The Making of Partisan Environmental Policy:

Tracking the Evolution of Environmental Voting in the U.S. Congress From 1970 to 2020

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I cannot proceed without thanking my original advisor Bryan Garsten. In my initial excitement at all the topics I could write about, I had too many ideas and little organization. Professor Garsten gave me direction when I most needed it. Lastly, I would be remiss without thanking the people who supported me throughout this process: my partner, Ivana, my dad, Jim, my mom, Maritza, my step mom, Nicole, my sister, Antares, and my brother, Alejandro. Each of you in your unique ways shaped my thinking, inspired my desire to fight for a more sustainable world, and gave me the motivation to

keep going. Finally, I want to dedicate this paper to all of the youth activists who are working tirelessly for a better future.

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ABSTRACT: Environmental policy once brought Democrats and Republicans together in Congress. In the modern Congress, however, it seems the parties are now irredeemably divided. To examine how environmental policy evolved from a nonpartisan issue to one of the most divisive partisan issues, I create a new measure of environmental policy preferences. In my analysis, I find environmental polarization steadily increased over time as Democrats and Republicans sorted along increasingly divergent party lines. Greater electoral competitiveness, I argue, incentivized more party conflict, which in turn drove the two parties further away from each other. At the same time, the preferences of legislators in the same party homogenized as the influence of cross-cutting factors such as regionalism diminished. In addition, I find that the distinctive dynamics of environmental politics led to a different trajectory of polarization than observed in general ideology. Altogether, the study makes two main contributions: the methodological contribution of the new measure and the contributions of the analyses enabled by it that show legislators have severely polarized on environmental policy.

I. Introduction

> "Moderate Republicans, upper-class voters, are with us on the environment. It cuts across the old class divisions. If you're a Democrat, especially in a middle-class district or on the West Coast, it is a great issue with the new voters. It is an issue with no downside."
> — Chuck Schumer (Dionne 1989 cited in Klyza and Sousa 2008, 22).

> "The contrast between the Republicans and us is glaring. We are investing, they are investigating... We welcome the contrast right now at this moment."
> — Chuck Schumer ("Press Call Ahead Of The Anniversary Of The IRA" 2023)

In 1989, then-representative of New York's 10th district, Chuck Schumer struck an optimistic note on the unifying power of environmental policy. Three decades later, after the Inflation Reduction Act—arguably, the most important climate change legislation of the 21st century—passed through an entirely party-line vote, Schumer held up environmental policy as a marker of difference. The majority leader was fully prepared to move forward without bipartisan buy-in, stating "the environment is too important to just wait for Republicans" (Dumain 2023). What changed?

There is an abundant literature attempting to explain why Congress has been unable to pass meaningful legislation on the environment in the past few decades. Although the polarization of political elites is an important component in these explanations, a systematic analysis of their changing policy preferences is often missing. Many of these studies primarily rely on historical research, survey data, or interest group scores. These methods have benefits and drawbacks. Historical research provides illuminating detail, but is limited to case studies. Survey data allows for wider coverage, but it depends on self-reported assessments of ideology. Moreover, survey results are heavily influenced by design: the wording of the questions, how it is administered, and the format of the answers. The most prominent interest group score on the environment is produced by the League of Conservation Voters (LCV). Interest group scores, however, can be unreliable (Snyder 1992).

In this paper, I take a step back. Rather than jump to explaining policy outcomes, I delve deeper into the particular dynamics of elite polarization on the environment. I construct a method to develop a new measure of environmental policy preferences, which I detail in Sections II and III. Both in terms of the method as well as results, my measure is superior to the standard measure. It works with more data, minimizes bias, and captures greater detail, producing a robust index. While other measures have been created using similar methods, no measure solely focuses on environmental policy.

In Section III, I examine the validity of my score through detailed case histories. I show that in a number of important roll calls related to the Clean Air Act, my measure better explains voting outcomes than general ideology measures. This lends confirmation to the notion that environmental politics are distinctive. There are two competing perspectives of dimensionality in Congress. One view contends there is low policy dimensionality, meaning most legislative behavior on roll-call voting can

be explained with general ideology (Poole and Rosenthal 2001, 2011). The other view counters legislative behavior is multidimensional and varies across issue domains (Koford 1994; Lapinski 2008). Since my method was a one-dimensional analysis, my finding is not definitive but merely suggestive. Specifically, it suggests general ideology does not fully explain why legislators voted the way they did in environmental policy roll calls.

In Section V, I use my measure to study the general dynamics of environmental polarization. I find that polarization steadily intensified. It was the result of unique coalitional evolutions, ones which are not visible in analyses of general ideology. In the 1970s and the 1980s, many legislators in Congress shared similar environmental policy preferences. Over time, the two parties increasingly diverged from each other and simultaneously became more internally homogeneous. Starting in the mid-1990s, the bipartisan consensus once enjoyed in Congress on environmental policy progressively fragmented into two distinct partisan coalitions. By 2020, virtually no legislators from opposing parties had similar preferences. In addition, I argue homogenization of the parties was in part made possible due to the diminishing influence of cross-cutting political factors such as regionalism. Likewise, the increase in electoral competitiveness after the end of Democratic domination in Congress incentivized the two parties to engage in more conflict which in turn exacerbated the partisanship of environmental policy. Ultimately, the picture painted is not a pretty one. In the modern Congress, when it comes to the environment, legislators are divided, moderates are endangered breeds, and hostilities abound.

II. Data and Methods

To capture the distinct dynamics of environmental politics in Congress (Klyza and Sousa 2008; Mayhew 2015; Mildenberger 2020), I create a new measure of environmental policy preferences. I use WNOMINATE (Poole et al. 2011) to estimate ideal points from all roll calls on environmental policy between the 91st Congress (1969-70) and the 116th Congress (2019-20) recorded in the Congressional Roll Call Voting dataset (Lewis et al. 2022).[1] Each legislator is assigned a single unchanging ideal point estimate.[2] In this section, I detail how WNOMINATE analyzes the data, which settings I specify in the model, and why certain legislators as well as roll calls are excluded.

Data Coverage

The dataset groups roll calls by issue codes from the Policy Agendas Project (Jones et al. 2023).[3] Since these codes are mutually exclusive, meaning only one code can be assigned per roll call, there is a risk of relevant roll calls being omitted. As a case in point, the passage of the Inflation Reduction Act is

[1] Unlike Bergquist and Warshaw (2020), which jointly analyzed roll calls in environmental policy *and* energy policy to examine polarization on the environment in Congress, I exclusively analyze roll calls in environmental policy. Although these two policy domains are related, the inclusion of energy policy complicates the interpretation of the ideal points estimated by WNOMINATE. In the midst of the 1970s energy crisis, there were 557 roll calls on energy policy in the Senate from 1973 to 1980, a number which surpasses the number of *all* roll calls on environmental policy from 1969 to 2020 by 135 roll calls. The inclusion of these roll calls would make it difficult to isolate the unique political dynamics surrounding environmental policy. I also use a different scaling procedure. Berquist and Warshaw (2020) and Jeong and Lowry (2021) applied one-dimensional dynamic item-response theory (IRT) estimation techniques, but I rely on WNOMINATE. Both models produce similar ideal point estimates and there are no clear advantages to using one over the other (Clinton and Jackman 2009; Royce Carroll et al. 2009). However, I settled on WNOMINATE so I could directly compare the environmental ideal points of legislators with their ideal points in the first dimension of DW-NOMINATE (which indexes the modern liberal-conservative ideological spectrum) without any rescaling.

[2] The only cases in which legislators will be assigned more than two ideal point estimates by WNOMINATE is when they switched parties or served in both chambers of Congress.

[3] There are twenty issue codes for major policy areas. The issue code for environmental policy is 7. There are also twelve additional environmental policy subtopics, which are coded with values between 700 and 799. Roll calls are coded into policy areas by two-person teams of human coders. These coders are trained on past roll call datasets to reach 95 percent intercoder agreement with previous coders on major policy areas.

coded into the issue of macroeconomics. On the flip side, the coding system reduces the likelihood of including roll calls where environmental protection is a marginal component. Even though the dataset does not capture the complete universe of environmental roll calls in Congress, it still observes a large sample and attenuates cross-pollination between policy domains. Furthermore, the dataset has been used in various studies on issue-based polarization in Congress (Jones and Baumgartner 2004; Nguyen et al. 2015; Ballard and Curry 2021).

The roll call dataset covers all roll calls in both chambers between the 80th Congress (1947-48) and the 117th Congress (2021-22). Out of a total of 1,737 roll calls on environmental policy, 92.8 percent of these roll calls (n = 1,613) took place between the 91st Congress (1969-70) and the 116th Congress (2019-20) with 73.8 percent in the House (n = 1,191) and the remaining 26.2 percent in the Senate (n = 422). I focus on this period because prior to the creation of the Environmental Protection Agency as well as the passage of the Clean Air Act in 1970, the regulatory architecture overseeing the environment was practically non-existent (Schmalensee and Stavins 2019). Figure 1 plots the number of environmental roll calls in both chambers in each Congress.

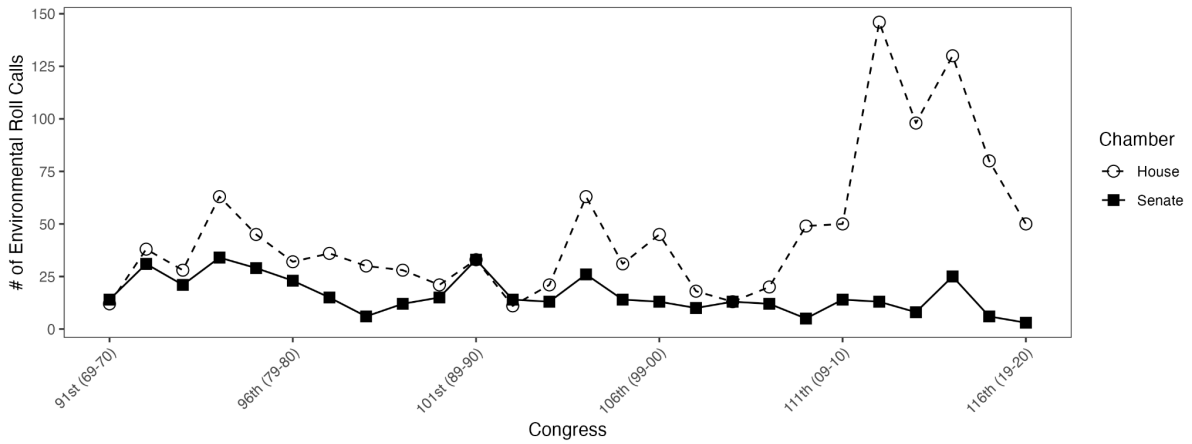


FIGURE 1. The graph shows the number of roll calls on environmental policy in the House and the Senate from the 91st Congress to the 116th Congress.

Estimation Procedure

I apply a one-dimensional ideal point model to a dataset consisting of 1,613 roll calls and 2,637 legislators where each roll call *j* presents each legislator *i* with a choice between a "Yea" vote (associated with position ζ_j in the relevant policy space) or a "Nay" vote (status quo ψ_j). As described in Clinton, Jackman, and Rivers (2004), WNOMINATE estimates an ideal point x_i for legislator *i*, which is the point where the legislator receives maximum utility. Legislators are assumed to have a Gaussian utility function over the policy space $U_i(\zeta_j) = -\Phi(x_i - \zeta_j) + \eta_{ij}$ and $U_i(\psi_j) = -\Phi(x_i - \psi_j) + v_{ij}$ where η_{ij} and v_{ij} denote normally distributed errors and Φ the Gaussian density function. The universe of roll calls is exclusively restricted to roll calls on environmental policy, so the policy space represents environmental regulation. The ideal points and policy positions are unobserved. However, legislators' votes, indicated by y_{ij}, are completely observed. Utility maximization implies $y_{ij} = 1$ if $U_i(\zeta_j) > U_i(\psi_j)$ and $y_{ij} = 0$ if otherwise. Given these specifications, it follows:

$$P(y_{ij} = 1) = P(U_i(\zeta_j) > U_i(\psi_j))$$

$$= \phi(\beta_j' x_i - \alpha_j)$$

$$\text{where } \beta_j = 2(\zeta_j - \psi_j) / \sigma_j, \text{ and } \alpha_j = (\zeta_j^2 - \psi_j^2) / \sigma_j$$

WNOMINATE uses an iterative procedure to estimate the parameters, especially ideal points x_i, from the data and presumed model. In what follows, I describe the settings I further specify in the model.[4]

In general, I rely on the default settings in WNOMINATE. However, I specify two important features: one, polarity; and two, the minimum votes threshold. Polarity identifies the legislator in the

[4] There are three iterations of NOMINATE coordinates: D-NOMINATE, W-NOMINATE, and DW-NOMINATE. While there are important differences in the comparability allowed by these scores, the three are highly correlated with each other. As such, by and large, the three measures are quite similar (Legacy Voteview 2004).

dataset that should be considered conservative. I chose to use Arizona's Jeff Flake to set polarity for a number of reasons: one, his first-dimension (i.e., general ideology) score in DW-NOMINATE groups him with other reliably conservative Republicans;[5] two, he served on committees and subcommittees with jurisdiction over environmental policy;[6] and three, since he served terms in the House as well as the Senate, I could set him as the polarity in both chambers.

The minimum votes threshold establishes the minimum number of roll calls a legislator must have voted in to be analyzed. I set the threshold at fifteen. Previous runs of WNOMINATE with more permissive thresholds yielded a predictive accuracy little to no better than a coin flip. Runs with stricter thresholds did not perform significantly better than runs with the fifteen-vote threshold; however, they did render a higher number of legislators ineligible for analysis. The fifteen-vote threshold hit the sweet spot, producing results with strong predictive power without excluding too many legislators.

