PARTY PRESSURE AND REPRESENTATION

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ABSTRACT. To study how political parties affect representation in the U.S. House, I account for party pressure on the votes of members in an otherwise standard spatial model that uses roll call voting patterns to identify member ideologies. I simultaneously estimate voter ideologies from survey responses, leveraging responses on issues before Congress to bridge voters and members into the same ideological space. I find that, relative to a model without party pressure, member ideologies and those of their constituents are much more closely aligned. The results imply that parties cause their members' votes to deviate from the policy preferences of those they represent. I provide evidence that parties do so strategically, balancing the need for legislative wins and the electoral concerns of their members.

1. INTRODUCTION

How well political agents, such as members of the U.S. Congress, represent those that elect them is a fundamental question in democratic politics. One relatively recent approach to studying representation leverages a vast literature that summarizes political actors' preferences through ideal points. In this formulation, taken from spatial voting theory (Downs, 1957), political actors prefer policies that are closer to their ideal points to those that are further away. To assess representation, one simply compares the ideal points, often referred to as 'ideologies', of members of Congress to those of voters. If a member's ideology is very close to that of, say, the median voter in a member's district, then the two share similar preferences and, in the absence of other forces, the member would choose the same policies that the median voter would choose on their own. In this case, the median voter would be well represented.[1]

Date: January 30, 2026.

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[1]Different concepts of representation exist. In this paper, I'm concerned with what Pitkin (1967) refers to as substantive representation: whether or not the representative advances the policy preferences of the represented.

The first challenge to this relatively simple idea is that one needs to measure the ideologies of members and voters in the same ideological space. To do so, researchers have leveraged surveys of voter positions on issues (roll calls) before Congress (Jessee, 2009; Bafumi and Herron, 2010). Intuitively, if we observe members' and voters' positions on the same (sub)set of issues, we can use these issues to 'bridge' ideological spaces. However, a second challenge arises if members are subject to external forces that cause them to choose policies that don't reflect their ideology. In this case, any ideological measure based on the policies a member chooses will be biased, and thus give a biased view of representation.

It is this second challenge that I address in this paper. I argue that members are subject to external forces, namely party pressure, such that standard estimates of their ideologies do not accurately reflect how well they represent voters. Even casual observation suggests that party pressure is prominent in legislative politics: almost daily, media headlines report attempts by parties to corral their members on important votes.[2] Further indirect evidence comes from the fact that the majority and minority whips, whose primary responsibility is to 'whip' the votes, are among the highest-ranking members within a party's hierarchy, indicating the importance of their role (Meinke, 2008; Evans, 2018).

I am not the first to recognize that party pressure may cause members' votes to deviate from their preferences, but the difficulty is in isolating party pressure from ideology. Members will only agree to join a party if they share similar preferences, so that observing common votes among party members could reflect either party pressure or homogeneous preferences (Krehbiel, 1993, 1999, 2000).

A recent literature (Canen et al., 2020, 2025) has made progress on this issue, providing a way to disentangle party pressure from ideology. These papers find that members are much less ideologically extreme when party pressure is accounted for, which raises an intriguing possibility. Perhaps once party pressure is accounted for, members of Congress are not much more extreme than their constituents, as current scholarship suggests (Bafumi and Herron, 2010; Ramey, 2015). If so, then the implication is that parties are creating a wedge between how members vote and their constituents' policy preferences.

[2]A prominent example at the time of this writing is Republican efforts to pass Donald Trump's "Big, Beautiful Bill": https://www.politico.com/news/2025/07/02/gop-megabill-whip-job-00436966.

In this paper, I adapt the methods of the 'bridging' literature to account for party pressure by constructing an empirical discrete choice model for both voters and members. For voters, the model is a variation of a standard one-dimensional spatial model (similar to NOMINATE, Poole and Rosenthal (1985)). On each issue, the voter chooses from a pair of policies, selecting the one which is closer to her ideal point. The key parameters to be estimated are the voters' ideological points, the marginal voter for each issue, and the 'direction' of each issue – whether the policy being proposed is left or right of the status quo.

For members, the model is identical except that I also allow vote choices to depend upon party pressure. Party pressure can be applied through a wide variety of carrots and sticks: committee assignments, campaign funding, the threat of facing a primary challenger, 'pork' for a member's district, etc. Due to the various means at the party's disposal, direct measures of pressure would be difficult to construct. Instead, I take a simple approach that is meant to capture, in a reduced-form way, all of the various levers the party controls. To do so, I first identify the direction of party pressure from the observed vote of each party's leadership. Then, I assume that each party only pressures those that would be most easily influenced: those nearest the marginal voter that would oppose the party in the absence of pressure. The key parameter – the strength of pressure – is measured by the distance between the marginal voter and the most distant member that can be persuaded to toe the party line. Critically, I *do not assume* party pressure: my model nests the standard model without pressure such that if parties actually wield no power, the strength of pressure will be estimated to be zero.

A key issue that must be addressed before estimating such a model is identification: ensuring that each parameter can be uniquely determined from the data at hand. As always, identification rests on certain assumptions. The first key assumption I impose is that, on certain bridging issues, the marginal voter and direction of an issue are the same among voters and members. This assumption allows me to place the members and voters in the same ideological space, as in Bafumi and Herron (2010), who impose an equivalent assumption.

The second key assumption is that voters' survey responses sincerely reflect their preferences and are thus not subject to party pressure. Under this assumption, I can identify party pressure in a very intuitive way. First, voters' ideological points are identified by how often they support left versus right-leaning policies in the standard way. Critically, this then pins down the marginal voters and directions on bridging

issues – as the (perhaps hypothetical) voter that is indifferent between the two policies, and by whether those on the left or the right support the proposed policy, respectively. Next, consider how a member votes on these bridging issues where the marginal voter and direction are known. Her vote depends on only two additional unknown parameters: her ideology and party pressure. Her ideology will be determined by how she voters *on average*, and party pressure will be identified by the *difference* in how she votes when pressured one way versus the other. The fact that pressure can be applied in either direction is critical. Given today's political climate, one may think that the Republicans always apply pressure to the right, but votes in the data exist where the party leaderships agree so that *if* Republican party pressure is applied, it must have been to the left (e.g., legislation proposed by the Democrats that is supported by the Republican party leadership).[3]

I estimate the model for the period of 2012-2024 using two main data sources: data on U.S. House members' roll call votes from Voteview and survey data on voters from the Cooperative Election Study (CES). I construct member ideologies from their roll call votes and voter ideologies from their survey responses to a wide variety of policies (gun rights, policing, taxes, immigration, healthcare, etc.). Critically, the CES surveys ask for voter positions on several roll call votes from the previous Congress, which serve as the bridging issues. I leverage the fact that voters are not subject to party pressure to allow party pressure to depend on factors which the previous literature (Canen et al., 2020, 2025) could not. In particular, I allow the party pressure parameter to differ depending on whether the leaders of both parties agree or disagree. I also allow pressure to depend on time, how safe a member's seat is, and whether or not they are retiring.

I find robust evidence that parties matter. The estimates of party pressure are statistically and quantitatively significant in every Congress, and have been increasing over time. As a consequence of this pressure, ideological polarization is significantly more muted relative to the estimates from a model in which I force party pressure to be zero. Measured as the distance between the median Democrat and Republican, polarization is reduced by 63% when pressure is accounted for. Furthermore, contrary to the results of standard models (e.g., DW-NOMINATE), I find substantial overlap between the distributions of the ideologies of each party – moderate members of Congress exist.

[3]To take just one examples, the CARES act in 2019 that provided relief from the pandemic was proposed by Democrats, but supported by both parties.

These results are consistent with those of Canen et al. (2020) and Canen et al. (2025), which lends credibility to both approaches given that party pressure is identified differently here. More novel, I find that party pressure is almost exclusively exerted when the parties disagree, as is intuitive.[4] I also find that party pressure is about 60% higher in the fourth quartile than in the first quartile of seat safety, so that those in safe seats are subject to more pressure. Finally, I find that retiring members are pressured slightly less than others.

Given evidence of substantial party pressure, I then turn to the consequences for representation. In the version of the model in which I force party pressure to be zero, I find results very similar to Bafumi and Herron (2010): members of the U.S. House appear far more extreme than voters. Specifically, the median Democratic member sits left of 93 percent of the voters in his or her district. Even more extreme, the median Republican sits to the right of 99%. When pressure is accounted for, the results change quite dramatically: the median Democrat lies left of 62 percent of voters, and the median Republican lies right of 77 percent.

Of course, given party pressure, members don't actually vote according to their ideology: parties cause them to deviate from their constituents' policy preferences. To quantitatively assess the extent of this 'wedge', I turn to a second measure of representation - vote congruence. Given estimates for the marginal voters and voter preferences, I simulate how the median voter in each district would vote and compare it to how their representative actually voted. I find that, across all roll call votes for which the parties disagree, Democratic members vote with the median voter 69% of the time, and Republicans 61% of the time. To explore the hypothetical of what would happen if party pressure were absent, I instead simulate member votes using their estimated ideologies to predict their votes. In this counterfactual exercise, congruence increases to 74% for Democrats and 66% for Republicans. Thus, absent party pressure, members would have voted with the median voter in their district substantially more often.

In the last part of the paper, I first address some important critiques of the bridging methodology I adopt. Specifically, I discuss the issues raised by Hill and Huber (2016) in the context of my results, and show through a robustness check that my results are unrelated to sample size (Jessee, 2016).

[4] Canen et al. (2025) assume no pressure is exerted when the parties disagree in one of their robustness checks, finding similar estimates of pressure as with other specifications.

Finally, I discuss the possible reasons parties pressure members to vote against constituent interests. A simple explanation is that parties are more extreme than their members, but given that party ideologies must necessarily be composed of the ideologies of their members, this explanation is incoherent. Instead, I suggest that, as in the strategic party government theory of Koger and Lebo (2017), parties value legislative wins. They do so because, as Koger and Lebo (2017) show, voters care not only about their policy preferences but also about their side winning (implying that party pressure is not necessarily detrimental to voter welfare). To obtain legislative wins, parties consistently oppose each other even if their preferences are not necessarily extreme. Importantly though, Koger and Lebo (2017) also show that voters dislike overly partisan representatives. As such, parties face a tradeoff between obtaining wins and allow their members to vote freely. The solution is to pressure members strategically, applying pressure to those in safe seats, while allowing those in competitive seats to vote more freely. My estimates show exactly this – party pressure is higher for those in safe seats.

This paper builds on a literature that studies representation using various methods to place voters and members on the same scale.[5] Initial works used surveys in which respondents placed political elites on ideological scales (Aldrich and McKelvey, 1977; Palfrey and Poole, 1987)), or used joint scaling methods (e.g., Hinich et al., 1978; Weisberg and Jerrod, 1970).[6] More recently, researchers developed the bridging techniques I utilize (e.g., Jessee, 2009; Bafumi and Herron, 2010; Shor et al., 2010; Shor and McCarty, 2011; Tausanovitch and Warshaw, 2014).[7] My primary contribution relative to this literature is to show how accounting for party pressure substantially changes views on representation.[8]

[5]This literature itself builds on a large literature that was developed to estimate the ideological positions of various political actors. Initial research focused on elites (e.g., Poole and Rosenthal, 1985; Heckman and Snyder, 1997; Poole and Rosenthal, 2001; Clinton et al., 2004), but similar techniques have also been applied to voters (e.g., Hill and Tausanovitch, 2015).

