the two measures are strongly correlated both within and across parties. Additional support for measure validity derives from their success in predicting congressional voting patterns. Despite the disadvantage of conditioning on contribution records rather than the roll call votes themselves, the CFscores correctly classify 88 percent of vote choices in the House and 87 percent of vote choices in the Senate for the 96th-112th Congresses. This is slightly below the corresponding correct classification rates for DW-NOMINATE (89.6 for the House and 88.2 for the Senate) and nearly on par with the correct classification rates for Turbo-ADA scores (Groseclose, Levitt, and Snyder 1999) (88.6 for the House and 87.3 for the Senate). Bonica further relies on comparisons between the candidate and

contributor ideal points for the set of individuals who both fundraise as a candidate and personally donate to other campaigns to help establish internal validity of the measures. The contributor and candidate ideal points correlate very strongly both within and across parties— $r = 0.94$ overall, $r = 0.78$ among Democrats, and $r = 0.68$ among Republicans—indicating that two sets of ideal points reveal similar information about positions along a latent ideological dimension.

As state and federal candidates are drawn from the same general pool of donors, the main assumption of the bridging strategy is that donors have the same ideal points whether they are giving to state or federal candidates. The validity of the assumption is tested by identifying all contributors who have donated to state and federal elections and then recovering two distinct ideal points for each donor, one based on contributions made to state candidate and another based on contributions made to federal candidates. The correlations between state and federal ideal points is $r = 0.88$ for all contributors and $r = 0.93$ for contributors who have donated to 10 or more candidates.

3.2 Recovering CFscores for State Supreme Court Justices

The availability of CFscores is not limited to justices who campaign and fundraise. In fact, there are three ways for state supreme court justices to enter into our data: (1) as a candidate, (2) as a contributor, or (3) as an appointee. This makes it possible to extend our measures to all 52 state supreme courts. We recover judicial CFscores

using a step-wise procedure. First, if a justice ran for election, we assign an ideal point based on her CFscore as a candidate. If a justice has not run for judicial office, we look to whether she campaigned for a different elected office during her political career. Second, if the justice has not run for elected office, we search for the justice in the database of individual contributors. Naturally, we augmented the search with biographical data to help identify contributions made prior to serving on the bench or after leaving. Third, if the justice was appointed, but has neither given nor received campaign contributions, we follow Giles, Hettinger, and Peppers (2001) and Epstein et al. (2007) in assigning a score based on the CFscores of the appointing governor or legislative body. For justices appointed by the legislature, we assign ideal points based on the CFscore of the median member of the relevant legislative bodies involved in the appointment process.

[Figure 1 about here.]

Table 1 lists the number of justices that are recovered by each source of contribution data. Approximately 31 percent of judges are assigned ideal points as candidates, 40 percent are assigned ideal points based on their personal contribution records, and another 24 percent are assigned ideal points based on their appointing governor or legislature. The remaining 5 percent of justices are missing ideal points. Most justices in the missing category joined the bench before 1990 and exited before 2000. The CFscore coverage rate, which was 91 percent of justices in 1990, currently exceeds 99 percent. As of 2012, 344 of the 347 sitting justices are assigned CFscores.

Our measurement strategy depends on the assumed interchangeability of judicial CFscores assigned from different data sources. We test this assumption directly using the set of justices for which we can recover ideal points from multiple data sources (*i.e.* candidates that also appear in the database as individual donors). Figure 1 plots each set of estimates against each other. It reveals a strong relationship between the contributor and candidate CFscores ($r = 0.92$). This indicates that the ideological information revealed from a justice's fundraising activity closely matches the information revealed by her activities as a donor and suggests that both activities appear to be genuine expressions of the same underlying ideological preferences. This result is consistent with candidate-contributor correlations observed for non-judicial candidates.

[Table 1 about here.]

We find a weaker but still robust relationship between the CFscores derived from nominating officials and CFscores for candidates ($r = 0.80$) and contributors ($r = 0.61$). This result is consistent with the claim that surrogate measures of judicial ideology are generally less reliable than more direct measures. While we are fully confident that the CFscores provide sound measures of gubernatorial ideology, we are somewhat less confident that the ideal points of nominating governors measure the ideology of judicial appointees as reliably as their candidate or contributor CFscores. While the correlations are reasonably strong by traditional standards for state-level measures of ideology, when available, direct measures derived from contri-

bution records of judicial appointees are preferable.⁹

4 Results and Measure Validity

Our measures of judicial ideology inherit many properties from the common-space CFscores. Bonica validates the measures, in part, by showing that candidate CFscores strongly correlate with roll-call based measures and are able to predict vote choice outcomes nearly as well as scaling methods that condition directly on the voting records. We adopt a similar approach to establish external validity for the judicial CFscores. We have collected a dataset of judicial voting records for the period beginning in 1990 and ending in 2008. As the layout of opinions can vary significantly by state, writing each script is a laborious process. As a result, we limit our analysis to eight states—Alabama, Arkansas, Louisiana, Missouri, Montana, Ohio, Pennsylvania, and Texas.¹⁰ For each of the eight states, we fit independent MCMC-IRT ideal point models based on the court’s voting records.¹¹ We include votes on all decisions in order to capture the broadest possible summary of preferences. We then compare the model fit for the IRT scores and the judicial CFscores. Since judicial CFscores and the voting scores are derived from distinct data sources, agreement between the scores should bolster confidence that they are measuring preferences along the same latent dimension.

[Figure 2 about here.]

Figure 2 reveals a strong relationship between the judicial CFscores and the IRT estimates. With the exception of Arkansas, each state exhibits a statistically significant relationship between the two sets of ideal points. In contrast, the relationship between PAJID and the IRT estimates is all but nonexistent. Only for Arkansas is the relationship statistically significant ($p < .05$).

Although comparing judicial voting records is a useful means of establishing external validity, it is not our intention to present the vote-based measures as the definitive measures of judicial ideology. In general, the measures provide validity checks on each other. Disagreement between the two measures does not necessarily indicate measurement error on behalf of the CFscores or vice versa.

In fact, there are compelling reasons that suggest CFscores are the more reliable of the two measures. One such reason is methodological. The ‘sag’ problem (Poole 2005), which artificially positions ideologically consistent justices far to the extremes of their colleagues, is especially problematic for small voting bodies and appears to be present in the estimates for Montana, Ohio, and Texas. This problem does not apply to CFscores. Another reason can be seen in the relative placement of key justices. At first glance, the relatively weak correlation for Alabama might seem to suggest that CFscores are poor measures of judicial ideology in that state, yet under closer examination they highlight a strength. This is seen most clearly in the positioning of Chief Justice Roy Moore. In 2001, Moore catapulted onto the national spotlight after installing a monument of the Ten Commandments at the Alabama Supreme Court

building. His later refusal to comply with federal orders to dismantle the monument resulted in his removal from office. He has since run for governor twice as a candidate of the far-right Constitution Party and has engaged in anti-tax activism before being reelected to the Alabama Supreme Court in 2012. His CFscore identifies him as a far-right conservative at 1.23, corresponding to his conservative donor base and his personal contribution records (his contributor CFscore is 1.25), but his IRT score places him on the far left of the Alabama court at -1.37. This seems to be a case where CFscores are robust but the IRT estimates are not.