Excluded Observations

WNOMINATE analyzed 95.1 percent of legislators in the House (n = 2,100) and 87.1 percent of legislators in the Senate (n = 373). Figures 2.1 and 2.2 plot the percentage of legislators analyzed per Congress.[7] The red lines indicate the distance between the actual percentage of legislators analyzed and 100 percent. Most legislators were dropped either in the first two or the last two Congresses. Still, at least three-fourths of legislators were analyzed in these periods. And from the 93rd Congress (1973-74) to the 114th Congress (2015-16), over 90 percent of legislators were analyzed per Congress.

[5] The first dimension in DW-NOMINATE indexes the modern liberal-conservative ideological spectrum.
[6] As a representative, Jeff Flake served on the Appropriations subcommittee on Interior, Environment, and Related Agencies. As a senator, he served on the Energy and Natural Resources Committee.
[7] To visualize how many legislators were analyzed per Congress, I combined my dataset with Voteview membership data (Lewis et al. 2024).

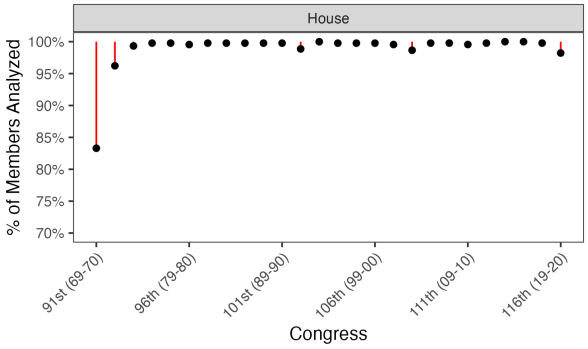


FIGURE 2.1. The graph shows the percentage of House legislators analyzed from the 91st Congress to the 116th Congress. Red lines mark the distance between legislators analyzed and 100 percent.

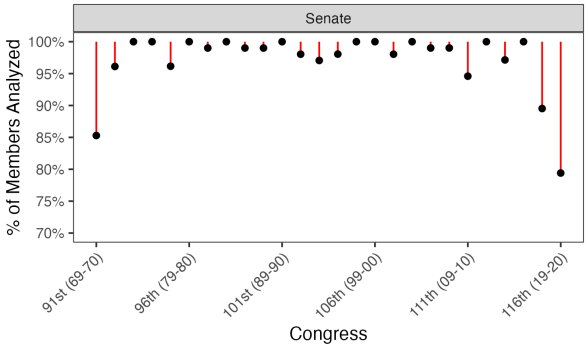


FIGURE 2.2. The graph shows the percentage of Senate legislators analyzed from the 91st Congress to the 116th Congress. Red lines mark the distance between legislators analyzed and 100 percent.

The 164 legislators excluded from analysis all failed the minimum votes threshold. 47.6 percent of these legislators (n = 78) had left by the end of the 91st Congress (1969-70). The maximum number of roll calls these legislators could have voted in were twelve and fourteen in the House and the Senate, respectively. Another 34.1 percent of omitted legislators served incomplete terms or singular terms in Congress (n = 56).[8] A further 14.6 percent were recently elected in the general elections of 2016 and 2018 or in intermediate and subsequent special elections (n = 24). Most of them were senators. In the 115th Congress (2017-18) and the 116th Congress (2019-20), there were a combined total of nine roll calls on environmental policy in the Senate. The few representatives excluded were those elected in special elections. Of the remaining six legislators missing, five of them switched parties at the start or end of their congressional careers but failed to vote at least fifteen times on environmental policy with their recently shed or newly acquired party identities.[9] Last but not least is Carl Albert. Despite serving

[8] Legislators served incomplete terms for a variety of reasons, e.g, being short-term governor appointments to the Senate, not seeking or losing re-election after being elected into office during a special election, leaving office to pursue other positions in government, resigning after being charged with criminal offenses, or death in office.

[9] Consider the case of Marty Martínez. He had represented California as a Democrat since 1982. But after losing his party's primary to a more liberal candidate in the lead-up to the 2000 elections, he ran as a Republican. Because he lost the election, however, Martínez never had the chance to cast enough votes as a Republican.

as Speaker of the House from 1971 to 1976, he did not cast a vote in any of the environmental roll calls I collected. This tracks with his sparse voting record observed by the League of Conservation Voters, an environmental advocacy group. For additional details on these omitted legislators, see Appendix A.

As for environmental roll calls, WNOMINATE analyzed 86.5 percent of roll calls in the House (n = 1,030) and 85.5 percent of roll calls in the Senate (n = 361). In Figures 3.1 and 3.2, I plot the percentage of environmental roll calls analyzed per Congress between the 91st Congress (1969-70) and the 116th Congress (2019-20). The red lines indicate the distance between the actual percentage of roll calls analyzed and 100 percent. The 222 roll calls excluded from analysis were all unanimous votes or near-unanimous votes. Since these types of votes reveal little information on how legislators differ from each other, WNOMINATE automatically drops them from analysis (Royce Carroll et al. 2009). One quick observation can consequently be made—the decreasing percentage of dropped environmental roll calls over time indicates decreasing proportions of unanimous votes or near-unanimous votes in Congress. For the voting totals of these omitted roll calls, see Appendix B. And for the number of roll calls analyzed per Congress, see Appendix C.

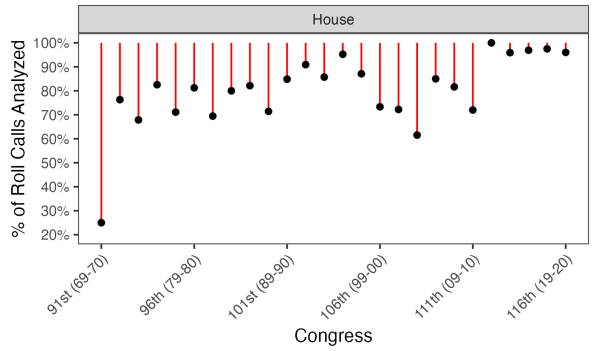


FIGURE 3.1. The graph shows the percentage of roll calls analyzed from the 91st Congress to the 116th Congress. Red lines mark the distance between roll calls analyzed and 100 percent.

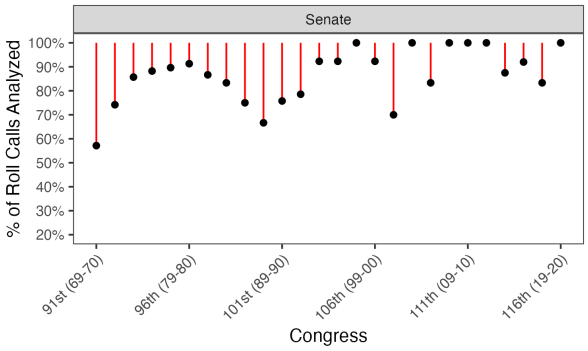


FIGURE 3.2. The graph shows the percentage of roll calls on environmental policy in the Senate analyzed from the 91st Congress to the 116th Congress. Red lines mark the distance between roll calls analyzed and 100 percent.

III. Improving Measures of Environmental Policy Preferences

In this section, I argue my new measure is a superior index of environmental policy preferences than the standard measure of League of Conservation Voters (LCV) legislative scorecards. In the first part, I detail how WNOMINATE provides a good fit to the data based on two measures of model fit: the classification rate and the aggregate proportional reduction of error. In the second part, I compare my measure with LCV ratings. In recent Congresses, LCV ratings crowd Democrats and Republicans into increasingly narrow ranges, making it difficult to observe any differences between legislators in the same party. In contrast, my measure produces wider dispersions, capturing greater nuance. Especially when it comes to identifying centrists and extremists, LCV ratings struggle. Overall, I find my measure creates a comparatively more fine-grained and comprehensive image of legislative behavior in Congress on environmental policy.

Model Fit

As shown in Table 1, which lists the summary results of ideal point analyses for both chambers, WNOMINATE provides a good fit overall to the data. Votes cast by legislators were correctly predicted 91.7 percent of the time in the House and 84.8 percent of the time in the Senate.[10] WNOMINATE sets an optimal cut point in every roll call that is analyzed (McCarty, Poole, and Rosenthal 2008). A classification error occurs when the model wrongly predicts on which side of the cut point a legislator voted. That is, the actual vote differed from the predicted vote. As such, the classification rate is

[10] In the House, 387,632 votes from a total of 422,351 votes were correctly classified, yielding a 91.8 percent classification rate (i.e., 387,632 / 422,351). In the Senate, 28,678 votes from a total of 33,663 votes were correctly classified, yielding an 84.8 percent classification rate (i.e., 28,678 / 33,663).

calculated as the percentage of times the model correctly predicted legislators' votes. The higher it is, the greater the fit is between the model and the data.

Another measure of fit is the aggregate proportional reduction of error (APRE).[11] It calculates how much better WNOMINATE performs against the null "majority" model in which legislators are assumed to always vote with the majority position (Ibid). APREs range from 0 to 1 with 1 representing a perfect fit. The resulting APREs were 0.771 in the House and 0.561 in the Senate. The superior classification rate and APRE in the House are largely explained by the fact that over five times as many members and nearly three times as many roll calls were analyzed in the House than in the Senate. Simply, there was more data.

	Members		Roll calls		Classification rate			APRE
Chamber	Analyzed	Dropped	Analyzed	Dropped	Yea	Nay	Total	
House	2,100	109	1,030	161	92.8%	90.6%	91.7%	0.771
Senate	373	55	361	61	87.8%	81.8%	84.8%	0.561

TABLE 1. The table displays the summary results of applying a one-dimensional WNOMINATE model to all environmental roll calls from the 91st Congress to the 116th Congress in the House and the Senate, respectively.

Comparison With LCV Ratings

Past studies have often relied on LCV ratings to measure polarization on environmental policy in Congress (Shipan and Lowry 2001; Gershtenson, Smith, and Mangun 2006; Skocpol 2013). Each year since 1972, the LCV has selected a number of roll calls it deems important. It assigns a yearly score to legislators in both chambers of Congress, which is calculated as the percentage of times they vote in alignment with the organization's policy preferences. Ratings by interest groups, however, can generate

[11] APRE = $[\sum^{q}_{j=1}(\text{Majority errors - Model errors})_j] \,/\, [\sum^{q}_{j=1}(\text{Majority errors})_j]$, where j = roll calls.

artificial extremism (Snyder 1992). Indeed, a recent study found LCV ratings generally overstated the degree of party polarization in Congress on energy policy (Jeong and Lowry 2021). Furthermore, the LCV operates with a permissive definition of what counts as a roll call on environmental policy. Of the thirteen roll calls tracked in the Senate in 2020, six of them were on judicial confirmations and another three on policing reform, COVID-19 relief, and NAFTA's replacement, respectively. For descriptions of all thirteen roll calls, see Appendix D.

To test the performance of LCV ratings, in Figures 4.1 and 4.2, I plot the LCV lifetime scores of legislators against their environmental ideal point estimates in both chambers in select Congresses.[12] Lifetime scores are calculated as the average of legislators' yearly scores.[13] These scores range between 0 percent and 100 percent. Unlike with environmental ideal point estimates, higher LCV lifetime scores correspond to more support for environmental regulation. To make visual comparison more intuitive, I multiplied all LCV lifetime scores by -1 so lower scores in both measures indicated greater support for environmental regulation.[14]

Consistent with the results in Jeong and Lowry (2021), LCV ratings display a general tendency to overstate partisanship in Congress. In the House, Republicans are consistently below the 135-degree line while Democrats are consistently above it. In other words, Republicans are more conservative and Democrats more liberal than what would be expected from their environmental ideal point estimates. In the Senate, most legislators lie somewhere above the 135-degree line, meaning the conservatism of

[12] Because the LCV released its first legislative scorecard in 1972, Figures 4.1 and 4.2 start in the 92nd Congress.
[13] I chose to analyze the LCV lifetime scores instead of the LCV yearly scores for reasons of comparability. LCV lifetime scores, like the environmental ideal points estimated by WNOMINATE, consider legislators' votes across their congressional career.
[14] I also applied the IRT estimation procedure used in Bergquist and Warshaw (2020) to the roll calls I collected on environmental policy. The results are shown in Appendix E.

both Republicans and Democrats is exaggerated. But over time, distributions in the Senate became more similar to distributions in the House with Democrats increasingly appearing below rather than above the 135-degree line.

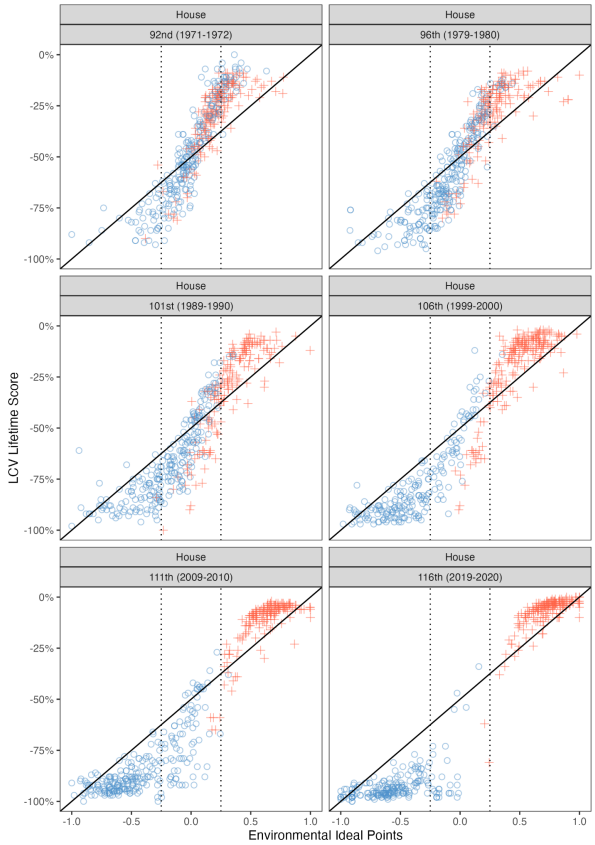


FIGURE 4.1. The graph plots the LCV lifetime ratings against my new measure of environmental ideal points for House legislators in select Congresses. Democrats are represented by blue open points and Republicans by red crosses. Dotted lines represent centrist range in WNOMINATE (- 0.25 < x_i < 0.25).