[6]Ramey (2015) is a more recent example that leverages survey respondents' placement of elites and themselves on the same scale. He finds that members of Congress are more extreme than voters, consistent with the results of Bafumi and Herron (2010). A potential issue with this approach is that voters may place members according to their roll call voting behavior, which confounds party pressure.

[7](Jessee, 2009) finds that voters are more extreme than Senators even when party pressure is not accounted for. Bafumi and Herron (2010) suggest that this may be because Jessee (2009) uses only bridging issues to estimate voter ideologies. These issues may evoke more consistently Democratic or Republican responses, making voter ideologies appear more extreme.

[8]A separate literature studies representation by leveraging election results to determine how voters weight different member attributes (Kendall et al., 2015; Cruz et al., 2021; Iaryczower et al., 2024; Cox, 2025; Longuet-Marx, 2025). These papers show that voters value members' ideological

I leverage the modeling structure of (Canen et al., 2020, 2025) to estimate party pressure.[9] But, I estimate party pressure when parties agree separately from when they disagree, showing that pressure is only applied in the latter case. Snyder and Groseclose (2000) estimate party pressure assuming that lop-sided votes are not pressured. Since lopsided votes tend to be correlated with the parties being in agreement, my results provide some validation for this approach. Another approach to identify party effects leverages politicians that switch parties (Kweit, 1986; Jenkins, 2000; McCarty et al., 2001). Rather than using party switchers to identify party effects, I use the one switcher in my sample as a way to validate the model with party pressure.[10]

Finally, in showing that parties pressure member votes, my work relates to theoretical research on the role of parties. My results most closely align with the strategic party government theory of Koger and Lebo (2017), as discussed above. Their theory builds upon the conditional party government theory of Aldrich (1995) and Rohde (1991), for which I also provide some evidence. The idea that parties care about their 'brand' and will therefore organize and discipline their members is discussed extensively in Cox and McCubbins (1993, 2005).

In the following section, I introduce the empirical model. I discuss the sources of data in Section 3 and how the model is identified in Section 4. I then turn to the results in Section 5, before discussing critiques of the bridging approach and what the results suggest about the goals of parties in Section 6. I conclude in Section 7.

2. Empirical Model

2.1. **Voters.** Voters, $i = 1, 2, \dots I$, 'vote' on issues, $j = 1, 2, \dots J$. Here, I use the word 'vote' for convenience; in reality, a vote represents a survey response. An issue consists of two policies: the status quo, $q_j \in \mathbb{R}$, and the alternative, $x_j \in \mathbb{R}$.[11] Voter $i's$ utility from policy $k_j \in \{q_j, x_j\}$ is given by $u\left(|\theta_i + \varepsilon_{ij} - k_j|\right)$, where θ_i is the voter's

policy positions when measured in ways arguably not confounded by party pressure (i.e., through surveys, campaign websites, or campaign donations).

[9] Longuet-Marx (2025) instead models party pressure as the weight a member places on her party's preferred position, relative to the probability of winning which depends on her constituents' preferences.

[10] Ansolabehere et al. (2001) compare roll call behavior to National Political Awareness Test (NPAT) surveys to identify party effects.

[11] I follow the previous work on bridging (Jessee, 2009; Bafumi and Herron, 2010; Jessee, 2016) by adopting a one-dimensional space.

ideology and $\varepsilon_{ij} \sim N(0,1)$ is an idiosyncratic shock that is independently distributed across voters and issues.[12] I assume $u'() < 0$.

The probability that voter i expresses support for the proposed alternative policy, x_j, over the status quo policy, q_j, (tie-breaking is immaterial) is given by

$$\begin{aligned} P\left(u\left(|\theta_i + \varepsilon_{ij} - x_j|\right)\right. &\geq \left. u\left(|\theta_i + \varepsilon_{ij} - q_j|\right)\right) \\ \iff P\left(|\theta_i + \varepsilon_{ij} - x_j|\right. &\leq \left. |\theta_i + \varepsilon_{ij} - q_j|\right) \\ \iff P\left(\theta_i + \varepsilon_{ij}\right. &\geq \left. m_j\right), \end{aligned}$$

where $m_j \equiv \frac{x_j + q_j}{2}$ is the midpoint (or cutpoint) between the two policies. The last step assumes $d_j = 0$, where $d_j \equiv I\left(x_j < q_j\right)$ is the 'direction' of an issue defined by whether the alternative, x_j, lies to the left ($d_j = 1$) or to the right ($d_j = 0$) of the status quo, q_j. For $d_j = 1$ the inequality is reversed. Defining $\gamma_{ij}^{d_j}$ as the probability the voter expresses support for the alternative when the direction is d_j, we have

$$\begin{aligned} \gamma_{ij}^{0} &= \Phi\left(\theta_i - m_j\right) \\ \gamma_{ij}^{1} &= \Phi\left(m_j - \theta_i\right), \end{aligned} \tag{2.1}$$

where $\Phi()$ indicates the cumulative distribution function of the standard normal distribution.

2.2. **Representatives.** Representatives, $r = 1, 2, \ldots R$, belong to one of two parties (D and$R$). They vote on a series of roll calls, $t = 1, 2, \ldots T$, some subset of which overlap with some subset of the issues voters are surveyed on – the bridging issues. Identical to voters, representative r's utility from policy k_t is given by $u\left(|\theta_r + \varepsilon_{rt} - k_t|\right)$ where θ_r is the representative's ideology and $\varepsilon_{rt} \sim N(0,1)$ is distributed independently across representatives and roll call votes, t.

As in Canen et al. (2020, 2025), I model party pressure through whips that exert pressure on members of their own party (only). Specifically, any party member, r, within y_{rt}^{max} of the midpoint, m_t, who would oppose the party in the absence of pressure is pressured in the direction, $Party_{rt} \in \{-1, 1\}$.[13] $Party_{rt}$ is an indicator for

[12] Assuming shocks have a variance of 1 is a necessary normalization to pin down the scale in the ideological space.

[13] This assumption can be microfounded as follows. Whips observe the idiosyncratic shocks of members that they are responsible for whipping. They obtain a reward, R_{rt}, if a member votes with the party, and nothing otherwise. To 'move' a member in ideological space, the whip pays a cost, $c()$ with $c'() > 0$ and $c(0) < R_{rt}$ for all r, t. These assumptions ensure a whip will only move members

the direction r's party prefers on roll call, t (-1 is to the right; 1 is to the left), and is observed in the data.

Following the same steps as for voters, the probabilities that representative r votes for x_t are given by

$$\begin{aligned} \gamma_{rt}^0 &= \Phi\left(\theta_r - m_t - y_{rt}^{max} Party_{rt}\right) \\ \gamma_{rt}^1 &= \Phi\left(m_t - \theta_r + y_{rt}^{max} Party_{rt}\right), \end{aligned} \tag{2.2}$$

so that one can think of party pressure as introducing member-specific cutpoints, $m_t \pm y_{rt}^{max}$. The overall log-likelihood function, assuming independent shocks, ε_{ij} and ε_{rt}, across voters, representatives, issues, and votes is

$$\log \mathscr{L} = \sum_{r=1}^{R} \sum_{t=1}^{T} \log \gamma_{rt}^{d_t} + \sum_{i=1}^{V} \sum_{j=1}^{J} \log \gamma_{ij}^{d_j}. \tag{2.3}$$

2.3. **Discussion of the Model.** The model is an extension of a standard probabilistic voting model to allow for the possibility that representatives are pressured by their respective parties. I purposefully adopt the term 'pressure' rather than 'discipline' to acknowledge that my estimates do not necessarily only capture party discipline from the top. Any party-specific shock that affects all members in the direction preferred by party leadership will be picked up as discipline. It could be, for example, that party members vote similarly because of peer pressure – the desire to get along with other members. [14]

The assumption that party pressure is applied to all members within y_{rt}^{max} is a simplification that allows for a tractable estimate of party pressure. This assumption implies that parties do not trade off the amount of pressure they apply across votes, nor do they balance members' electoral concerns with party goals such as branding, etc. However, in estimation, I allow for these considerations in a straightforward way, by allowing party pressure to depend on whether or not the two parties agree or disagree (hence allowing for variation across votes) and by allowing it to depend on how safe a member's seat is (hence allowing for variation across members).

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that initially oppose the party and are within some maximum distance, y_{rt}^{max}, of the midpoint. Note that, on a given vote, discipline stochastically affects all members because, through the idiosyncratic shock, any member could lie in the region of ideological space for which pressure is applied.

[14] Importantly, however, Canen et al. (2025) provide evidence that party leadership itself must play a substantial role: using other members' votes to indicate the direction of pressure results in smaller estimates of pressure.

The assumption that idiosyncratic shocks operate through changes in ideologies rather than in changes in utility follows Canen et al. (2020, 2025). Conceptually, a shock to ideology and a, more standard, shock to utility are similar. But, having the shocks operate on ideology results in two major simplifications. First, it avoids having to specify the utility function beyond being single-peaked. Second, it avoids having to identify the individual policy locations, q_t and x_t, because only the midpoint, m_j, and direction, d_j enter the vote probabilities.

A final concern about the estimation of ideal point models in general is that parties control the bills that make it to the floor so that the observed votes are subject to selection (Cox and McCubbins, 2005), which some have argued can bias estimates of the ideal points and polarization (Clinton et al., 2014). However, Canen et al. (2025) argue formally, and demonstrate through extensive Monte Carlo simulations, that these concerns are not an issue in large samples provided (i) the roll parameters m_j and d_j are determined prior to the realizations of the idiosyncratic shocks, and (ii) the shocks are unbounded so that any member could vote either way on any particular roll call.

3. Data and Empirical Specification

I rely on two primary data sources: roll call voting data comes from Voteview (https://voteview.com/) and the voter survey data comes from the Cooperative Election Study (CES; https://tischcollege.tufts.edu/research-faculty/research-centers/cooperative-election-study). I restrict the data to six Congresses, 113-118, using survey data for every year from 2012 to 2024. Although both data sources provide data for earlier years, surveys prior to 2012 contain fewer questions of a binary nature that I use to estimate voter ideologies.[15] I focus on the U.S. House because there are relatively few bridging questions for the Senate in the survey data. In total, I have data on 2,876,245 votes and 18,726,081 survey responses.[16]

The Voteview data contains representative information on their roll call votes, state, Congressional district, name, and party affiliation. For each vote, Voteview provides a brief description of the issue that is being voted on. To this data, I manually add identifiers for the leader of each party as well as the majority and minority whips. To

[15]For example, Bafumi and Herron (2010) have an average of only 16 binary questions in their study of the 2006 and 2008 Congresses, and many of these come from team modules with many fewer respondents.

