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When Do Legislators Follow Constituent Opinion? Evidence from Matched Roll Call and Referendum Votes

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Stigler Center

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**When Do Legislators Follow Constituent Opinion?
Evidence from Matched Roll Call and Referendum
Votes**

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When Do Legislators Follow Constituent Opinion? Evidence from Matched Roll Call and Referendum Votes

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This paper investigates how often and under what conditions legislators vote in accordance with constituent opinion. The main innovation is to measure constituent opinion using referendum election returns. In a sample of 3,555 roll call votes on 28 laws in nine states, I find that legislator roll call votes were congruent with the opinion of a majority of their constituents 65 percent of the time. However, when legislator preferences differed from district opinion on an issue, legislators voted congruent with district opinion only 29 percent of the time. The data do not show a reliable connection between congruence and competitive elections, term limits, campaign contributions, or media attention. The evidence is most consistent with the assumption of the citizen-candidate model that legislators vote their own preferences.

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When Do Legislators Follow Constituent Opinion? Evidence from Matched Roll Call and Referendum Votes

1. Introduction

Representation – and its failures – is a central concern of political economy scholars and political activists. The literature is enormous and open to interpretation, but there is a common view along the following lines: it is not unusual for legislators to act against the wishes of their constituents – either because they are influenced by special interests or because they follow their personal ideological preferences¹ – but legislators become more responsive to constituents when subject to more electoral pressure and when voters care more or have more information about their actions.² The belief that more electoral competition and less campaign contributions make legislators more responsive to their constituents is axiomatic for many election reformers (McDonald and Samples, 2006).

This paper offers a new empirical strategy to directly measure the congruence between legislator roll call votes and constituent opinion, and uses it to address several central questions that so far have been addressed with indirect methods: How often do legislators follow the wishes of the majority of their constituents? When they vote contrary to constituent interests, why do they do this? How often are nonresponsive roll call votes linked to uncompetitive elections or large campaign contributions? The main obstacle to measuring congruence is lack of data on constituent preferences. The innovation of this paper is to capture constituent preferences on a law using referendum election returns, and use that information to directly measure congruence of individual roll call votes. At present, 23 American states allow citizens to challenge state laws that have been approved by the legislature and governor, using what is

¹ Stigler (1971) and Peltzman (1976) are classic references on the special interest view. See Poole and Rosenthal (1991, 1996) and Poole (2007) on legislator ideology.

² Legislators follow citizen preferences in the median voter model and in political agency models (Barro, 1973; Ferejohn, 1986; Banks and Sundaram, 1993; Maskin and Tirole, 2004).

typically called the referendum process.³ In these states, if citizens collect a predetermined number of signatures from fellow citizens, an election is held in which voters have the option to approve or repeal the law. I construct a new data set that covers 28 laws in nine states for which district-level referendum election returns are available, and determine whether or not each of 3,555 roll call votes on those laws was congruent with majority opinion in the district.

I find that representation “works” more often than not – legislators cast congruent votes 65 percent of the time. This is better than the 50 percent rate of congruence that would occur if legislators simply flipped a coin when voting, but perhaps less than one might hope. This finding adds to the already tall stack of evidence against the median voter model as an accurate description of policy making. The frequent disconnect between legislator votes and district opinion might go part way toward explaining the low congruence between *policy* and public opinion in the states found in Matsusaka (2010) and Lax and Phillips (2012) (59 percent and 48 percent, respectively.)

The core of the paper is an exploration into the factors that cause and impede congruence. Surprisingly, I find that legislators almost always vote in accordance with their ideological preferences, as measured by Shor and McCarty’s (2011) NPAT common space scores, regardless of district opinion. When their ideology aligns with constituent interest, they cast a congruent vote 89 percent of the time; when their ideology is opposed to constituent preferences, they cast a congruent vote only 29 percent of the time. To the extent that legislators represent majority opinion, it happens largely because legislators share the opinions of their constituents, not because legislators seek to reflect constituent opinion.

Pointing in the same direction, I find remarkably little evidence that legislators are less likely to cast a congruent vote when they represent a uncompetitive district, when they do not need to stand for re-election, when they collect substantial campaign contributions, or when

³ Direct democracy terminology is not standardized. I use “referendum” to mean a vote on a law passed by the legislature that is challenged by citizen petition, and approved or repealed in a vote by the electorate at large. Lupia and Matsusaka (2004) and Matsusaka (2005) discuss direct democracy terms and provide institutional details.

their actions are not subject to media scrutiny. Broadly speaking, I find little evidence to support the common belief that electoral competition and public attention make legislators more responsive. The evidence reinforces the general sense of the literature that elections do not provide strong incentives for incumbents to heed public opinion.

The evidence paints a picture in which elections serve to select candidates who are more-or-less ideologically aligned with the district's voters, but once in office legislators mainly follow their ideologies when voting, even when they are in a tenuous electoral position. In terms of theory, the citizen-candidate model of Osborne and Slavinsky (1996) and Besley and Coate (1997) seems to offer the best description of the findings. The failure to detect any connections between electoral competition, re-election risk, and public attention could mean that such connections do not exist, or that their effects are subtle and can operate in different directions depending on particular features of the electoral environment, as suggested by models of political accountability with asymmetric information about incumbent types.⁴ In terms of election reform, the evidence suggests that the effects of increasing electoral competition and reducing campaign contributions might be less obvious than sometimes claimed.

Because the literature on representation is so extensive, it may help the reader to briefly describe existing approaches to measuring representation, and highlight the point of departure for this paper. The literature has revolved around two main empirical strategies.⁵ One approach

⁴ See Ashworth (2012) for a survey. Specific examples include Maskin and Tirole (2004) on re-election pressures and Ashworth and Shotts (2010) on media scrutiny

⁵ Two notable studies do not fit into these two boxes. Lee et al. (2004) assume that re-election motivated politicians should respond to an incumbency advantage by moving their roll call votes in the direction of the incumbent's ideal point. Using a regression discontinuity strategy based on close elections, they find no evidence of such a move, which they interpret as purely ideological voting. A limitation of their approach is that the assumption that incumbency causes policy shifts is not a general property of political agency models. Another limitation is that their reliance on close elections limits their inferences to the behavior of legislators representing competitive districts. Legislators representing uncompetitive districts, the more common case, may be different than those from competitive districts. Levitt (1998) estimates a

has been to regress roll call votes on proxies for constituent preferences and ideology, with the size of the coefficient (or correlation) on preferences taken as a proxy for the degree of representation.⁶ While this approach can reveal if there is a connection between votes, citizen preferences, and ideology at the margin, several studies have shown that the magnitude of the coefficient cannot be interpreted as a proxy for the *degree* of representation (Achen, 1977; Romer and Rosenthal, 1979; Erikson et al., 1993, chapter 4; Matsusaka, 2001). A more recent approach has been to estimate the ideal point of each legislator (from roll call votes) and his or her constituents (from opinion surveys or election returns) in a spatial model, and compare the distance between the two.⁷ Such estimates are appealing because of their grounding in theory, but require a bridging assumption to place ideal points on a similar scale, and the numbers lack a natural interpretation. Moreover, Broockman (2016) shows that even with a valid bridging assumption, such comparisons might not indicate ideological congruence, but rather the relative consistency of beliefs held by legislators and ordinary citizens. My paper's approach of comparing roll call and referendum votes on individual issues avoids the problems associated with the regression method by calculating congruence directly, and avoids problems associated with the ideal point method by comparing individual votes rather than aggregating. The basic strategy of using referendum votes is inspired by Gerber (1996) and Gerber and Lewis (2004) and is closely related to recent work by a team of researchers studying Swiss legislators (Portmann et al. (2012), Stadelmann et al. (2013, 2014)).⁸

structural model of a representative senator's utility function, finding a heavy weight on ideology in the voting decision. That approach requires the strong assumption that voter preferences can be proxied by the roll call voting behavior of elected representatives.

⁶ "Classic" references in this vein are Kau and Rubin (1979), Kalt and Zupan (1984), and Peltzman (1984).

⁷ Examples include Gerber and Lewis (2004), Bafumi and Herron (2010), Masket and Noel (2011), and Kousser et al. (2014).

⁸ Brunner et al. (2013) use ballot proposition votes in California to measure the congruence of legislators with their poorest and richest constituents.

2. Constructs and Data

A. Definition of Congruence

A general definition of congruence between legislator n and his or her constituents is $-|Y_n - Y_n^*|$, where Y_n is the legislator's vote (or voting record) and Y_n^* is the vote (or voting record) preferred by his or her constituents. As noted above, some previous research has estimated Y_n and Y_n^* as points on the real line based on a sample of roll call votes and a measure of constituent opinion. Broockman (2016) cautions that this approach might be flawed because middling ideological scores arise not only if a person is a moderate but also if he or she takes extreme positions on both the conservative and liberal side of different issues; calculating congruence with ideal points then may capture differences in consistency rather than differences in ideology.

This paper's approach is to estimate congruence between roll call votes and referendum returns on individual laws, where $Y_n \in \{yes, no\}$ is the legislator's vote on a particular law, $Y_n^* \in \{yes, no\}$ is the majority view in the district based on referendum election results, and

$$Congruence_i = \begin{cases} 1 & \text{if } Y_n = Y_n^*; \\ 0 & \text{if } Y_n \neq Y_n^*. \end{cases}$$

With only two outcomes, the majority position is equal to the median voter's position.

Using roll call votes coupled with referendum returns offers some advantages over previous estimates: because these decisions involve only two outcomes, approve or reject, they are naturally on the same scale and thus directly comparable without a bridging assumption. Also, they have a natural interpretation: *Congruence* = 1 means that the legislator's vote matched majority opinion in the district, and *Congruence* = 0 means the legislator's vote opposed majority opinion in the district.

B. Referendums and Constituent Preferences

At present, 23 American states allow citizens to use the referendum process to challenge state laws approved by the legislature and signed by the governor. Implementation details

differ, but in these states, if citizens collect a predetermined number of signatures from fellow citizens, an election is held involving the electorate at large in which voters have the option to confirm or repeal the law.⁹ I use district level referendum election returns to measure the majority opinion of constituents in each legislator's district on a law.

To construct the sample, I began by identifying all state-level referendums during the period 2000-2016. From this list of 60 ballot measures, I examined official election returns provided by each state's election division to determine if returns were available by legislative district, or could be constructed from precinct-level data.¹⁰ The necessary data are available for 28 referendums. For each referendum, I identified the roll call votes cast in each house of the state legislature on the law. Laws are voted on several times en route to approval; I used the final roll call vote cast in each chamber. The 3,555 roll call votes associated with these referendums form the core of the study (abstentions are omitted). The 28 referendums are listed in Table 1, along with summary and descriptive information.