Perhaps more revealing than the bivariate correlations is the ability of the measures to explain judicial voting patterns. We use a logistic cut-point model to assess how well each set of estimates can explain variance in vote choices. For each case, the logistic cut-point model fits a curve using the fitted values for the vote parameters and ideal points. The fitted curves predict the direction each justice will vote in each case such that justices with fitted values above 0.5 vote yea and justices with fitted values less than 0.5 vote nay. Aggregating over all cases yields measures of correct classification and aggregate proportional reduction in error (APRE). We additionally report the geometric mean probability (GMP), which is calculated as the exponential of the mean log-likelihood across all observed choices.

Although this approach departs from much of the previous literature, it avoids coding the ideological direction of case outcomes—a process found in scholarship on the Supreme Court to be susceptible to various endogeneity concerns, especially when

used to construct scores of ideological preferences. Likewise, the Martin and Quinn (2002) scores do not rely on directional coding of case outcomes. Even ignoring theoretical concerns about constructing such scores, recent scholarship demonstrates that the actual process of coding the ideological direction of outcomes can be susceptible to coders' expectations about justices' preferences. Whether an opinion is coded 'liberal' versus 'conservative' can be more influenced by the makeup of the majority rather than the content of the case (Harvey and Woodruff 2013).

In interpreting the results, we note that the test favors the IRT measures both for reasons that are obvious and reasons that are more subtle. The IRT scores condition directly on the voting data whereas the CFscores do not. This alone accounts for a large portion of the difference in model fit. As a dimensional reduction technique, insofar as the IRT model is properly fitting the data, the mean posterior ideal point estimates will approach the upper-bound for the proportion of the variance in voting that can be explained by positioning actors along a single dimension. Second, the common-space constraint lowers model fit statistics for CFscores. CFscores are constrained to share the same liberal-conservative dimensionality across all states, whereas the dimension recovered by the IRT scores is whatever best explains the variance in judicial voting decisions for that particular state court. This often closely aligns with the standard liberal-conservative ideological dimension but there is no guarantee, especially if a court exhibits relatively little ideological diversity.¹²

[Table 2 about here.]

Table 2 reports the correct classification rates by state for the IRT scores, CF-scores, PAJID scores, and a simple partisan model that assumes that justices vote with other members of their own party. The measures are consistent with the findings in Figure 2. The CFscores outperform the partisan model in every state but Pennsylvania and Missouri, where they do slightly worse. In contrast, the PAJID scores underperform both the CFscores and the partisan model, usually by large margins. Only in Arkansas, which exhibits almost no variation in the partisanship of its justices, does PAJID outperform the partisan model. Worse yet, even the modest increase in model fit may actually overstate the PAJID's predictive power. The PAJID scores are negatively correlated with CFscores for Montana, Missouri, and Texas, the three states associated with the highest model fit. As the classification scheme is agnostic to polarity, the predictive power in each these states actually comes at the expense of placing liberals to the right of conservatives.¹³

These results raise serious doubts about the validity of the PAJID as a measure of judicial preferences. PAJID scores are extremely poor predictors of judicial voting patterns and only very loosely map onto the familiar liberal-conservative dimension that has come to define American political ideology. As such, it is not entirely clear what, if any, facet of justices' preferences PAJID measures, and it appears that its construction places scores too far from the actual preferences of justices to be considered reliable surrogates of judicial ideology.¹⁴

There are two final points to consider when interpreting the weak correlation between the CFscores and IRT scores for the Arkansas Supreme Court. First, despite the absence of a statistically significant relationship with the IRT estimates, the CFscores significantly improve model fit over the baseline model. Second, it is important to note that the Arkansas Supreme Court exhibits little ideological diversity during the period under study. This is reflected in the negligible improvement in fit associated with the partisan model. In fact, only two Republicans served on the court during the period under study, Lavensky Smith and Betty Dickey, neither of whom served for more than a few years. This raises a more general point about taking into account the level of ideological heterogeneity present on a given court when interpreting measures of fit related to spatial voting. A court composed of ideologically like-minded justices can severely understate the influence of ideology on voting patterns, in the same way that a scaling restricted to Republican members of Congress will appear less ideological than a scaling that includes members from both parties. Similar to how analyzing a single party isolation would make divisive party-line votes appear as unanimous votes in the data, a court composed exclusively of liberal or conservative justices will likely reveal most of its ideological content in judicial voting through unanimous votes (Epstein, Landes, and Posner 2012). This is important to note, because as we later show, many of the state supreme courts exhibit very little within-body ideological variation relative to Congress and the U.S. Supreme Court.

4.1 Robustness to Strategic Giving

In this section, we address concerns about measure validity associated with accounts of strategic giving behavior. Most of what has been written about the determinants of campaign contributions comes from an extensive empirical literature on the determinants of PAC contributions that sought to adjudicate between two competing models of PAC contribution behavior. The first, which is known as the *investor* model, traces back to the seminal work of Denzau and Munger (1986) who developed a theoretical explanation for contributions as payments in a market for legislative services, votes, and access. The alternative model of political giving, known as the *ideological* model, conjectures that PAC contributions are primarily motivated by ideology.

The bulk of support for the investor model is derived from studies that focused on the subset of PACs affiliated with corporation and trade groups. However, the wider literature uncovered substantial heterogeneity in the giving behavior of PACs, leading to the practice of classifying PACs into groups based on whether their contributions are more closely conform to investor or ideological models of giving. This approach is typified by (Snyder 1992) who argues that labor and membership PACs typically spend to influence election outcomes, whereas corporate and trade PACs typically spend to influence the legislative process. For this reason, contributions from PACs or committees at either the state or federal level that are associated with corporate and trade organizations are excluded when estimating the common-space CFscores and thus do not factor into the ideal point estimates used here.

Although the spatial giving assumption made by the common-space CFscore model may prove problematic for corporate and trade PACs, evidence of widespread strategic giving among individual donors is extremely scarce. In fact, nearly all existing research on individual donors suggests that campaign contributions primarily represent a genuine expression of the donors' political preferences (McCarty, Poole, and Rosenthal 2006; Ensley 2009). These findings are largely consistent with the claim made by Ansolabehere, de Figueiredo, and Snyder (2003) that individual contributions are best understood as consumption goods that fulfill the desire to participate in politics. In validating the measures, Bonica (2013*b*) performs a battery of tests to gage the sensitivity of the measures to strategic giving behavior. He finds that controlling for a set of non-spatial covariates linked to strategic models of giving and known to be important determinants of contributions for corporate and trade PACs, such as incumbency status, institutional power, committee assignment, and electoral competitiveness, had negligible explanatory power for a sample of individual donors that had made at least 25 contributions during a period from 2003 to 2010.