[16]I treat member votes of 'present' and 'absent' as missing at random. Although it is possible that 'present' votes are strategic (Rosas et al., 2015), they make up only 0.04% of all votes in the data. Absent votes make up approximately 4.3% of all votes, but are less likely to be strategic.

identify the leadership position of a party, $Party_{rt}$, I use the leader's vote if available. If not, I use the vote of the party's whip and if that is also not available, I use the preference of the majority of the party's members.[17] I merge the voting data with an indicator for a member retiring using data from Ballotpedia[18], and I construct a measure of how safe a member's seat is using data compiled by The Downballot.[19] This data provides the fraction of voters that voted for each Presidential candidate by Congressional district. Following Kustov et al. (2021), I define the competitiveness of a district for a given Congress as the average of the Democratic vote share minus the Republican vote share over the previous two elections.[20] This measure varies from -1 to 1 and indicates how safe a seat is for a Democrat (with 1 being the most safe). For the measure of seat safety used in estimation, I multiply the measure by -1 for Republican members, so that a value of 1 is safe for either party.

From the CCES data, I utilize the survey responses as well as information on a respondent's state, Congressional district, and an indicator for the party they self-identify with (Democrat, Republican, Independent). To estimate an individual voter's ideology, I make use of all of the binary questions on policy issues in a given survey. The number of such questions varies across surveys from 19-48. The questions cover a wide range of issues including abortion, immigration, gun control, healthcare, the environment, and policing, as well as questions related to Congress roll call votes and executive orders. Importantly, many questions are repeated over time so that voter preferences are comparable across time. When constructing the ideology of the median voter and when presenting the results for a given Congress and district, I weight voters by the survey weights, pooling across the two surveys that correspond to a given Congress.[21]

The survey questions related to Congress roll call votes are critical because they allow me to bridge voter and legislator preferences. Across Congresses, voters are surveyed on between 4 and 11 roll call votes, for a total of 47. I manually map each surveyed roll call vote to a House roll call from Voteview when one exists. In some

[17]The leader's vote is missing about 5% of the time, and both the leader's and the whip's vote are missing about 0.5% of the time. Canen et al. (2025) show that their results do not depend on the exact specification of leadership positions.

[18]https://ballotpedia.org/Congressional_retirements_by_month,_2011-2024

[19]https://www.the-downballot.com/p/the-downballots-calculations-of-presidential

[20]For the election in 2022, I don't have data on the Presidential vote shares for 2016 based on 2022 district boundaries, so I define competitiveness based on 2020 Presidential vote shares only.

[21]I use all respondents rather than only those that were verified to have voted. If I were to restrict to this subsample, I would not be able to make use of the surveys in non-election years (and 2014), which would reduce the number of bridging issues by 40%.

instances, the surveyed issue is related to a roll call in the Senate or an issue that never made it to the floor. The complete list of the survey questions and the roll call votes I map them to are provided in Appendix C.[22] The 47 bridging issues cover a wide range of issues including Congressional votes on abortion, healthcare, national security and a wide variety of economic issues (e.g., debt ceiling, minimum wage, taxes, and trade issues). They also vary with respect to which party proposed the bill, whether or not party leaders' votes agree, and in vote outcomes (i.e., split across parties, near unanimous, etc.). Thus, the subset of issues is fairly representative of bills before Congress apart from the fact that they are clearly some of the more substantive issues.

The fact that the voter data, through the surveyed issues that bridge roll call votes, 'anchors' member preferences allows me to generalize the model of party pressure in Canen et al. (2025). Rather than assuming parties always apply pressure, or only apply pressure when they disagree, I separately estimate party pressure for votes in which the parties disagree from those in which they agree. Specifically, I define party pressure as $y_{rt}^{max} = e^{\beta X_{rt}}$, where X_{rt} is made up of a constant, seat safety, a dummy for member retirement, and a time dummy interacted with disagreement between the parties. I don't allow party pressure to differ by party because Canen et al. (2025) find that the pressure parameters for each party closely track each other.[23]

I estimate (2.3) using maximum likelihood estimation. On bridging issues, I constrain the midpoint and direction for the roll call to be the same as the midpoint and direction for the related survey question ($m_t = m_j$ and $d_t = d_j$), which is the crucial constraint that bridges the members and voters into the same space. I also generally constrain the midpoints for identical survey questions to be the same across time, as in past studies that estimate changes in voter preferences over time (e.g., Hill and Tausanovitch, 2015). However, in cases in which the survey questions pertain to repeated roll calls on the same issue (e.g., attempts to repeal the Affordable Care Act), I allow the midpoints to be different, consistent with the fact that each roll call is allowed to have its own midpoint.[24]

[22]This list overlaps quite well with Ansolabehere and Kuriwaki (2022), who use bridging issues to study accountability. The few differences are discussed in Appendix C.

[23]If I allow party pressure to differ by party, the results are qualitatively similar and the estimates for the two parties track each other.

[24]There are four such cases of repeated surveyed roll calls - see Appendix C.

4. Identification

Here, I describe intuitively how the variation in the data identifies the model parameters. I provide a formal proof of identification in Appendix B.

Consider first the voters. As is standard, differences in voters' ideologies are identified by differences in vote probabilities on the same issue. The absolute locations of the ideologies are then pinned down by (i) normalizing the location of one voter and (ii) normalizing the variance of the the distribution of the ideology shocks.[25] The direction of each issue is then identified by whether voters on the left support a policy proposal more or less often than those on the right. Finally, the midpoint of each issue is identified as the location of a voter that would be indifferent between the two policies.

Now consider the members of Congress. The known midpoints and directions for roll call votes for which I have voter survey data provide the critical 'bridge' between voters and members. In particular, absent party pressure, each member's ideology would immediately be pinned down by how she votes on the bridging issues. With party pressure, her ideology and the extent of pressure can both be determined: her ideology will be identified by how she voters on average, and party pressure will be identified by the difference in how she votes when pressured one way versus the other. Importantly, within the subset of bridging issues where the parties agree, party leaders sometimes prefer the left policy and sometimes prefer the right policy so that pressure, if any, is not always exerted in the same direction. For the case in which the parties disagree, it is rare to observe the Democrats applying pressure to the right (and Republicans to the left), and it doesn't occur on bridging issues. However, once the ideologies are identified based on votes where the parties agree, party pressure for the case in which parties disagree is then identified from how votes depart from the predictions of ideologies alone. Finally, once member ideologies and party pressure are identified, the midpoints and directions for all of the roll call votes that do not bridge the roll call and survey data are also pinned down uniquely.

The above argument suggests that it would be possible to estimate the voter parameters first, then, holding these parameters fixed, estimate the representative parameters using the bridging data only (and finally one could estimate the midpoints and directions for the non-bridging roll call votes if desired). Although this would

[25]Technically, the ideologies are only locally identified. One can flip both the estimated ideologies and midpoints through the origin to obtain identical voting probabilities. I resolve this indeterminacy by assuming Democrats generally lie to the left of Republicans

theoretically lead to unbiased estimates, I instead estimate all of the parameters simultaneously, ensuring that the party pressure parameter estimates are not derived *only* from the bridging issues. In this way, the parameters result from the best fit across all roll call votes.

5. Results

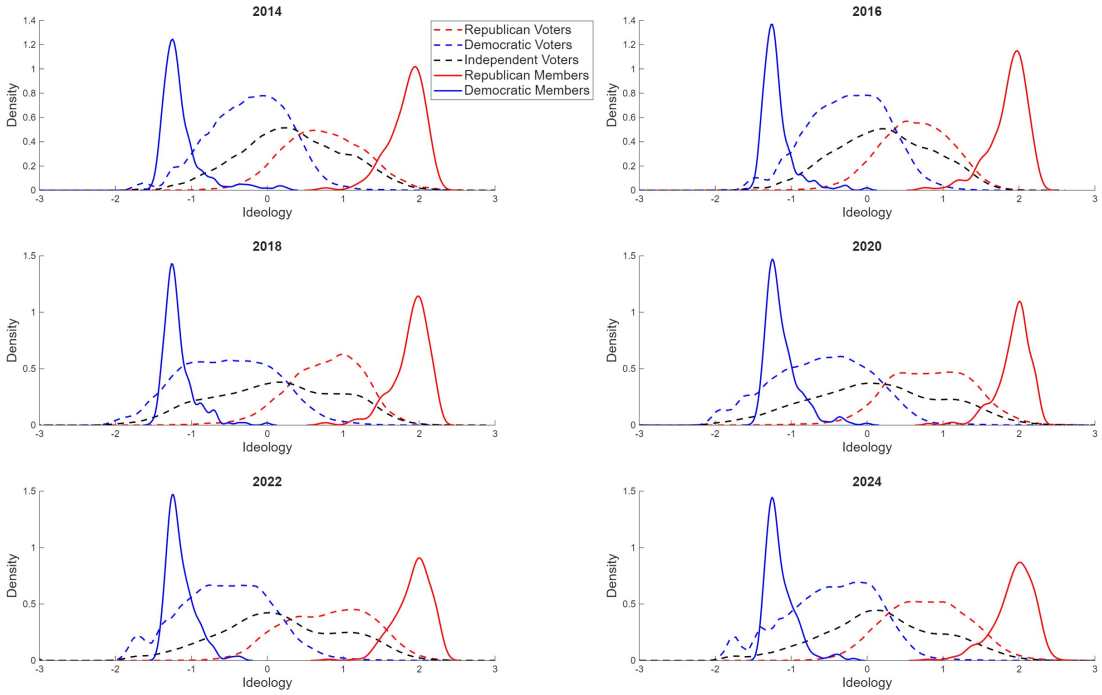
In Section 5.1, I first present the estimates of member and voter ideologies, comparing them to a standard model without party pressure to show that accounting for party pressure dramatically changes the view on how polarized members are relative to voters. In Section 5.2, I provide estimates of the determinants of party pressure. In Section 5.3, I further compare the models with and without party pressure, showing that the model without party pressure fails to account for several features of the data. Finally, in Section 5.4, I turn to the main question of representation. There, I show that, in terms of actual votes, parties cause members to vote less in line with the expressed preferences of voters.

5.1. **Ideologies and Polarization.** In this section, I compare voters' and members' ideologies to provide an overview of representation directly in the ideological space. To serve as a benchmark, I estimate a version of the model in which party pressure is set to zero, $y_{rt}^{max} = 0$ for all r and t. I refer to this model as the *standard* model as it makes the standard assumption that members' votes are a function of ideology only. This version of the model is very similar to a standard model such as NOMINATE or the IRT model used by (Bafumi and Herron, 2010). Figure 5.1 plots the kernel density estimates from this model for each of the Congresses in the sample. The density estimates for voters are weighted by the sample weights and plotted separately for those that identify as Republican, Democrat, and Independent.

Figure 1 supports the view that legislators are extremely polarized, with almost no overlap between the distributions of Republican and Democratic members (McCarty et al., 2016). Furthermore, legislators are far more extremist than voters. In fact, although the results are for a different time period and are obtained using a slightly different method, the overall takeaway is very similar to that of Bafumi and Herron (2010).

In Figure 5.2, I plot the ideology estimates from the *full* model that allows for party pressure. Comparing the ideological densities in Figure 5.2 with those in Figure 5.1, a very different picture emerges. When party pressure is not accounted for, the ideological polarization of elites is severely exaggerated. Intuitively, if the parties often

FIGURE 5.1. Standard Model Ideology Estimates



Notes: Kernel density estimates of ideologies for members and voters in the standard model without party pressure.