The referendums took place in nine states: Alaska, California, Maine, Maryland, Michigan, North Dakota, Ohio, South Dakota, and Washington. These states represent a mix of urban and rural, and include both "blue" and "red" states in terms of partisan orientation. In the sample period, Republicans typically controlled the legislatures of Alaska, Michigan, North Dakota, Ohio, and South Dakota; and Democrats usually controlled California, Maine, Maryland, and Washington. The subject matter of the challenged laws covered fiscal, political, and social issues, and included high profile topics of national interest such as same-sex marriage and the minimum wage as well as issues of primarily local interest such as Alaska's

⁹ For example, in California, petitioners have 90 days after the governor approves a law to collect signatures from eligible voters equal to 5 percent of the number of votes cast in the previous gubernatorial election (as of 2015, roughly 505,000 signatures). For institutional details across the states, see Gerber (1999).

¹⁰ Some referendums were excluded because the state does not report sufficiently disaggregated data. Others were excluded because the state changed its district lines between the time of the roll call vote and the time of the referendum election. One California referendum excluded because it was abandoned by its sponsors after qualifying for the ballot.

law allowing aerial hunting of wolves and North Dakota's law allowing the University of North Dakota to stop using the name "Fighting Sioux" for its mascot. The ideological orientation of the laws was also mixed, with some proposing to move policy in a liberal direction (e.g., allowing same-sex marriage or granting tuition to illegal immigrants) and others proposing to move policy in a conservative direction (e.g., allowing charter schools or limiting collective bargaining by public employees). Voters repealed 12 of the 28 laws in question.

Referendum election results offer some advantages over opinion surveys as a source of constituent preferences: First, election returns indicate opinion on exactly the same law approved by the legislature, while opinion surveys usually summarize the law in question when polling voters. Because "the devil is in the details," the summaries may fail to capture elements of the law that turn out to be important to voters. Second, votes in referendum elections actually make law – citizens are not giving off-the-cuff opinion on a matter over which they have no control but are casting votes that aggregate into an actual law. Third, election returns come closer to giving the informed opinion of citizens because the votes are cast after a campaign in which contending groups publicize the benefits and costs of the law, as they see them, and opinion leaders (such as newspapers and interest groups) give their endorsements. A possible limitation of election returns is that not every person votes so the numbers may not give an unbiased estimate of district opinion. The severity of this limitation depends on the question; if the goal is to understand how electoral incentives influence legislator behavior, then it may be desirable to focus on the views of those citizens who vote and not the abstainers.

One issue that is relevant for the external validity of the roll call votes studied in this paper is whether referendums are anticipated, causing legislators to vote differently on these laws than other laws. If legislators expect a law to be put to a vote of the people, their decision calculus may be different; they may vote no in order to avoid being overruled or may vote yes simply to give voters the final decision. As a practical matter, referendums are extremely rare. As noted, there have been only 60 state-level referendums in the 21st century, compared to many thousands of laws that have been passed in the 23 states that allow referendums. An aggrieved group may threaten a referendum, but the cost of collecting petitions in a compressed time period is typically prohibitive. It is plausible to assume that when legislators cast their

votes on the laws studied in this paper, they did not expect the law to go to a referendum, and so their voting behavior on these laws is likely to have been similar to their behavior on other laws.¹¹

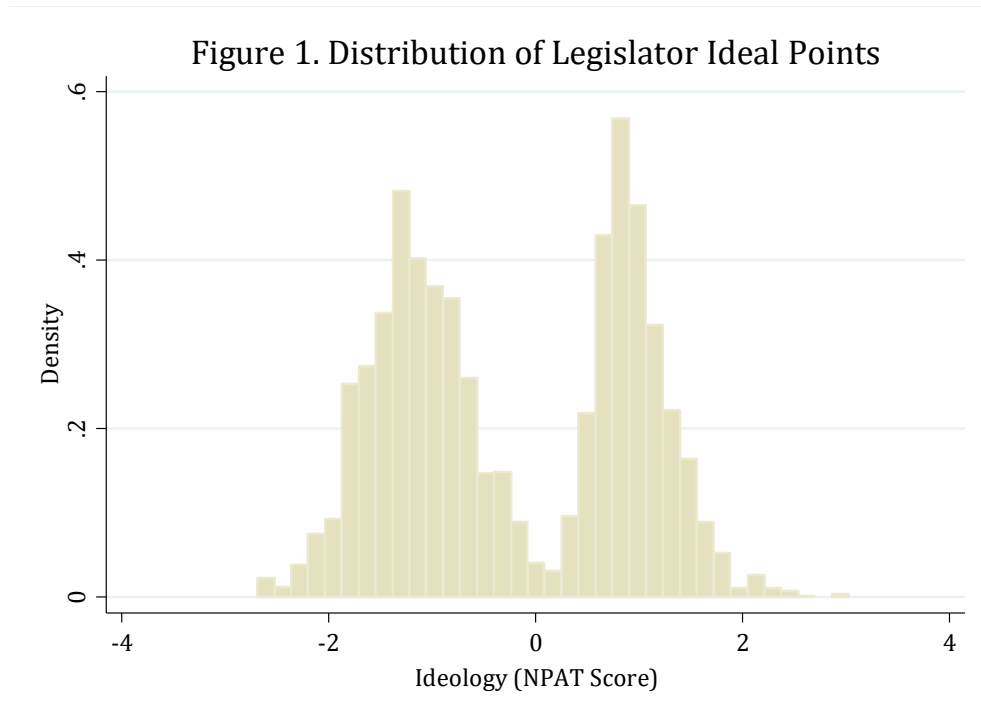
C. *Ideology and Disagreement*

I capture legislator ideology using the NPAT common space scores constructed by Shor and McCarty (2011) for state legislators during the period 1993-2013.¹² These scores assign each legislator a scalar (ranging from -2.69 to 3.03 in the sample); negative numbers indicate relatively liberal positions and positive numbers as relatively conservative positions. By construction, the scores do not vary over time. There is a close connection between ideology and partisan affiliation: the mean score for Democrats is -1.16 and the mean for Republicans is 0.97, with the difference statistically significant at the 1 percent level. Table 2 reports summary statistics on these and other explanatory variables.

The use of NOMINATE and similar ideal point scores as a proxy for ideology is a common practice. Technically the scores are simply a low dimensional representation of a legislator's history of roll call votes, meaning they could be determined not only by ideology, but also by external influences such as party membership, interest group pressure, and constituent opinion. Several arguments have been offered for interpreting these ideal point estimates as ideological preferences: the estimates are fairly stable throughout a legislator's career; a legislator's ideal point estimate changes little when his or her constituency changes (e.g., when the legislator moves from one chamber to another or when major redistricting occurs); U. S. Senators from the same state often have quite different estimated ideal points,

¹¹ The argument given here for external validity would not apply to laws that are known to *require* voter approval, such as bond proposals and constitutional amendments in some states. When voting on such proposals, legislators may vote yes in order to let voters decide issue, even if they do not favor personally favor the law. Thus, one needs to be careful in generalizing from roll call votes on issues that require popular approval, such as bond proposals or most propositions considered in studies of Switzerland.

¹² More precisely, I use the July 2014 updated scores, available online at <http://americanlegislatures.com>. I thank Nolan McCarty and Boris Shor for helping me navigate through the data.



suggesting that ideal points are not simply induced by constituents; and same-party replacements of an incumbent legislator can have very different ideal points from their successors.¹³

Despite evidence suggesting that ideal point estimates are effective proxies for ideology, they may incorporate other information as well. To mitigate the possibility of patterns being driven by these other factors, my estimates do not rely on the precise estimate of a legislator’s ideal point, but only on whether it is on the “left” or “right” side of the distribution. That is, in the main estimates, I collapse NPAT scores into two categories, called “liberal” and “conservative.” Figure 1, which reports the distribution of NPAT scores, shows that dividing legislators into two broad groups like this is a natural way to organize the data. The two-group classification scheme, which typically corresponds to Democrat and Republicans, loses some information but turns out to display a fair amount of explanatory power.

To assess the role of preference disagreement, we need to compare legislator and district opinions on an issue. The district’s view comes from referendum returns. The legislator’s view

¹³ See McCarty (2011) for a longer discussion. Also see Poole (2007) and Stratmann (2000).

comes from his or her ideology in conjunction with the ideological orientation of the law in question. I determined the ideological orientation of each law in three different ways, to ensure robustness: (i) by regressing the percentage of referendum votes in favor on the percentage of votes received by the Democratic candidate in the preceding legislative election; (ii) by regressing a legislator's roll call vote on his or her party; and (iii) by identifying the party of each bill's sponsors. Each law was classified as conservative or liberal if there was a significant connection between voting and party, where Democrat=liberal, or based on the partisan affiliation of the sponsors.¹⁴ Appendix Table A lists the orientation of each law using each method. The orientations conform to what an informed observer would expect, for example, allowing same-sex marriage (Maryland), granting domestic partnership rights to gay couples (Washington), and requiring employers to provide health insurance (California) are classified as liberal issues, while allowing charter schools (Washington) and restricting public employee collective bargaining (Ohio) are conservative issues. The first classification scheme, which orients an issue based on how people in the district vote, seems most likely to capture how a legislator would personally think about an issue (as opposed to the roll call or sponsorship measures, which may be influenced by party pressure), so I focus on that classification below, but I show that the findings are robust to the other classifications.

D. Competition and Other Electoral Pressure

To assess the importance of electoral pressure, I collected data that allow construction of several variables that are linked to re-election concerns. For each district, I collected information on votes received by the top two candidates in the previous legislative election. Following the literature, I measure competitiveness of the district as the vote margin, defined as the difference

¹⁴ Laws were left unclassified if the regression coefficients were statistically insignificant (for the first two approaches); or if the list of sponsors included both Democrats and Republicans or the bill originated with a governor of one party while the sponsor belonged to the other party (third approach).

between votes received by the winner and runner up, divided by their combined votes.¹⁵ Electoral pressure may also be exerted by proximity of the next election. If voters are myopic, legislators may be more responsive to constituent interests when the next election is imminent than when it is far in the future. Based on state law, I determined the date of the next legislative election in each district.

If a state has term limits for state legislators, I determined if a legislator is currently serving in his or her statutorily mandated final term. Political agency theory implies that legislators should be less attentive to constituent interests when they are ineligible to stand for re-election.

E. Campaign Contributions

I collected data on campaign contributions from candidate filings reported on state web sites. The analysis focuses on California, Ohio, and Washington, states for which the data are available in an accessible form. I excluded Maine because it has a public funding system for campaigns, and private contributions are minimal. For each legislator, I determined the total amount of campaign contributions in the previous election cycle, defined as the previous election year in California and Ohio, and the previous two-year period preceding the previous election year in Washington.

