Congruence, Responsiveness, and Representation in American State Legislatures

Boris Shor†

May 14, 2014

Abstract

Two problems hinder the ability of scholars to assess the quality of representation of state-level public opinion by elected representatives. First, the main tool measuring ideology in public opinion has historically been self-reported, but this is now well known to be severely plagued by measurement error. Second, and far more binding, we lack a common scale on which to place both constituents and representatives. While the literature has addressed a number of methods estimating a common space for politicians’ ideal points across political institutions, little work exists that incorporates citizens into this space. The unified methodology in this paper solves both problems in order to assess representation of constituents by their individual state legislators, the parties in the state legislatures, and the state legislature as a whole. Bridging is accomplished using policy preference questions from a state and congressional candidate survey administered since the early 1990s. I ask those questions in my own 2008 survey of over 4,200 citizen respondents, representative at the state and national levels. Thus, citizens and state legislators can be located on the same ideological scale. I employ multilevel regression with poststratification to model state-level public ideology and obtain aggregate opinion estimates for all 50 states and 1942 upper chamber state legislative districts. State legislators and chamber and party medians are responsive to public opinion, but they are very often incongruent to it. Democrats and Republicans diverge from district and state opinion, but in an asymmetric fashion, with Republicans considerably more distant.

EARLY DRAFT: PLEASE DO NOT CITE WITHOUT PERMISSION

†Harris School of Public Policy Studies, University of Chicago; bshor@uchicago.edu
1 Introduction

Normative democratic theory establishes the benchmark of representativeness for democratic politics. We can disaggregate this into two standards: responsiveness and congruence. The first denotes the idea that legislators, either by selection or adaptation, respond to their constituents’ policy preferences. Thus, liberal publics should be represented by liberal representatives (and similarly for conservatives). Yet responsiveness is a relatively weak standard; conservative representatives of liberal public opinion could be perfectly responsive, as long as they responded on the margins to changes in opinion. Congruence is a far higher standard. In cardinal terms, the preferences of constituents and the representative should match in some common metric.

Assessing congruence in the representational relationship is beset by two problems. First, how should we ascertain the unobservable set of policy preferences that individuals possess—and are these views consistent or constrained? Second, how can we measure those preferences on a common scale with that of their representatives at multiple levels of government? Both questions has long bedeviled attempts to assess congruence at the state level (Lax and Phillips 2009a; Matsusaka 2010), so analysts have typically had to fall back on responsiveness as a benchmark (Erikson, Wright and McIver 1993).

At the individual level, the main measurement tool on ideology writ large has long been some variant of a self-reported ideology measure. That is, people are asked in a survey to rate themselves from strongly liberal to strongly conservative on some scale. Of course, this measure is notoriously noisy and crude. The terms “liberal” or “conservative” do not refer to some fixed external scale, but rather are dependent on context, both in time and place, filtered through contemporaneous events in particular places. Conservative means one thing in Texas—and something entirely different in Massachusetts. It may mean one thing in the 1980s under Ronald Reagan, and something else entirely in the 2000s under George W. Bush. Today, the pejorative connotations of “liberal” affect even people who otherwise hold liberal policy preferences. In sum, these labels mean different things to different people, which is problematic if we hope to get at some latent, comparable trait. Thus, either our survey instruments are too weak to identify underlying ideology, or perhaps there is no coherent, consistent ideology in most people to measure in the first place (Converse 1964).

Achen (1975) and Ansolabehere, Rodden and Snyder (2008) conceptualize the problem of determining individual ideology from the perspective of measurement error. This perspective suggests alternatives to abstract single-item questions about ideology such as multi-item issue preference scores which evince far greater individual stability than self-reported ideology. They also show that these scales approach the stability of party identification in applications like vote choice. While undoubtedly a major advance in measurement, the choice, weightings, and groupings of the
components of these indices seem arbitrary. Beyond received wisdom, for example, what suggests breaking up ideology into moral and economic groupings, but not foreign policy?