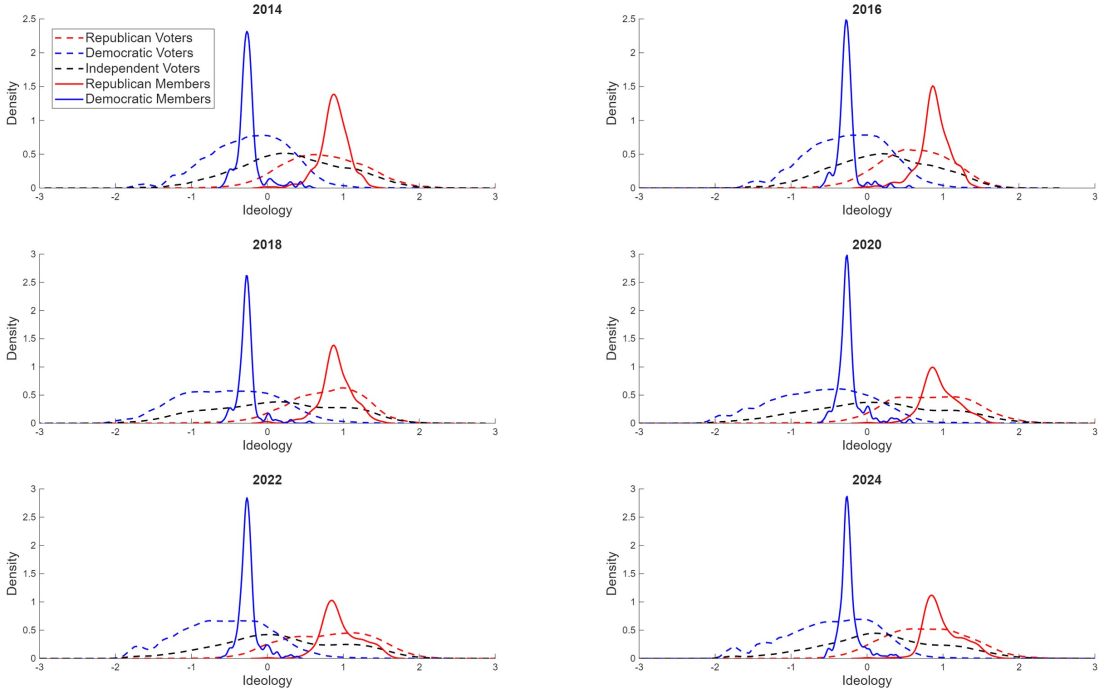
pressure their members in opposite directions, ignoring the pressure causes differences in voting patterns across parties to load on ideologies, making them appear farther apart.

In particular, when party pressure is accounted for, there is a substantial region of overlap between moderate Democrat and Republican members. And, critically, when party pressure is accounted for, member ideologies are clustered around the center of the distributions for voters that share the member's ideology.

This evidence provides strong support for the notion that parties matter, and it has consequences for how we think about the extent of polarization. Figure 5.3 plots the evolution of the ideologies of the median Republican and Democrat voters along with those of the median Republican and Democratic members for the standard model (on the left) and for the full model (on the right).

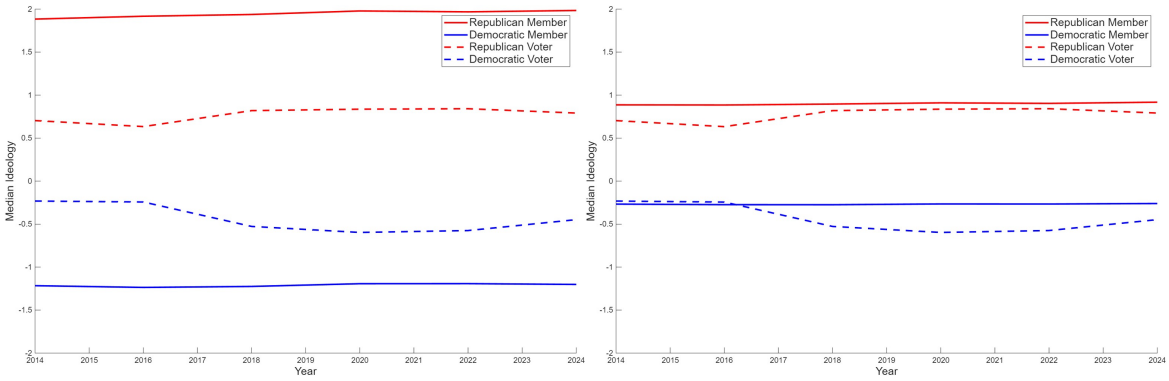
Taking the standard measure of polarization as the difference between the median Republican and Democrat, in the standard model the polarization of members of Congress averages 2.7 times that of voters. In contrast, when party pressure is accounted for, the average polarization measures for members and voters are very similar. Over

FIGURE 5.2. Full Model Ideology Estimates



Notes: Kernel density estimates of ideologies for members and voters in the full model with party pressure.

FIGURE 5.3. Polarization



Notes: Median member and voter ideologies across time. The left panel is for the standard model without party pressure. The right panel is for the full model with party pressure.

time, voter polarization first increases and then decreases slightly, resulting in about a 33% increase from 2014 to 2024 (in both models). This increase is consistent with the findings of Kendall and Matsusaka (2025) who also study voter polarization in recent time periods (though Kendall and Matsusaka (2025) study voters in California only).

TABLE 1. Moments of Party Pressure

Statistic	Estimate	Standard Error
average y_{rt}^{max} when parties agree	0.08	0.002
average y_{rt}^{max} when parties disagree, 2012-14	1.70	0.004
average y_{rt}^{max} when parties disagree, 2014-16	1.90	0.005
average y_{rt}^{max} when parties disagree, 2016-18	1.82	0.005
average y_{rt}^{max} when parties disagree, 2018-20	2.20	0.007
average y_{rt}^{max} when parties disagree, 2020-22	2.45	0.008
average y_{rt}^{max} when parties disagree, 2022-24	2.26	0.005
average change in y_{rt}^{max} with safe seat (4th-1st quartile)	0.67	0.004
average change in y_{rt}^{max} when retiring	-0.10	0.005

The polarization of elites also increases across time, but only slightly in either model. NOMINATE shows a much larger increase in polarization but it does not account for party pressure. Canen et al. (2025) also find a greater increase in polarization for the overlapping time period from 2014 and 2018. The difference may be due to either a different specification of party pressure or the fact that, in their specification, only members that serve in multiple Congresses pin down changes across time. Here, voter ideologies also serve as an anchor.

5.2. **Determinants of Party Pressure.** Table A.3 in Appendix A provides the estimates of β, the determinants of party pressure, showing that all determinants of pressure are statistically significant. In Table 1, I translate the estimates into more meaningful statistical moments of party pressure.[26]

There are several key takeaways from Table 1. First, when the parties disagree, they exert substantial pressure over their members and this pressure has increased over time. One way to assess the estimated magnitudes of party pressure is to calculate the percent reduction in polarization when party pressure is accounted for.[27] By this measure, party pressure accounts for 63% of polarization in each Congress. Using

[26]To calculate the standard errors, I use the standard outer product of gradients (OPG) and delta methods. However, given the large number of voters, it is computationally infeasible to calculate the full OPG matrix and invert it. Thus, I randomly sample 5000 voters to construct the OPG matrix. Reassuringly, the standard errors do not depend on the random sample or sample size. Furthermore, I can construct the full OPG matrix when I estimate the model on a reduced sample of voters (Section 6.1). The standard errors for this reduced sample are almost identical (Table A.4) which is intuitive because the number of voter observations is orthogonal to the variation that pins down party pressure.

[27]Another way is to consider the size of shock that would be needed to cause a member to vote against their party. For example, with $y_{rt}^{max} = 2$, a member who is indifferent in the absence of pressure ($\theta_i = m_t$) would require a shock greater than two standard deviations of a standard normal to vote against her party. Thus, we would expect this to happen roughly 2.5% of the time.

the same measure, Canen et al. (2025) report that party pressure accounts for 65% of polarization in 2018, which is reassuring given that pressure is identified slightly differently.[28]

Second, when the parties agree, very little pressure is exerted, as we might expect. Even though the estimate is statistically significant, the coefficient is very small.

Third, parties exert much more influence over members in safe seats: average pressure in the 4th quartile of seat safety is 0.67 greater than the in the 1st quartile. This difference is substantial, increasing the reach of parties by 60% from the 1st to 4th quartiles. This result suggests that pressure is exerted strategically across different members, something which I explore further in Section 6.2.

Finally, I find that when a member announces their retirement, they are subject to less pressure, though not substantially. On the one hand, a retiring member may be less susceptible to reward and punishment; on the other, they may be more amenable to persuasion as they don't face reelection concerns. The estimate suggests that the first factor dominates, perhaps because many retiring members still care about their voting record because they plan to run for other positions.

5.3. **Model Comparison.** In the previous section, I noted stark differences between the standard model and the full model with party pressure. Here, I conduct several analyses that suggest that the full model is likely to better reflect reality.

First, the full model nests the standard model. As such, if party pressure were zero, the estimates of the full model should reflect this fact. Instead, party pressure is economically and statistically significant in every Congress. Furthermore, a likelihood ratio test favors the full model over the standard model even with though the full model has extra degrees of freedom ($p < 0.001$).

Second, I compare how the two models treat members that switched between the Republican and Democratic parties during their tenure. In the Congresses I consider, there is only one such member: Jefferson Van Drew of New Jersey was elected as a Democrat in 2018 but has served as a Republican from about midway through his first term until the present.[29] I estimate two separate ideologies for Van Drew, one for his time with each of the parties (NOMINATE does the same). In the standard model, his ideology is estimated to be -0.31 when a Democrat and 1.81 when a Republican. These very different ideologies strongly suggest a role for party pressure, consistent

[28]Given the different specifications of party pressure, the estimates for y_{rt}^{max} are not directly comparable to those of Canen et al. (2025), though they are of very similar magnitudes.

[29]Justin Amash and Paul Mitchell switched from Republicans to Independents (Amash switched again to a Libertarian). Following Voteview, I treat them both as Republicans throughout.

with the results of McCarty et al. (2001) who also find party switchers' ideologies move substantially. The estimates imply that Van Drew's ideology changed from one that places him in the 33rd percentile of voters in his district to one that places him to the right of 99 percent of voters. In the full model, his two ideologies are estimated to be 0.42 and 0.85, suggesting a more stable ideology that moved from the 65th percentile to the 79th percentile of voters in his district. Though it's possible a massive shift in policy views prompted Van Drew's party switch, it seems more likely that, as he has stated, his views have always been 'middle of the road to conservative'.[30]

Third, the standard model has difficulty reconciling additional vote patterns in the data. Specifically, in this model, any issue for which there is broad support among members of both parties implies an extreme midpoint, which in turn implies that all voters should support the issue as well. Among the bridging issues for which voter support is known, there are cases for which this is not true in the data. To take one example, the Coronavirus Aid, Relief, and Economic Security (CARES) Act proposed support for individuals and businesses during the pandemic. It passed the House in 2019 (Congress 116) with about 99% of the vote, and about 90% of surveyed voters expressed support. To accommodate the substantive, but not full, support among voters, with more Democratic voters in favor, the midpoint in the standard model is estimated to be 1.64 with the policy left of the status quo (consistent with it being proposed by Democrats). From Figure 5.1, we see that such a midpoint and direction would imply that very few Republican members should have supported the policy, contrary to the data. On the other hand, estimates of ideologies from the full model in Figure 5.2 predict that the vast majority of Republican members would support the policy, as they did.[31]

Though this is just one example, the difficulty the standard model has fitting bridging issues is more general. To quantify the extent of the problem, I calculate a measure of model fit for members' votes: I say that the model predicts correctly if the estimated probability of a Yes vote is greater than one-half and the observed vote is Yes, or the estimated probability is less than one-half and the observed vote is No. By this measure, the fit of the standard model across all bills is 94% for Democratic members and 93% for Republican members. In the full model, the corresponding fits are 96% and 93%. Thus, across all bills, both models fit the data extremely well. However, among bridging issues, the standard model fit is only 81% for Democrats

[30]See https://www.youtube.com/watch?v=6mcpY59lcSA.