Even if it were the case that most individual donors regularly conditioned their contributions on strategic considerations, it would not necessarily result in biased estimates. Although the common-space CFscore model operates on the assumption that contribution decisions are spatially determined, strategic giving will only bias the candidate estimates if the resulting spatial errors violate normality assumptions. Results from additional tests of the sensitivity of the candidate CFscores to time-varying

candidate characteristics associated with models of strategic giving show that the candidate CFscores are largely robust to changes in relevant candidate characteristics.

These findings should hold for the judicial CFscores insofar as the fundraising and contribution behavior of state judges does not meaningfully differ from the general population of candidates and donors. Initial support for the claim that the influence of strategic giving behavior does not operate differently for state judges derives from the contributor/candidate correlations shown in Figure 1, which reveals a relationship that is similar in strength to what is found for members of Congress and other types of elected officials. Any theory of strategic giving would struggle to account for this alignment. It is difficult to conceive of a compelling explanation as to why strategic contributors would position justices so similarly to ideal point estimates based on judges' personal contributions, while also accounting for the result that the scores explain a significant amount of variance in judicial voting patterns. Even supposing judges were highly strategic contributors, the result would be no less puzzling. This leaves the much simpler explanation that the alignment reflects the actual position of justices along a latent spatial dimension.

Additional evidence is had by identifying the set of judicial candidates that also campaigned for non-judicial office at some point in their careers to examine whether their ideal points change or remain stable as they transition between campaigning for different types of office. Of the sample of 53 judicial candidates that also ran for a non-judicial office, their candidate CFscores remain remarkably consistent when

campaigning for different types of office ($r = 0.94$). Again, this suggests that the importance of ideology for fundraising in judicial elections is not fundamentally different than it is for other types of elections.

In sum, the combined findings that (1) covariates linked to strategic models of giving have so little explanatory power as compared to a simple spatial model, (2) that the candidate CFscores are largely robust to changes in these covariates, (3) the consistency between contributor and candidate CFscores, and (4) that ideal points for candidates that have campaigned for judicial and non-judicial office are robust to changes in election type should do much to address concerns about strategic giving. The absence of direct evidence that the state courts differ from the general population provides little reason for heightened concern about applying the CFscores to the state courts.

To be clear, we do not intend to claim that ideological proximity is the sole determinant of contribution patterns in judicial elections or elsewhere. Neither does the above imply that empirical studies designed to test for whether donors in judicial elections engage in specific forms strategic giving behavior will fail to reject the null. Indeed, regardless of the primacy of ideological giving, there is little doubt that such effects will be detectable in the typically large N samples of contribution records if a sufficient number of donors mix sincere and strategic motives. Rather, our claim is that the omitted non-spatial covariates explain a relatively minuscule proportion of variance in contribution decisions compared to spatial proximity and appear to

be largely orthogonal to ideological considerations. In other words, strategic giving matters but usually at the margins and does not significantly bias the estimated ideal points.

4.2 State Supreme Court Ideology across Time

With our measures of state supreme court ideology in hand, we can compare ideological composition of courts across states and time. Figure 3 plots the medians by year for all 52 state supreme courts from 1990 through 2012. The level of within-court ideological variation in a given year is conveyed by the gray ribbon bars which show the intervals a standard deviation above and below the median. We also include additional cells with trends for the complete sample of justices and all members of Congress as points of references.

[Figure 3 about here.]

The figure reveals several features of interest. First, the state courts have gradually trended to the right during the period, moving from -0.32 in 1990 to -0.02 in 2012. Second, while many court medians are rather dynamic over the period, others remain stable. Third, state supreme courts exhibit a pattern of ideological sorting similar to trends that have been noted elsewhere in American politics. As the population of justices polarized across states over the past two decades, individual state courts became more homogeneous. This trend is especially apparent for the 22 states that

select justices through competitive judicial elections. The mean interpersonal distance between justices across these states increased from from 0.82 in 1990 to 0.94 in 2012. Over the same period, the mean within-court interpersonal distance decreased in 18 out of 22 of these states, often quite drastically—for example, falling from 1.02 to 0.57 in Montana, from 0.87 to 0.48 in Ohio, from 0.41 to 0.15 in Alabama, from 0.93 to 0.20 in Nevada, from 0.26 to 0.09 in Arkansas, and from 0.89 to just 0.09 in Texas.

The movement toward ideologically cohesive courts is not necessarily a troublesome development. Given that most states elect justices at-large and that ideological preferences for state electorates are generally stable across election cycles, well-functioning electoral institutions should, in theory, permit relatively little ideological diversity among those elected to the bench—that is, assuming that justices have preferences that are representative of their states. All this raises the question: What selection methods are most likely to produce representative courts? This, of course, is a question that our measures are well positioned to address, but for now we defer those lines of inquiry for future analysis.

5 Implications for the Study of Judicial Politics

The above sections demonstrate the robustness of CFscores over existing measures in capturing the latent ideology of state supreme court justices. In this section, we discuss how our approach overcomes methodological challenges that have limited

researchers in pursuing several lines of inquiry into the state supreme courts.

5.1 Independent Measures of Judicial Ideology

More so than other areas of study, judicial scholars have emphasized the value of measuring preferences using sources of data that are independent of the votes under analysis. This view is likely rooted in early empirical tests of the attitudinal model, where spatial models of voting initially met heightened scrutiny from legal scholars regarding circularity in measurements. Although the success of the now canonical Martin-Quinn Scores of Supreme Court ideology has helped shift scholars away from the view that independent measures are required to study many aspects of judicial decision-making, independent measures of judicial ideology retain considerable appeal. For example, Bailey and Maltzman (2011) note that a “major challenge facing the separation-of-powers literature is ensuring that the judicial preference estimates are uncontaminated by possible strategic behavior” (pp. 102). If judges behave as separation-of-powers models predict, the courts may strategically respond to political pressure from the legislature by deciding against hearing problematic cases (Harvey and Friedman 2006) or deviating from their true preferences by crafting their rulings such that it locates within the Pareto set. Additional challenges arise when attempting to determine the extent to which policy-motivated decision-making is constrained by respect for legal doctrine (Epstein and Knight 1998, 2013).

Judicial scholars have long sought ways to measure the preferences of judges

apart from their votes. Previous studies have employed two general approaches. The first used past votes of justices to make out-of-sample predictions for votes in the period under study (Walker, Epstein, and Dixon 1988). The second approach relied on content-analyzing newspaper editorials (Segal and Cover 1989). The common-space CFscores provide a third approach. Similar to the Segal and Cover scores, the CFscores utilize expert evaluations but do so on a much larger scale by conditioning on the ideology-based research conducted by contributors. Judicial CFscores assigned based on judges' contribution records or appointing officials are likewise constructed independently of judicial vote records.