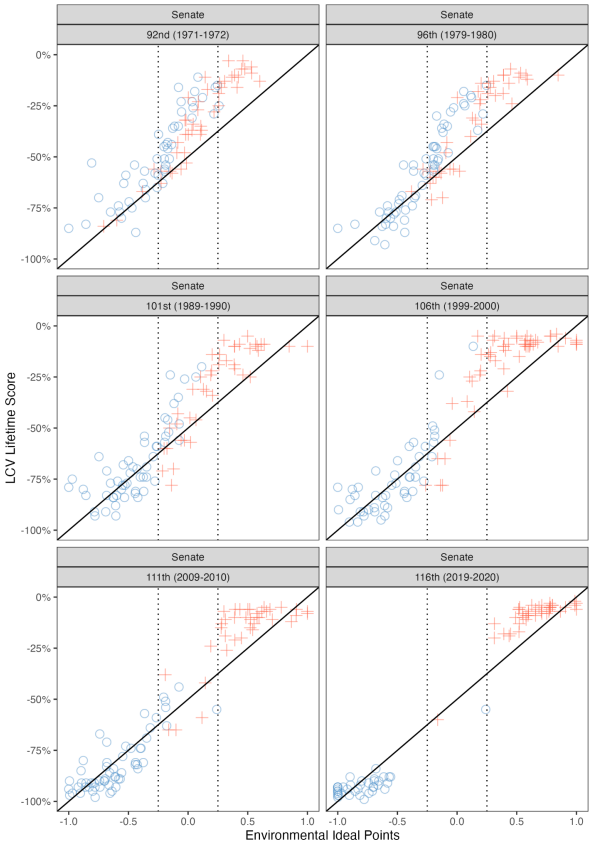


FIGURE 4.2. The graph plots the LCV lifetime ratings against my new measure of environmental ideal points for Senate legislators in select Congresses. Democrats are represented by blue open points and Republicans by red crosses. Dotted lines represent centrist range in WNOMINATE (- 0.25 < x_i < 0.25).

LCV ratings particularly struggle with centrists, defined as legislators with ideal point estimates between -0.25 and 0.25 (Merrill III, Grofman, and Brunell 2023). Centrist legislators are often below or above the 135-degree line, at times reaching levels that are on par with extremist legislators. In recent Congresses, LCV ratings have proven largely unable to meaningfully distinguish between legislators in

the same party. In 2020, for example, the majority of Democrats had lifetime scores above 75 percent and the majority of Republicans had lifetime scores below 25 percent despite much wider dispersions of environmental ideal point estimates in both parties. Ultimately, my new measure is stronger than the standard measure of LCV ratings insofar as it is less prone to exaggerating partisanship, more capable of identifying centrists as well as extremists, and allows for a broader range of distinctions to be made between legislators.

IV. The Environmental Dimension in Congress: Case Studies

To probe the validity of my new measure, I turn to detailed case histories to examine whether environmental ideal point estimates reveal important legislative dynamics that are not clearly captured by first-dimension ideal point estimates. I restrict my analysis to roll calls in the Senate on the Clean Air Act.[15] I plot ideal point estimates in both policy dimensions and use a support vector machine (SVM) to determine which dimension best discriminates between legislators who voted "Yay" and legislators who voted "Nay." The angle of the line created by the SVM indicates the primary policy dimension. In the present study, if the line is vertical, the primary dimension is the first dimension. If it is horizontal, then it is the environmental dimension. I rely on congressional debates, contemporaneous media accounts, and other sources to investigate whether the qualitative evidence is consistent with the quantitative results.

I report the strongest examples of roll calls displaying greater legislative grouping along the environmental dimension than the first dimension. Overall, the results are mixed. The environmental dimension at times wields advantages over the first dimension, but these advantages are neither systematic nor wholesale.[16] This is not necessarily indicative of flaws in my model. Instead, it possibly indicates a way to distinguish which votes split legislators along more generally ideological lines and which were more heavily influenced by environmental concerns. But without further verification, this

[15] I restrict my analysis to these roll calls for two key reasons. One, the range of environmental policy subtopics can elicit different preferences; as such, fewer confounding factors have to be considered if observations are limited to roll calls dealing with the same or related piece of legislation. Two, in the Senate, there are fewer legislators, these legislators receive more media coverage, and there are not as many rules restricting debate in the chamber. These factors make it easier to delve deeper in qualitative analyses.

[16] See Appendix F for roll calls in which the environmental dimension does not map voting outcomes as well as or better than the first dimension.

is only suggestive. Despite these uncertainties, there is a significant takeaway: environmental policy gives rise to distinctive preferences, coalitions, and politics that are not always effectively observed with the measure of general ideology.

Clean Air Act Amendments of 1977

The 1976 elections ushered in a Democratic trifecta. Jimmy Carter had defeated Gerald Ford in a close presidential race. Democrats in the Senate preserved their 62-seat majority. In the House, they increased their numerical advantage over Republicans from 58 seats to 141 seats. As the Senate worked to pass the first significant update to the Clean Air Act in the summer of 1977, the two senators from Michigan, Democrat Donald Riegle and Republican Robert Griffin, introduced an amendment which sought to relax nitrogen oxide emission standards for the auto industry. The heated debate between Riegle and Edmund Muskie, the towering Maine Democrat who led the passage of the first Clean Air Act, marked a fissure in the party on environmental policy (Congressional Record 1977). As Riegle noted: "I think the situation today is quite different" (Ibid, 18061). Indeed, the amendment split the party into two mostly even camps with 26 voting for it and 33 voting against it. Given the Democratic trifecta, I focus on Democrats. In Figure 5, I plot their ideal point estimates in the first dimension and the environmental dimension. As can be gleaned from the nearly horizontal line, Democrats' votes are better separated along the environmental dimension than the first dimension.

To illustrate the power of my measure, consider Lee Metcalf. In the first dimension, he is the seventh most liberal Democrat, three spots above and four spots above well-known liberals such as Ted Kennedy (eleventh) and Paul Sarbanes (twelfth), respectively. Kennedy and Sarbanes, unlike Metcalf,

voted against the amendment. From the perspective of general ideology, it appears Metcalf is an outlier vote. However, the environmental dimension provides clarity. There, Metcalf is the thirty-third most liberal Democrat, whereas Kennedy is the second most liberal and Sarbanes the third most liberal.[17] Consistent with these scores, after the death of the Massachusetts senator, the online climate magazine *Grist* called Kennedy a "champion of the environment" (Romm 2009). As for Sarbanes, near the end of his congressional career, he spoke before the United Nations, warning environmental degradation was one of the world's most urgent problems ("United Nations Week" 2003). In contrast, Metcalf was known for supporting damming rivers and logging federal lands for economic gain (Kemmick 2018).

A central component of Riegle's argument in favor of his amendment was that it was backed by two of the most powerful American unions, the AFL-CIO and the UAW (Congressional Record 1977, 18061). Metcalf's close relationship to labor may in part explain his vote. Jim Curry, the former director of the Montana AFL-CIO, fondly remembered him as "one of us" (Kemmick 2018). Riegle's amendment targeted the standards set in an amendment introduced by Colorado's Gary Hart. Unlike Riegle and Metcalf, Hart's relationship to labor was contentious.[18] In 1984, Lane Kirkland, then the president of the AFL-CIO, publicly accused Hart of hypocrisy: "He is for workers, but he defames their unions as special interests" (Associated Press 1984). True to the charge, during debate on the amendment, Hart claimed industry and labor were working together to hold up common-sense and much-needed legislation on clean air (Congressional Record 1977, 18057-8). Similarly to Riegle, the other Democrats below the horizontal line who voted for the amendment such as Indiana's Birch Bayh

[17] The most liberal Senate Democrat on the environment was none other than Gaylord Nelson (D-WI)—the founder of Earth Day.

[18] The union density in Colorado was nearly half that in Michigan and 6.4 percentage points lower than in Montana (Hirsch, Macpherson, and Vroman 2001).

or Ohio's Howard Metzenbaum were from prominent car-producing states with high union densities, particularly in the auto industry.

These dynamics track with what Matto Mildenberger (2020) calls double representation—i.e., the nexus of labor and industry interests against strict environmental standards. In the first dimension, Kennedy, Sarbanes, Hart, Riegle, and Metcalf are all similar. In fact, opponents Hart and Riegle are merely 0.004 points apart. But in the environmental dimension, the aforementioned senators are much more dissimilar. Their environmental ideal point estimates are revealing, avoiding the confusion which would arise from analysis solely based on the first dimension. To that end, the superior performance of the environmental dimension may potentially be an indicator of the measure's ability to capture some of the unique political dynamics of double representation.

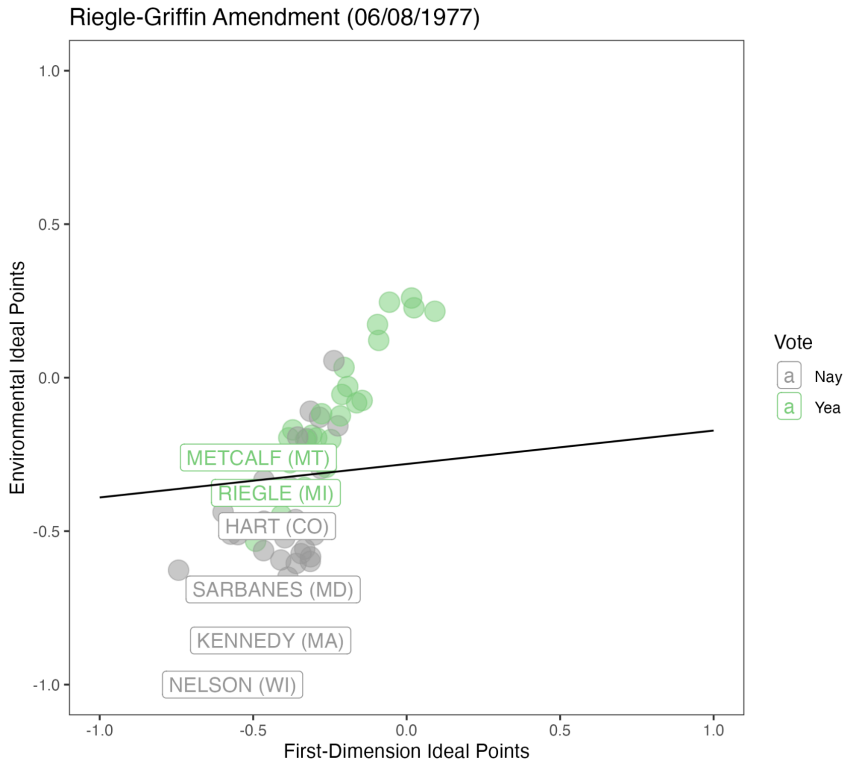


FIGURE 5. The graph shows the ideal point estimates of Democrats in the 95th Congress (1977-78) plotted along the first dimension and the environmental dimension. Each senator's vote on the Riegle-Griffin amendment (roll call vote no. 178) is recorded. Green represents Democrats who voted "Yea," and gray those who voted "Nay."

Clean Air Act Amendments of 1990

The Clean Air Act amendments of 1990 was the last time Congress successfully managed to update the landmark legislation. Since then, progressive action on clean air regulation has largely been initiated by the executive and the EPA (Mildenberger 2021). The effects of the 1990 iteration of the Clean Air Act proved to be particularly far-reaching, improving air quality (Harrington et al. 2012), mitigating acid rain (Likens, Butler, and Buso 2001), and enacting Montreal Protocol provisions on ozone depletion (Hufford and Horwitz 2005). The regulation of greenhouse gases, for the first time, began to be incorporated into the mandate of the Clean Air Act. Still, it was far from the central focus (Schmalensee and Stavins 2019).

Massachusetts senator John Kerry, who would eventually become president Joe Biden's climate czar in 2021, introduced an amendment which aimed to restore a provision in the 1970 Clean Air Act requiring the federal government to develop attainment plans for states that failed to create their own. Essentially, states either had to develop their own plans or have one be made for them by the EPA. The amendment faced heavy opposition, drawing condemnation from the two party leaders in the Senate and from the Republican administration. In Figure 6, I plot the ideal point estimates of Republican senators in the first dimension and the environmental dimension, additionally recording their votes on the motion to table the Kerry amendment. Strikingly, Kerry's Democratic colleague, majority leader George Mitchell (ME) was the one who made the motion to table. Despite bipartisan opposition to the amendment from top ranks, as Figure 6 shows, the motion divided Republicans. Finally, as the close to completely horizontal line indicates, the environmental dimension manifests as the primary dimension, more clearly sorting Republicans' votes.