3. How Often Do Legislators Represent Constituent Interests?

The analysis begins by quantifying the amount of congruence between legislator votes and constituent preferences. Figure 2 reports the percentage of congruent roll call votes by issue and overall. The solid dots show congruence based on all roll call votes. Overall congruence was 65.4 percent on the 3,555 roll call votes in the full sample: one-third of roll call votes were cast contrary to the preferences of a majority of people in the legislator's district. Congruence was almost identical in the upper chamber (65.2 percent) and lower chamber (65.9 percent). The

¹⁵ For multimember districts, the vote margin is the difference between the incumbent's vote and the losing candidate with the most votes, divided by their combined votes.

lowest congruence was on South Dakota's 2015 law reforming the candidate nomination process (23.2 percent), California's 2013 gambling law (27.9 percent), South Dakota's 2015 law creating a subminimum wage for youth (30.7 percent), and Michigan's 2014 dove hunting law (38.7 percent). All four laws were repealed by the voters. The highest congruence was on California's health insurance law of 2003 (92.4 percent, including 100 percent in the senate). Interestingly, this law was also repealed.

If legislators made their voting decisions by flipping a coin, they would vote with the majority 50 percent of the time. So while 65 percent might at first glance suggest that legislators are healthily attentive to district opinion, it is only 15 more congruent than if legislators voted randomly. The frequent disconnect between legislator votes and district opinion might go part way toward explaining the low congruence between *policy* and public opinion in the states found in Matsusaka (2010) and Lax and Phillips (2012) (59 percent and 48 percent, respectively.)

When district opinion is evenly divided, the fact that a legislator votes against the majority may not be so interesting. In a district with a 50.1-to-49.9 split on an issue, the distinction between majority and minority opinion is almost a matter of measurement error, carries little normative weight, and may be difficult for a legislator to discern. To get a sense of the importance of closely divided districts in the overall quantification of congruence, Figure 2 also reports congruence only for districts in which opinion was "one-sided" in the sense that the majority was greater than 55 percent (a margin of 10 percent or more). Legislators in one-sided districts voted more congruently overall and for all but six issues than legislators in the other districts. Even so, congruence in the one-sided subsample is not all that different from the full sample: for the 2,962 votes in one-sided districts, congruence was 66.7 percent overall, only 1.3 percent higher than the full sample.

4. When Do Legislators Represent the Majority?

The previous section shows that legislators follow district preferences more often than not, but even so, often vote contrary to majority opinion. This section explores a number of possible explanations for the observed congruence patterns. The research design does not lend

Figure 2. Congruence between Legislator Votes and District Opinion



Note. The figure plots the percentage of roll call votes that were congruent with majority opinion in a district. 'One-sided districts' are those with a majority greater than 55 percent. The full sample includes 3,555 votes; the one-sided district sample includes 2,926 votes.

itself to rigorous identification of causal relations; the goal is to identify factors that are able to account for variation in congruence as a first step before more detailed causal analysis.

A. *Honest Mistakes*

One possible explanation of noncongruent votes is simply “honest mistakes”: faced with hundreds of votes during a legislative session, and with thousands of constituents to represent, representatives may have to act with limited information about constituent views.”¹⁶ This explanation seems unlikely in light of the evidence in Figure 2 that congruence levels are similar in districts with evenly-divided and one-sided opinion. It is easier to make an honest mistake when voter opinion is evenly divided than when it is one-sided; if honest mistakes were a big part of the story, noncongruence should be concentrated in the districts with evenly divided opinion. It seems likely that noncongruent voting happens even though legislators are aware of constituent preferences.

Alaska’s wolf hunting law of 1999 is an interesting case in point. The law was passed by large majorities in both the senate (14 in favor and 5 against) and house (27 in favor and 11 against), yet in the referendum was rejected in 29 of the state’s 40 house districts and repealed statewide. Congruence was only 53 percent in the house and 47 percent in the senate. Was it simply a matter of legislators misunderstanding that their constituents objected to this way of hunting wolves? Possibly, but against this interpretation is the fact that the law in question, SB 267, overrode an existing law banning precisely this form of hunting that voters had approved by initiative in 1996, only three years earlier. Thus, each legislator had a fairly clear statement of his or her constituent’s opinion on the issue from the previous election. It seems likely that most legislators understood constituent preferences on this issue but chose to proceed anyway.

B. *Legislator Preferences*

One venerable school of thought, often called the “trustee view”, is that representatives ought not to slavishly follow the preferences of their constituents, but should vote based on

¹⁶ Matsusaka (1992) and Matsusaka and McCarty (2001) explore this idea theoretically. Broockman and Skovron (2014) provide evidence that state legislators misperceive constituent views, typically erring by 10 percentage points or more. Butler and Nickerson (2011) finds that New Mexico state legislators changed their voting behavior when supplied with information about citizen preferences.

their own beliefs about what would be best. Noncongruence then arises when legislators follow their own beliefs despite contrary constituent preferences. To assess the importance of this explanation, I classified each legislator-vote according to whether the legislator’s personal preferences coincided or disagreed with majority opinion of his or her constituents. Specifically, I classified each legislator as liberal if his or her NPAT score was negative and conservative if his or her NPAT score was positive. Dividing ideologies at the point zero is arbitrary, especially since the common space scale is arbitrary, but as Figure 1 shows, legislators are polarized with few scores in the vicinity of zero. I then compared a legislator’s ideological classification (conservative or liberal) with the orientation of a law to determine if the legislator’s preference would be to vote in favor or against the law. Finally, I compared the legislator’s preference with majority opinion in the district to determine if there was disagreement, and constructed a dummy variable DISAGREE that is equal to one if the legislator and district prefer different outcomes. Formally,

$$DISAGREE_i = \begin{cases} 1 & \text{if (Legislator } i = \text{ conservative) \& (District } i \text{ favors liberal outcome);} \\ 1 & \text{if (Legislator } i = \text{ liberal) \& (District } i \text{ favors conservative outcome);} \\ 0 & \text{if otherwise.} \end{cases}$$

Table 3 explores the connection between congruence, constituent interests, and legislator preferences. Each row reports the percentage of congruent roll call votes when the legislator’s preference agrees and disagrees with majority opinion in his or her district. The first row includes all roll call votes, and classifies the orientation of laws based on referendum vote regressions. With preference agreement, congruence is 89.4 percent, meaning that legislators almost always vote in accordance with constituent opinion when they happen to agree with it. Thus, representation “works” well when voters select a legislator whose ideology matches their preferences. In contrast, when a legislator disagrees with district opinion, congruence is only 28.5 percent; which is to say that legislators follow their own preferences 71.5 percent of the time when they disagree with constituents. If elections generate incentives for legislators to adhere to constituent opinion, those incentives appear to be inadequate more than two-thirds of the time. The second row of the table reports the same information but classifies the ideological

orientation of laws based on roll call votes; and the third row classifies laws based on the party membership of its legislative sponsors. The basic pattern is the same regardless of how laws are classified.

Next I explore some possibilities that could lead to spurious findings, particularly, that could cause the congruence rate for DISAGREE to appear misleadingly low. To address the possibility that congruence might be low primarily in districts where opinion is evenly divided, the fourth, fifth, and sixth rows of Table 3 report congruence rates when the size of the majority in the districts was 55 percent, 60 percent, and 70 percent, respectively. Even in districts with extremely one-sided opinion, legislators almost always vote with district opinion when they agree with it and vote against district opinion when they disagree with it.

Another possibility is that legislator opinion is misclassified. Recall that legislators are assigned an ideology based on whether their NPAT common space score is positive or negative. Misclassification is more likely for scores that are near zero. Although Figure 1 shows that such cases are rare, the seventh, eighth, and ninth rows allow for the possibility of ideological misclassification by restricting the sample to legislators with an absolute NPAT score in excess of 0.5, 0.75, and 1.0, respectively. Again, the basic pattern is unchanged even if legislators whose ideology is most likely to be misclassified are omitted.

The bottom three rows of Table 3 apply the district majority and legislator ideology filters simultaneously, that is, they delete observations in which both district opinion and legislator ideology are most likely to be misclassified. Each successive row applies a more stringent filter; in the bottom row only observations in which the district majority exceeded 70 percent and the legislator's ideology was greater than 1.0 or less than -1.0 are retained. If anything, the basic patterns become more pronounced with these filters. In the bottom row, congruence was 97.4 percent when the legislator and district agreed, and only 2.0 percent (statistically indistinguishable from zero!) when they disagreed.

The stark difference in congruence when legislators agree versus disagree with their constituents is one of the main findings of the paper, and much of what follows is focused on explaining this pattern. Before proceeding to that analysis, I provide a little more evidence on its robustness. To do this, I estimated a series of regressions in which the dependent variable was a

dummy for congruence, and the independent variable was DISAGREE, the dummy for disagreement between the legislator and majority opinion in the district. Table 4 reports the coefficients on the disagreement dummy. The columns vary according to how the ideological orientation of issues was determined, and the rows vary in terms of the sample and fixed effects. Panel A includes all laws. The regressions in the top row include law-chamber fixed effects. The coefficient in the first cell indicates that legislators were 57.3 percent less likely to cast a congruent vote when they disagreed with district opinion, using referendum votes to classify issues. The second row reports coefficients from regressions on a sample that excludes districts where district opinion varies by less than 10 percent. The third row includes legislator fixed effects as well law-chamber fixed effects. This specification comes at some cost because only 855 legislators appear in the sample more than once, resulting in a “loss” of more than 20 percent of the sample that are singletons. Across all regressions, the coefficients range from -53.8 percent to -75.9 percent, indicating that the relation between congruence and disagreement is not due to law, chamber, or legislator specific differences.¹⁷

The other issue of concern in Table 4 external validity. One might wonder if the fact that these laws were challenged by referendum makes them fundamentally different from other votes: perhaps they were challenged specifically because of the high prevalence of legislators voting their own opinion rather than constituent preferences, in which case the influence of

¹⁷ The regressions in Table 4 and elsewhere typically employ 58 clusters. This might produce a “few-clusters” problem, meaning that standard test statistics will over-reject the null hypothesis, although it exceeds the rule of thumb of 50 clusters. Cameron and Miller (2015) suggest that one strategy for addressing this is to use the wild bootstrap to estimate the distribution of t -statistics. The basic idea of bootstraps is to generate pseudo-samples from the original sample, use each pseudo-sample to calculate the test statistics, and use the distribution of the test statistic across the pseudo-samples to infer the distribution of the test statistic in question; the wild bootstrap uses a particular algorithm to calculate the pseudo-samples. To assess the reliability of the test statistics in the paper, I construct p -values using the wild bootstrap cluster method for key coefficients in Table 4, and compare them to the p -values from the degrees of freedom method. The p -values for the two methods are fairly similar, suggesting that the test statistics do not suffer from a few-clusters problem.

ideological disagreement would be unusually high for these laws. To evaluate this possibility, Panels A and B of Table 4 reports the DISAGREE coefficients separately for regressions in which voters approved the law and regressions in which voters repealed the law. The DISAGREE coefficients are generally larger in magnitude for repealed than approved laws, but they remain sizeable in all cases. The large disagreement effects are probably not unique to laws challenged in referendums.¹⁸