For politicians, the estimation of spatial models of roll call voting and their interpretation as measures of unobserved ideology has been one of the most important developments in the study of Congress and other legislative and judicial institutions. The seminal contributions of Poole and Rosenthal (1991, 1997) launched an extensive literature that is marked by sustained methodological innovation, new estimators (Martin and Quinn 2002; Clinton, Jackman and Rivers 2004; Jackman 2004; Poole 2000)\(^1\) The scope of application has expanded greatly from the original work on the U.S. Congress. Spatial mappings and ideal points have now been estimated for the Supreme Court (e.g. Martin and Quinn 2002; Bailey and Chang 2001; Bailey, Kamoie and Maltzman 2005), U.S. presidents (McCarty and Poole 1995), a large number of non-U.S. legislatures (Londregan 2000b; Morgenstern 2004), the European Parliament (Hix, Noury and Roland 2007), and the U.N. General Assembly (Voeten 2000).

The most painful limitation of any set of ideal point estimates for politicians, or of conventional ideological measures of individuals, is that they cannot be compared to each other directly on the same scale. While responsiveness in representation could be assessed with measures like presidential vote or self-identification (Clinton 2006), the same is not true of congruence.

This paper proposes a unified solution to this common metric problem. The scale derives from a hitherto-underemployed voter information questionnaire developed by a private organization and administered to politicians across all state legislatures and Congress for over a decade, beginning in the mid 1990s. Politicians are jointly scaled with constituents through the use of a new survey sampling 4,200 Americans. Such a strategy allows, for the first time, measuring ideological distributions of state legislative chamber and party medians, individual state legislators, and citizens all on the same scale. These scores can then be applied to address theoretical debates in social science and substantive public policy problems.

At the macro level, I assess the degree to which state legislative chamber and party medians are congruent with state-level public ideology. I find significant heterogeneity. While state-level public opinion varies across states, it is in the main rather moderate. In contrast, in most states, state legislatures are considerably more extreme in their ideological leanings.

\(^1\)See Poole (2005) for an introduction and survey of ideal point estimation.
2 Methodology

2.1 Common Space Ideal Points

To grossly simplify, statistical identification of ideal points comes from data on how often legislators vote with other legislators on a common set of roll calls. We identify a legislator as a conservative because he is observed voting with other conservatives more frequently than he is observed voting with moderates, which he does more often than he votes with liberals. But when we want to make comparisons across political institutions, we are at a loss to make such comparisons. Being a conservative in the Massachusetts Senate is quite different from being a conservative in the US House.

The need for comparable preference estimates across political institutions is hardly new. Efforts to place multiple institutions in a common space rely, in varying ways, on bridge actors. There have been efforts to produce common ideological scales for the US House and Senate (Poole 1998; Groseclose, Levitt and Snyder 1999), for presidents and Congress (McCarty and Poole 1995), for presidents, senators, and Supreme Court justices (Bailey and Chang 2001; Bailey, Kamoie and Maltzman 2005), for Supreme Court and Court of Appeals justices (Epstein et al. 2007), and state legislators and Congress (Shor, Berry and McCarty 2010; Shor and McCarty 2011). Similar issues arise in the estimation of dynamic models (Poole and Rosenthal 1997; Martin and Quinn 2002). Identification of the models relies on the existence of bridge actors who make choices that can be construed as votes in multiple settings. For example, Bailey and Chang (2001) compares Congress and the Supreme Court by leveraging the fact that legislators often opine on the cases that the justices have voted on. Common scales are identified by the analyst’s assumptions about the consistency of behavior when a bridge actor moves from one setting to another.

Yet the limitations of using bridge legislators is obvious; they can not help us to construct a common ideological space between politicians and constituents. Instead, I adopt the framework of an earlier paper (Shor and McCarty 2011), where I use bridge questions from the NPAT survey of Project Vote Smart rather than individuals.\(^2\) I exploit this survey of state and federal legislative candidates—described in more detail below—that has been continually administered in largely identical form every election cycle since 1996. I conduct an online survey that asked questions from the legislative survey to 4,200 respondents. Treating citizens as if they were legislators, I use standard ideal point estimation techniques to derive spatial location parameters for congressional and state legislative incumbents, as well as my survey respondents.\(^3\)

\(^2\)Similarly, Gerber and Lewis (2004) use the initiative in California, limiting its application to that state.