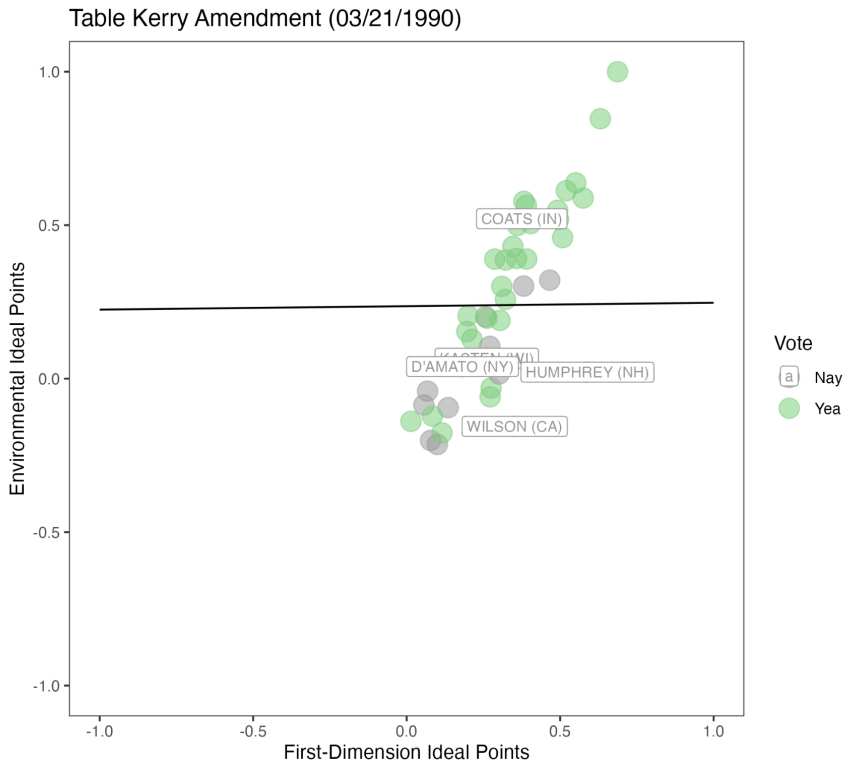


FIGURE 6. The graph shows the ideal point estimates of Republicans in the 101st Congress (1989-90) plotted along the first dimension and the environmental dimension. Each senator's vote on motion to table Kerry amendment (roll call vote no. 37) is recorded. Green represents Republicans who voted "Yea," and gray those who voted "Nay."

Downwind States

The three Republicans out of nineteen senators who cosponsored the Kerry amendment are all below the horizontal line: Pete Wilson (CA), Bob Kasten (WI), and Alfonse D'Amato (NY). Wilson, in particular, stands out. Although his first-dimension ideal point estimate puts him to the right of more than half of his Republican colleagues in the Senate, he has the fourth lowest score among Republicans on environmental policy. These differences set him at odds with himself. As he conceded in debate: "I must confess I have some mixed feelings, as a States righter generally, about the necessity to threaten States and localities that fail to comply with the law. As a realist, I acknowledge that there is a necessity to have that kind of threat" (Congressional Record 1990, 4825). By law, states cannot impose motor vehicle standard emissions above the federal standard. But California is exempted from this limitation,

often setting more stringent standards than would normally be allowed. Its stringency puts the state at risk of costs due to free-riding by neighboring states. The distinct environmental politics of California likely influence Wilson's maverick approach.

States with comparatively more stringent environmental regulations face two costs. The first is environmental. Since pollution does not stay within state borders, pollution drifting from states with weaker standards will harm citizens in states downwind. Indeed, all three of the Republican cosponsors to the Kerry amendment emphasized this point (Congressional Record 1990, 4830-40). The second cost is economic. As Wilson put it: "We will have the bitter irony of a State that is not doing the kind of job that it should... and at the same time, they may be sending economic development emissaries into the State whose air they are fouling urging that the businesses in that State relocate to the State that is guilty of that sin" (Ibid, 4839). D'Amato bitterly recounted how the printing company Kleer Pak left New York and relocated to Pennsylvania because it had more lax emission standards (Ibid, 4840).

Electoral Pressures

Two interesting outliers are Dan Coats (IN) and Gordon Humphrey (NH). Ranked as the sixteenth most conservative Republican on the environment, Coats surprisingly voted against tabling the amendment. Likely, his vote was strategic. At the time, Coats was running for reelection. He ended one campaign ad with the tagline: "Senator Dan Coats. Stopping pollution. Stopping the poison." But as the Sierra Club pointed out, out of sixteen committee votes on the Superfund program, he voted against it fifteen times (Foster 1990). Casting these outlier votes allowed Coats to tout concern for the environment. He could portray himself to voters as a maverick without actually having to be one.

In contrast to Coats, Gordon Humphrey's environmentalism appears genuine. Although he ranks as the third most conservative Republican in the first dimension, he is the thirteenth most liberal Republican on the environment. Like Coats, Humphrey was in an election year when he made a grand show of his newfound concern for the environment, inviting the press to accompany him on a tour of a toxic waste site where he pronounced "public health problems" like this could no longer be ignored. His political challenger argued it was politically calculated messaging. Humphrey, however, insisted he was sincere in his change of heart (Tolchin 1984). His environmental ideal point estimate suggests he was telling the truth.

In the first dimension, Coats is just slightly to the right of Kasten and to the left of Humphrey. Therefore, in the first dimension, the outlier nature of his vote is not immediately apparent since he is in between Kasten and Humphrey, both of whom voted against tabling the Kerry amendment. The first dimension, it seems, would have identified Humphrey as an outlier vote since he is one of the most generally conservative Republicans. The environmental dimension is clearer as it shows that the votes cast by Kasten and Humphrey are not outliers but the vote cast by Coats is. These numerous vignettes reveal the explanatory power of environmental ideal point estimates, which make it easier to identify Republican mavericks on the environment as well as genuine outlier votes.

The Case of John Chafee

John Chafee (RI) and John Heinz (PA) are two of the three senators mentioned by Kerry in his memoir as environmentalist Republicans (Kerry 2018, 153). The third, Lowell Weicker (CT), had retired at the end of the previous Congress. While Heinz voted against tabling Kerry's amendment,

Chafee surprisingly voted for it. Yet, in debate, it seemed as if Chafee was frustrated not because the amendment went too far but because it did not go far enough. He reminded senators the whole nation was supposed to have reached attainment of clean air quality standards three years earlier in 1987. For Chafee, the Clean Air Act had to date proven to be a failure. He saw Kerry's amendment as an effort to go back to a system that was already not succeeding. Chafee lashed out at the EPA for dragging its feet when it came to developing federal implementation plans. In his rebuttals to cosponsors of the Kerry amendment, he implored them to think of ways to create a better system rather than sticking with the old, ineffective one and call it progress.

Chafee argued the EPA would be more effective if it focused on sanctioning non-compliant states instead of trying to govern them. He listed four sanguine sanctions he felt the EPA should be able to impose in order to make states compliant: cutting highway funding, prohibiting drinking water hookups, reducing federal air pollution grants, and withholding permits for constructing new factories (Congressional Record 1990, 4829). Although he makes a brief mention of the impact the amendment would have on small businesses, his concern for it is overshadowed by his overarching frustrations with the Clean Air Act's failure in effectively reducing air pollution. Almost a mirror contrast to Chafee, minority leader Bob Dole (KS) spoke at length about the deleterious effects the amendment would inflict on small businesses, and made only a passing comment about the inefficiencies of federal implementation plans (Ibid, 4842). Unsurprisingly, on environmental policy, Dole is closer to strong conservatives such as Orrin Hatch (UT) than he is to liberal conservatives like Chafee. Therefore, even though Chafee and Dole voted the same, their reasons for doing so were different. While Chafee might initially appear as an outlier, closer inspection confirms his environmentalist bona fides.

Cross-State Air Pollution Rule

In 2011, Republican senator Rand Paul offered a resolution which would express Congress' disapproval of the EPA's cross-state air pollution rule (CSAPR). The rule dealt with nitrogen oxides and sulfur dioxides, harmful gases emitted by the burning of fuel that can cause asthma in people and produce acid rain. The rule imposed tougher regulations on twenty-seven states in the eastern United States whose pollution prevented downwind states from attaining air quality standards. Paul's home state of Kentucky was one of these states that would be required to meet several more requirements to ensure cleaner air.

At the time, the Democrat-controlled Senate was obstructing voting on the resolution. A motion to proceed was made, but ultimately, the motion failed 41-56. As Figure 7 shows, which like the previous plots includes the ideal point estimates of senators in the environmental dimension and the first dimension as well as how senators voted, the environmental dimension more effectively splits senators who voted "Yay" from those who voted "Nay." Unlike the previous plots, however, which focused on intraparty dynamics, this plot illustrates the capacity of the environmental dimension to reveal information about interparty dynamics.

The environmental dimension does not perform significantly better than the first dimension in terms of capturing the overall dynamics in the votes on the motion to proceed with the Paul resolution. But the environmental dimension does wield a comparative advantage insofar as it allows for more informative and intuitive comparisons of legislators in the same party as well as in opposing parties. Even if the first dimension is largely able to predict senators' votes, environmental ideal point estimates provide a clearer map of legislative groupings.

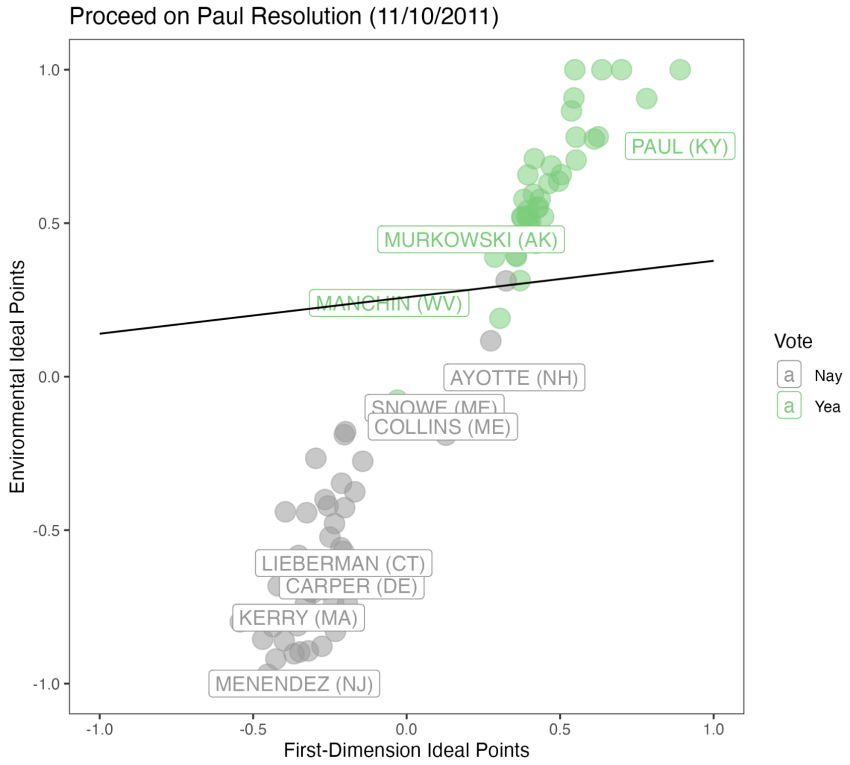


FIGURE 7. The graph shows the ideal point estimates of all senators in the 112th Congress (2011-12) plotted along the first dimension and the environmental dimension. Each senator's vote on motion to proceed on Paul resolution (roll call vote no. 201) is recorded. Green represents senators who voted "Yea," and gray those who voted "Nay."

The Northeastern Tradition

Among the most interesting outliers is Kelly Ayotte who, like Gordon Humphrey, hails from New Hampshire. Tellingly, she references this homegrown maverick streak: "In New Hampshire, we have a long, bipartisan tradition of working to advance commonsense, balanced environmental protections" (Congressional Record 2011, 7181). Ayotte's first-dimension ideal point estimate places her closer to conservatives such as James Inhofe (OK) and Jeff Sessions (AL). Yet, on the environment, she is closer to the two liberal Republican senators from Maine—Olympia Snowe and Susan Collins. Like previous Republican senators who voted for stricter environmental standards, she emphasized the unfairness of downwind states like New Hampshire suffering due to air pollution from noncompliant neighboring states.

Less surprisingly, the generally liberal Republican senators Collins and Snowe were also among the most liberal Republicans on the environment. In contrast, one of the most surprising cases is Lisa Murkwoski, who is often spoken in the same breath as Collins and Snowe. In the first dimension, the grouping is apt since she is the fourth most generally liberal Republican. But in the environmental dimension, Murkwoski is at least ten spots behind Collins and Snowe. As with Wilson's connection to the unique environmental politics in California, Murkowski's conservatism on the environment might be indicative of the environmental politics in Alaska where opening up Arctic oil drilling has been a sought-after goal of the Republican party and the extractive industry (Fountain and Friedman 2017).

Party Counterparts

As for the Democrats, three of the Democrats who spoke during debate in favor of CSAPR were among the most liberal on the environment: Tom Carper (DE), John Kerry (MA), and Robert Menendez (NJ) (Congressional Record 2011). The most intriguing case is that of Tom Carper. His first-dimension ideal point estimate ranks him as the fifth most conservative Democrat, grouping him with Democrats from typically Republican states such as Missouri's Claire MacAskill or Louisiana's Mary Landrieu. But on the environment, he is closer to strongly liberal senators such as Ron Wyden (OR) or Bernie Sanders (VT).

Another interesting case is that of Joe Lieberman (CT). During the 111th Congress (2009-10), he became infamous for his role in destroying the public option in the push for affordable healthcare. Unsurprisingly, in the first dimension, he is the tenth most conservative Democrat.[19] However, on the

[19] In the 112th Congress (2011-12), Sanders and Lieberman were independent senators. Because they caucused with Democrats, however, they are classified as Democrats.

environment, he has been one of the party's prime movers, especially on cap-and-trade legislation. Indeed, his environmental ideal point estimate is significantly lower than his first-dimension ideal point estimates and places him in the more liberal wing of Democrats. Or consider the case of one of the most conservative Democrats on the environment—West Virginia's Joe Manchin. Along the first dimension, the Republicans Manchin is most similar to are its most liberal members: Collins and Snowe. However, along the environmental dimension, he is closer to more conservative Republicans like Iowa's Chuck Grassley.

V. Partisanship in Environmental Policy: Quantitative Analysis

There are three parts to this section. The first part traces how environmental policy preferences became partisan. Many Democrats and Republicans had similar environmental ideal point estimates in the 1970s and the 1980s. Over time, polarization on environmental policy rapidly intensified. Meanwhile, shifting coalitions due to ideological sorting and evolving geographic bases enabled parties to homogenize preferences as the two parties simultaneously diverged further away from each other. The third part recounts how these trends coincided with increasing levels of party conflict. Changes in policy preferences, party influence, and political conflict turned environmental policy into one of the most divisive issues before Congress. Although environmental policy once fostered bipartisan unity, today it foments partisan division.