C. Electoral Pressure

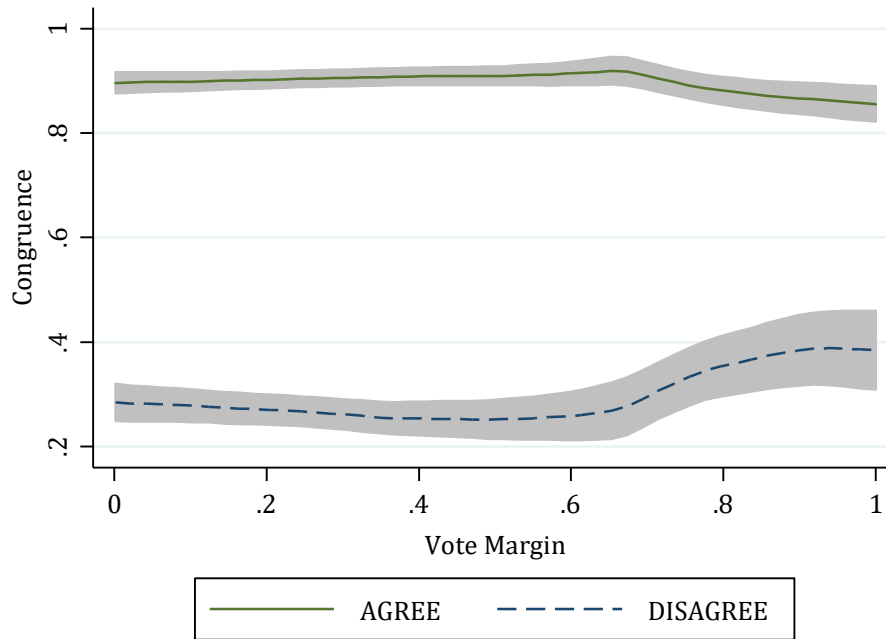
The preceding evidence shows that legislators usually vote their own preferences when they conflict with district preferences. While difficult to square some approaches in the literature such as the median voter model, the pattern supports contemporary critics of American elections who are concerned with lack of representation. A central belief of the reform agenda is that introducing more competition into elections will make legislators more responsive to public opinion (e.g. see the various chapters of McDonald and Samples (2006)).¹⁹ This section explores the link between congruence and electoral pressure empirically.

There are several ways to measure electoral pressure. I start with the vote margin between the winning and losing candidate. Following the literature, I define the vote margin in a district as the difference between the votes received by the winner and the runner-up in the previous election, divided by the sum of their votes. This inverse measure of competition ranges

¹⁸ The fact that a law is challenged certainly signals some degree of popular disapproval, but only a small fraction of the electorate needs to sign a petition to call a referendum. The signature requirement is 7 percent in Alaska, 5 percent in California, 10 percent in Maine, 3 percent in Maryland, 5 percent in Michigan, 2 percent in North Dakota, 6 percent in Ohio, 5 percent in South Dakota, and 4 percent in Washington, where the percentage is relative to the total number of votes cast in the previous gubernatorial election (in Alaska it is relative to total votes in the previous general election, and in North Dakota it is a percentage of the population.)

¹⁹ Although competition is a central plank of more reform agendas, the value of increased competition is not well established theoretically. Indeed, one lesson that emerges from multiple models that increased competition can both help and hurt constituents, depending on initial conditions (CITE).

Figure 3. Congruence and Vote Margin



Note. The figure plots the relation between congruence and electoral competition based on kernel regressions. Congruence means a legislator's roll call vote is consistent with majority opinion in his or her district. Vote margin is the difference in votes received by the top two candidates in the previous election, divided by their combined votes. The regressions differ according to whether a legislator's ideology agrees or disagrees with majority opinion in the district. The regressions are estimated using the Epanechnikov kernel function with bandwidth of 0.15. Shaded areas show 95% confidence intervals.

from zero in the case of a tie, to 1.0 in the case of a candidate running unopposed. Many legislative districts have almost no effective competition: for the full sample, 14 percent of districts had only one candidate, and in 21 percent of districts the vote margin exceeded 60 percent (meaning that the winner received more than 80 percent of the votes.)

Figure 3 depicts the relation between congruence and vote margin, distinguishing between votes in which the legislator agrees and disagrees with district opinion, using a kernel regression. If competition is important for congruence, we expect to see congruence increase as the vote margin declines, especially when there is disagreement. To the contrary, when there is disagreement, congruence is actually higher in the less competitive districts, and the congruence gap between agreement and disagreement does not come near to closing even for the most competitive districts. Figure 3 does not control for any confounding factors nor is it convincingly causal, but it foreshadows basic patterns that appear throughout.

Table 5 reports linear probability regressions of congruence on disagreement and electoral competition. Competition might affect congruence in two ways, by changing the type of people elected and by changing the behavior of the people in office. The regression in (1), which includes law-chamber fixed effects but not legislator fixed effects, speaks to the first channel. The coefficient on vote margin implies that a 1 percent increase in the margin is associated with a 0.04 percent lower probability of congruence, when legislator and district preferences agree. When legislator and district preferences disagree, a 1 percent increase in margin is associated with 0.14 percent increase in congruence. Neither coefficient is statistically different from zero, and the magnitudes are small. As suggested by Figure 3, the legislators elected in competitive districts do not appear more or less likely to cast a congruent vote than legislators from uncompetitive districts. The regression in column (2) of Table 5 includes legislator fixed effects, so speaks to the issue of how competition affects the behavior of a given legislator. The coefficients are larger in magnitude and statistically significant, but even so, are quantitatively small and not in the expected direction. The regression implies that when there is disagreement, a 1 percent increase in the vote margin (less competition) is associated with 0.13 lower congruence by 0.13. Neither (1) nor (2) suggest a big role for competition in determining congruence.

The estimates are not experimental and therefore may not be causal. It is worth thinking about what sort of underlying relationships could bias the coefficients against finding that competition increases congruence. In column (1), there would be a bias if legislators from competitive districts are less congruent than legislators from uncompetitive districts, for reasons other than competition. For example, if some districts are full of contentious, bull-headed people and others are full of agreeable, accommodating people, then the contentious districts might have more competitive elections and noncongruent voting. This example is obviously forced, but there may be more plausible stories. In column (2), the story would have to be somewhat different because the regression reports within-legislator differences. An example would be: if tenure in office causes a legislator to attract less competition and to become more receptive to constituent interests, then a negative relation between competition and congruence would appear. The research design does not allow us to rule out such sources of spurious

correlation, so the plausibility of the estimates as causal relations depends on one's priors about the likelihood of a spurious relation. The estimates do show that there is not an obvious connection between congruence and competition; if such an effect exists, it appears there is a second effect that works in the opposite direction.

Figure 3 suggests that the relation between congruence and competition may be nonlinear, indeed, perhaps nonmonotonic. The regressions in columns (3) and (4) of Table 5 allow for this possibility by replacing the vote margin variable with a dummy for very competitive districts (margin less than 2.5 percent) and a dummy for very uncompetitive elections (margin greater than 60 percent), with the omitted category being districts with a margin between 2.5 percent and 60 percent.²⁰ The estimates imply a nonmonotonicity: when the legislator and district disagree, congruence is 11.9 percent higher in very competitive districts and 15.8 percent higher in very uncompetitive districts, compared to districts with intermediate levels of competition. The numbers are sizeable, although only a fraction of the coefficient on DISAGREE itself, meaning that they only partially reverse the disagreement effect. There is no obvious reason to expect higher congruence in uncompetitive districts.^{21 22}

A second way to assess the importance of electoral pressure is to consider how roll call voting changes when legislators no longer face the prospect of standing for re-election (Besley and Case, 2003). During the sample period, five states imposed term limits on state legislators:

²⁰ I explored numerous alternative specifications, for example, allowing a series of dummy variables for ranges of vote margin; the reported specifications are representative.

²¹ One possibility is that legislator preferences are mismeasured. The method I use to calculate disagreement forces legislators to have one-dimensional preferences but allows voters to have multidimensional preferences. It could be that in extremely uncompetitive districts, a legislator is likely to share the district's (multidimensional) preferences, and thus actually agree with the district even though he or she is classified as disagreeing. If this were the entire story, then the coefficient on uncompetitive districts would erase the disagreement effect.

²² I also estimated the regressions in Table 5 using only data from one-sided districts, meaning those in which district opinion varied by 10 percent or more. Qualitatively, the findings are similar.

California, Maine, Michigan, Ohio, and South Dakota.²³ Theory suggests that legislators will be less attentive to constituent interests as they near the end of a term, and in the extreme, they can fully indulge their personal preferences once they are ineligible to stand for re-election. In practice, politicians often jump from one public office to another when they hit a term limit, for example, they may move from the lower to the upper chamber, so re-election incentives do not necessarily vanish at the end of a term. Even so, those incentives are muted because any subsequent campaigns would involve a different group of constituents.

Table 6 reports congruence regressions that include term limit variables. The regression in column (1) includes the DISAGREE dummy as well as a dummy variable equal to one if a legislator is in the mandatory last term of office and DISAGREE interacted with the last-term dummy. If re-election concerns are important for congruence, the coefficient on the two last-term dummies should be negative, especially when interacted with DISAGREE. The estimates imply that when the legislator and district agree, congruence is 8.4 percent lower in the last term; while when the legislator and district disagree, congruence is 11.4 percent higher in the last term. There is no natural interpretation for these patterns, suggesting they may be spurious.

The estimates in regression (1) of Table 6 may be confounded by combining both term-limit and non-term-limits states. Advocates of terms limits argue that they change the basic functioning of a legislature by replacing professional politicians with ordinary citizens. To the extent this is true, how legislators behave in the face of disagreement may be different in term-limit states, that is, the coefficient of DISAGREE may be different. The regression in column (2) removes this concern by restricting the sample to the five term-limit states. The DISAGREE coefficient remains negative and statistically significant, but drops almost 15 percent to -50.9

²³ California and Michigan restricted members of the lower chamber to a maximum of three two-year terms and members of the upper chamber to a maximum of two four-year terms. After 2012, California changed its rules to limit members to a maximum of twelve years total in any chamber. Maine and South Dakota restricted members to a maximum of four consecutive two-year terms in either house. Ohio restricted house members to four consecutive two-year terms and senators to two consecutive four-year terms. In California and Michigan the limits were for a lifetime; in the other states members could serve again after remaining out of office for one term.

percent, suggesting that the existence of term limits might make legislators more attentive to constituent interests. The coefficients on the two term-limit dummies drop in magnitude by more than half, and are no longer statistically significant.