\(^3\)Ideal point estimates are from Bayesian item-response theory models (Jackman 2000; Martin and Quinn 2002; Clinton, Jackman and Rivers 2004; Jackman 2004), but Poole-Rosenthal NOMINATE scores work just as well.
For incumbents in state legislatures, I transform their roll call based ideal point measures into NPAT common space measures. After estimating roll call ideal points for legislators in each state, I project them into the space of NPAT ideal points using OLS. The fitted values of these regressions generate predicted NPAT scores for the legislative non-respondents. The crucial assumption is that legislators who are NPAT respondents act consistently whenever they are making choices about policy, whether it be during a roll call or answering an election survey. If they do, at least on average, the resulting estimates will be comparable across states, chambers and time. It is not necessary for legislator NPAT respondents themselves to be representative of the universe of legislators (Shor and McCarty 2011).

2.2 Modeling Aggregate Opinion

To evaluate how well individual state legislators, state legislative parties, and state legislatures as a whole represent their constituents, we need measures of state- and district-level public opinion. This is difficult to accomplish, as sample sizes on typical national surveys dwindle rapidly for all but the largest states. A common response to this problem is disaggregation at the state (Erikson, Wright and McIver 1993) and now district levels (Warshaw and Rodden 2012; Tausanovitch and Warshaw 2013). Here, multiple national polls are pooled so as to generate sufficiently large sample sizes by state or district. The principal difficulty of such a method is the sheer amount of data required, which often necessitate pooling polls over a decade or more. This approach radically limits the number of applications for aggregating opinion to important political constituencies (for example, Bafumi and Herron (2010) only display common space results for a subset of states for this reason); even the large survey data presented here with 4,200 respondents only has 24 states with 50 or more. The data requirements are drastically more onerous when attempting to estimate opinion at the congressional or state legislative district level.

Instead, I turn to the newly developed technique of modeling aggregate opinion with multilevel (or hierarchical) regression combined with poststratification (MRP) (Park, Gelman and Bafumi 2004). Here, opinion is modeled with both demographic information and non-demographic geographic effects. The multilevel structure of the model improves the estimation of these effects through partial pooling, which is a more reasonable alternative to complete pooling (ignoring geography entirely) or no pooling (ignoring out-constituency variation, eg fixed effects) (Gelman and Hill 2006). Mechanically, after the multilevel model is estimation, predictions are made for each demographic-geographic respondent cell. Then, these predictions are poststratified by detailed

---

4 Disaggregation, in turn, was a response to weaknesses of a prior method of simulating state-level public opinion using only the demographic differences between states.

5 Tausanovitch and Warshaw (2013) pool surveys containing over 350,000 respondents for a decade to estimate district level opinion.
Census population data about the sizes of these cells in the states. Lax and Phillips (2009b) use simulations and validation via real election returns to conclude that MRP offers superior recovery of state-level opinion to disaggregation, at fractions of the required sample sizes. Warshaw and Rodden (2012) conduct similar exercises for state Senate districts and find that MRP efficiently estimates opinion despite the extreme sparseness of the data.

Typical uses of MRP in applied research, such as Lax and Phillips (2009a) and Kastellec, Lax and Phillips (2010), involve estimation of state-level public opinion from dichotomous preference questions. For example, state level support for particular Supreme Court nominations is modeled from a binary response for support or opposition by respondents. I adopt the MRP approach, but adapt it for individual-level ideal points (themselves estimated from preference questions). This use of continuous measures as an individual response is novel, but poses no special difficulties for MRP. The approach has been used elsewhere, including Kousser, Phillips and Shor (2014).