Polarizing Preferences

Intensifying Party Divergence

I analyze the degree of party polarization on environmental policy by calculating the difference between the respective averages of the ideal points of Democrats and Republicans in Congress. The measure captures the extent to which the two parties diverge on policy. Since ideal points estimated by WNOMINATE range between -1 and 1, the maximum level possible of party divergence is 2, which would indicate the two parties *never* agree with each other on policy. As Figure 8 shows, which plots the party divergence measure from the 91st Congress (1969-70) to the 116th Congresses (2019-20) in both chambers, the parties are approaching the maximum level of divergence. In the span of fifty years, party divergence increased more than six-fold and four-fold in the House and the Senate, respectively.

To put it simply, Democrats and Republicans have progressively agreed less and less with each other on environmental policy.

Consistent with mainstream interpretations of a past "golden era" when environmental policy encouraged bipartisanship (Klyza and Sousa 2008), Figure 8 provides quantitative evidence indicating party divergence indeed was low in the 1970s and the 1980s. Likewise, tracking with contemporaneous journalistic and scholarly accounts which argue Congress is irredeemably divided on the environment (Bagley 2015; Konisky 2016; Williams 2021), party divergence is now significantly more severe than it used to be. Interestingly, party divergence increases quite steadily, suggesting a developmental trajectory in environmental polarization. That is, polarization intensifies over time rather than self-correcting (Pierson and Schickler 2020). Finally, the similarity in the dynamics of polarization in both chambers is intriguing—environmental polarization affected Congress as a whole.

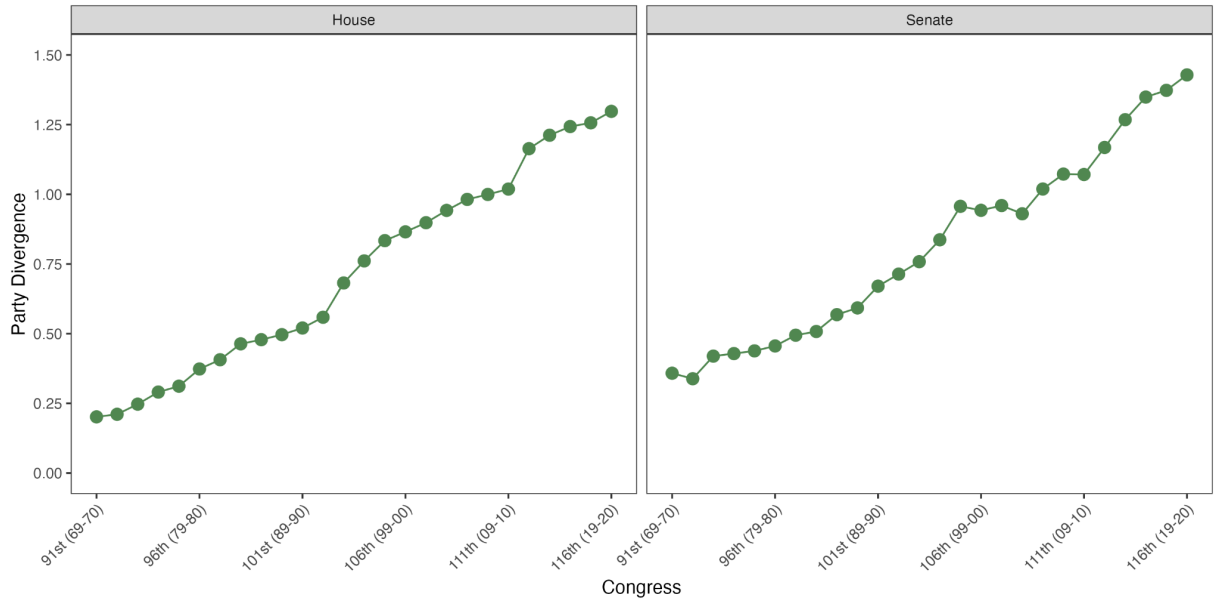


FIGURE 8. Party divergence = |Average of Democrats - Average of Republicans|. The graph plots the absolute difference between the respective averages of the ideal point estimates of Democrats and Republicans on environmental policy in the House and the Senate between the 91st Congress (1969-70) and the 116th Congress (2019-20). *(NOTE: Since ideal points range between -1 and 1, the maximum level of divergence is 2.)*

Explaining Environmental Polarization

There are numerous attempts to explain why environmental policy became polarized. Prior to the enactment of the Clean Air Act or the creation of the Environmental Protection Agency (EPA) in 1970, the regulatory architecture overseeing environmental problems was practically non-existent (Schmalensee and Stavins 2019). Because the policy area of environmental regulation was just emerging, it would be a while before interest groups could mount an effective countermovement (Brulle 2020).[20] Theories of parties which center the role of mobilized interest groups (Schattschneider 1935; Bawn et al. 2012, Hacker and Pierson 2014) would expect legislators to be less polarized in the absence of organized pressure. As one frustrated executive put it during the onslaught of regulations in the 1970s: "We don't have a business community" (Perlstein 2020, 201).

In the Downsian vein, various studies have sought to link changes in public opinion with party polarization on environmental policy (Lyons 1999; Kim and Urpelainen 2018; Pacca et al. 2021). The theory might be boiled down to this: As citizens polarized on environmental issues (Howe et al. 2015; Smith, Bognar, and Mayer 2024), reelection-minded legislators adapted to meet new policy demands. Frances Lee (2016) extends the logic of the electoral connection,[21] arguing increasing competitiveness in elections incentivized Democrats and Republicans to engage in more frequent interparty conflict to magnify their differences and make clear to voters why they needed to vote for one party over the other. I mention these explanations not to settle which best accounts for environmental polarization. Rather,

[20] Even in the 101st Congress (1989-90), Henry Waxman (D-CA-24) noted how strained industry solidarity enabled Democrats to curry support for environmental regulation as industries were each looking out for themselves and willing to trade support in exchange for assurances they would not be the biggest policy loser (Waxman 2009, 97).

[21] The electoral connection, a concept developed in Mayhew (1974), argues legislative behavior can be explained by examining legislators' fundamental drive for re-election. From this singular motivation, there are three typical behaviors that follow: advertising (i.e., publicity), credit claiming (i.e., particularistic policies), and position taking (i.e., messaging).

I do so to provide readers with a set of interpretive tools that help contextualize the results in Figure 8 as well as the figures included in the following pages.

Changing Coalitions

Party Sorting

Environmental polarization occurred via a multi-decadal process of coalitional realignment. In Figures 9.1 and 9.2, I plot the distributions of the environmental ideal point estimates of Democrats and Republicans in both chambers in each decennial Congress following the 91st Congress (1969-70). Unimodal distributions in earlier Congresses gave way to bimodal distributions in later Congresses as legislators in opposing parties sorted into increasingly divergent ideological lines.[22] Early on, the policy space of environmental regulation was undefined territory. As Richard Preyer (D-NC-6) noted in 1970 during a debate on the Clean Air Act, because "we know so little about what to do," legislators must rely on "creative intelligence" (Congressional Record 1970b, 19213). The novelty of the issue meant interest groups, party platforms, and policy agendas were all in flux. Yet, as legislators in both chambers recognized, there was fervent public demand for action (Congressional Record 1970a; Congressional Record 1970b). As such, the early bipartisan variability in environmental ideal point estimates may be indicative of a period when legislators operated foremost as individuals in the uncertain but still not contentious terrain of environmental policy.

During the 1970s, bipartisan cooperation was also a more enticing prospect due to the lack of electoral competition. The Democratic party had been the majority party in both chambers since 1955.

[22] The distributions of the ideal points in the first dimension of DW-NOMINATE, which indexes general ideology, display bimodal tendencies as early as the 91st Congress (1969-70). See Appendix G.

This is why Minnesota Republican David Durenber became involved with environmental policy when he was elected to the Senate in 1978, explaining: "I was attracted [to environmental policy] obviously because the Democrats still controlled things in the Senate" ("Superfund 25th Anniversary" 2005, 2). Durenberger, who formed part of the famous trio of environmentalist Republicans in the Senate with John Chafee (RI) and Jack Heinz (PA), saw first-hand how environmental politics became partisan as anti-regulatory industry groups and anti-government party activists made it increasingly difficult for Republicans to work with Democrats (Ibid, 8). Tensions came to a head between Durenberger and the evolving GOP in 1992 when he was booed by fellow Republicans as he presented a proposal to elevate the EPA to a cabinet-level position. Quite simply, as he realized, Republicans "didn't want any more government" (Ibid, 10). Two years later, Republicans swept the 1994 elections on an anti-government platform. It appears as public support for government action faded, interest groups mobilized, and the parties developed competing environmental agendas, bipartisan behavior became increasingly costly.

For Durenberger, the 1990s were a turning point. Indeed, as Figures 9.1 and 9.2 show, after the 101st Congress (1989-90), the bimodal tendencies in the distribution become much more apparent. Times had changed. Ultimately, the early bipartisan coalition anchored at the center splintered into two partisan coalitions promoting distinct and opposite preferences on environmental policy. By the 116th Congress (2019-20), as the distribution of the colored points show, all House Democrats were to the left of all House Republicans and all Senate Democrats except for one were to the left of all Senate Republicans.[23] The times had changed. Durenberger lamented the loss: "Thank God I lived in almost a bipartisan period of time [on] environmental health" (Ibid, 13).

[23] The two outliers are Democratic senator Joe Manchin of West Virginia and Republican senator Susan Collins of Maine. Both represent states typically carried by the other party.

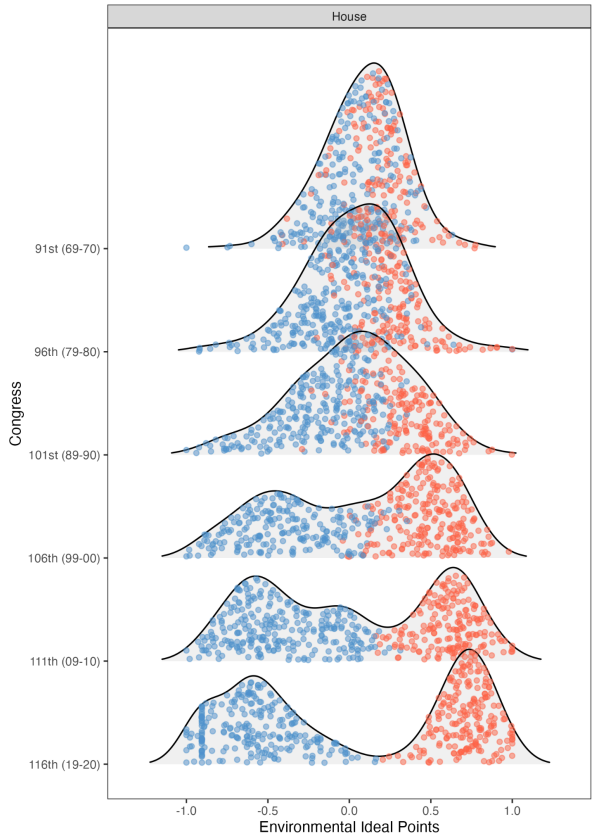


FIGURE 9.1. The graph shows the distributions of the environmental ideal point estimates of legislators in the House in select Congresses. Democrats are in blue, Republicans in red. *(Note: Only the horizontal positions of the colored points matter. Their vertical positions are merely to help distinguish legislators with similar environmental ideal point estimates.)*

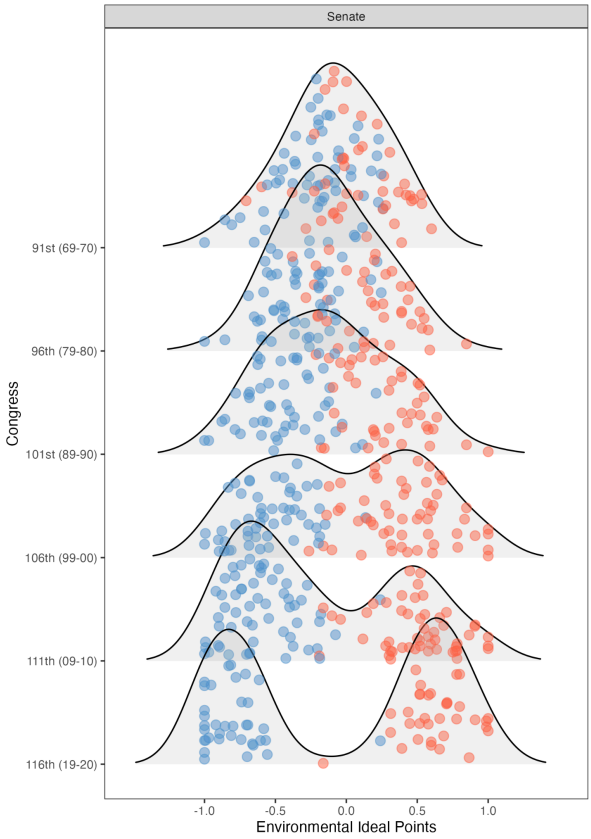


FIGURE 9.2. The graph shows the distributions of the environmental ideal point estimates of legislators in the Senate in select Congresses. Democrats are in blue, Republicans in red. *(Note: Only the horizontal positions of the colored points matter. Their vertical positions are merely to help distinguish legislators with similar environmental ideal point estimates.)*

As the level of intergroup heterogeneity of Congress increased as Democrats moved to the left and Republicans to the right, the parties also became more internally homogeneous,[24] which can be noted in the gradual narrowing of the left and right modes. In sum, environmental polarization was both the product of legislators in opposing parties becoming more different as well as legislators in the same party becoming more alike. These trends are consistent with those observed in general political polarization (McCarty, Poole, and Rosenthal 2008; Theriault 2008; McCarty 2019, all cited in Curry

[24] Intergroup heterogeneity refers to the difference between legislators in opposing parties, whereas intragroup homogeneity refers to the similarity of legislators in the same party. I borrow these terms from Mehlhaff 2023.

and Lee 2020).[25] A comparison of the distributions in both chambers in the 91st Congress (1969-70) and the 116th Congress (2019-20) reveals how Congress transitioned from the least polarized state (i.e., low levels of intergroup heterogeneity and intragroup homogeneity) to the most polarized state (i.e., high levels of intergroup heterogeneity and intragroup homogeneity). In the intermediate stages, even as Congress experienced increasing levels of intergroup heterogeneity, environmental polarization was curbed by the persistence of intragroup *heterogeneity*. Eventually, that gave way too. In the end, as the figures show and Durenberger's account illustrates, the locus of unity shifted from Congress as a whole to the parties themselves.