The term-limit restrictions in California and Michigan are lifetime caps – once the years have been served the legislator is forever ineligible to hold that office – while in the other states, a legislator’s eligibility returns after one term out of office. To allow for the possibility that lifetime limits have a larger effect than waiting-period limits, regression (3) of Table 6 includes two last-term dummies, one for the lifetime-limit states and one for the waiting-period states. The magnitude of the coefficients is larger for the waiting-period states than the lifetime-limit states, again contrary to expectations, but never statistically different from zero. Leaving aside the often-puzzling signs of the term limit variables, their inclusion never materially reduces the DISAGREE effect, which provides little support for the view that electoral pressure (or lack thereof) can account for the dominance of legislator preferences over district preferences.²⁴

D. Campaign Contributions

No single issue attracts the ire of election reformers more than the role of money in campaigns. Many believe that campaign contributions are effectively bribes, and that the need to raise money makes legislators more beholden to their contributors than the residents of their districts. If correct, the noncongruent votes might be “payoffs” to campaign contributors.

To explore this possibility, I investigate the connection between congruence and campaign contributions. Ideally, we would like to observe if a legislator received money from groups or individuals interested in the law at hand, but that level of detail is beyond the scope of this study. Instead, I examine the total contributions received by each legislator in his or her previous election. The intuition is that if money causes noncongruent voting we should observe more congruence for candidates who raised very little money compared to candidates who raised a lot of money. Because money is endogenous, we should hesitate to say that money

²⁴ I also estimated the regression with legislator fixed effects, with qualitatively similar and statistically insignificant estimates on the last-term variables.

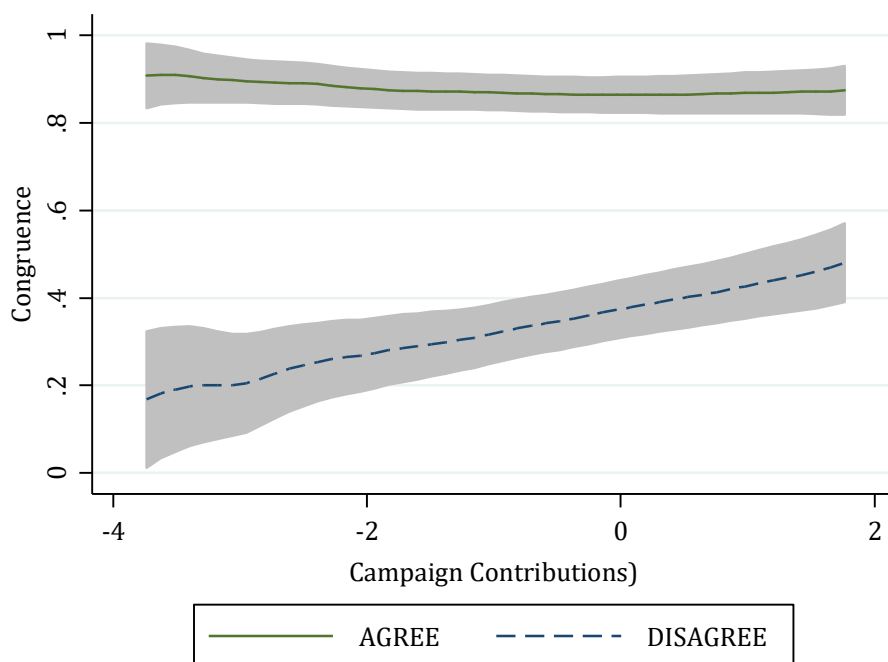
causes congruence; the estimates instead establish to what extent noncongruence is concentrated among legislators who raise a lot of money.²⁵ Because spending varies across states, chambers, and time, I standardized contributions by calculating the mean and variance in total contributions for each election year-state-chamber, and then for each legislator subtracting the mean and dividing by the variance. This forces the contributions for each election year-state-chamber into a distribution with a mean of zero and a variance of one. The estimates then indicate if legislators who raised a large amount of money vote more or less congruently than legislators *in the same chamber and state in the previous election year* who raised little money.

Figure 4 describes the relation between congruence and standardized campaign contributions. Another unexpected pattern appears: when legislators disagree with district opinion, congruence is higher among legislators with large compared to small amounts of campaign contributions. When legislators and the district agree, there is little relation between congruence and contributions.

Table 7 reports linear probability regressions of congruence on campaign contributions that control for law-chamber fixed effects. The regression in column (1) includes DISAGREE, standardized campaign contributions, and an interaction term. The relation in Figure 3 remains after including the controls: the likelihood of casting a congruent vote is increasing in contributions when there is disagreement. The relation, while statistically distinguishable from zero, is weak: the coefficient on the interaction term indicates that a one standard deviation increase in campaign contributions is associated with 6.2 percent more congruence (recall that contributions are standardized to have a standard deviation of one.) The regression in column (2) investigates whether behavior is different at the extremes by introducing a dummy variable for contributions in the top quartile and a dummy variable for contributions in the bottom

²⁵ It is not clear if the concern with money is that it causes noncongruence. It could be, for example, that re-election pressure causes a candidate seek contributions, and that creates a relationship with potentially deleterious obligations. Regardless, the common theme is that large contributions are associated with special interest influence.

Figure 4. Congruence and Campaign Contributions



Note. The figure plots the relation between congruence and campaign contributions based on kernel regressions. Congruence means a legislator's roll call vote is consistent with majority opinion in his or her district. Contributions are standardized by state-chamber-year, and expressed as logarithms. The regressions differ according to whether a legislator's ideology agrees or disagrees with majority opinion in the district. The regressions are estimated using the Epanechnikov kernel function with bandwidth of 1.0. Shaded areas show 95% confidence intervals.

quartile. The estimates indicate that the variation is mainly in the top quartile: legislators in the high contribution category were 11.7 percent more likely to cast a congruent vote. As before, the effect of DISAGREE remains large. Campaign contributions are likely to be higher in competitive districts, so contributions might be a proxy for competition. To allow for this possibility, the columns (3) and (4) of Table 7 report estimates of the same regressions including a control for vote margin. Nothing material changes.²⁶ In sum, the evidence suggests that campaign contributions are associate with higher congruence. One possible explanation is that legislators who are more attentive to constituent interests are better able to raise contributions.

²⁶ I also estimated the regressions on a sample of one-sided districts only, with qualitatively similar results. I also estimated the regressions including legislator fixed effects; the patterns are similar, but with less precise estimates.

E. Attention

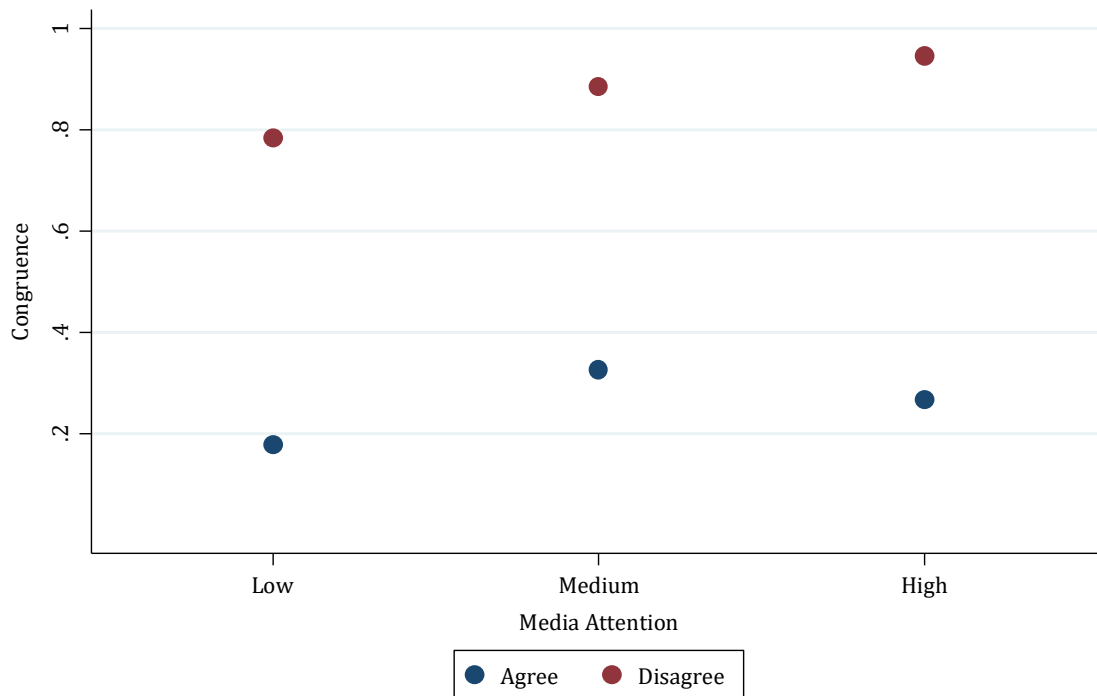
Another common belief is that congruence is enhanced by public attention, or put the other way around, noncongruence happens when voters are not paying attention. Consistent with this idea, Berry and Howell (2007) find that South Carolina voters held school board members more accountable for test scores when local newspapers devoted attention to test scores; and somewhat related, Snyder and Stromberg (2010) find that Congressmen deliver more for their constituents when they are covered more by local newspapers. To examine this, I created a variable capturing the amount of media attention that each law received. If passage of a law was covered on the front page of the state's largest newspaper, it was classified as "high" attention; if it was covered elsewhere than the front page (typically in the local politics section), then it was classified as "medium" attention; if it was not reported at all in the weeks immediately before or after passage, it was classified as "low salience." Some of the sample issues received a lot of attention and were highly salient for voters, such as the same-sex marriage laws in Maryland and Washington. Other laws were fairly obscure and largely ignored by the media, such as the election procedure laws in Maryland and South Dakota.

Figure 5 reports mean congruence by level of attention and agreement. When there is agreement, congruence is higher when the attention level is high, but when there is disagreement, congruence is not reliably connected to attention. The gap in congruence between agreement and disagreement shows no sign of narrowing as the attention level increases: legislators appear to vote their own preferences even for the highest profile issues.²⁷ This finding echoes related evidence in Fowler and Hall (2016) that legislators do not seem to converge toward constituent preferences on issues that strongly interest their constituents.

Attention may also vary depending on the time until the next election. Although there is evidence that voters are not as myopic as sometimes believed (Peltzman, 1990), voters may

²⁷ Dyck et al. (2010) find that in the Progressive Era legislators exposed to muckraking media were more likely to support progressive reforms. One interpretation of this is that media shifted the views of ordinary citizens, resulting in pressure on legislators. The results here offer another possibility: muckraking shifted the views of the legislators themselves, which directly shifted their voting behavior.