To be specific, I model each individual $i$’s ideal point as a function of their demographics (indexed $j$, $k$, $m$ and $n$ for gender, race, age and education), and either their state ($s$) or district ($d$) of residence, using a varying intercept approach.

$$NPAT_i = \beta_0 + \alpha_{gender}^j[i] + \alpha_{race}^k[i] + \alpha_{age}^m[i] + \alpha_{edu}^n[i] + \alpha_{state|district}^s$$ (1)

The demographic and state intercepts are themselves modeled as drawn from a normal distribution with mean zero and estimated variance, as follows:

$$\alpha_{gender}^j \sim N(0, \sigma_{gender}^2), \text{ for } j = 0, 1$$ (2)
$$\alpha_{race}^k \sim N(0, \sigma_{race}^2), \text{ for } k = 0, ..., 4$$
$$\alpha_{age}^m \sim N(0, \sigma_{age}^2), \text{ for } m = 0, ..., 3$$
$$\alpha_{edu}^n \sim N(0, \sigma_{edu}^2), \text{ for } n = 0, ..., 4$$

District effects are modeled as a function of their region, their state, and the 2008 presidential election returns by district:

$$\alpha_{district}^d \sim N(\alpha_{state}^d + \alpha_{region}^d + \beta_{prez} \cdot prez_d, \sigma_{district}^2), \text{ for } d = 1, ..., 1942$$ (3)

State effects are modeled as a function of their region, and the 2008 presidential election returns by state:

$$\alpha_{state}^s \sim N(\alpha_{region}^s + \beta_{prez} \cdot prez_s, \sigma_{state}^2), \text{ for } s = 1, ..., 50$$ (4)

With region a varying intercept term similar to the demographic terms:

$$\alpha_{region}^r \sim N(0, \sigma_{region}^2), \text{ for } j = 1, ..., 4$$ (5)
Poststratification proceeds after predictions are made for each demographic-geographic type, which number 10,000 (50 states with 200 demographic categories) for states and 388,400 for state senate districts (1,942 districts with 200 demographic categories). Populations of each of the types are obtained from the Census’ 5% Public Use Microdata Sample. Predictions are weighted by the population, and summed over each state or district, to derive the mean public ideology by state or district.

3 Data

3.1 Legislators: NPAT Survey and Roll Call Data

To scale members of Congress, state legislators, and individuals on a common ideological space, I begin with 17 years (1996-2013) of the National Political Awareness Test (NPAT) survey administered by Project Vote Smart, a nonpartisan organization that disseminates information on campaigning politicians to the public at large. Since the survey is answered before November of an election year, I drop all observations for all subsequent losers to get at the population of all incumbents. The questions asked by NPAT cover a wide range of policy matters, including on national security, social issues, fiscal policy, environmentalism, criminal justice, and many more. The questions on the NPAT do change somewhat over time. But while some topics like stem cell funding come and go, the survey asks many other questions consistently and repeatedly. Most useful, a large proportion of the questions asked of state and congressional candidates are identical across the country. This large set of common questions provides significant leverage for making cross-state, cross-level, and longitudinal comparisons.

Despite the richness of the data, use of the NPAT surveys has been limited. Ansolabehere, Snyder and Stewart (2001) use the 1996 and 1998 surveys to distinguish between the influence of party and preferences on roll call voting. This is because of the less than universal number of incumbents who answered the survey. The alternative used here is the exploitation of roll call voting data, which has been the staple of the empirical spatial voting literature. Congressional roll call data is from Keith Poole’s Voteview web site. For state legislatures, I use a new comparative data set of state legislative roll call votes that covers over 21,000 legislators from all 50 states from over a decade from Shor and McCarty (2011).

3.2 Individuals: CCAP Survey

I administered a large subset of the NPAT survey to individuals via several waves in the 2008 Co-operative Campaign Analysis Project (CCAP), a joint venture of 27 research teams. The multiwave panel was administered online by YouGov/Polimetrix with roughly 20,000 people (representative at the state level) completing all six waves. Details on the construction of the sample and validation
exercises can be found in Jackman and Vavreck (2010). Pooled together, a common set of questions are asked of all the respondents, while a subset of representative respondents answered individual team questions.