Waning Regionalism

Regional factors such as localized environmental issues, the economic importance of extractive industries, or the level of union density might induce similar interests in legislators irrespective of party identity.[26] As evidenced by accounts from former high-profile legislators in Congress such as Waxman (2009), Kerry (2018), and Boehner (2021), regionalism can weaken party control, producing new allies, unexpected foes, and unpredictability. Figures displayed in preceding pages show environmental policy preferences grew increasingly partisan. Therefore, there should be a strong link between party identity and environmental policy preferences, one which hardens over time.

One way to examine regionalism is by looking at whether a congressional delegation's share of legislators from either party is predictive of the average of the environmental ideal point estimates of its members. In Figures 10.1 and 10.2, I plot these averages against the delegations' shares of Democrats in

[25] Unlike general polarization which developed asymmetrically as Republicans moved to the right while Democrats remained largely fixed, environmental polarization developed largely symmetrically. See Appendix H.
[26] Refer to the case studies in Section IV for examples.

both chambers in each decennial Congress following the 91st Congress (1969-70). As is expected, the correlation between the two variables tightens over time, which can be observed through the increasing slantedness of the trendlines. Both in the House and the Senate, the variability of the averages among delegations with similar shares of Democrats decreased. Note how the delegations get closer and closer to each other along the y-axis, which plots the ideal point averages.

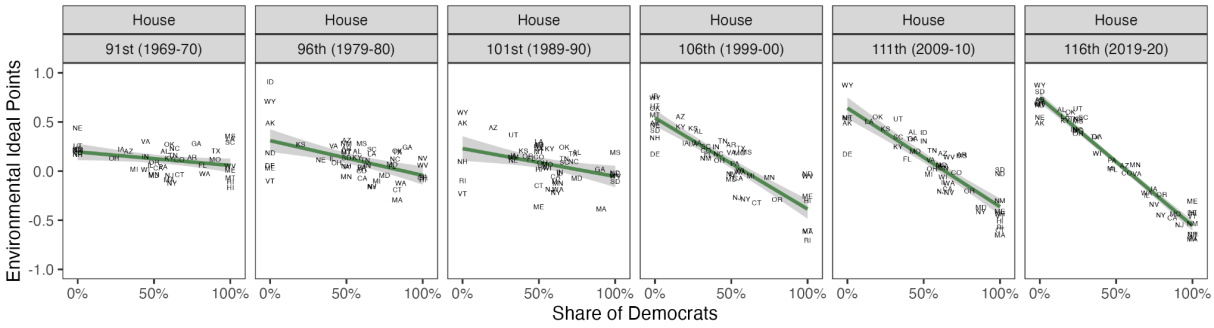


FIGURE 10.1. The graph plots the averages of the environmental ideal points of all House delegations against their share of Democrats in select Congresses.

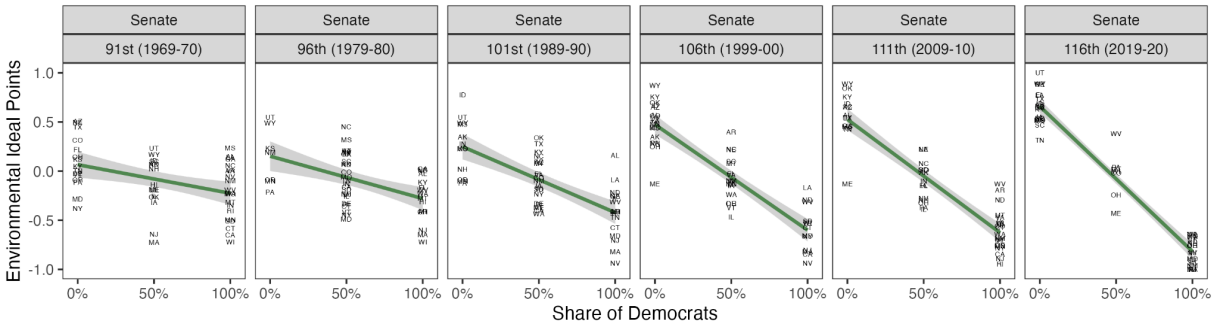


FIGURE 10.2. The graph plots the averages of the environmental ideal points of all Senate delegations against their share of Democrats in select Congresses.

Consider the 91st Congress (1969-70) in which Democrat-only Senate delegations include the second and third most liberal delegations on the environment (Wisconsin, California) as well as the fourth and eighth most conservative delegations (Alabama, Mississippi). Or take the 101st Congress (1989-90) in which Republican-only House delegations range from the most conservative delegation (Wyoming) to the third most liberal delegation (Vermont). Clearly, in earlier Congresses, there was

great variation in the averages of delegations with similar shares of Democrats. But by the 116th Congress (2019-20), all delegations entirely made up of Democrats were more liberal than delegations with no Democrats. The averages of mixed delegations also varied less, hovering somewhere between the two extremes. Over time, the partisan composition of delegations increasingly mapped onto their overall approach to environmental policy. In other words, as legislators became more partisan on the environment, it made them more predictable because they toed the party line. By and large, it appears that parties managed to successfully consolidate the environmental policy preferences of their members. As the margins of majority power decrease, however, it takes fewer legislators being out of step with the rest of their party for factors such as regional variation to become pivotal. Consider Joe Manchin's outsized role in the drafting, debate, and passing of the Inflation Reduction Act. Repeatedly, Manchin frustrated Democrats due to his efforts to protect extractive industries in West Virginia from regulatory exposure.

Attenuated regional variation within parties is in part the result of intensifying partisanship. It is also the consequence of shifting geographic bases, a widely recognized phenomenon in the literature (Bishop and Chusing 2008; Johnston, Manley, and Jones 2016; Hacker et al. 2023). Between the 101st Congress (1989-90) and the 116th Congress (2019-20), the number of bipartisan delegations in the House and the Senate dropped from 41 states to 32 states (22 percent decrease) and from 21 states to 9 states (57 percent decrease), respectively. In the modern Congress, fewer delegations are represented by members of both parties, reducing the likelihood of cross-cutting regional dynamics. In Figures 11.1 and 11.2, I plot the percentage of Democrats and Republicans in both chambers from the four different regions of the United States defined by the Census Bureau. As shown in the figures, the

geographic bases of the party differ. Today, most Democrats hail from the Northeast and the West while most Republicans hail from the Midwest and the South.

Southern Democrats and northeastern Republicans were often the legislators who defied their parties on the issue of environmental regulation. As the figures illustrate, however, Democrats lost their foothold in the South, just as Republicans did in the Northeast. This meant fewer Democrats came from states in the South dependent on extractive industries and fewer Republicans came from downwind states in the Northeast struggling with air pollution. Because of these shifting regional compositions, the two parties did not have to balance as many contradictory interests as they once did. These geographic changes in tandem with intensifying partisanship homogenized the manifold electoral demands often faced by the Democratic party and the Republican party, enabling the two parties to consolidate the environmental policy preferences of their members. Burdened with fewer cross-cutting incentives, the path was cleared for the parties to polarize on environmental policy.

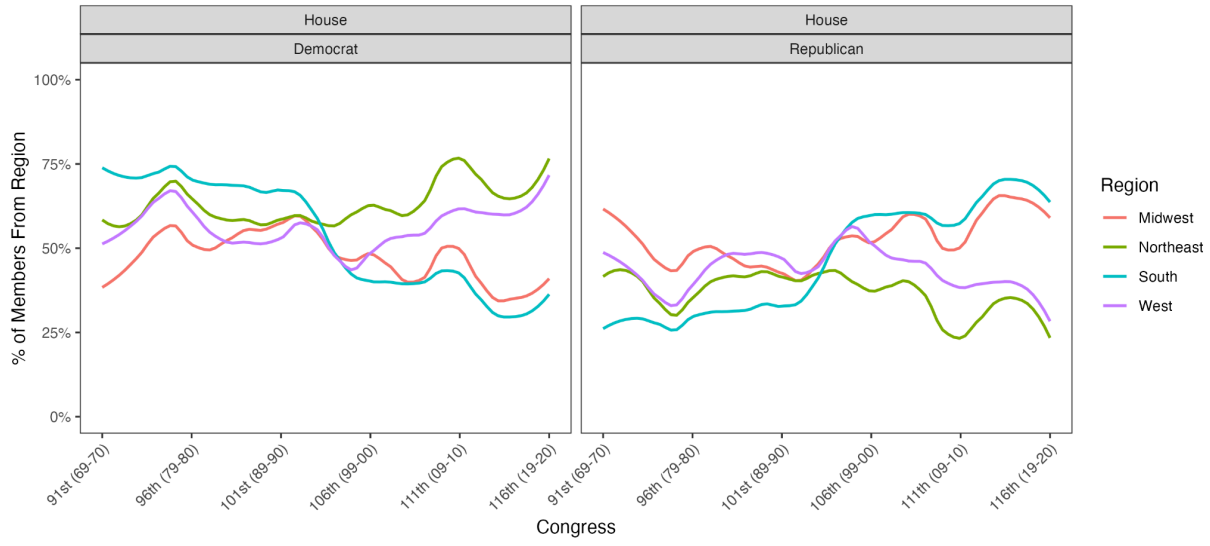


FIGURE 11.1. The graph plots the percentage of House Democrats and House Republicans from the four regions of the United States defined by the Census Bureau.

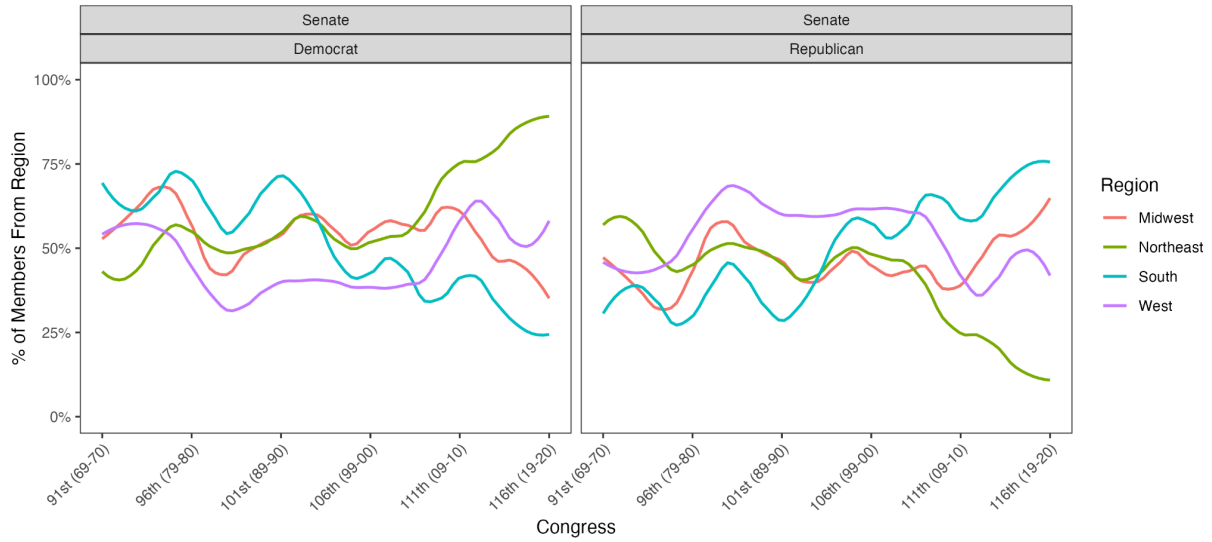


FIGURE 11.2. The graph plots the percentage of Senate Democrats and Senate Republicans from the four regions of the United States defined by the Census Bureau.

Intensifying Political Conflict

Party Conflict

The New Deal era relegated Republicans to a quasi-permanent minority. The prospects of a Republican majority seemed a pipe dream. Then, Democrats lost majorities in the 1980 and the 1994 elections in the Senate and the House, respectively. Increasing electoral competitiveness, as argued in Lee (2016), incentivized party conflict. The logic is simple: voters will not choose one party over the other if they appear to be the same. In the 1970s and the 1980s, all rules were generally open. Fewer than thirty percent had any restrictions (Curry and Lee 2020). From the 112th Congress (2010-11) to the 116th Congress (2019-20), the House voted on thirty-six rules setting how bills on environmental policy would be considered, debated, and passed. Of these, only one was open. The rest were either restrictive or closed (Wolfensberger 2022). For a breakdown of all roll calls by motion or request, see Appendix I. Further details on which rules were open, restrictive, or closed are found in Appendix J.

Another measure of party conflict developed in Curry and Lee (2020) examines the percentage of roll calls pitting at least 90 percent of Democrats against at least 90 percent of Republicans. I plot the percentage of these polarizing votes on environmental roll calls from the 91st Congress (1969-70) to the 116th Congress (2019-20). As shown in Figures 12.1 and 12.2, over time, there is a dramatic increase in the percentage of these polarizing votes in both chambers. In the 114th Congress (2015-16), the majority of roll calls in the Senate arrayed the two parties in nearly perfect opposition to one another. Between the 113th Congress (2013-14) and the 115th Congress (2017-18), essentially all environmental roll calls in the House were polarizing votes. In the figures, I highlight periods of party control in both chambers. Consistent with Lee's thesis, the percentage of polarizing votes appears to peak during or increase shortly before transitions of control between parties.[27]

Unlike Figure 8 where polarization is steadily increasing from the get-go, Figures 12.1 and 12.2 do not show a rise in the percentage of polarizing votes until the 1990s. In decades prior, it is possible Democrats and Republicans are increasingly opposing each other in roll calls but not yet at the levels set by Curry and Lee (2020). It also possibly suggests the exclusion of unanimous or near-unanimous votes in WNOMINATE obscures broader bipartisan agreement. Regardless, multiple figures as well as historical accounts indicate the 1990s were a watershed moment in environmental politics. Since then, neither polarization nor conflict have plateaued but rather have continued to intensify, cultivating an increasingly hardscrabble, antagonistic, and partisan environmental policy terrain. Environmental policy once softened party divisions. Today, it exacerbates them.