Figure 5. Congruence and Media Attention



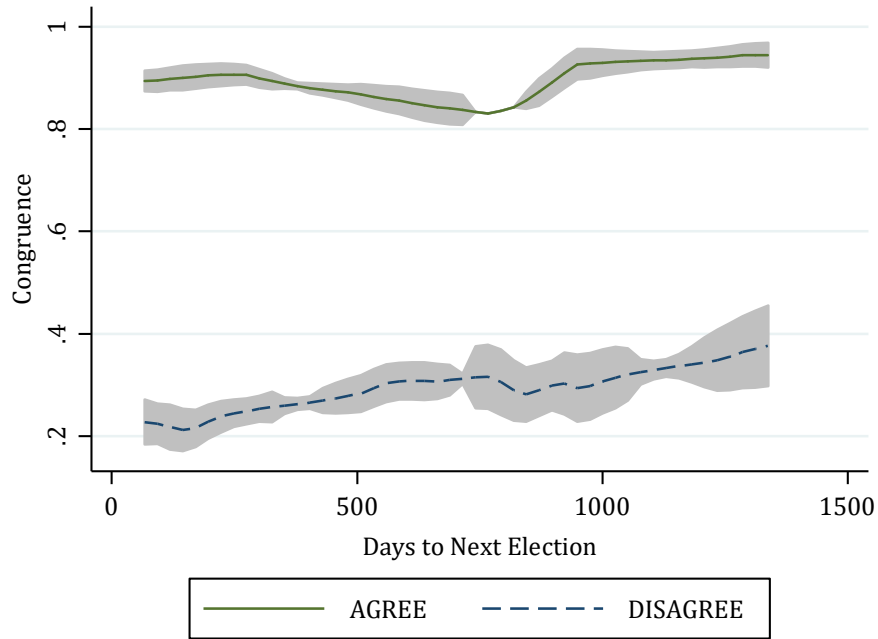
remember actions taken immediately before an election better than actions taken years earlier (Bechtel and Hainmueller, 2011). To examine this, I calculate the number of days between the roll call vote and the next general election for which the candidate must stand for re-election. If an imminent election puts pressure on legislators to attend to district opinion, congruence would increase as the days to the next election declines.

Figure 6 describes the relation between congruence and days to the net election. Again, the connection is weak at best, and there is no indication that the gap between agreement and disagreement closes when the election is near. This “non-relation also holds after controlling for law-chamber fixed effects.

F. Other Explanations

I explored but do not report statistics on several other factors that might account for variation in congruence. One possibility is party discipline: parties might put pressure on their

Figure 6. Congruence and Days to Next Election



Note. The figure plots the relation between congruence and days to the next election based on kernel regressions. Congruence means a legislator's roll call vote is consistent with majority opinion in his or her district. Days is the number of days between the roll call vote and next general election. The regressions differ according to whether a legislator's ideology agrees or disagrees with district majority opinion. The regressions are estimated using the Epanechnikov kernel function with bandwidth of 150. Shaded areas show 95% confidence intervals.

members to cast a vote for the benefit of the party, even if a legislator's district disagrees. This follows a line of argument that parties function as cartels to maximize their collective payoffs (Cox and McCubbins, 1993, 2005). Since this would presumably influence members of the majority party more than members of the minority party, I compared congruence for legislators in the majority and minority parties. Congruence is actually higher for members of the majority than minority party, and especially so when there is disagreement. If anything, the evidence suggests that party discipline puts pressure on legislators to follow district preferences rather than their own preferences. Introducing this consideration does not remove the strong predictive ability of disagreement.

A second issue is variation in the number of constituents that a legislator represents, which varies enormously across states and chambers. It might be easier to understand constituent preferences if there are 3,000 or 4,000 voters (Maine house districts) compared to 300,000 or 400,000 voters (California senate districts). However, I found no consistent

connection between district population and congruence. A related idea is that congruence might be different between legislators in the house compared to the senate, given that senate districts typically contain more people. However, I found no consistent difference in congruence between upper and lower chamber legislators either.

Another possible factor is personal characteristics. Anzia and Berry (2011) argue that because of discrimination, women have to be more skilled to be elected, and they show that female congressional representatives deliver more federal spending to their districts than male representatives. Stadelmann et al. (2014) reports that female legislators vote more congruently than male legislators in Switzerland. In contrast, Ferreira and Gyourko (2014) find no difference in the policy choices of female and male mayors. I tested for differences in congruence based on gender and found no reliable differences. I also tested for differences based on legislator age and education level, again finding no reliable differences.

5. Discussion

This paper provides new, direct measures of the extent to which legislators vote in accordance with majority opinion in their districts. The main empirical innovation is to use referendum returns to measure citizen preferences, which I argue allows estimates of congruence that avoid problems with existing measures in the literature. In a sample of 3,555 roll call votes on 28 laws in nine states, I find that 65 percent of roll call votes were congruent with majority opinion in the district. In this respect, representation appears to “work” more often than not, although the 35 percent “failure” rate is not inconsequential. I then conduct an exploratory analysis to identify factors that can account for variation in congruence. More an accounting exercise than an attempt to rigorously establish causality, the evidence reveals which factors are strongly associated with congruence and which are not. The most pronounced finding is the strong relation between congruence and legislator preferences: when legislator preference are aligned with district opinion, legislators cast a congruent vote 89 percent of the time; when legislators disagree with constituent opinion, they cast a congruent vote only 29 percent of the time. In contrast to the strong power of legislator ideology to predict congruence, I find almost no predictive power for several other factors that have received substantial

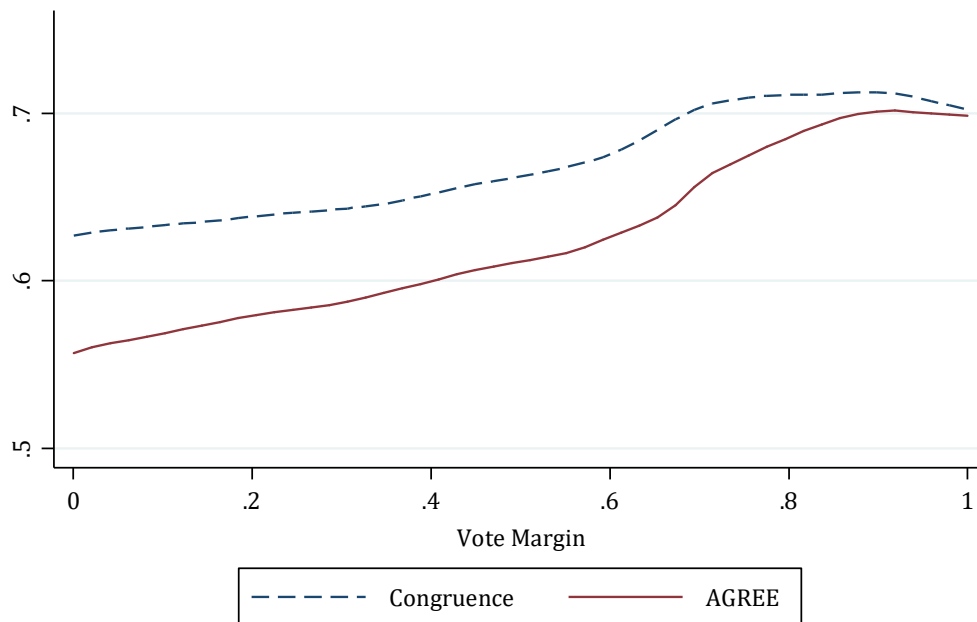
attention: electoral competition, re-election pressures, campaign contributions, and media attention.

The findings raise a number of interesting issues for the study of representation and for election law. In terms of theory, the evidence adds to the already immense body of research rejecting the median voter model as a description of legislative behavior. The evidence goes even beyond this, however, by suggesting that re-election motives are of secondary importance in explaining voting behavior, which poses a challenge for political agency theories that emphasize the desire to influence re-election probabilities as a primary motive for legislator behavior. The evidence sits most naturally with the citizen-candidate class of models in which legislators primarily follow their own beliefs when voting, and elections serve primarily to select the type of person to hold the office (Osborne and Slavinsky, 1996; Besley and Coate, 1997).

The conclusion that legislators mainly vote their personal interests comports with an array of other evidence on the importance of ideology (Poole and Rosenthal, 1991, 1996; Poole, 2007) and has an interesting implication about policy change. To the extent that elections are used to select ideologues more than induce conformity with constituent opinion, it suggests that major policy changes will require changes in legislators. If electoral pressure is too weak to force legislators to heed voter preferences, incumbents cannot be induced to change their views in response to shifts in public opinion. McCarty et al. (2013) contains an extensive argument along these lines. Fedaseyev et al. (2015) provide concrete evidence of exactly such behavior in a study of how legislators responded to technology developments in the 2000s that allowed the tapping of shale oil and gas reserves in their districts. They find that legislators representing districts where oil development had recently become viable did not change their voting behavior to become more conservative (pro-development); change only came when sitting legislators were voted out of office and replaced with more ideologically conservative legislators.

This way of thinking about legislators also has implications for election reform. A primary goal of reformers is to introduce more competition into elections. One way to do this is by drawing district lines so create partisan balance, but this might be counterproductive if congruence occurs primarily by selection of like-minded legislators. Consider Figure 7, which

Figure 7. Congruence and Agreement by Vote Margin



Note. The figure plots the relation between congruence and vote margin, and the relation between agreement and vote margin, based on kernel regressions. Congruence means a legislator's roll call vote is consistent with majority opinion in his or her district. Agreement means the legislator's ideology agrees with majority opinion in the district. Vote margin is the difference in votes received by the top two candidates in the previous election, divided by their combined votes. The regressions are estimated using the Epanechnikov kernel function with bandwidth of 0.15.

plots congruence and agreement against vote margin. Top line shows that congruence is actually higher in uncompetitive than competitive districts. The bottom line shows why: legislators are more likely to agree with constituents in uncompetitive districts. This is not surprising: one-sided districts are more likely to select legislators who share the preferences of the district majority. Drawing district lines so as to make them competitive – the goal of some reformers – may have a negative effect on representation, counterintuitively, by electing representatives whose personal views diverge from district opinion.

Competition also has emerged as a potential organizing principle for election law. Issacharoff and Pildes (1998, p. 649), among others, argue that judges should move away from thinking about democracy exclusively in terms of rights (of individuals, or groups, of states) and more in terms of creating a competitive environment: the “judiciary should destabilize political lockups in order to protect the competitive vitality of the electoral process and facilitate more responsive representation.” This paper’s findings suggest that competition may not be an

unalloyed good in terms of increasing representation. Competition may be helpful if it leads to selection of candidates who share the values a majority of their constituents. But competition, which almost by definition increases the electoral prospects of candidates with differing views from the majority, can also be harmful by placing in office more candidates who do not share the views of the district. Following Figure 7, it seems possible that uncompetitive districts might end up doing a better job of electing responsive citizen legislators, even if they provide little electoral pressure on the legislator once he or she is in office.

Special interests such as corporations and unions play a prominent role in many narratives about contemporary politics. This paper finds that a great deal of voting behavior can be understood simply in terms legislator preferences and district opinion, without requiring consideration of interest groups. The inability of campaign contributions to account for congruent voting also suggests that special interest influence may be of secondary importance to understanding roll call votes.