In two long-form CCAP survey waves conducted in March and September 2008, I asked 76 dichotomous questions taken verbatim from the 2008 Congressional and state legislative NPAT questionnaires. I matched these question with NPAT questionnaires from 2006 and earlier. In the short-form CCAP survey waves conducted in September 2008, I asked a subset of 15 questions asked in the long-form survey. The consequences of the smaller number of bridge actors is one of efficiency, not bias.⁶

4 Descriptives

4.1 Fit and Dimensionality

For each state roll call record, I estimated one and two dimension spatial models. Following Poole and Rosenthal (1991, 1997), I assess the models based on the overall classification success as well as the aggregate proportionate reduction in error (APRE).⁷ Despite considerable cross-state variation, average classification and APRE scores for state legislatures are quite comparable with that of Congress. Moreover, the improvement in fit afforded by a second dimension is minimal. Thus, policy preference appear adequately described in one dimension in the states, just as it is in Congress.

Estimation statistics from the CCAP survey sample, in comparison with legislative institutions, show that the fits are poorer, though not much more so. Thus, the first dimension classifies some 73% of NPAT answers correctly, with a 28% APRE.⁸ This compares with the poorest fitting states, with Nebraska at 79% correct classification and Arkansas at 26% APRE. The second point is that the improvement in classification for using two dimensions is more substantial relative to that of most states and Congress, but only a touch larger than the Illinois legislature, which gives the largest improvement in adding a second dimensions. In sum, we can safely say that one ideological dimension dominates the CCAP survey responses to NPAT questions.

This finding is remarkable on a number of levels. It undermines Converse (1964) and his classic argument that the mass public is ideologically unconstrained— that belief in general ideological

⁶ The standard deviation of the estimate ideal points is higher for the short-form waves, but the mean is not different, as expected. Note that similar studies (Bafumi and Herron 2010; Jessee 2009, 2010) use only 10-15 questions for bridging.

⁷ The APRE measures the improvement in classification relative to a null model where all votes are cast for the winning side. This is a more realistic benchmark than classification success, where even the naive model can do well on.

⁸ Note that these statistics are from a CCAP-only estimation; they are not contaminated by including legislators.
principles do not constrain more specific policy preferences. The necessary inference from such an argument is that policy preferences for the vast majority should not be correlated in a consistent way. Individuals hold ideological opinions as a grab-bag, plucked almost randomly. They (as opposed to elites) can not be classified on the left-right ideological continuum because of their incoherent beliefs. If true, this should manifest itself in very poor fit statistics from an ideal point estimation, and/or highly multidimensional preferences, as beliefs in one area do not correlate with those in another.

It has been thought that the ubiquity of one dimension in legislative politics had to do with institutional or party factors. For example, there may be very high returns to party discipline in establishing party brand names, which may necessitates simple and consistent voting behavior to more easily be identified by the public at large. But the unidimensionality of public opinion points to causes that transcend features of legislative politics, such as the politico-cultural or philosophical fusing of intellectual traditions into the public discourse, or the psychological need for some sort of consistency in preferences. It is not clear why environmentalism necessarily hangs together with a desire for more union prerogatives, but it does – for people as well as politicians.

4.2 Validation

Before proceeding, it is instructive to compare the estimated common space ideal points for individuals with other measured political variables. The correlation of the ideal points with the standard seven-item party identification question is 0.66. The correlation with the five-item ideological self-placement question is 0.72. The scores are both highly substantively and statistically significant predictors of responses to issue preference questions, including those on abortion, prison, and guns, even controlling for party. They are also a very powerful predictor of presidential vote choice, also controlling for party identification.

At the aggregate level, I begin with the comparison to a measure of district ideology developed by Tausanovitch and Warshaw (2013). They measure the ideology of all states and state legislative districts prior to the 2012 redistricting, pooling responses from a variety of surveys over a decade. In their analysis, the number of respondents per state averaged around 7,000 and the state senate districts around 180, orders of magnitude more than this application. Yet Figure 1 shows that the correlations between their measure and ours is quite impressive; 0.92 at the state level and 0.63 at the district level. This is a good sign that the survey and methodology have produced an accurate estimate of constituent preferences at both of these levels.