This is not to claim that the CFscores are entirely exogenous from judicial voting records. Donors almost certainly use judicial voting records to update the beliefs about a judge's preferences, but voting records are just one of many ways by which donors evaluate judicial ideology. Donors are free to consider the many ways judges reveal their policy preferences beyond how they decide cases. Such considerations may include a judge's published opinions, public speaking record, issue advocacy, judicial philosophy, religious and cultural values, or even a court's decisions on whether or not to hear a controversial case. Indeed, relying on binary vote choices is arguably less appropriate when analyzing the courts because, unlike legislators, judges are given a venue to explain and defend their votes on controversial cases through their written opinions. This in turn provides additional flexibility in testing theories about judicial behavior and political institutions.

5.2 Separation-of-Powers Models

The common-space CFscores are a recent addition to a quickly growing literature on estimating ideal points for state politics (Berry et al. 1998, 2007; Aldrich and Battista 2002; Kousser, Lewis, and Masket 2007; Wright 2007; Gerber and Lewis 2004; Shor and McCarty 2011). Their main contribution is the ability to bridge across institutions, states, and time to reliably estimate ideal points for a much more comprehensive range of political actors than can be had with other methods. Figure 4 illustrates this by showing how the courts relate to each other and to other institutions in their respective states. It displays the common-space CFscores for the median justice, governor, attorney general, and median members of the upper and lower legislative chambers for all 50 states following the 2010 Elections.

[Figure 4 about here.]

Combined with the common-space CFscores, our measures of judicial ideology overcome several methodological challenges associated with empirically testing separation-of-powers models (Ferejohn and Shipan 1990; McNollgast 1994; Ferejohn and Weingast 1992; De Figueiredo, Weingast, and Jacobi 2006). Separation-of-powers models, which seek to formalize strategic interactions between the legislature, executive, and the judiciary, have been highly influential for the study of the U.S. Supreme Court and have given rise to an impressive empirical literature (Spiller and Gely 1992; Bergara, Richman, and Spiller 2003; Epstein and Knight 1998; Clark 2009, 2010; Harvey and Friedman 2006; Harvey and Woodruff 2013; Sala and Spriggs 2004; Harvey

and Friedman 2009; Segal 1997; Bailey and Maltzman 2011). However, methodological limitations have thus far precluded tests of comparable quality at the level of the states. As the common-space CFscores already provide ideal points for state legislators, governors, and state officials, the judicial CFscores provide the final piece needed to begin testing theories of interacting institutions.

We look to Wisconsin's 2011 political battle over collective bargaining rights for public sector employees as an illustrative application. The three-month saga over the legislative collective bargaining was extraordinarily salient and involved nearly every elected state official in Wisconsin. In doing so, it offers an ideal state-level case study of the separation-of-powers approach to modeling political institutions. A brief summary of events is as follows. Shortly after the 2010 elections, the Republican majority in the Wisconsin Assembly introduced legislation backed by Governor Walker that sought to restrict collective bargaining rights of public sector unions. Democrats in the Wisconsin Senate countered by leaving the state to prevent caucus. Public protests ensued, drawing national attention to the issue. Faced with the prospect of extended gridlock, Republican supporters moved to pass the legislation in the Wisconsin Assembly and pushed it through a joint Assembly-Senate committee meeting which allowed them to bypass Senate quorum requirements. Opponents of the bill immediately filed suit challenging the constitutionality of the legislation on procedural grounds. Wisconsin Secretary of State, Doug La Follette, refused to publish the law, insisting that the courts first needed time to rule on its constitutionality.

Dane County Judge Maryann Sumi later issued a stay on the bill. Attorney General, J.B. Van Hollen, quickly appealed to the Wisconsin State Supreme Court. To further complicate matters, judicial elections for one of the seats on the court was scheduled to take place before the court's next session. It was widely believed that the outcome of the election would influence the court's decision.

[Figure 5 about here.]

Figure 5 characterizes the ideological preferences of every political actor directly involved in the legislation. We use CFscore estimates from a separate scaling restricted to contributions made prior to 2011 for this analysis. Thus, the ideal points will not reflect the flood of out-of-state money that occurred after the introduction of the legislation. First, using the CFscores for members of the Wisconsin State Assembly and Senate, we predict support for the legislation with a logistic regression.¹⁵ We then project the ideal points for Governor Walker, Attorney General Van Hollen, and Secretary of State La Follette, Judge Sumi, and the Wisconsin Supreme Court justices onto the plot. The spatial model fits voting on the legislation extremely well. Drawing a cut-point at $Pr(Y = 1) \geq .5$ results in a total of three classification errors out of 128 state legislators, each of which locates very near the estimated cut-point, indicating that the errors are small. The model perfectly predicts how each justice ruled. It predicts that Justices Abrahamson and Bradley would oppose the legislation and that Justices Prosser, Ziegler, and Gableman would support it. Justice Roggensack, who was widely viewed as the pivotal vote, is slightly to the right of

the predicted cut-point and Justice Crooks, who concurred and dissented in part, is slightly to the left. Moreover, as we also recover ideal points for judicial challenger candidates, we can show with considerable confidence that had JoAnne Kloppenburg unseated Justice Prosser, the decisive vote would have shifted to Justice Crooks.¹⁶

The orderly mapping of CFscores on to vote outcomes on this highly salient piece of legislation speaks volumes about the measures potential for systematically testing separation-of-powers models across all fifty states. While certainly impressive, the CFscores' predictive power with respect to spatial voting is arguably less striking than the close fit between the theory and data. A key implication of separation-of-powers models is that the legislature will take into account the preferences of the judiciary when drafting legislation. Specifically, the model predicts that if the state courts wield an effective veto over a specific legislation, the legislature will strategically craft legislation so that the median justice on the supreme court will slightly prefer it to the status quo. Positioned slightly to the left of the median justices' ideal point, the estimated cut-point is precisely where the separation-of-powers model predicts it should be. While it is unwise to conclude too much from a single example, the ability to apply the measures in a similar manner to other states and areas of legislation should be readily apparent.

5.3 The Judicial Common Space

Lastly, we raise the possibility of building on the common-space measurement strategy pioneered by Giles, Hettinger, and Peppers (2001) and Epstein et al. (2007) by combining the common-space CFscores for judges and their nominating officials with judicial voting records in order to construct a judicial common-space that spans state and federal courts. Giles et. al. assign ideal points based on the NOMINATE common-space scores for the nominating officials. They assign ideal points based on either the home state senator if she is a member of the presidents party or the ideal point of the president if the home state senator is a member of the opposing party. Epstein et. al. expand this approach by using the vote based Martin-Quinn scores to locate Supreme Court justices in the same space via a non-linear transformation.

[Figure 6 about here.]

The same techniques used to estimate ideal points for state supreme justices can be applied to the federal courts. Federal judges are no less likely to have made political contributions prior to serving on the bench and CFscores are readily available for the key actors in the White House and Senate involved in the judicial nomination process. In fact, approximately 65 percent of current circuit court judges are included in the database as contributors. To illustrate, Figure 6 compares the ideal point distributions for state supreme courts justices and federal circuit judges. In total, 1093 of those appointed to federal judgeships since 1990 appear in the database as contributors. In

conjunction with other sources of data, this would likely provide added flexibility in bridging across the judicial hierarchy.