[27] The analysis of polarizing votes considers all 1,613 roll call votes on environmental policy observed in the Congressional Roll Call Voting dataset. Thus, the unanimous and near-unanimous votes dropped by WNOMINATE are included here.

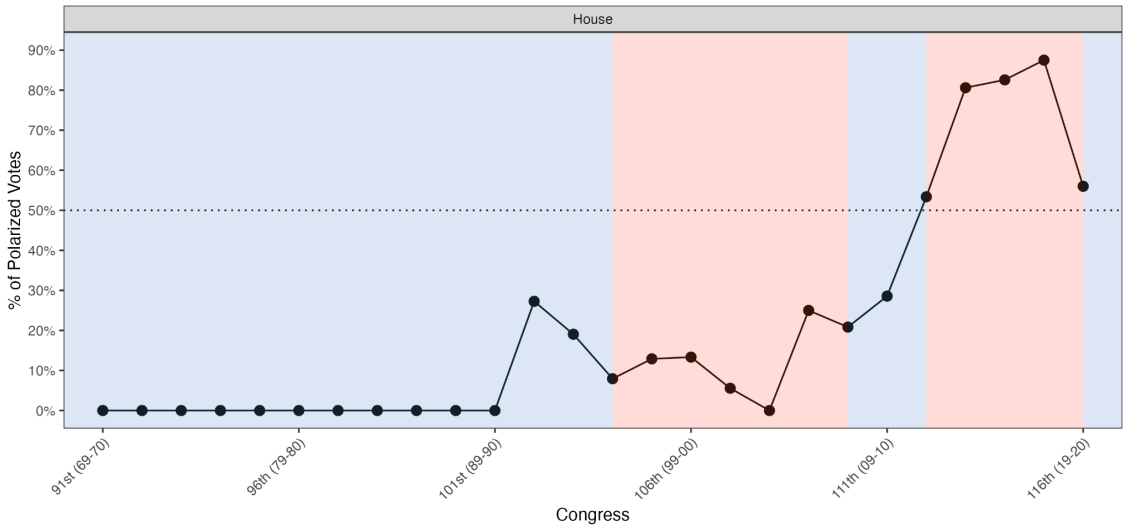


FIGURE 12.1. The graph shows the percentage of House roll call votes where at least 90 percent of members in each party opposed each other. Blue indicates Democratic control and red indicates Republican control. The dotted line marks the 50 percent threshold.

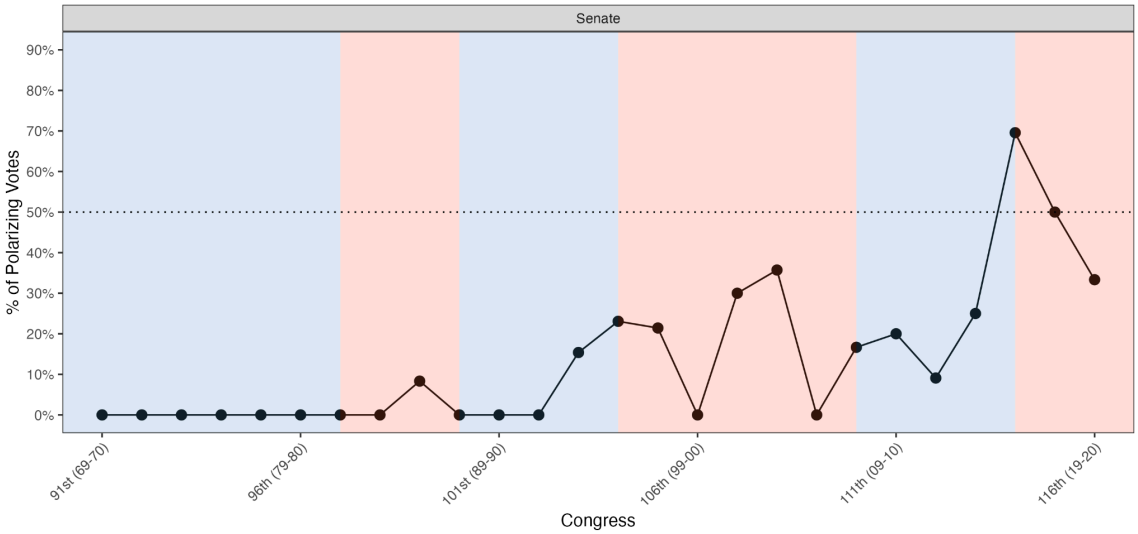


FIGURE 12.2. The graph shows the percentage of Senate roll call votes where at least 90 percent of members in each party opposed each other. Blue indicates Democratic control and red indicates Republican control. The dotted line marks the 50 percent threshold.

Sponsorship

Party conflict can be further observed by examining trends in sponsorship. In Figures 13.1 and 13.2, I plot the medians of the environmental ideal point estimates of the floor and of sponsors. To do this, I combined my dataset of environmental ideal points with the dataset developed by Adler and

Wilkerson 2018) on bills introduced in Congress, which lists the sponsors of each measure. The highlighted areas indicate the majority party in the chamber. Unsurprisingly, when Democrats are in control, the sponsor median is significantly lower than the floor median, suggesting those proposing environmental policy bills are more partisan than many of their colleagues. Interestingly, when Republicans are in the majority, the value of the sponsor median increases but only occasionally exceeds the floor median.

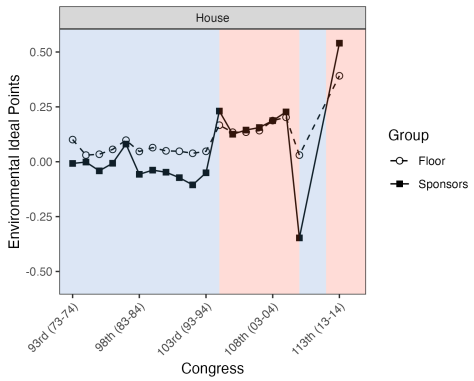


FIGURE 13.1. The graph shows the medians of the environmental ideal points of the floor and sponsors in the House. Blue indicates Democratic control, and red indicates Republican control.

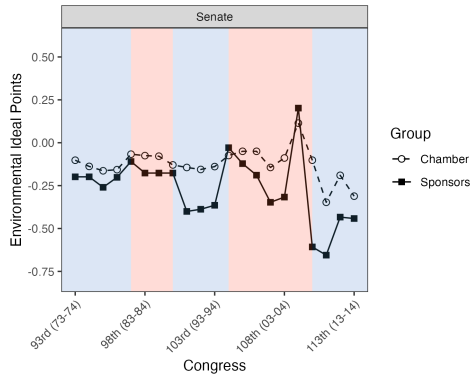


FIGURE 13.2. The graph shows the medians of the environmental ideal points of the floor and sponsors in the Senate. Blue indicates Democratic control, and red indicates Republican control.

The peaks and troughs of the median ideal point estimates of sponsors tend to occur during party transitions. The Republican takeovers of the Senate in the 97th Congress (1981-82) or the House in the 104th Congress (1995-96) coincide with the most dramatic increases in the median of sponsors. When Democrats retake control, sponsor medians similarly experience large decreases. After majority control switches parties, however, the swing in medians moderates in the following Congresses. These fluctuations between transitions of party control and the subsequent moderations after party takeovers suggest the prospect of losing or gaining a majority in Congress spurs partisan activity by sponsors.

Cosponsorship

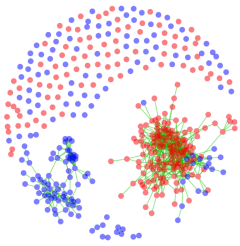
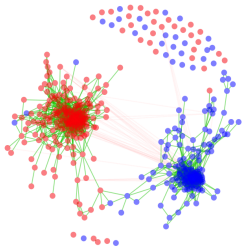
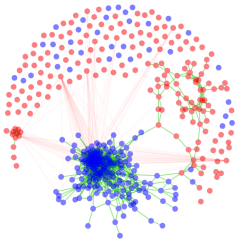
The combination of intense partisan polarization and party conflict makes it more difficult for legislators in opposing parties to work with each other due to substantive policy differences as well as the pressure to differentiate each other. One illustrative case is that of Lindsey Graham. When senators John Kerry (D-MA) and Joe Lieberman (I-CT) started work on cap-and-trade legislation, they reached out to the Republican senator from South Carolina. At first, Graham seemed open to the idea of cosponsoring legislation with Kerry and Lieberman. Eventually, fearing backlash from his Republican colleagues and facing a tough challenger from the Tea Party in the primaries, Graham was dissuaded and released a statement condemning cap-and-trade (Kerry 2018, 361-66).

To study cosponsorship behavior on environmental policy, I used network analysis developed by Neal (2022) to visualize co-sponsorship behavior in Congress. I generate a signed political network where legislators who cosponsored significantly many bills are connected by a tie that indicates alliance (shown in green) while legislators who cosponsored significantly few bills are connected by a tie that indicates opposition (shown in red). Essentially, legislators connected by a green tie "like" each other and tend to work together on legislation while those connected by a red tie "dislike" each other and are unlikely to team up. The cosponsorship data on bills and resolutions are extracted from the policy area of "Environmental Protection" by Congress.gov.[28]

In the figures below, I plot the networks of legislators in the House in select Congresses. There are two typical behaviors, inactivity by one party and intense unilateral activity by the opposing party

[28] The data begins in the 108th Congress. This is different from the Voteview data I used on the introduction of bills. As such, it is important to keep this in mind. However, these figures are used largely to illustrate the division in cosponsorship in recent Congresses.

or intense but opposing activity by both parties.[29] Cosponsorship behavior is partisan-structured. Since most of these measures rarely go up for a vote, much less are substantively considered, it suggests that legislators in opposing parties are often engaging in what Lee terms *messaging*. That is, legislators in opposing parties are not trying to get things done but rather show how different they are from each other. The titles of these introduced measures reveal just as much. Consider: America's Commitment to Clean Water Act (H.R. 5088), End EPA Rogue Spending Act (H.R. 5551), and Environmental Justice Legacy Pollution Cleanup Act of 2020 (H.R. 8271). Although none of these bills came up for a vote, they are strong signals of the parties' diverging approaches to environmental policy.

111th Congress (2009-2010)	114th Congress (2015-2016)	116th Congress (2019-2020)
		

[29] I do not include network analysis of the Senate as there was a significant amount of sparsity in the networks and did not elucidate starkly different behaviors as those shown in the figures below.

VI. Conclusion

Today, the defining environmental issue is climate change. A quick look through mainstream news headlines, however, delivers a pessimistic outlook on the prospects of policy progress: "Why the US is so horribly incapable of meaningful climate action" from *CNN* (Wolf 2022); "As the Planet Cooks, Climate Stalls as a Political Issue" from *The New York Times* (Weisman and Ulloa 2022); and, "Congress's long history of doing nothing on climate change, in 6 acts" from *The Washington Post* (Phillips 2015). Young people desperate for action are staging school strikes (Milman 2019), occupying Capitol Hill (Green and Cama 2018), and suing the government in court for failure to preserve their futures (Gelles and Baker 2023).

What, then, are the stakes of my analysis? From the beginning, my motivation in writing this paper was to produce something that would be helpful to the young activists fighting for a sustainable world. What I hope to have shown is that inaction on environmental policy is not because legislators in Congress simply do not care or because they are incompetent. In sports, pundits tend to ascribe bad performances by teams as a result of the team simply not wanting the win bad enough. On television, this type of vibes-based analysis sells, discouraging pundits from focusing on structural explanations. Likewise, in politics, it is possible to trace structurally-induced incentives which motivated increasingly partisan behavior on environmental policy.

Climate change was not on the agenda in the 1970s and the 1980s. Once Congress started to pursue action, however, the policy terrain had by then been saturated. The relative absence of pressures enjoyed by legislators early on was replaced by an arena filled with organized interest groups, ideological

think tanks, and increasingly partisan legislators. Furthermore, in the 1990s, as the electoral landscape grew increasingly competitive, there were not as many incentives for bipartisanship. Each election year presented the minority party with a reasonable chance of taking the majority either in the House or the Senate. When Republicans were a quasi-permanent minority, it was in their interest to cooperate with Democrats just so they could exert some modicum of influence in Congress. Once Republicans were competitive, it served them better to obstruct so that candidates could make convincing appeals to voters that if they were elected or re-elected, things would get going in Congress. Finally, changes in the geographic bases and electoral bases of both parties enabled them to homogenize the environmental policy preferences of their members.

In sum, the combination of policy terrains influenced by intense policy demanders, electoral incentives to engage in party conflict to emphasize partisan differences, and social transformations in regions gives rise to a situation in which the political polarization on environmental policy can be understood as a rational rather than irrational phenomenon. Inaction on environmental policy, then, is a structural issue. To that end, efforts to address environmental polarization through fact-checking, messaging, and other psychologically-oriented interventions will not be effective in the long run. The driving forces of environmental polarization require structural responses. It is about mobilizing new coalitions, altering electoral incentives, and intensifying public pressure. Fire must be met with fire.

Appendix A

This appendix includes the names and other identifying information of all legislators omitted from analysis by WNOMINATE. It also includes the reason why these legislators failed the minimum votes threshold.