---

*The correlation is 0.77 for the simple three-question ideological index suggested by Ansolabehere, Rodden and Snyder (2008).

10By comparison, the raw data without MRP correlate at 0.54 and 0.32, respectively.
Figure 1: State and District level validation. District MRP estimates are highly correlated with state and district level ideology from Tausanovitch and Warshaw (2013).
5 District Level Representation

The payoff of the joint scaling exercise is that we can now compare legislator and district opinion directly. Figure 2 plots the two against each other. Legislator opinion, on the whole, is responsive to district opinion. Separating districts by the party of the legislator shows that Democrats are more responsive than Republicans. Yet this result mirrors earlier findings using the proxy of district presidential vote for district opinion (Shor and McCarty 2011).

The new finding shown in Figure 2 is the common space distance of legislators from their districts. The grey line in the plot is the 45 degree line of perfect congruence. Democrats are typically (but not always) more liberal than their districts, and Republicans are almost always more conservative. Yet Republicans are typically more distant from their districts, as highlighted in the density curve of Figure 2.

What factors account for the variation in the distance between legislators and their districts? My outcome variable is the absolute value of distance (since Republicans’ distance is typically positive and Democrats’ negative). I regress a number of predictors on the absolute distance. The first of these is political party. There have been a number of arguments (Hacker and Pierson 2005; McCarty, Poole and Rosenthal 2013; Mann and Ornstein 2013) that Republicans are becoming polarized much faster than Democrats. If district opinion moves slower than elite preferences, we should expect Republicans at a time of extreme polarization to be drifting farther from public opinion than Democrats.

Groseclose (2001) argues that incumbents have strategic reasons to locate closer to the center, since this would amplify their valence advantages over their challengers. Alternatively, incumbents could trade policy distance for their valence advantages, allowing them to locate farther away than their challengers. I include an interaction between party and incumbency to account for heterogeneity in the incumbency effect by party.

For re-election minded politicians, close races should attune their incentives closer to that of their constituents (Mayhew 1974). I measure electoral tightness by the vote margin of the state legislator over the runner up in the last election prior to 2008. A higher margin should induce moderation by legislators towards the distract mean.

Rodden et al. (2014) argue that heterogeneous districts themselves lead to polarized, and hence extreme legislators. The simple intuition is based on the idea that candidates must choose platforms in the presence of uncertainty over the median voter (Calvert 1985; Wittman 1983). The greater the uncertainty, the more candidates move towards their party’s more extreme ideological preferences. The intuition is that when district opinion is unimodal, the median voter on election day will be largely predictable, constraining candidates. In contrast, when voters are more evenly distributed
throughout the ideological spectrum or even polarized into a bimodal distribution, there is more uncertainty about the identity of the median voter on election day, and hence weaker electoral constraints on candidates’ ideological positioning. In other words, when districts are moderate—but only as a consequence of internal divisions—they tend to elect more extreme legislators. This is because normal Downsian pressures to converge are balanced against the returns to turning out your own base. For example, this is seen in large legislative districts where red precincts in the outlying areas surround deep blue areas like college towns. They are moderate only because they are deeply internally divided, with a balance between highly liberal and conservative voters, not because the voters are moderate and unimodal. So the expectation is that more heterogeneity should induce greater distance from distract means.

The results in Table 1 largely confirm these hypotheses. Republicans are considerably more distant than Democrats, though the effect is moderated by incumbency. Republican challengers who win their state Senate races before 2008 are quite extreme. In fact, the incumbency effect operates only in the Republican party; as Model 2 shows, there is little differences, ceteris paribus, between Democratic incumbents and challengers. This seems quite consistent with a polarizing party environment where successive generations of Republicans are ever more polarized, while Democrats are more stable. Legislators who win by tighter margins are indeed closer to their districts. And more heterogenous districts lead to increasingly distant legislators.
Table 1: Distance Models