6 Conclusions

We have demonstrated the common-space CFscores to be reliable measures of judicial ideology and a significant improvement over existing measures. In doing so, we provide a valuable new tool for conducting research on the state courts. Yet our approach offers more than reliable measures of judicial ideology. By unifying ideal point estimation into a single measurement framework, the common-space CFscores facilitate comparisons of ideal points across states, institutions, incumbency status, and time that would otherwise be overly complicated or infeasible with existing methods.

These methodological advances open up several exciting avenues of research. In particular, they stand to bring separation-of-powers models, which have thus far been largely confined to the study of federal institutions, to the laboratory of the states. This represents an important step forward in terms of our ability to test theories of interacting political institutions. Lastly, the measures show great promise in advancing the literature on strategic litigation and constructing a judicial common space that spans state and federal judiciaries. The CFscores include ideal points for a variety of actors involved in the judicial process, including many private and government lawyers, unions, and businesses that appear before the courts, as well as assorted interest groups engaged in advocacy. As such, the method has the potential

to address extent to which money and ideology affect how those who sit on the bench interact with those who appear and argue before it, a central question in the debate over judicial selection (Epstein 1994; Songer and Kuersten 1995; Songer, Kuersten, and Kaheny 2000; Cann 2007).

While the judicial CFscores do much to advance ideal point estimation for the state courts, more work remains. Collecting data on state judicial decisions in recent decades for all 52 state supreme courts would make it possible to impute ideal points for missing justices. In addition, issue coding cases would allow for more in depth analyses of judicial decision-making that can speak to the variation in preferences across issue areas (Clark and Lauderdale 2012). Moreover, constructing a database of CFscores for litigants and interest groups could provide an immensely useful resource for studies of strategic litigation. To conclude, we have shown that judicial CFscores have much to offer the study the state supreme courts. It is our hope that making the dataset publicly available will help enrich our understanding of state supreme courts in the larger contexts of state and judicial politics.

Notes

¹We use the term 'supreme court' for convenience to refer to the highest court across states even though some have a different name (e.g., Maine's highest court is the Maine Supreme Judicial Court, and New York's is the New York Court of Appeals.)

²According to Google Scholar, Brace, Langer, and Hall (2000) has been cited in 185 manuscripts and publications in the past five years.

³The complete data set of judicial ideal point estimates are available for download at http://www.stanford.edu/~bonica/files/BW_SSC_CFscores.zip.

⁴Oklahoma and Texas both have two courts of last resort, one for criminal cases and the other for civil cases.

⁵Studies already mentioned that use PAJID include Brace and Hall (2001); Langer (2002, 2003); Hurwitz and Lanier (2003); Comparato and McClurg (2007); Brace and Boyea (2008); Shepherd (2009a,b, 2010); Boyea (2010); Randazzo, Waterman, and Fix (2010); Choi, Gulati, and Posner (2010).

⁶According to Google Scholar, the Brace, Langer, and Hall (2000) has been cited in 185 papers in the last 5 years

⁷The crux of the support for the measure is that the PAJID outperforms simple partisan affiliation in some areas of the law and in some states, reporting greater pseudo- R^2 statistics from regressing the two measures on the proportion of justices' liberal votes. Using pseudo- R^2 as a means of evaluation is highly questionable, as the coefficient on the measure can be statistically insignificant and, more problematically, in the wrong direction. This information is not presented for the robustness tests regarding different areas of law, but it is clearly a problem in the data presented for the cross-state comparison. Indeed, only eight of the 37 state courts with results for both PAJID and partisan affiliation have statistically significant coefficients that point in the expected direction.

⁸See Bonica (2013b) for a treatment of the scaling methodology.

⁹It is possible that the relationship between appointment-based ideal points and ideal points assigned by other means would strengthen were we to model the nominating process (Sala and Spriggs 2004). However, our initial tests suggest such an approach would be of limited value.

¹⁰All published opinions were downloaded from LexisNexis and coded using heavily supervised automated text analysis with individual scripts written for each state written in Perl by the authors. See the online supplemental for details.

¹¹The models were fit using the MCMCpack package for R (Martin, Quinn, and Park 2011).

¹²What matters to policy debates, as well as what it means to be a Democrat or Republican, can vary considerably from one state to another. In the end, if the goal is to determine the dimension that best explains judicial voting in a isolated state court, then the vote-based measures are likely preferable. In the more common scenario where the goal is to compare the ideal points across courts or with other political actors or deal with questions that require a measure of ideology that is independent of votes, then the CFscores are likely preferable.

¹³The robust identification strategy of the common-space CFscores makes it extremely unlikely that it reversed the polarity rather than PAJID. Also note that PAJID places the average Republican to the left the average Democrat for both Texas and Missouri.

¹⁴Neither can these findings be explained away by presence strategic litigants, as has been suggested. Insofar as litigants are strategically settling their cases through the state courts, it would fail to explain why the IRT, CFscores, and partisan indicators all consistently explain a much larger portion of variance in judicial voting than does PAJID.

¹⁵The votes choices for the Democratic legislators that abstained out of protest are coded as nay votes based on their stated opposition to the bill.

¹⁶As a point of comparison, the most recent release of PAJID scores includes measures for five of the seven Wisconsin justices. By comparison, the scores for all five justices cluster to the left of the median PAJID score, ranging between the 31st to 43rd percentile in terms of conservatism. The

PAJID scores order the justices randomly with respect to their vote choice, with Abrahamson as the most liberal, followed by Prosser, Walsh, Roggensack, and Crooks as the most conservative. This serves to highlight the added value of our measures over PAJID for testing such theories.