Finally, and speculatively, the findings may shed light on the broader issue of popular dissatisfaction with elected officials. In the United States today, opinion surveys show high levels of dissatisfaction with the quality of representation; only 33 percent of respondents in a recent survey disagreed with the statement, "People like me don't have any say about what the government does."²⁸ Whether these feelings are based in reality is an open question, but recent evidence that state policies are often not congruent with majority opinion gives the feelings some credence (Matsusaka, 2010; Lax and Phillips, 2012). The finding that legislators follow the majority opinion of their district 65 percent of time, compared to 50 percent if they voted based on a coin flip, and usually ignore district opinion if they disagree with it, suggests that one cause of policy congruence may be the tendency of legislators to vote based on their ideology with little regard for constituent preferences.

²⁸ Source: American National Election Survey, 2016.

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Table 1. Description of Laws

State	Law	Bill	Roll Call (Y-N-A)	Referendum	Date	Vote (Y-N)	Outcome
Alaska	Permits hunters to use airplanes to hunt wolves	SB 267	Senate 14-5-1 (3/23/2000) House 27-11-2 (4/4/2000)	Measure 6	Nov. 7, 2000	47% - 53%	Repealed
California	Permits Pala tribe to operate video lottery terminals	SB 287	Senate 21-7-12 (8/27/1998) Assembly 52-24-4 (8/28/1998)	Prop. 29	Mar. 7, 2000	53% - 47%	Approved
California	Allows third parties to sue insurance companies for unfair claim practices	SB 1237	Senate 22-16-2 (6/2/1999) Assembly 43-26-11 (7/8/1999)	Prop. 30	Mar. 7, 2000	32% - 68%	Repealed
California	Allows third parties to sue insurance companies (modifies Prop 30 on same ballot)	AB 1309	Senate 22-14-4 (9/7/1999) Assembly 43-32-5 (9/7/1999)	Prop. 31	Mar. 7, 2000	28% - 72%	Repealed
California	Requires large companies to provide health care coverage	SB 2	Senate 25-15-0 (9/12/2003) Assembly 46-32-2 (9/13/2003)	Prop. 72	Nov. 2, 2004	49% - 51%	Repealed
California	Authorizes gambling compact with Pechanga tribe	SB 903	Senate 23-8-9 (4/19/2007) Assembly 61-9-10 (6/28/2007)	Prop. 94	Feb. 5, 2008	56% - 44%	Approved
California	Authorizes gambling compact with Morongo tribe	SB 174	Senate 23-10-7 (4/19/2007) Assembly 50-13-17 (6/28/2007)	Prop. 95	Feb. 5, 2008	56% - 44%	Approved
California	Authorizes gambling compact with Sycuan tribe	SB 175	Senate 22-10-8 (4/19/2007) Assembly 61-9-10 (6/28/2007)	Prop. 96	Feb. 5, 2008	56% - 44%	Approved
California	Authorizes gambling compact with Agua Caliente tribe	SB 957	Senate 23-9-8 (4/19/2007) Assembly 52-11-17 (6/28/2007)	Prop. 97	Feb. 5, 2008	55% - 45%	Approved
California	Allows North Folk tribe casino in Central Valley	AB 277	Assembly 41-12-26 (5/2/2013) Senate 22-11-6 (6/27/2013)	Prop. 48	Nov. 4, 2014	39% - 61%	Repealed
California	Bans plastic bags at grocery stores	SB 270	Assembly 45-31-4 (8/28/2014) Senate 22-15-3 (8/29/2014)	Prop. 67	Nov. 8, 2016	53% - 47%	Approved

Maine	Replaces health insurance claims tax with beverage tax	LD 2247	House 75-64-12 (4/15/2008) Senate 18-17-0 (4/15/2008)	Question 1	Nov. 4, 2008	35% - 65%	Repealed
Maryland	Changes voting procedures	HB 1368	House 94-43-4 (3/29/2006) Senate 29-3-14 (3/29/2006)	Question 4	Nov. 7, 2006	71% - 29%	Approved
Maryland	Allows illegal immigrants to pay in-state tuition rates	SB 167	Senate 27-19-1 (4/7/2011) House 74-65-2 (4/8/2011)	Question 4	Nov. 6, 2012	59% - 41%	Approved
Maryland	Congressional redistricting plan	SB 1	House 91-46-4 (10/19/2011) Senate 32-13-2 (10/20/2011)	Question 5	Nov. 6, 2012	64% - 36%	Approved
Maryland	Allows same-sex marriage	HB 438	House 72-67-2 (2/17/2012) Senate 25-22-0 (2/23/2012)	Question 6	Nov. 6, 2012	52% - 48%	Approved
Michigan	Allows hunting of mourning doves.	HB 5029	Senate 22-15-1 (3/31/2004) House 65-40-15 (6/8/2004)	Proposal 06-03	Nov. 7, 2006	31% - 69%	Repealed
North Dakota	Ends use of "Fighting Sioux" college nickname	SB 2370	Senate 39-7-1 (11/8/2011) House 63-31-0 (11/9/2011)	Referred Measure 4	Jun. 12, 2012	67% - 33%	Approved
Ohio	Limits interest rate charged by payday lenders	HB 545	Senate 29-4-0 (5/14/2008) House 70-24-4 (5/20/2008)	Issue 5	Nov. 4, 2008	64% - 36%	Approved
Ohio	Limits collective bargaining by public employees	SB 5	House 53-44-2 (3/30/2011) Senate 17-16-0 (3/31/2011)	Issue 2	Nov. 8, 2011	38% - 62%	Repealed
South Dakota	Bans smoking in restaurants and bars	HB 1240	Senate 21-14 (3/4/2009) House 46-23 (3/9/2009)	Referred Law 12	Nov. 2, 2010	64%-36%	Approved
South Dakota	Reforms candidate petition process, makes qualification more difficult for independents	SB 69	House 59-16-4 (3/13/2015) Senate 26-7-2 (3/13/2015)	Referred Law 19	Nov. 8, 2016	29% - 71%	Repealed
South Dakota	Creates a sub-minimum wage for workers under the age of 18	SB 177	Senate 26-7-2 (2/18/2015) House 44-24-2 (3/4/2015)	Referred Law 20	Nov. 8, 2016	29% - 71%	Repealed
Washington	Increases taxes for unemployment insurance	HB 2901	House 66-29-3 (3/11/2002) Senate 35-14-0 (3/13/2002)	R-53	Nov. 5, 2002	41% - 59%	Repealed

Washington	Allows charter schools	HB 2295	House 51-46-1 (3/10/2004) Senate 27-22-0 (3/10/2004)	R-55	Nov. 2, 2004	42% - 58%	Repealed
Washington	Prohibits insurers from denying certain claims	SB 5726	Senate 30-17-2 (3/13/2007) House 59-38-1 (4/5/2007)	R-67	Nov. 6, 2007	57% - 43%	Approved
Washington	Grants domestic partners same rights as married persons	SB 5688	Senate 30-18-1 (3/10/2009) House 62-35-1 (4/15/2009)	R-71	Nov. 3, 2009	53% - 47%	Approved
Washington	Allows same-sex marriage	SB 6239	Senate 28-21-0 (2/1/2012) House 55-43-0 (2/8/2012)	R-74	Nov. 6, 2012	54% - 46%	Approved

Note. Roll call numbers are (in order): votes in favor, votes against, and abstentions (or vacant seats), followed by the date of the vote. On Alaska and Maine ballots, a “yes” vote is to repeal the law; the table restates numbers so that “yes” means approval.

Table 2. Summary Statistics

	Mean	SD	Min	Max	N
Ideal point	-0.21	1.15	-2.69	3.03	3,501
|Ideal point| > 1.0	0.53	0.50	0	1	3,501
DISAGREE (laws classified by referendum votes)	0.38	0.49	0	1	3,097
DISAGREE (laws classified by roll call votes)	0.42	0.49	0	1	3,397
DISAGREE (laws classified by sponsorship)	0.40	0.49	0	1	1,970
Vote margin (%)	37.7	31.1	0.1	100	3,555
Dummy = 1 if vote margin < 2.5%	0.04	0.20	0	1	3,555
Dummy = 1 if vote margin > 60%	0.21	0.41	0	1	3,555
Days to next election	586	377	67	1,337	3,555
Dummy = 1 if last term (term-limited)	0.26	0.44	0	1	1,910
Size of majority in district (%)	62.9	8.0	50.01	90.9	3,555
Dummy = 1 if Republican	0.45	0.50	0	1	3,554
Dummy = 1 if member of majority party	0.64	0.48	0	1	3,554
Age in days	54	12	22	84	3,285
Dummy = 1 if male	0.72	0.45	0	1	3,555

Note. The unit of observation is a legislator/district. Ideal point is the NPAT common space score from Shor and McCarty (2011) (July 2014 version); positive scores can be interpreted as conservative voting records and negative scores represent liberal voting records. DISAGREE is dummy variable equal to 1 if the legislator's ideology conflicts with majority opinion in the district on a law; DISAGREE is calculated three different ways: based on referendum returns, based on roll call votes, and based on party of its sponsors. Vote margin is the difference between the votes received by the winner and runner up, divided by their combined votes, in the previous legislative election. A legislator is classified as term-limited if he or she is in the final term of office in a state with term limits; the term limit variable is only calculated for states with term limits. Size of majority is the fraction of votes cast for the majority position on the referendum.

Table 3. Congruence when Legislator and District Preferences Agree and Disagree

Sample	AGREE	DISAGREE		N
All roll call votes (referendum classification)	89.4	28.5	$z = 34.8^{***}$	3,097
All roll call votes (roll call classification)	91.8	30.5	$z = 37.2^{***}$	3,397
All roll call votes (sponsor classification)	94.2	16.8	$z = 34.9^{***}$	1,970
District majority > 55%	89.5	28.3	$z = 31.8^{***}$	2,579
District majority > 60%	90.0	27.3	$z = 27.3^{***}$	1,824
District majority > 70%	89.8	25.7	$z = 16.1^{***}$	672
|Ideology| > 0.5	90.1	25.7	$z = 35.1^{***}$	2,848
|Ideology| > 0.75	91.9	24.8	$z = 33.8^{***}$	2,405
|Ideology| > 1.0	94.0	26.3	$z = 29.4^{***}$	1,740
District majority > 55% and |Ideology| > 0.5	90.1	26.1	$z = 31.8^{***}$	2,374
District majority > 60% and |Ideology| > 0.75	92.9	22.1	$z = 26.9^{***}$	1,405
District majority > 70% and |Ideology| > 1.0	97.4	2.0	$z = 17.9^{***}$	397

Note. The main cell entries are the percentage of roll call votes that are congruent with majority opinion in the district. AGREE means that the legislator's preference agrees with majority opinion in the district agree on the law in question; DISAGREE means that legislator's preference disagrees with the district majority. Except where noted, issues are classified based on district referendum results. "District majority > 55%" means the sample is restricted to districts in which the majority opinion exceeded 55 percent. "|Ideology| > 0.5" means the sample is restricted to legislators with an absolute NPAT score in excess of 0.5. The z-statistic tests the hypothesis that the proportions for AGREE and DISAGREE are the same. Significance levels are indicated: * = 10 percent, ** = 5 percent, *** = 1 percent.