[31]The estimated direction (left) and midpoint (1.64) are the same in the full model as in the standard model.

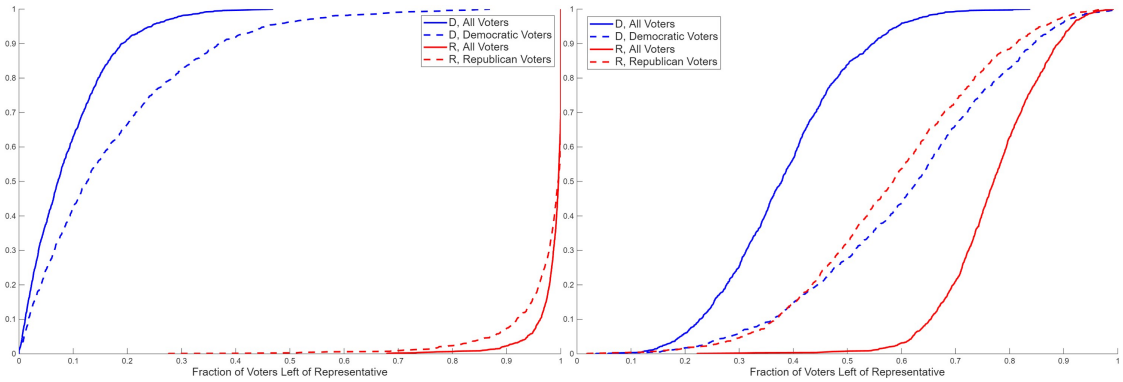
and 71% for Republicans, compared to 90% and 85% for the full model. The reason that the standard model can fit most issues where the parties agree is that it does so by estimating an extreme midpoint. But, on bridging issues where the midpoint is constrained by voter support, the standard model fits less well because, as in the example above, it cannot simultaneously accommodate mixed support among the voters and broad support among members.

Interesting, Lewis and Tausanovitch (2015) run into this same problem when they estimate voters and members separately and compare the fit to that of a jointly-estimated model. They find that separate models fit the data better precisely because the joint model has "a severely reduced ability to predict legislator choices on the bridged items" (p42). Mapping separately estimated models onto one another runs into the same problem noted here: on bridging issues, voter and legislator estimates imply different midpoints that cannot be reconciled if one doesn't account for party pressure.

5.4. **Representation.** Figures 5.1 and 5.2 give a sense of how members align with voters, but don't capture the correlation between individual members and voters in their districts. In Appendix figures A.1 and A.2, I plot member's ideologies versus the median ideology in their district both for the standard model and the full model. Both models illustrate a positive correlation between the extremeness of the median voter in a district and their representative. In fact, apart from the change in scale, the correlations look similar across models. However, as noted by Achen (1977), correlation is not a good measure of representation because, as we see with the standard model, a positive correlation can exist even if members and voters are extremely far apart.

Instead, I measure representation by the percentile at which a member lies in the distribution of voters in their district. While the absolute distance between a member and the median voter in a district has been used in the past (e.g., Bafumi and Herron, 2010), where a member lies is, I believe, easier to interpret. Specifically, in Figure 5.4, I plot the empirical cdf of the fraction of voters in a member's district that lie to the left of the member (pooling across all districts and Congresses). Perfect representation of the median voter would result in a step function at 0.5. On the left, I show the results of the standard model, and on the right, results from the full model. In both cases, to assess representation of a member's 'base' – voters who identify with the member's party – I also show the fraction of such voters that lie left of the member.

FIGURE 5.4. Member Ideologies Relative to Voter Ideologies in their District



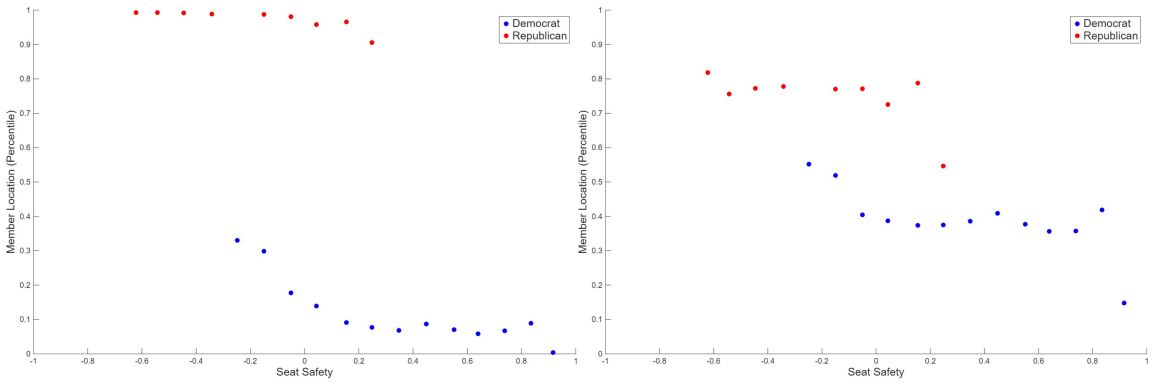
Notes: Each panel plots the empirical cdf of the fraction of voters in a member's district left of the member, pooling across districts and Congresses. Solid lines are the fraction of all voters; dashed lines are the fraction of voters associated with the same party as the member. The left panel is for the standard model without party pressure. The right panel is for the full model with party pressure.

In the standard model, the median Democrat lies further to the left than 93% of voters in their district, and the median Republican lies further to the right than more than 99% of voters. Representation among a member's base is not much better: the median Democrat lies to the left of 87% of Democratic voters, and the median Republican lies to the right of 99% of Republican voters. Thus, according to this model, voters are poorly represented in practically all districts.

After accounting for party pressure, representation improves dramatically. Members are still generally more extreme than the overall median voter in their district: the median Democrat lies left of 62% of voters, and the median Republican right of 77% of voters. But, both the median Democratic and Republican members are quite closely aligned with the median voter in their base (left of 37% of such voters and right of 58%, respectively). While the standard model begs the question as to why voters elect such extremist members, after we account for party pressure, the question becomes essentially moot if we we're willing to accept that members primarily represent their party base (Clinton, 2006).

Although in the full model representation is much better than in the standard model, in Figure 5.4 we still observe substantial heterogeneity in how well different districts are represented. Intuitively, one factor that might drive a large part of this heterogeneity is the competitiveness of a district: in more competitive districts, we might expect candidates to converge to the median voter (Downs, 1957). To test

FIGURE 5.5. Member Percentiles vs. Seat Safety



Notes: Each panel plots the average percentile (fraction of voters in a member's district left of the member) for members of each party, pooling across districts and Congresses, versus the average measure of seat safety (-1 being very safe for Republicans; 1 being very safe for Democrats). Seat safety is binned into 20 equally-sized bins for which the averages are calculated. The left panel is for the standard model without party pressure. The right panel is for the full model with party pressure.

this hypothesis, Figure 5.5 plots a member's percentile in the distribution of voters in their district as a function of how safe a seat is for a Democrat (with 1 being very safe and -1 being very safe for a Republican).[32] To produce the plot, I bin seat safety into 20 equally-sized bins and calculate the average seat safety, Democratic member percentile, and Republican member percentile in each bin. I again compare representation in the standard model (on the left) to that in the full model (on the right).

In both models, we see some evidence for the hypothesis that competitive districts are better represented. In non-competitive districts, only members of the party that are favored by the district are ever elected, and in the most safe seats, the members lie towards the extremes of the voter distribution even in the full model. Note that this result is saying more than members in safe seats are extreme. It's of course the case that median voters are more extreme in safe seats because voter preferences are correlated with seat safety. What the result says is that even *conditional* on the more extreme preferences in these districts, the fact that there is little competition allows members to be even more extreme.

In more competitive districts, we see that members of both parties are elected, but also that even in the most competitive districts, we don't see complete convergence to

[32]This measure is the same as that used in estimation except that for the measure used in estimation, I flipped the sign for Republican incumbents so that 1 means safe for both parties.

the median voter. In the standard model, we instead observe the 'leapfrog' representation of Bafumi and Herron (2010): representation flips over time from a Republican that sits right of the vast majority of voters to a Democrat that sits to their left. Although we see a similar pattern under the full model, the extent of leapfrogging is significantly reduced: members of alternate parties sit on opposite sides of the median voter, but not at the extremes of the distribution of the voter distribution.

Interestingly, the one case in which we observe members positioning themselves almost perfectly at the median voter is when a member is elected in a district that leans somewhat in the other direction. When a Democrat wins in a district that leans Republican (seat safety $\cong$ -0.2), he or she lies almost exactly at the district median, on average. Similarly, when a Republican wins a seat in a district that leans Democratic (seat safety $\cong$ 0.2), he or she lies just slightly right of the district median. Note, however, that that we still don't have Downsian convergence even in these cases: elected members for which the seat leans in their favor still distance themselves from the median voter.

Thus far, I have shown that accounting for party pressure changes the view of how well voters are represented in the ideological space. But, ultimately what matters is how members vote, so I now turn to a measure of vote congruence: how often a member votes according to the preferences of a given member in their district. Of particular interest is how vote congruence would change if members were allowed to vote according to their preferences (without party pressure).

In Table 2, I present this congruence measure by party, both for the median voter in a member's district and for the median of their voter base. All of the congruence measures are calculated using estimates from the full model and are averaged across districts and time. I restrict to votes in which the parties oppose each other (about two-thirds of votes) because these are the votes for which the suppression of party pressure is relevant.[33] In Panel A, the congruence measures are across all such votes; in Panel B, I further restrict to only the bridging issues.

In the first row of each panel in Table 2, I begin with the congruence of actual votes taken by party leadership. Specifically, I calculate the fraction of bills for which each party leadership's vote agrees with the preferences of the median voter in a district, using estimates of the midpoint and voter ideologies to determine the median voter's preferred vote. I restrict to districts for which the party has an incumbent member

[33]The congruence measures for votes in which the parties agree are generally above 90%, reflecting the fact that the estimated midpoints tend to be very extreme in these cases.