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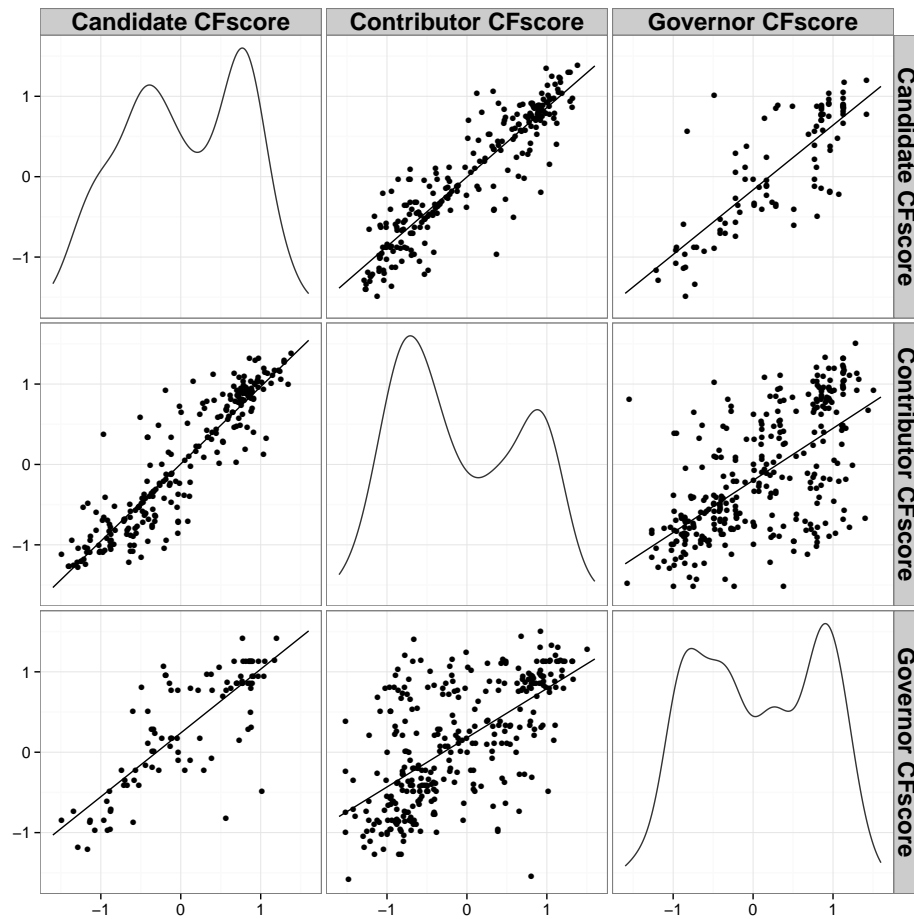
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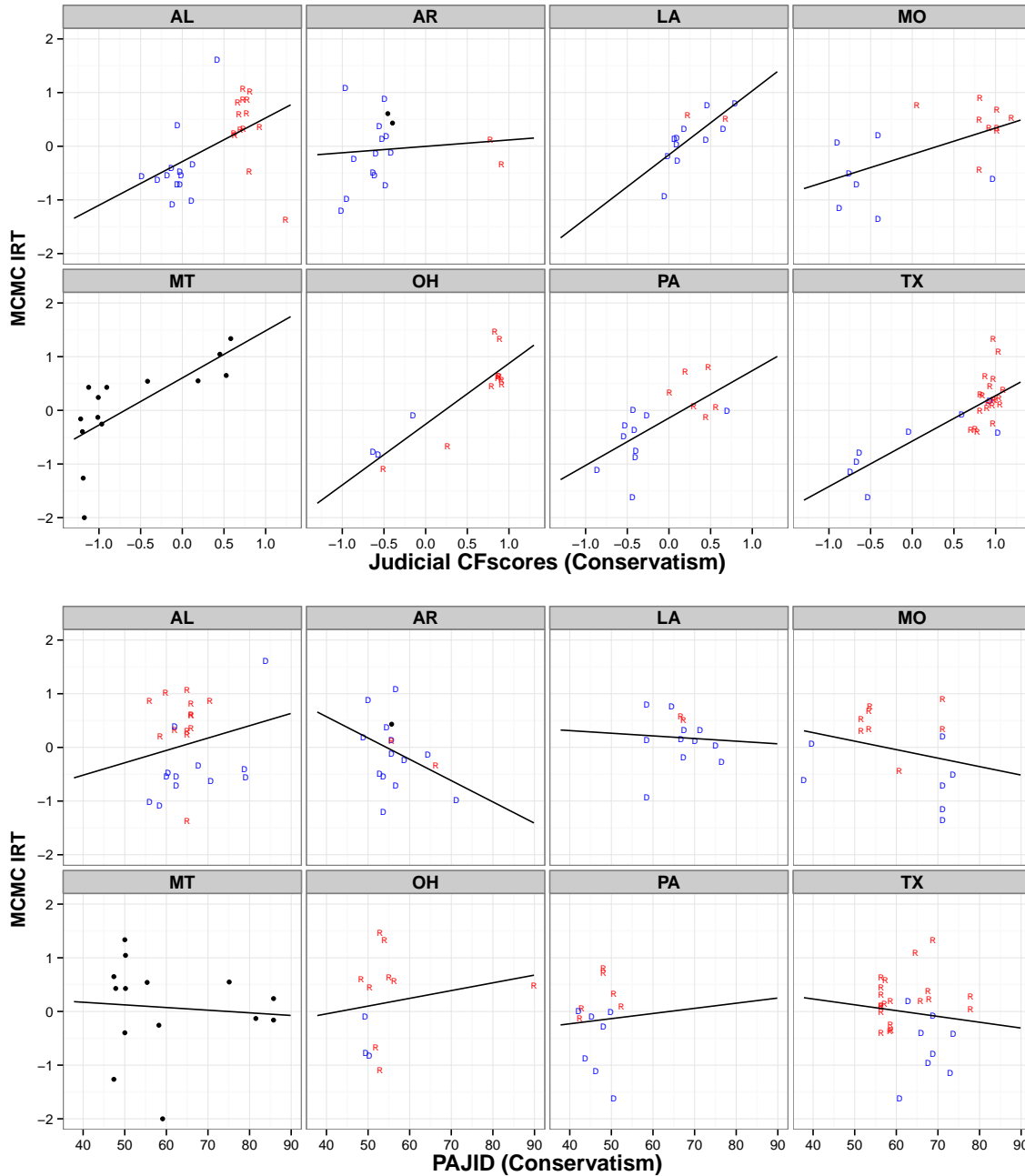
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Figure 1: Comparisons of CFscores Assigned for Contributors, Candidates, and Appointees