<table>
<thead>
<tr>
<th></th>
<th>Dependent variable: Absolute Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td>Republican</td>
<td>0.059***</td>
</tr>
<tr>
<td></td>
<td>(0.018)</td>
</tr>
<tr>
<td>Incumbent</td>
<td>−0.055***</td>
</tr>
<tr>
<td></td>
<td>(0.021)</td>
</tr>
<tr>
<td>Vote Margin</td>
<td>0.064**</td>
</tr>
<tr>
<td></td>
<td>(0.027)</td>
</tr>
<tr>
<td>District Opinion Polarization</td>
<td>0.681***</td>
</tr>
<tr>
<td></td>
<td>(0.216)</td>
</tr>
<tr>
<td>Republican * Incumbent</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>−0.988**</td>
</tr>
<tr>
<td></td>
<td>(0.490)</td>
</tr>
<tr>
<td>Observations</td>
<td>1,088</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>−211.541</td>
</tr>
<tr>
<td>Akaike Inf. Crit.</td>
<td>437.083</td>
</tr>
<tr>
<td>Bayesian Inf. Crit.</td>
<td>472.027</td>
</tr>
</tbody>
</table>

Note: *p<0.1; **p<0.05; ***p<0.01
Figure 2: Congruence at the district level.
5.1 State Level Representation

Figure 3 plot state opinion against aggregate state legislative ideology, measured as the average of the chamber medians. Opinion is responsive but frequently incongruent.

![State Opinion and Legislative Ideology 2008](image)

**Figure 3:** Congruence at the state level.

5.1.1 Chamber Medians

Figure 4 plot state opinion against legislative ideology, measured as chamber medians (Figure 5 reconfigures the plot to more clearly communicate the extent of state-level incongruence of opinion). Opinion is responsive but frequently incongruent. Republican-held chambers are more conservative than state opinion, while Democratic-held chambers are mostly, but not always, more liberal than their states (Mississippi is the most prominent exception). Here, too, the finding from the district-level analysis holds up. Republican-led chambers appear to be more distant than Democratic-led chambers.
Figure 4: Congruence at the chamber median level. Party assigned to who controls the chamber.
Figure 5: Representation of state opinion by chamber medians in common NPAT ideological space. Circles indicate a MRP point estimate of mean ideology in the state. Chambers are colored according to party control as of 2008.
5.2 Party Medians

Incomplete

Figure 7 continues the exercise, this time displaying state opinion plotted against party medians within the two chambers. Parties are clearly responsive to public opinion, but with Democrats more so than Republicans. And again, Republican medians are more conservative than are Democratic medians liberal.

Figure 6 plots state opinion means and chamber party medians directly on the left, and on the right reformats the plot to highlight the ideological distance between the two. Since some party medians are more moderate than state opinion, the use of an absolute (or folded) distance measure would be misleading for these cases. Instead of using the absolute value of distance, I have created an alternative measure of distance, extremism, which multiplies the Democratic medians by negative 1. Thus, positive values for both Democrats and Republicans indicate increasing extremism relative to the state, while (infrequent) negative values imply moderation relative to the state.

Several patterns become apparent. First, there is an extreme heterogeneity in the range of distance. States like California and Colorado have highly distant party medians, while at the other extreme, Alaska and Rhode Island have very moderate party medians. Nevertheless, party medians are still, on the whole, more extreme than state opinion. There are outliers like Alaska, where 3 out of 4 medians are more moderate than the state, and New Jersey, whose Republicans are to the left of state public opinion. Third, party medians are correlated in extremism relative to state opinion. Party medians tend to be distance simultaneously for both parties.

Now we investigate the variation in the congruence of party medians relative to state opinion means. The outcome variable is the absolute distance between the two.

Republicans party medians are expected to be further from state opinion than Democrats.

Chambers that are more competitive should inspire moderation by parties who converge in Downsian fashion. Competition is calculated as per Holbrook and Van Dunk (1993), but at the chamber level.

States vary dramatically in population and the number of legislative districts. The ratio of the two I call district magnitude. The idea is that a larger magnitude makes the monitoring problem more difficult, and allows for ideological drift from state opinion.