TABLE 2. Congruence in Votes

	Dem with median	Dem with base	Rep with median	Rep with base
Panel A: All votes where parties disagree				
actual party	0.65	0.75	0.57	0.74
actual member	0.69	0.78	0.61	0.79
predicted member	0.66	0.76	0.59	0.75
counterfactual member	0.74	0.79	0.66	0.81
Panel B: Bridging votes where parties disagree				
actual party	0.73	0.82	0.43	0.70
actual member	0.75	0.83	0.43	0.67
predicted member	0.74	0.82	0.44	0.70
counterfactual member	0.92	0.93	0.61	0.90

Notes: Congruence is measured as the fraction of time a vote (actual or predicted) agrees with the predicted vote of the median voter in a district (median), or of the median voter in a district among those sharing the same party affiliation (base). Counterfactual member votes are predicted votes of members based on their estimated ideology when there is no party pressure. The top panel is for all roll call votes where the parties disagree and the bottom panel restricts to only issues that bridge the roll call and survey data.

so that this measure serves as a baseline for the second row which instead uses actual member votes. The third row in Table 2 replaces actual member votes with predicted votes, based on estimated voter ideologies *and the estimates of party pressure*. The third row serves as a benchmark for the main counterfactual of interest shown in the fourth row. Here, I shut down party pressure to ask how well members would represent voters in their district *in the absence of party pressure*.[34]

Comparing the first and second rows of each panel, we see that members represent the median voter or median voter in their base only slightly better than party leadership. This result again reflects strong party pressure: member votes and leadership votes frequently align. Comparing the second and third rows, we see little difference which again demonstrates good model fit – actual and predicted members votes differ only slightly.

Comparing the third and fourth rows provides results for the main counterfactual of interest. Here, we see substantial improvements in representation. It is in this sense that parties drive a wedge between members' votes and the preferences of the constituents they represent: vote congruence would improve if parties did not pressure their members. The improvements are particularly large among the bridging issues. Importantly, these issues are both substantive and the issues for which we have better estimates of what voters prefer: the midpoint is estimated based on both voter and member preferences, rather than member preferences alone. On the bridging issues,

[34]I hold the estimated midpoints constant in this counterfactual. If parties are unable to pressure members, the policies they choose to pursue may be different (Canen et al., 2020).

we see that, if left to their own devices, Democratic members would vote with the median voter and their base more than 90% of time. Republicans would vote the preferences of their base 90% of the time, but still not represent the median voter's preferences very well.

6. Discussion

6.1. **Potential Limitations and Robustness.** Researchers have noted potential limitations in the use of bridging issues to place members and voters on the same scale. Here, I discuss these potential limitations in relation to my findings.

The first issue pertains to the possibility that members and voters lie in different ideological spaces, making any attempt to bridge the two questionable. Jessee (2016) shows that one obtains different results if one first pins down the ideological space using members' votes and then places voters in this space, or vice versa (see also Lewis and Tausanovitch (2015)). He concludes that researchers must choose the relevant ideological space to operate in for the question of interest. For the purposes of representation, I would argue that the ideological space of citizens is the relevant one, as we're interested in how legislators map onto voter preferences. And, with many more voters than legislators, my pooled estimation technique forces the estimated parameters (midpoints and directions in particular) to mainly be determined by the voter data, so that my baseline results should in fact place members into the voters' ideological space.

Nevertheless, as a robustness check, I re-estimate the standard and full models limiting the number of voter responses to 450 in each survey. 450 is roughly the number of members voting on any particular issue, so that the number of survey responses and member votes will be very similar for each issue. In this way, voter and member responses will get approximately equal weights in determining the estimates of the midpoints and directions of bridging issues, unlike in the baseline where the large number of voter responses force the estimates to be determined primarily by voters. Jessee (2016) shows that changing the sample size in this way can, in some cases, substantially change how the distributions of voter and member ideologies overlap.

The estimated ideologies for this exercise are provided in Figures A.3 andA.4, and the moments of party pressure are provided in Table A.4. Both are extremely similar to the estimates obtained with the full sample of voters. This result is reassuring as it suggests that differences across ideological spaces appear to be minor when using

CCES data. Jessee (2016) shows a similar result and suggests that it may be because the issues voters are surveyed on are relatively familiar to them.[35]

The second issue pertains to how survey responses relate to representation. Hill and Huber (2016) correctly point out that the survey responses may not reflect the decisions a voter would make if actually present in the legislature. They show that information about the context of the vote, particularly information about how the parties split on an issue, influences survey responses (see also Lauderdale, 2013). The authors highlight that this result may be due to voters placing some weight on the strategic implications of a particular vote.

These results raise the important question of what exactly 'representation' should entail. Perhaps voters simply want legislators to enact the policies they prefer in a narrow sense. Or, perhaps they are willing to forego a policy gain today in order to reap further gains in the future – that is, they want parties to act strategically. In taking survey responses as actual preferences, as in Bafumi and Herron (2010), I study how well member positions align with voters' expressed preferences on policies, ignoring other potential factors that may enter a voter's utility function. I make no claim that this implies that parties are not acting in voters' interests. Instead, my goal is more modest – to show that parties cause members to vote against these expressed preferences. In doing so, it raises the question as to whether doing so furthers voter interests.

6.2. **Party Goals.** The results I have presented suggest that the focus of studies of representation should shift from the question of why extremists are elected to the question of why parties pressure members to vote against the policy preferences of their constituents. One possibility is that the leaderships of the parties have extreme preferences: since the parties apply pressure only when they disagree, this pressure is almost always to the left by the Democratic party and to the right by the Republican party, suggesting ideological extremism. This interpretation has a problem, however, as it begs the question as to how parties can have preferences more extreme than those of all of their members.

Another possibility, which is easier to interpret, comes from the idea of party sorting put forward by scholars of polarization (Abrams and Fiorina, 2015; Gentzkow, 2016; McCarty, 2019). In the party sorting view, extreme ideologies arise not because of extreme preferences, but because of sorting across different issues along party lines.

[35] Jessee (2016) finds bigger differences when using the Senate Representation Survey from Jessee (2009).

A member appears extreme if she consistently votes along party lines, but appears centrist if she votes differently depending on the issue. In this view, party leadership must appear extreme *by definition*: it determines what it means to vote along party lines.[36]

Under the party sorting view, the question is why parties apply pressure in opposite directions if not because of extreme preferences. One possibility is that they do this *simply to oppose the other party.* The theory of strategic party government put forth by Koger and Lebo (2017) provides a reason parties might do so. Koger and Lebo (2017) posit, and provide evidence for, the hypothesis that voters reward legislative 'wins' – vote outcomes the party prefers when party leaders disagree. In their theory, parties face a tradeoff. On the one hand, to obtain wins, parties must pressure members to vote against the other party, regardless of individual member positions on the issue at hand. On the other hand, Koger and Lebo (2017) show that members that are overly partisan – those that frequently succumb to the demands of party leadership – suffer electorally.

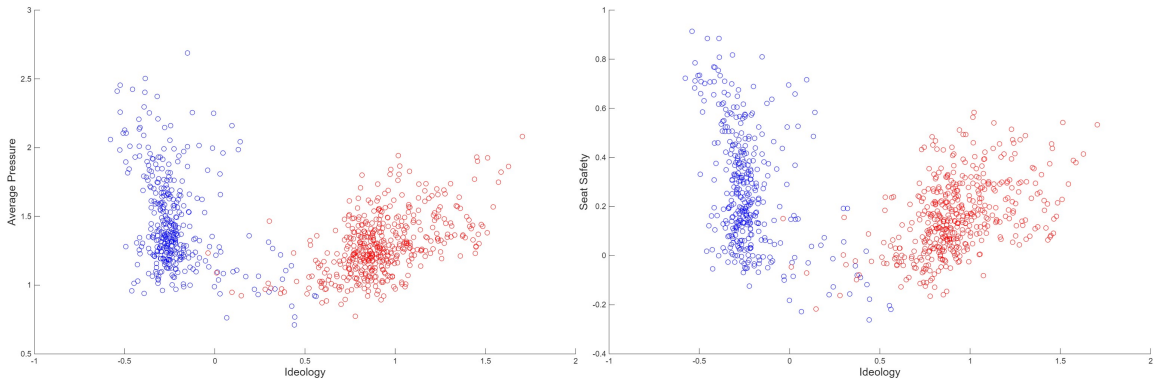
If parties face such a tradeoff, the natural solution is apply pressure strategically, obtaining votes from members that are less likely to suffer electorally from appearing too partisan. The determinants of party pressure in Section 5.2 already provide evidence for this view: members in safe seats are subject to more pressure.[37] To understand in more detail which members are subject to the most pressure, in Figure 6.1, I plot average pressure versus ideology (left panel). There, it is clear that, for both parties, centrists are subject to much less influence than extremists. This pattern emerges precisely because extremists hold relatively safe seats (right panel).

If parties were solely interested in obtaining votes, these results raise a puzzle: extremists should require less pressure because they would be more likely to vote with the party regardless. Although it's true that, on average, extremists would be more likely to vote with the party without pressure, on any given vote, any member could have idiosyncratic reasons for deviating from the party's preferred policy. Thus, parties will often face a choice between obtaining the vote from a centrist or from an extremist that, on this particular issue, prefers to vote against the party. If parties

[36]In a similar vein, (Broockman, 2015) argues that elites may appear more extreme than voters because they are more consistent across issues. However, if this were the sole determinant of extremism, we would not expect significant estimates of party pressure.

[37]Members themselves may value legislative wins, but they would then face a free-riding problem. In this case, it's not clear why those in safe seats would tend to vote with the party more.

FIGURE 6.1. Party Pressure and Seat Safety versus Ideology



Notes: The left panel plots average party pressure versus ideology. The right panel plots seat safety (1 being very safe; 0 being unsafe) versus ideology. Each observation corresponds to a member-Congress pair.

act strategically, it may be better to pressure the extremist who is less likely to suffer electorally from deviating from their constituent's preferences.[38]

Koger and Lebo (2017), further suggest that, because winning is rewarded electorally, an arms race in party pressure results. If one party is strongly disciplining members, then the other party cannot afford to lose any votes and must best respond by disciplining its own members. Over time, the series of best responses results in a ratcheting up of party pressure, consistent with the increasing trend in y^{max} I observe.[39]

Why do members allow themselves to be subject to party influence if it costs them electorally? One answer has already been suggested – party wins are valuable electorally. But, another answer comes from the theory of conditional party government (Aldrich, 1995; Rohde, 1991), on which Koger and Lebo (2017), build. In this theory, as members become more homogeneous, they are more willing to delegate power to their party leadership because their preferences are more aligned. Here, I note that accounting for party pressure compresses the distribution of ideologies within a party (comparing Figures 5.1 and 5.2), making them more homogeneous. On average across Congresses, the standard deviation of ideologies within the Democratic party is 34%

[38]An alternative interpretation is that parties attempt to apply the same pressure to all members but those in relatively safe seats are more likely to respond. Disentangling these two alternatives would require data on the actual amount of pressure applied, which is difficult to come by given the many ways in which pressure can be applied.

[39]This arms race in party pressure should also result in party pressure across the two parties tracking each other over time, as shown in Canen et al. (2020, 2025).

less in the full model than in the standard model. Similarly, the standard deviation among Republican members is 7% less. Thus, accounting for party pressure reveals that party members are quite homogeneous, making it more plausible that they are willing to delegate power to leadership.[40]

7. Conclusion

In this paper, I adapted standard bridging techniques that place members of the U.S. House and voters on the same scale to account for party pressure. Doing so dramatically changes the standard view that elites are more polarized than voters. Instead, my results show that parties drive members to vote against voters' policy preferences, making them appear more polarized in the ideological space than in standard models. Simultaneously estimating the ideological positions of voters and members also allowed me to better ascertain the determinants of party pressure than in previous work: parties only apply pressure when they disagree, and they do so strategically, pressuring members in safe seats to a greater extent.