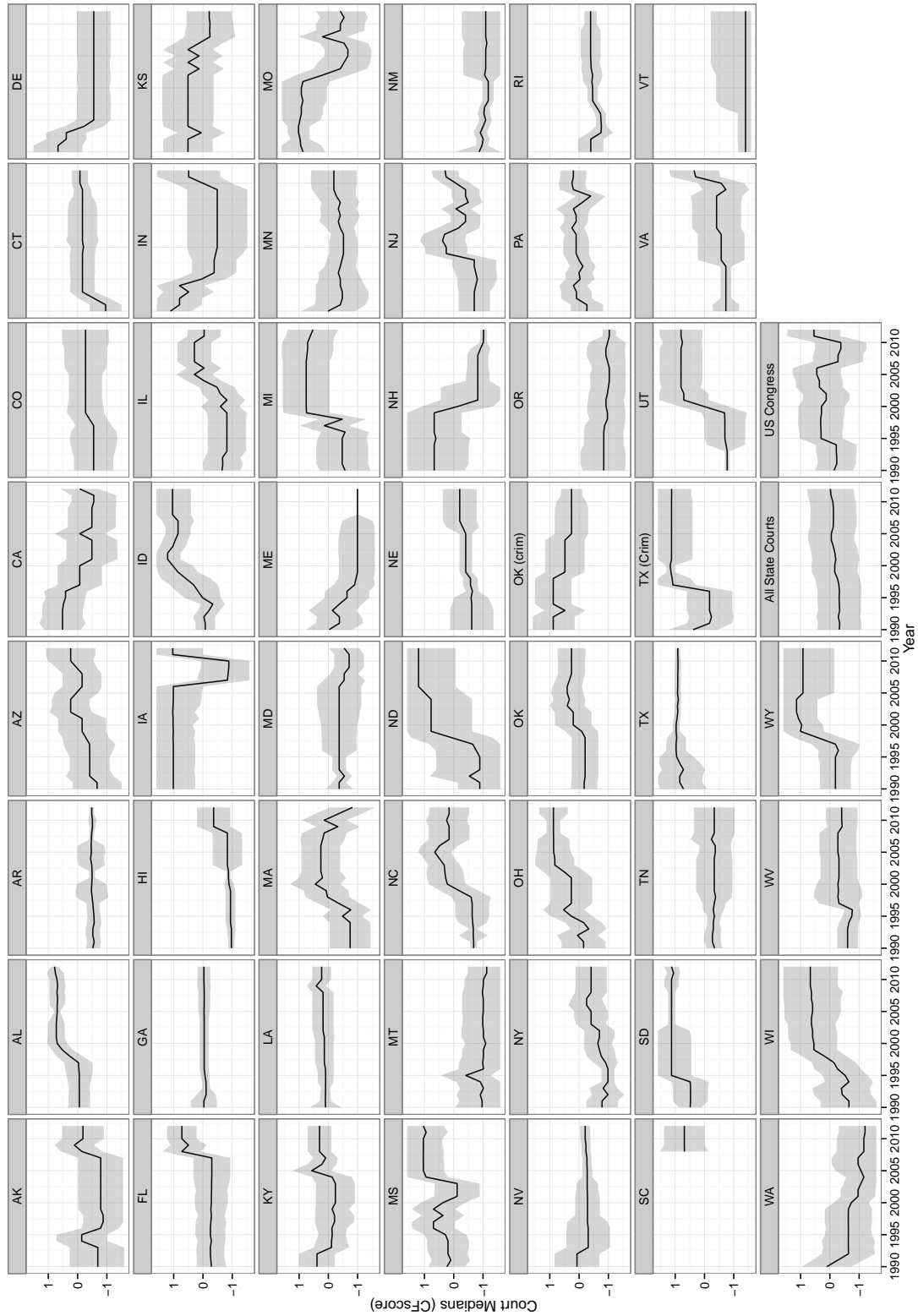
Note: The diagonal panels show the ideal point distributions for ideal points derived from each data source.

Figure 2: IRT estimates against judicial CFscores (top) and PAJID (bottom)



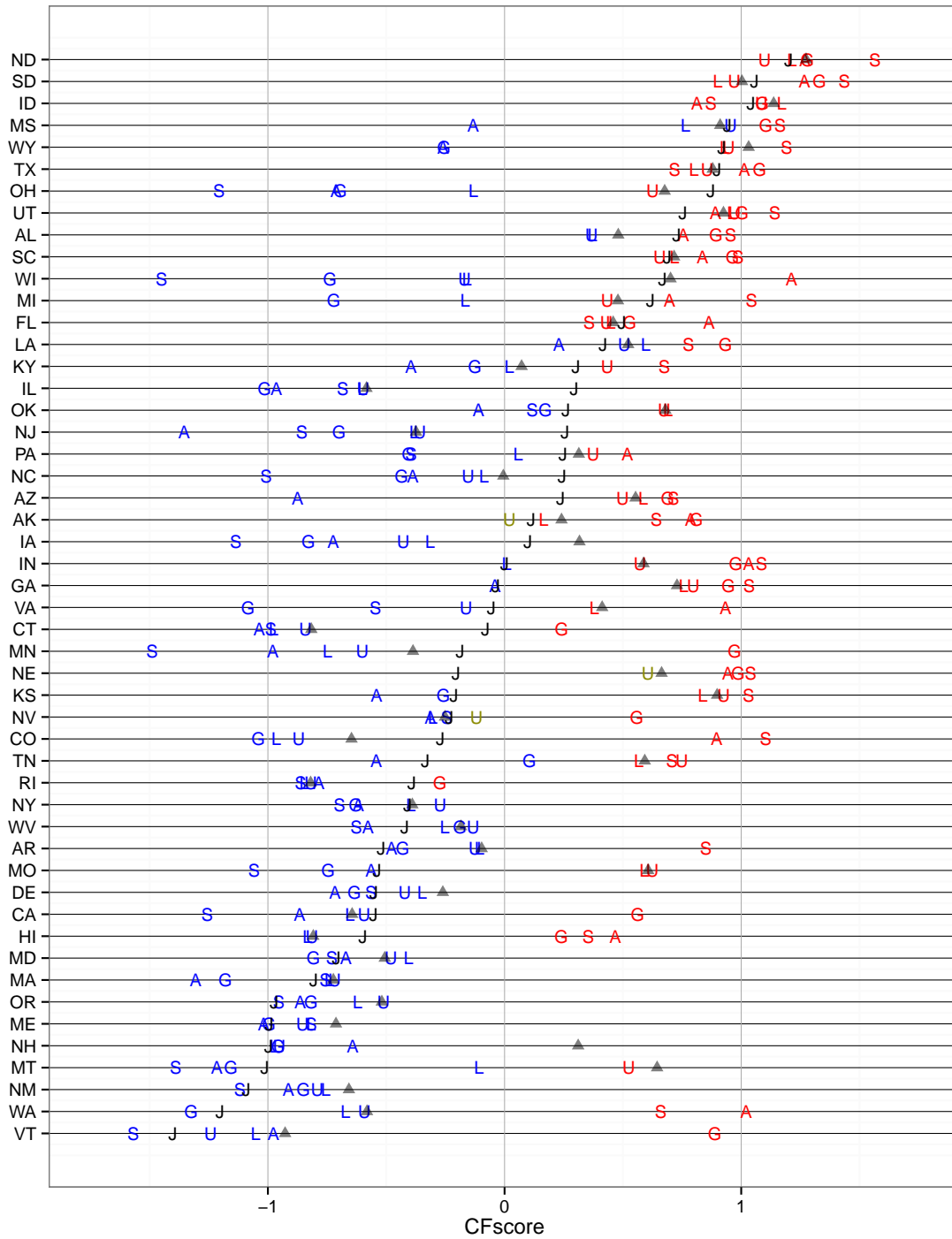
Note: IRT estimates are mean posterior draws from a one-dimensional model. The polarity of the PAJID scores is reversed such that values increase with conservatism. The labels are based on partisan affiliation as listed on the ballot, stated partisanship (in the case of Ohio), or the party of the appointing governor (D indicates Democrats and R indicates Republicans). Candidates who campaign in strictly non-partisan elections are indicated by dots.