Table 4. Coefficient on DISAGREE Dummy in Congruence Regressions

	Issue Orientation Classified By					
	Referendum Votes		Roll Call Votes		Sponsors	
	(1)		(2)		(2)	
	β	S.E.	β	S.E.	β	S.E.
<i>Panel A. All Laws</i>						
Law-chamber FE	-57.3	5.7	-59.0	4.9	-73.3	4.7
Law-chamber FE; one-sided districts only	-56.5	6.5	-58.6	5.3	-75.9	4.1
Law-chamber & legislator FE	-53.8	2.9	-61.1	2.8	-64.6	3.4
<i>Panel B. Laws Approved by Referendum</i>						
Law-chamber FE	-49.4	8.1	-47.4	7.2	-64.1	8.5
Law-chamber FE; one-sided districts only	-46.0	10.4	-43.6	8.7	-66.0	8.7
Law-chamber & legislator FE	-64.4	3.7	-64.4	3.7	-61.2	4.1
<i>Panel C. Laws Repealed by Referendum</i>						
Law-chamber FE	-66.9	7.5	-73.9	4.9	-80.2	4.6
Law-chamber FE; one-sided districts only	-65.1	7.8	73.3	4.9	-78.2	4.7
Law-chamber & legislator FE	-47.9	4.7	-67.0	4.6	-97.0	1.7

Note. The table reports the coefficient β from regressions: $D_i^{congruent} = \alpha + \beta DISAGREE_i + e_i$, where i is a legislator, $D = 1$ if the roll call vote is congruent with majority opinion in the district, and $DISAGREE = 1$ if the legislator's preference disagrees with majority opinion in his or her district. The regressions differ in terms of fixed effects and whether the sample includes all laws, only approved laws, only repealed laws, and only one-sided districts, defined as those with a majority > 55 percent. Coefficients and standard errors are multiplied by 100 to express them as percentages. All coefficients are statistically different from zero at the 1 percent level.

Table 5. Regressions of Congruence on Vote Margin

	(1)	(2)	(3)	(4)
DISAGREE	-62.2** (5.4)	-58.6** (3.9)	-69.5** (5.4)	-58.9** (3.1)
Vote margin (%)	-0.04 (0.03)	-0.14** (0.06)	...	...
DISAGREE × Margin	0.14 (0.08)	0.13* (0.07)	...	...
Margin < 2.5%	...	...	3.4 (4.1)	-0.2 (7.9)
Margin > 60%	...	...	-1.3 (2.0)	-10.5** (4.1)
DISAGREE × Margin < 2.5%	...	...	11.9 (7.5)	24.2** (11.1)
DISAGREE × Margin > 60%	...	...	15.8** (5.5)	17.3** (5.4)
Law-Chamber FE	Yes	Yes	Yes	Yes
Legislator FE	No	Yes	No	Yes
R ²	.489	.411	.494	.452
N	3,097	2,781	3,097	2,781

Note. Each column reports estimates from a linear probability regression in which the dependent variable is a dummy equal to one if a legislator cast a congruent vote. Coefficients and standard errors are multiplied by 100 to indicate percentages. Standard errors clustered by law-chamber in (1) and (3) and by legislator in (2) and (4) are in parentheses beneath the coefficient estimates. DISAGREE is a dummy equal to one if a legislator's ideology differs from majority opinion in a district on a particular law, classified using referendum votes. Margin is the vote of received by the winner minus the vote received by the runner-up, divided by their combined votes, expressed as a percentage. Significance levels are indicated: * = 10 percent, ** = 5 percent, *** = 1 percent.

Table 6. Regressions of Congruence on Term Limit Variables

	Full Sample	Term Limit States Only	
		(1)	(2)	(3)
DISAGREE	-59.1*** (5.6)	-50.9*** (8.7)	-50.9*** (8.7)
Dummy = 1 if last term	-8.4** (3.7)	-4.8 (3.1)	...
DISAGREE × last term	11.4* (5.6)	3.9 (4.1)	...
Dummy = 1 if last term (lifetime limit state)	...	...	-2.9 (4.1)
Dummy = 1 if last term (waiting period state)	...	...	-15.7 (9.8)
DISAGREE × last term (lifetime limit state)	...	...	-0.4 (6.7)
DISAGREE × last term (waiting period state)	...	...	19.7 (15.9)
R ²	.490	.450	.452
N	3,097	1,649	1,649

Note. Each column reports estimates from a linear probability regression in which the dependent variable is equal to one if a legislator cast a congruent vote and zero if the vote was noncongruent. Coefficients and standard errors are multiplied by 100 to indicate percentages. Standard errors clustered by law-chamber are in parentheses beneath the coefficient estimates. All regressions include law-chamber fixed effects. DISAGREE is a dummy variable equal to one if a legislator's ideology differs from majority opinion in a district on a particular law, using the referendum-vote classification of laws. Significance levels are indicated: * = 10 percent, ** = 5 percent, *** = 1 percent.

Table 7. Regressions of Congruence on Campaign Contributions

	(1)	(2)	One-Sided Districts Only	
			(3)	(4)
DISAGREE	-50.3*** (7.0)	-52.3*** (6.5)	-50.3*** (7.0)	-52.3*** (6.5)
Campaign contributions	-1.6 (1.4)	...	-1.5 (1.4)	...
DISAGREE × Contributions	6.2** (2.2)	...	6.2** (2.3)	...
Dummy = 1 if contributions in top quartile	...	-1.9 (2.2)	...	-1.9 (2.3)
Dummy = 1 if contributions in bottom quartile	...	2.5 (2.5)	...	2.5 (2.6)
DISAGREE × Contributions in top quartile	...	11.7* (5.8)	...	11.7* (5.8)
DISAGREE × Contributions in bottom quartile	...	-1.2 (4.2)	...	-1.2 (4.2)
Vote margin (%)	...	...	0.001 (0.03)	0.001 (0.03)
R ²	.431	.429	.431	.429
N	1,622	1,626	1,622	1,626

Note. Each column reports estimates from a linear probability regression in which the dependent variable is equal to one if a legislator cast a congruent vote and zero if the vote was noncongruent. Coefficients and standard errors are multiplied by 100 to indicate percentages. Standard errors clustered by law-chamber are in parentheses beneath the coefficient estimates. DISAGREE is a dummy variable equal to one if a legislator's ideology differs from majority opinion in a district on a particular law, classified using referendum votes. Campaign contributions are standardized by election year-state-chamber to have a mean of zero and standard deviation of one. Margin is the vote of received by the winner minus the vote received by the runner-up, divided by their combined votes, expressed as a percentage. All regressions include law-chamber fixed effects. Significance levels are indicated: * = 10 percent, ** = 5 percent, *** = 1 percent.

Appendix Table A. Ideological Classification of Laws (C = Conservative, L = Liberal)

State	Description	Bill / Measures	Issue Orientation Determined By		
			Referendum votes	Roll call votes	Bill sponsor
Alaska	Permits hunters to use airplanes to hunt wolves	SB 267 / Measure 6 (2000)	...	C	...
California	Permits Pala tribe to operate video lottery terminals	SB 287 / Prop. 29 (2000)	...	...	...
California	Allows third parties to sue insurance companies	SB 1237 / Prop. 30 (2000)	L	L	L
California	Allows third parties to sue insurance companies	AB 1309 / Prop. 31 (2000)	L	L	L
California	Requires companies to provide health care coverage	SB 2 / Prop. 72 (2004)	L	L	L
California	Authorizes gambling compact with Pechanga tribe	SB 903 / Prop. 94 (2008)	C	C	...
California	Authorizes gambling compact with Morongo tribe	SB 174 / Prop. 95 (2008)	C	C	...
California	Authorizes gambling compact with Sycuan tribe	SB 175 / Prop. 96 (2008)	C	C	...
California	Authorizes gambling compact with Agua Caliente tribe	SB 957 / Prop. 97 (2008)	C	C	...
California	Allows North Folk tribe casino in Central Valley	AB 277 / Prop. 48 (2014)	L	L	L
California	Bans plastic bags at grocery stores	SB 270 / Prop. 67 (2016)	L	L	L
Maine	Replaces health insurance claims tax with beverage tax	LD 2247 / Question 1 (2008)	L	L	L
Maryland	Changes voting procedures	HB 1368 / Question 4 (2006)	L	L	...
Maryland	Allows illegal immigrants to pay in-state tuition rates	SB 167 / Question 4 (2012)	L	L	L
Maryland	Congressional redistricting plan	SB 1 / Question 5 (2012)	L	L	L
Maryland	Allows same-sex marriage	HB 438 / Question 6 (2012)	L	L	L
Michigan	Allows hunting of mourning doves.	HB 5029 / Prop. 06-03 (2006)	C	C	C
North Dakota	Ends use of "Fighting Sioux" college nickname	SB 2370 / Ref. Measure 4 (2012)	...	L	...

Ohio	Limits interest rate charged by payday lenders	HB 545 / Issue 5 (2008)	L	L	...
Ohio	Limits collective bargaining by public employees	SB 5 / Issue 2 (2011)	C	C	C
South Dakota	Bans smoking in restaurants and bars	HB 1240 / Ref. Law 12 (2010)	...	L	...
South Dakota	Reforms candidate petition process	SB 69 / Ref. Law 19 (2016)	L	C	C
South Dakota	Creates a sub-minimum wage for young workers	SB 177 / Ref. Law 20 (2016)	C	C	C
Washington	Increases taxes for unemployment insurance	HB 2901 / R-53 (2002)	L	L	...
Washington	Allows charter schools	HB 2295 / R-55 (2004)	C	C	C
Washington	Prohibits insurers from denying certain claims	SB 5726 / R-67 (2007)	L	L	L
Washington	Grants rights to domestic partners	SB 5688 / R-71 (2009)	L	L	L
Washington	Allows same-sex marriage	SB 6239 / R-74 (2012)	L	L	...

Note. This table indicates the ideological classification of each law. The referendum vote method regressed district votes on the fraction of Republican votes received by the legislative candidates in the previous election. The roll call vote method regressed legislator roll call votes on a dummy for Republicans. In both cases, a law was classified as “conservative” if there was a statistically significant positive relation between votes and Republicans and “liberal” if there was a statistically significant negative relation. If there was not a statistically significant relation, then no classification was assigned. The bill sponsorship method classified a law as “conservative” if its sponsors were Republicans, “liberal” if its sponsors were Democrats, and neither if it had bipartisan sponsorship.