My work raises several questions that require further study. First, what are the goals of the parties? I have suggested, following Koger and Lebo (2017), that parties face a tradeoff between winning legislative votes and getting their members re-elected. As a first step, I provided evidence of this strategic behavior using a reduced-form measure of pressure that averages across issues and members. Although difficult because of the vast array of carrots and sticks parties wield, it would be valuable to bolster this evidence with more fine-grained data showing exactly who is pressured, on which issues, and by what means. Second, and perhaps most importantly, does party pressure increase or decrease the welfare of voters? As I have shown, if one solely determines welfare by voters' stated issue positions on surveys, then parties appear to be working to the detriment of voters. However, parties may be working in the interest of voters if one takes a broader view of welfare, perhaps accounting for the necessary give and take across bills, for example. The survey results of Hill and Huber (2016) discussed in Section 6.1 provide some evidence that voters do understand the strategic nature of votes and thus may not narrowly value their policy preferences. Related, other research has explored the 'electoral penalty' – whether voters actually care if their representatives vote for or against their policy interests, or are instead purely tribal, voting with 'their side' regardless of issue positions. The results thus

[40]This compression is another consequence of the fact extremists are subject to more pressure: accounting for pressure 'shifts' their ideologies more to the center than it does for centrists, as seen in comparing Figures 5.1 and 5.2.

far are inconclusive (see the summary in Bonica et al. (2025), Table 1). More work is needed given that the answer to this question is critical to determining whether or not political parties ultimately work for or against the interests of voters.

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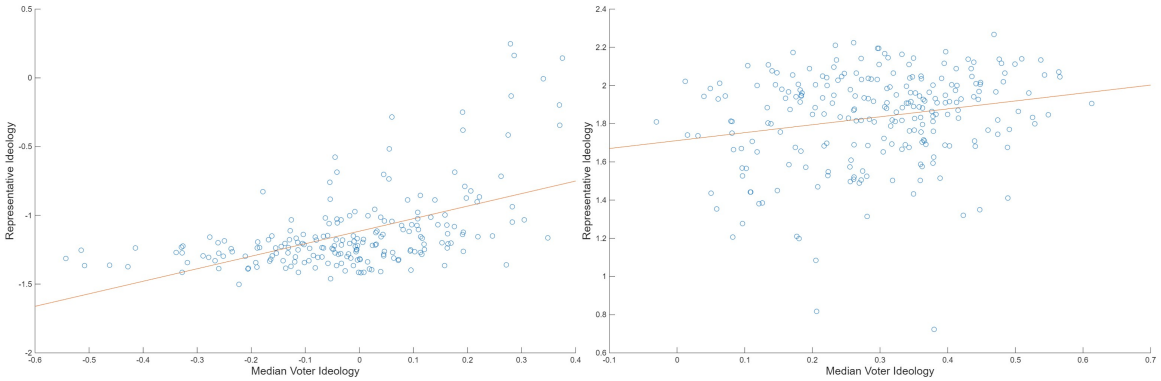
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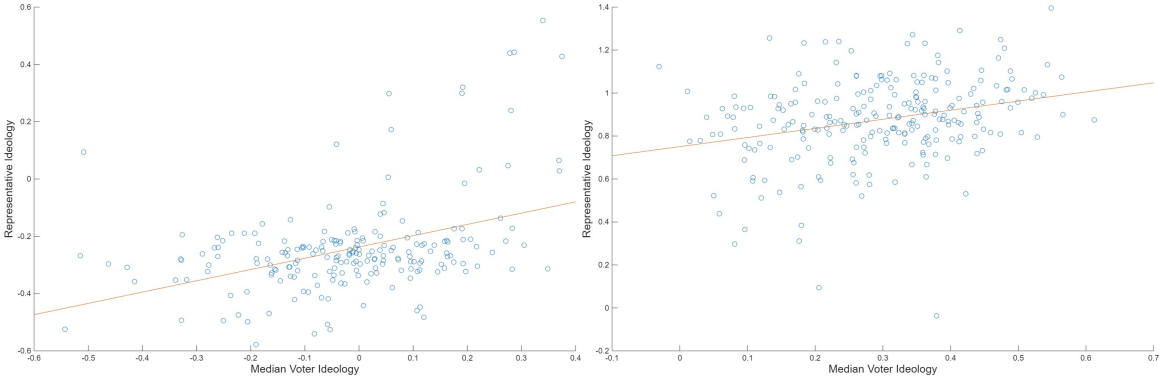
Appendix A. Additional Figures and Tables

Figure A.1. Member Ideologies vs. Voter Median Ideologies (Standard Model)



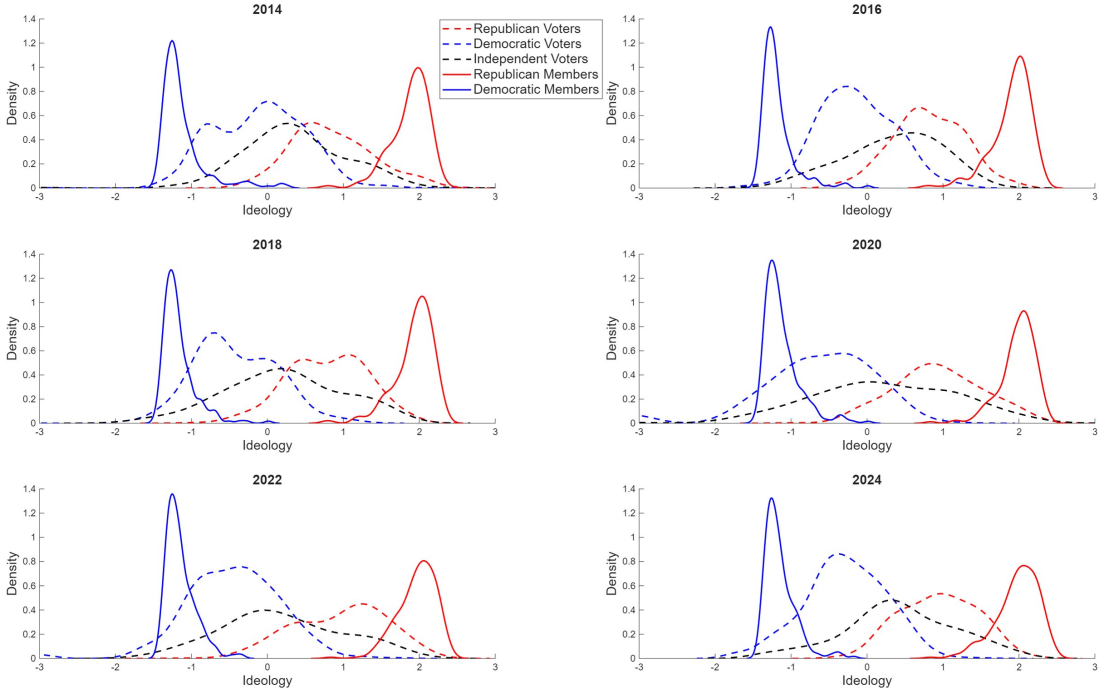
Notes: Each panel plots member ideology versus the ideology of the median member in their district using estimates from the standard model. Each observation is for a member; the ideology of the median member in their district is averages across Congresses. The left panel is for Democratic members and the right panel for Republican members. The lines reflect a linear fit (OLS).

Figure A.2. Member Ideologies vs. Voter Median Ideologies (Full Model)



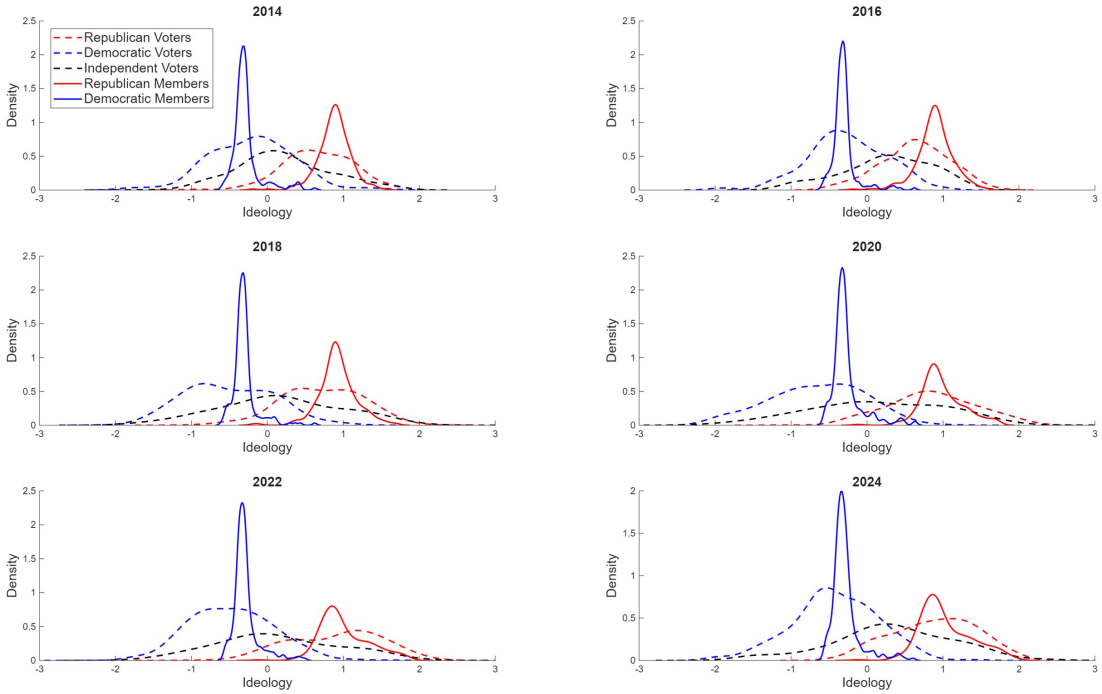
Notes: Each panel plots member ideology versus the ideology of the median member in their district using estimates from the full model. Each observation is for a member; the ideology of the median member in their district is averaged across Congresses. The left panel is for Democratic members and the right panel for Republican members. The lines reflect a linear fit (OLS).

FIGURE A.3. Standard Model Ideology Estimates (Reduced Sample)



Notes: Kernel density estimates of ideologies for members and voters in the standard model without party pressure. The estimates use a reduced sample of voters which makes the number of voters and members comparable on every issue.

FIGURE A.4. Full Model Ideology Estimates (Reduced Sample)



Notes: Kernel density estimates of ideologies for members and voters in the full model with party pressure. The estimates use a reduced sample of voters which makes the number of voters and members comparable on every issue.

TABLE A.3. Determinants of Party Pressure

	Component of β	Estimate	Standard Error
β	Constant (parties agree)	-2.79	0.031
	Congress 113 x disagreement	3.09	0.031
	Congress 114 x disagreement	3.20	0.031
	Congress 115 x disagreement	3.14	0.031
	Congress 116 x disagreement	3.33	0.031
	Congress 117 x disagreement	3.43	0.031
	Congress 118 x disagreement	3.35	0.031
	seat safety	0.93	0.005
	member retiring	-0.04	0.004

Notes: Raw coefficient estimates for the determinants of party pressure, β.