Figure 3: State Supreme Court Medians



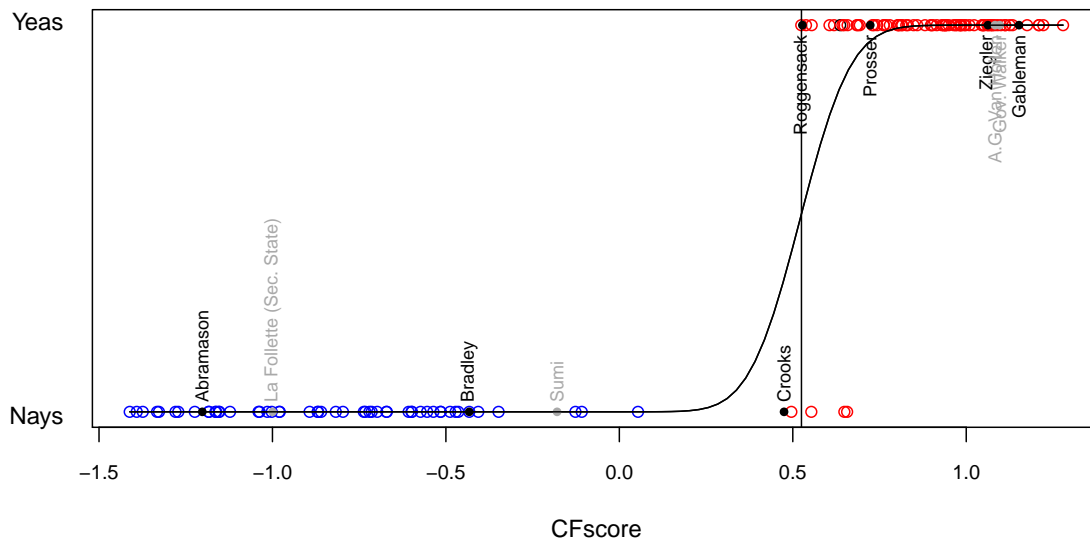
Note: The dark line in each cell is the court median. The gray ribbon covers the interval \pm the standard deviation for all members of the court in each year. The trend for South Carolina is truncated due to missing observations prior to 2006.

Figure 4: Ideological Summary of States Politics (2010)



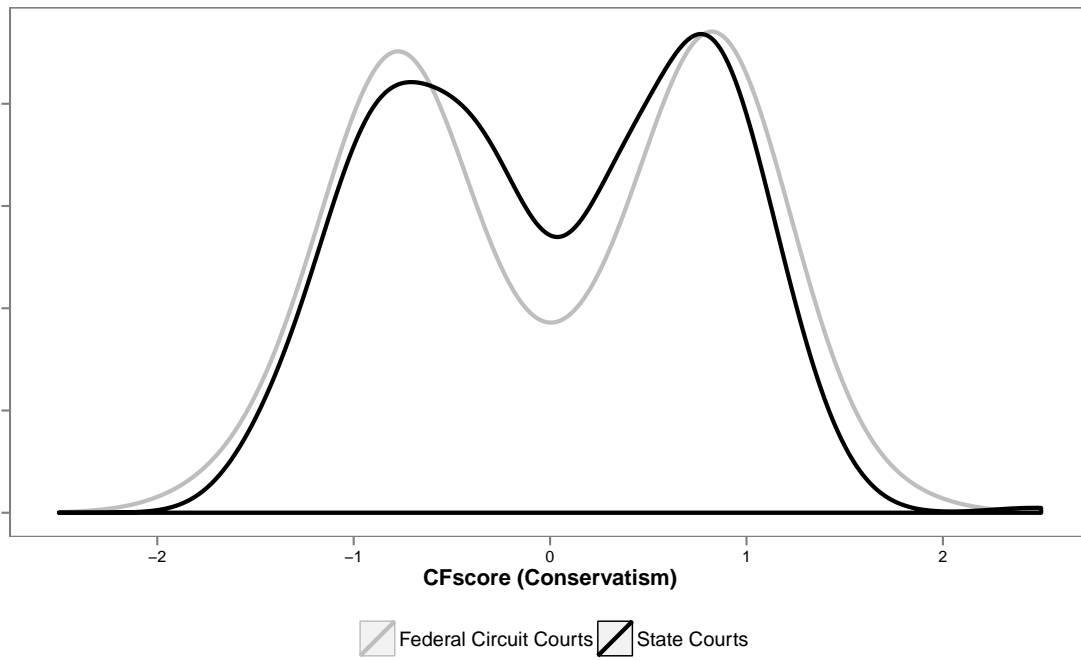
Note: The symbols are interpreted as follows: G = Governor, A = Attorney General, S = Secretary of State, J = State Supreme Court (median), L = Lower Legislative Chamber (median), U = Upper Legislative Chamber (median), black triangle = median ideal point for all winning candidates elected in state-level elections between 2000 and 2010. The symbols are color coded by party (Dem = Blue; Rep = Red).

Figure 5: Predicting Support for Wisconsin Collective Bargaining Ban



Note: The predicted probability of support for collective bargaining bill is estimated using a logistic regression of vote choice on legislator CFscores. The vertical line indicates predicted cut-point at $Pr(Y = 1) \geq .5$.

Figure 6: Comparison of Ideological Distributions for Judges Serving in The State Supreme Courts and Federal Circuit Courts



Note: Ideal point estimates for judicial federal circuit judges are based on their contributor CFscores.

Table 1: Distribution of Sources for Assigning Judicial CFscores

CFscore Source	Assigned as Judicial CFscore	N with Estimates
Candidate	279 (31%)	279 (31%)
Contributor	360 (40%)	602 (66%)
Governor/Nom. Officials	219 (24%)	533 (58%)
Missing	51 (05%)	—

Note: The values in the first column report the number of justices that have ideal points assigned using either campaign filings as a candidate, contributions made as an individual, or the ideal points of nominating officials. The second column reports the total number of justices that have ideal points recovered from each data source. For instance, contributor CFscores are available for 602 justices but are only used to assign Judicial CFscores for 360 justices.

Table 2: Aggregate Model Fit for Voting on Non-Unanimous Cases

		IRT	CFscores	PAJID	Party
Texas	CC	0.823	0.802	0.748	0.763
	APRE	0.374	0.300	0.108	0.162
	GMP	0.718	0.664	0.605	0.633
Ohio	CC	0.833	0.829	0.719	0.752
	APRE	0.440	0.427	0.067	0.168
	GMP	0.734	0.707	0.588	0.624
Pennsylvania	CC	0.826	0.778	0.741	0.781
	APRE	0.355	0.177	0.045	0.190
	GMP	0.702	0.658	0.593	0.663
Louisiana	CC	0.851	0.823	0.793	0.806
	APRE	0.331	0.208	0.073	0.130
	GMP	0.73	0.697	0.664	0.658
Alabama	CC	0.881	0.844	0.801	0.817
	APRE	0.475	0.313	0.132	0.196
	GMP	0.782	0.717	0.656	0.673
Montana	CC	0.853	0.807	0.760	-
	APRE	0.486	0.323	0.158	-
	GMP	0.756	0.707	0.636	-
Arkansas	CC	0.82	0.757	0.739	0.722
	APRE	0.375	0.154	0.095	0.042
	GMP	0.707	0.637	0.598	0.579
Missouri	CC	0.853	0.789	0.758	0.795
	APRE	0.495	0.275	0.171	0.294
	GMP	0.746	0.681	0.622	0.681