Table 2 shows the results of the model.
Figure 6: Leftmost plot shows state public opinion mean and party medians within chambers on the common NPAT scale. Rightmost plot is ideological distance between state opinion means and chamber party medians. Positive values indicate party medians are more extreme than the state; negative values are more moderate than the state (eg, AK). Left plot is sorted by score, right plot is sorted with by extremism.
Figure 7: Congruence at the party median level, within chambers.
Table 2: *Party Median Distance Models*

<table>
<thead>
<tr>
<th></th>
<th>Dependent variable: Absolute Distance from State Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Republican Median</td>
<td>0.097***</td>
</tr>
<tr>
<td></td>
<td>(0.033)</td>
</tr>
<tr>
<td>Chamber Competitiveness</td>
<td>−0.005**</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
</tr>
<tr>
<td>Initiative</td>
<td>0.069</td>
</tr>
<tr>
<td></td>
<td>(0.052)</td>
</tr>
<tr>
<td>Interest Group Density</td>
<td>−1.396***</td>
</tr>
<tr>
<td></td>
<td>(0.481)</td>
</tr>
<tr>
<td>Term Limits</td>
<td>0.047</td>
</tr>
<tr>
<td></td>
<td>(0.057)</td>
</tr>
<tr>
<td>Logged District Magnitude</td>
<td>0.069***</td>
</tr>
<tr>
<td></td>
<td>(0.023)</td>
</tr>
<tr>
<td>Legislative Professionalism</td>
<td>0.079</td>
</tr>
<tr>
<td></td>
<td>(0.233)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.421***</td>
</tr>
<tr>
<td></td>
<td>(0.142)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Observations: 198</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log likelihood</td>
<td>−20.282</td>
</tr>
<tr>
<td>Akaike Inf. Crit.</td>
<td>60.564</td>
</tr>
<tr>
<td>Bayesian Inf. Crit.</td>
<td>93.447</td>
</tr>
</tbody>
</table>

*Note:*  *p*<0.1; **p**<0.05; ***p***<0.01
6 Discussion and Conclusion

My goal in this paper is the creation of an ideological common space that includes individuals and state legislators (individually and aggregated at the chamber and party levels) in common space. The presence of those scores—varying across space and time—open up the possibility for exploring any number of interesting questions in representation, lawmaking, and public policy. I illustrated a few examples in this paper.

State legislators and state legislative chamber and party medians are responsive to variation in district and state-level public opinion. But they are quite often strikingly incongruent to it. Public opinion is considerably more moderate than elected officials’ ideology. The variation in this incongruence is partly explained by political party. Republicans are considerably more incongruent than Democrats, at the individual and aggregate levels. Other factors include structural features of state institutional environments, like district magnitude.

This pattern of responsiveness combined with incongruence has been noted before, but only at the level of individual policy issues (Lax and Phillips 2009b,a). The findings here suggest a broader conclusion. The policy views of elected officials are systematically distant from their constituencies.

Getting good measures of public opinion on a common scale with their representatives is going to be useful in illuminating the role of institutions as moderators of incongruence. Public and elite preferences are insufficient, on their own. This is because those preferences are filtered through the institutional environment that characterizes each state. The amount of state institutional heterogeneity is staggering. These include supermajoritarian decision rules, legislative professionalism, term limits, campaign finance regulations, primary institutions, and much more. For example, the heterogeneity in the quality of representation could be in part caused by institutional differences between states. (Gerber 1996; Lax and Phillips 2009a; Matsusaka 2010). An integrated perspective is required to illuminate state policy outcomes, requiring all three parts—public opinion, legislative ideology, and institutions.
References


Kousser, Thad, Justin H. Phillips and Boris Shor. 2014. “Reform and Representation: Assessing California’s Top-Two Primary and Redistricting Commission.”


Rodden, Jonathan, Boris Shor, Christopher Warshaw, Christopher Tausanovitch and Nolan McCarty. 2014. “Geography and Polarization.”