TABLE A.4. Moments of Party Pressure (Reduced Sample)

Statistic	Estimate	Standard Error
average y_{rt}^{max} when parties agree	0.06	0.003
average y_{rt}^{max} when parties disagree, 2012-14	1.73	0.004
average y_{rt}^{max} when parties disagree, 2014-16	1.81	0.004
average y_{rt}^{max} when parties disagree, 2016-18	1.76	0.005
average y_{rt}^{max} when parties disagree, 2018-20	2.23	0.007
average y_{rt}^{max} when parties disagree, 2020-22	2.43	0.007
average y_{rt}^{max} when parties disagree, 2022-24	2.12	0.005
average change in y_{rt}^{max} with safe seat (4th-1st quartile)	0.64	0.004
average change in y_{rt}^{max} when retiring	-0.11	0.005

APPENDIX B. PROOF OF IDENTIFICATION

I make the following assumptions. Throughout, I assume party pressure, y_{rt}^{max}, is homogeneous among members - observable covariates extend identification to the heterogeneous case.

A1: $\theta_{i|i=0} = 0$

A2: In some Congress, C, there exist two issues, k and k', that bridge the survey and roll call data, have different directions, and for which any pressure exerted by either party is in the direction of the issue (i.e., the parties agree on the direction of pressure).

A3: In each Congress, there exists at least one issue that bridges the survey and roll call data and for which any pressure exerted by the parties is in opposite directions.

A4: At least two members vote in both of any two consecutive Congresses.

Assumption A2 can be verified in the data in the first Congress analyzed (Congress 113).[41] I make assumption A2 because it can be seen to hold in the data and is sufficient to prove identification. It could be relaxed to not require the issues to be in the same Congress provided some members vote in multiple Congresses (as is the case in the data), though the argument would be more complicated. Assumptions A3 and A4 are easily verified in the data as well.

Consider first the voters. Given that $\Phi()$ is a monotonic function, we can invert (2.1) to obtain

[41]Although the directions must be estimated, the majority party almost certainly proposes key policies, thus indicating the direction (i.e., Republicans move policy to the right). I also verify the directions satisfy the assumption after estimation.

$$\Phi^{-1}\left(\gamma_{ij}^{d_j}\right) = \pm\left(\theta_i - m_j\right) \tag{B.1}$$

where the two possible signs reflect the unknown direction, d_j. Using $\theta_{i|i=0} = 0$ (from assumption A1), (B.1) immediately identifies each m_j up to the direction. We can then identify each θ_i using (B.1). The left-hand side and m_j are known so that θ_i is determined, up to the direction. But, since this must hold for all θ_i, the direction of each issue is also known. Fix $\theta_i > \theta_{i'}$. Then, $\Phi^{-1}(\gamma_{ij}) > \Phi^{-1}(\gamma_{i'j})$ implies $d_j = 0$, and conversely.[42]

Now consider the representatives. Consider the Congress, C, for which assumption A2 is satisfied with $d_k = 0$ and $d_{k'} = 1$. Because we have identified the midpoints and directions for all issues voters are surveyed on, we have identified these parameters for k and k'. Invert (2.2) for roll call k to obtain

$$\Phi^{-1}\left(\gamma_{rk}^{0}\right) = \theta_r - m_k - y_{rk}^{max} Party_{rk} \tag{B.2}$$

We first identify y_{rt}^{max} for Congress C (and hence, by assumption, for all Congresses) for the case in which parties exert pressure in the same direction.[43] With $d_k = 0$ and pressure exerted in this direction on bridged issue k, (B.2) becomes

$$\Phi^{-1}\left(\gamma_{rk}^{0}\right) = \theta_r - m_k + y_{rk}^{max} \tag{B.3}$$

With $d_{k'} = 1$ and pressure exerted in this direction on bridged issue k', we instead have

$$\Phi^{-1}\left(\gamma_{rk'}^{1}\right) = m_{k'} - \theta_r + y_{rk'}^{max} \tag{B.4}$$

Adding (B.3) and (B.4), we obtain

$$\Phi^{-1}(\gamma_{rk}) + \Phi^{-1}(\gamma_{rk'}) = m_{k'} - m_k + y_{rk}^{max} + y_{rk'}^{max}$$

[42]Technically, identification is only local in nature: one can always flip all θ_i and m_j around the origin and obtain the same vote probabilities. I resolve this global identification problem by orienting ideologies such that Republicans generally lie to the right of Democrats.

[43]This argument leverages the fact that, when the parties agree, pressure can be applied in either direction. It also applies when the parties exert pressure in opposite directions, but it is rare in the data for Democrats to exert pressure to the right when the Republicans exert pressure to the left and this never occurs for bridging issues. Thus, I prove y_{rk}^{max} is identified when the parties exert pressure in opposite directions in another way.

for which $y_{rk}^{max} = y_{rk'}^{max}$ (since the parties agree in both cases) is the only unknown quantity, ensuring it is identified. Subtracting (B.4) from (B.3) instead gives

$$\Phi^{-1}(\gamma_{rk}) - \Phi^{-1}(\gamma_{rk'}) = 2\theta_r - m_k - m_{k'}$$

so that θ_r is identified (for all r) as well.

Next, we identify party pressure for the case in which the two parties exert pressure in different directions, in Congress C. Under Assumption A3, there exists a bridged issue in Congress C for which the parties whip in opposite directions. Using the analogous equation to (B.2) for this issue, y_{rk}^{max}, is the only unknown and hence is identified.

We then identify the directions, d_t, in Congress C for all non-bridged roll calls. Take two members in the same party such that party pressure is the same. The member further to the right has a higher probability of expressing support when the direction is to the right, and conversely. Finally, the midpoints, m_t, for all of the non-bridged roll calls in Congress C are identified from (B.2).

Finally, we turn to Congresses other than C. Consider a Congress for which at least two members are also present in Congress C (under assumption A4) so that their ideologies have been identified. Under assumption A3, we can directly identify y_{rk}^{max} in this Congress for the case that the parties disagree using (B.2) for either member, because it is the only unknown for some bridged issue, k. With the pressure parameters known for both the case in which parties agree and disagree, the directions for all roll calls are identified by which of the two members with known ideologies has a higher probability of expressing support, as before. Then, using the known ideology for one of the members and (B.2) identifies the non-bridged midpoints. Finally, we apply (B.2) again to identify any unknown θ_r (i.e., those of new members) given knowledge of all of the other parameters. This argument can then be repeated for all of the remaining Congresses (applying assumption A4 iteratively).

Appendix C. Bridging Issues

Table C.1 provides a complete list of the issues I use to bridge the voter survey data to roll call votes in Congress. The majority are inline with Ansolabehere and Kuriwaki (2021), but they differ in the following ways.

(1) I focus on the U.S. House only, because there are insufficient bridging issues for the Senate.

(2) Ansolabehere and Kuriwaki (2021) cover Congresses 113-115 only. For these Congresses, the only differences are:
   (a) I include CC332G/CC14_331_2, a vote on the USA freedom act
   (b) I exclude CC14_331_5 (South Korea FTA) and CC14_325_2 (Simpson Bowles) because they were voted on in Congress 112
   (c) I exclude CC15_327E (Cuba Open) because I could not match it to a vote in Congress 114 (Ansolabehere and Kuriwaki (2021) do not provide a reference to Voteview or Congressional records)

For most of the bridging issues, a single vote is associated with one or two surveys very close in time to the vote (usually after). In some cases, I leverage surveys over longer periods of time, with the proposal to ban abortions after 20 weeks being a prominent example. In this case, the assumption is that voter preferences may change, but the midpoint does not. In all such cases, I'm unaware of any possible change in the status quo that would affect the midpoint, and the proposal is held constant so that this assumption seems reasonable.[44]

In four cases (Repeal of the ACA, Freedom act, Equality act, and the Equal pay act), roll call votes are repeated. In these cases, I treat the midpoints as different for each vote since the exact content of the bill may be different. I bridge each separate vote to only the surveys that occurred after the vote.

[44]Roe vs. Wade was overturned prior to the 2022 wave of the CCES survey. It may have affected the real or perceived status quo for some respondents, so I exclude the 2022 responses.

TABLE C.1. Bridging Issues

Congress	CCES Question ID	Voteview Vote	Description
113	CC332F, CC15_327H	54	Violence against women
	CC332C, CC14_324_2	153	Repeal ACA 2013
	CC14_323_3, CC15_322c, CC16_332c, CC17_332c, CC18_321c, CC19_321c, CC20_332c, CC21_323d	250	Ban 20 week abortion
	CC14_325_1, CC15_330a	816	Ryan budget
	CC14_325_4, CC15_330d	1182	Tax increase prevention act
	CC14_325_5	549	Raise debt ceiling (HR2775)
	CC14_331_1	352	Federal agriculture reform and risk mgmt.
	CC332G, CC14_331_2	869	Freedom act 2013
114	CC332D, CC15_327B	74	Keystone pipeline
	CC15_327F2, CC17_340a	223	Freedom act 2015
	CC15_327G	359	Trade adjustment assistance (HR1314)
	CC15_327D, CC16_351B	372	Trans-pacific partnership (HR2146)
	CC16_351E	662	Reauthorize elementary and secondary educ.
	CC16_351F	248	Highway funding
	CC15_327C, CC16_351G	1167	Iran sanctions
	CC16_351H	143	Medicare reform
	CC15_327A, CC16_351I, CC18_327c, CC19_327d, CC20_327d, CC21_320b, CC22_327c, CC23_328d, CC24_328d	57	Repeal ACA 2015
	CC13_332H	421	Student success act
115	CC17_340C	255	American healthcare act
	CC17_340D	298	Financial CHOICE
	CC17_340E	343	Kate's law
	CC17_340G	341	No sanctuary
	CC17_340I	834	Continue funding
	CC17_340F, CC18_328e	412	Countering adversaries
116	CC19_328a, CC20_350a	216	Equality act 2019
	CC19_328b, CC20_350b, CC21_355e	495	Minimum wage
	CC19_328d, CC20_350d	133	Equal pay 2019
	CC18_322b, CC19_328e, CC20_350e, CC21_322e, CC23_323d, CC24_323d	239	American dream (DACA)
	CC20_350f	694	Impeach Trump for abuse of office
	CC20_350g	695	Impeach Trump for obstruction
	CC20_351a	492	CARES act
	CC20_351b	808	HEROES act

Table 5: Bridging Issues (con't)

Congress	CCES Question ID	Voteview Vote	Description
117	CC21_350a, CC24_341b	153	Jan.6 commission
	CC20_334f, CC21_350c, CC22_334f	59	George Floyd accountability
	CC21_350d	69	Right to organize
	CC21_350e	896	Presidential election reform
	CC21_350f	38	Equality act 2021
	CC21_350g	107	Equal pay 2021
	CC21_350b, CC22_350a	48	American rescue plan
	CC21_350i, CC22_350b, CC23_340a, CC24_341d	207	INVEST in America
	CC22_350c	384	Build back better act
	CC22_350d, CC23_340c, CC24_340b	807	Women's health protection
	CC21_350h, CC22_350e	238	CHIPS act
118	CC23_340d, CC24_340c	820	Same-sex marriage
	CC24_340d	804	Ban TikTok
	CC24_340e	718	National defense authorization act
	CC24_340f	208	Secure the border act