#	Name	State	Party	End of tenure	Cause	Description	Chamber
1	BATES, William Henry	MA	R	1969	Death		House
2	JOELSON, Charles Samuel	NJ	D	1969	Death		House
3	RUMSFELD, Donald Henry	IL	R	1969	Resigned	OEO Director	House
4	RONAN, Daniel John	IL	D	1969	Death		House
5	CAHILL, William Thomas	NJ	R	1970	Governor		House
6	DAWSON, William Levi	IL	D	1970	Death		House
7	KIRWAN, Michael Joseph	OH	D	1970	Death		House
8	LIPSCOMB, Glenard Paul	CA	R	1970	Death		House
9	RIVERS, Lucius Mendel	SC	D	1970	Death		House
10	UTT, James Boyd	CA	R	1970	Death		House
11	ST. ONGE, William Leon	CT	D	1970	Death		House
12	WATKINS, George Robert	PA	R	1970	Death		House
13	SMITH, Ralph Tyler	IL	R	1970	Appointed		Senate
14	ADAIR, Edwin Ross	IN	R	1971	End of term		House
15	ANDREWS, George William	AL	D	1971	Death		House
16	AYRES, William Hanes	OH	R	1971	End of term		House
17	BERRY, Ellis Yarnal	SD	R	1971	End of term		House
18	COHELAN, Jeffery	CA	D	1971	End of term		House
19	CORBETT, Robert James	PA	R	1971	Death		House
20	CRAMER, William Cato	FL	R	1971	End of term		House
21	CUNNINGHAM, Glenn Clarence	NE	R	1971	End of term		House
22	DADDARIO, Emilio Quincy	CT	D	1971	End of term		House

23	FALLON, George Hyde	MD	D	1971	End of term		House
24	FARBSTEIN, Leonard	NY	D	1971	End of term		House
25	FEIGHAN, Michael Aloysius	OH	D	1971	End of term		House
26	FRIEDEL, Samuel Nathaniel	MD	D	1971	End of term		House
27	FULTON, James Grove	PA	R	1971	Death		House
28	GILBERT, Jacob H.	NY	D	1971	End of term		House
29	LANGEN, Odin Elsford Stanley	MN	R	1971	End of term		House
30	MAY, Catherine Dean	WA	R	1971	End of term		House
31	MURPHY, William Thomas	IL	D	1971	End of term		House
32	PHILBIN, Philip Joseph	MA	D	1971	End of term		House
33	POWELL, Adam Clayton, Jr.	NY	D	1971	End of term		House
34	ROGERS, Byron Giles	CO	D	1971	End of term		House
35	WATTS, John Clarence	KY	D	1971	Death		House
36	MacGREGOR, Clark	MN	R	1971	End of term		House
37	OLSEN, Arnold	MT	D	1971	End of term		House
38	REIFEL, Benjamin	SD	R	1971	End of term		House
39	ROUDEBUSH, Richard Lowell	IN	R	1971	End of term		House
40	SCHADEBERG, Henry Carl	WI	R	1971	End of term		House
41	STAFFORD, Robert Theodore	VT	R	1971	Senator		House
42	BROCK, William Emerson, III	TN	R	1971	End of term		House
43	BURTON, Laurence Junior	UT	R	1971	End of term		House
44	FOREMAN, Edgar Franklin	TX	R	1971	End of term		House
45	MARSH, John Otho, Jr.	VA	D	1971	End of term		House
46	MORTON, Rogers Clark Ballard	MD	R	1971	Resigned	RNC Chair	House
47	REID, Charlotte Thompson	IL	R	1971	Resigned	FCC Commissioner	House
48	TAFT, Robert, Jr.	OH	R	1971	End of term		House
49	WATSON, Albert William	SC	R	1971	End of term		House
50	McCARTHY, Richard Dean	NY	D	1971	End of term		House
51	MIZE, Chester Louis	KS	R	1971	End of term		House
52	O'NEAL, Maston Emmett, Jr.	GA	D	1971	End of term		House

53	TUNNEY, John Varick	CA	D	1971	End of term		House
54	BUSH, George Herbert Walker	TX	R	1971	End of term		House
55	BUTTON, Daniel Evan	NY	R	1971	End of term		House
56	COWGER, William Owen	KY	R	1971	End of term		House
57	DENNEY, Robert Vernon	NE	R	1971	End of term		House
58	KLEPPE, Thomas Savig	ND	R	1971	End of term		House
59	MESKILL, Thomas Joseph	CT	R	1971	End of term		House
60	POLLOCK, Howard Wallace	AK	R	1971	End of term		House
61	ROTH, William Victor, Jr.	DE	R	1971	End of term		House
62	BEALL, John Glenn, Jr.	MD	R	1971	End of term		House
63	LOWENSTEIN, Allard Kenneth	NY	D	1971	End of term		House
64	McKNEALLY, Martin Boswell	NY	R	1971	End of term		House
65	WEICKER, Lowell Palmer, Jr.	CT	R	1971	End of term		House
66	WOLD, John Schiller	WY	R	1971	End of term		House
67	DODD, Thomas Joseph	CT	D	1971	End of term		Senate
68	GOODELL, Charles Ellsworth	NY	R	1971	End of term		Senate
69	GORE, Albert Arnold	TN	D	1971	End of term		Senate
70	HOLLAND, Spessard Lindsey	FL	D	1971	End of term		Senate
71	McCARTHY, Eugene Joseph	MN	D	1971	End of term		Senate
72	PROUTY, Winston Lewis	VT	R	1971	Death		Senate
73	RUSSELL, Richard Brevard, Jr.	GA	D	1971	Death		Senate
74	WILLIAMS, John James	DE	R	1971	End of term		Senate
75	YARBOROUGH, Ralph Webster	TX	D	1971	End of term		Senate
76	YOUNG, Stephen Marvin	OH	D	1971	End of term		Senate
77	MURPHY, George Lloyd	CA	R	1971	End of term		Senate
78	TYDINGS, Joseph Davies	MD	D	1971	End of term		Senate
79	EDWARDS, Edwin Washington	LA	D	1972	Resigned	Governor	House
80	EDWARDS, Elaine Schwartzenburg	LA	D	1972	Appointed		Senate
81	BARING, Walter Stephan, Jr.	NV	D	1973	End of term		House
82	DOWDY, John Vernard	TX	D	1973	End of term		House

83	LONG, Speedy Oteria	LA	D	1973	End of term		House
84	CURLIN, William Prather, Jr.	KY	D	1973	Special Election		House
85	ANDREWS, Elizabeth Bullock	AL	D	1973	Special Election		House
86	CARLSON, Cliffard Dale	IL	R	1973	Special Election		House
87	CONOVER, William Sheldrick, II	PA	R	1973	Special Election		House
88	MUNDT, Karl Earl	SD	R	1973	End of term		Senate
89	McSPADDEN, Clem Rogers	OK	D	1975	One term		House
90	REID, Ogden Rogers	NY	D	1975	End of term		House
91	ALBERT, Carl Bert	OK	D	1977	NA		House
92	TONRY, Richard Alvin	LA	D	1977	Resigned	Election Fraud	House
93	HATFIELD, Paul Gerhart	MT	D	1978	Appointed		Senate
94	HUMPHREY, Muriel Buck	MN	D	1978	Appointed		Senate
95	ALLEN, Maryon Pittman	AL	D	1978	Appointed		Senate
96	HODGES, Kaneaster, Jr.	AR	D	1979	Appointed		Senate
97	MUSTO, Raphael John	PA	D	1981	Special Election		House
98	HUTCHINSON, John Guiher	WV	D	1981	Special Election		House
99	BRADY, Nicholas Frederick	NJ	R	1982	Appointed		Senate
100	SMITH, Joseph Francis	PA	D	1983	Special Election		House
101	BROYHILL, James Thomas	NC	R	1986	Appointed		Senate
102	WALDON, Alton R., Jr.	NY	D	1987	Special Election		House
103	DAVIS, Jack	IL	R	1989	One term		House
104	SMITH, Larkin I.	MS	R	1989	Death		House
105	KARNES, David Kemp	NE	R	1989	Appointed		Senate
106	SEYMOUR, John	CA	R	1992	Appointed		Senate
107	LUKEN, Charles J.	OH	D	1993	One term		House
108	COX, John W., Jr.	IL	D	1993	One term		House
109	NICHOLS, Richard	KS	R	1993	One term		House
110	HORN, Joan Kelly	MO	D	1993	One term		House
111	ALLEN, George	VA	R	1993	Special Election		House
112	KRUEGER, Robert Charles	TX	D	1993	Appointed		Senate

113	MATHEWS, Harlan	TN	D	1994	Appointed		Senate
114	FRAHM, Sheila	KS	R	1996	Appointed		Senate
115	CAPPS, Walter Holden	CA	D	1997	Death		House
116	HAYES, James Allison	LA	R	1997	Switched Parties		House
117	MARTINEZ, Matthew G.	CA	R	2001	Switched Parties		House
118	CARNAHAN, Jean	MO	D	2002	Appointed		Senate
119	KERNS, Brian D.	IN	R	2003	One term		House
120	GRUCCI, Jr., Felix J.	NY	R	2003	One term		House
121	BALLANCE, Frank W., Jr.	NC	D	2004	Resigned	Money Laundering	House
122	JANKLOW, William J.	SD	R	2004	Resigned	Manslaughter	House
123	MAJETTE, Denise L.	GA	D	2005	One term		House
124	BURNS, Max	GA	R	2005	One term		House
125	BELL, Chris	TX	D	2005	One term		House
126	CAMPBELL, Ben Nighthorse	CO	D	2005	Switched Parties		Senate
127	OBAMA, Barack	IL	D	2008	President		Senate
128	CAZAYOUX, Donald J. Jr.	LA	D	2009	Special Election		House
129	KAUFMAN, Edward E. (Ted)	DE	D	2010	Appointed		Senate
130	BURRIS, Roland	IL	D	2010	Appointed		Senate
131	DJOU, Charles	HI	R	2011	Special Election		House
132	GRIFFITH, Parker	AL	R	2011	One term		House
133	LEMIEUX, George S.	FL	R	2011	Appointed		Senate
134	SPECTER, Arlen	PA	D	2011	Switched Parties		Senate
135	ALEXANDER, Rodney	LA	D	2013	Switched Parties		House
136	COWAN, William (Mo)	MA	D	2013	Appointed		Senate
137	WALSH, John E.	MT	D	2015	Appointed		Senate
138	STRANGE, Luther Johnson, III	AL	R	2018	Appointed		Senate
139	McSALLY, Martha	AZ	R	2020	Appointed		Senate
140	HALL, Kwanza	GA	D	2021	Special Election		House
141	JONES, Gordon Douglas (Doug)	AL	D	2021	Special Election		Senate
142	BISHOP, Dan	NC	R	NA	Special Election		House

143	MURPHY, Gregory Francis	NC	R	NA	Special Election		House
144	GARCIA, Mike	CA	R	NA	Special Election		House
145	TIFFANY, Thomas P.	WI	R	NA	Special Election		House
146	JACOBS, Chris	NY	R	NA	Special Election		House
147	VAN DREW, Jefferson	NJ	R	NA	Switched Parties		House
148	VAN HOLLEN, Christopher	MD	D	NA	Election		Senate
149	BLACKBURN, Marsha	TN	R	NA	Election		Senate
150	YOUNG, Todd	IN	R	NA	Election		Senate
151	SINEMA, Kyrsten	AZ	D	NA	Election		Senate
152	DUCKWORTH, Tammy	IL	D	NA	Election		Senate
153	CRAMER, Kevin	ND	R	NA	Election		Senate
154	ROSEN, Jacklyn Sheryl	NV	D	NA	Election		Senate
155	CORTEZ MASTO, Catherine Marie	NV	D	NA	Election		Senate
156	HARRIS, Kamala Devi	CA	D	NA	Election		Senate
157	HASSAN, Margaret (Maggie)	NH	D	NA	Election		Senate
158	KENNEDY, John Neely	LA	R	NA	Election		Senate
159	SMITH, Tina	MN	D	NA	Special Election		Senate
160	HYDE-SMITH, Cindy	MS	R	NA	Special Election		Senate
161	BRAUN, Michael	IN	R	NA	Election		Senate
162	HAWLEY, Joshua David	MO	R	NA	Election		Senate
163	ROMNEY, Willard Mitt (Mitt)	UT	R	NA	Election		Senate
164	SCOTT, Richard Lynn (Rick)	FL	R	NA	Election		Senate

Appendix B

This appendix includes the roll calls omitted from analysis by WNOMINATE. It also includes the motions to which these roll calls pertained to as well as the voting tallies. These tallies show the votes are all unanimous or near-unanimous.

#	Congress	Roll #	Chamber	Year	Yeas	Nays	Related Bill	Motion
1	91	98	Senate	1969	86	0	HR4148	On passage
2	91	19	House	1969	392	1	HR4148	On passage
3	91	77	House	1969	332	0	HR12085	On passage
4	91	345	Senate	1970	80	0	HR4148	Conference report
5	91	454	Senate	1970	77	0	HR17923	Amendment
6	91	458	Senate	1970	75	3	HR17923	Amendment
7	91	538	Senate	1970	64	0	HR18260	On passage
8	91	543	Senate	1970	73	0	HR17255	On passage
9	91	212	House	1970	358	0	HR4148	Conference report
10	91	256	House	1970	287	7	HJRES1117	On passage
11	91	268	House	1970	375	1	HR17255	On passage
12	91	277	House	1970	314	1	S2315	On passage
13	91	278	House	1970	339	0	HR11833	On passage
14	91	323	House	1970	358	0	S1933	On passage
15	91	357	House	1970	310	0	S1933	Conference report
16	92	258	Senate	1971	92	0	S2770	Amendment
17	92	261	Senate	1971	86	0	S2770	On passage
18	92	368	Senate	1971	73	0	HR97278	On passage
19	92	120	House	1971	325	0	HR9093	On passage
20	92	168	House	1971	305	3	HR9727	On passage
21	92	563	Senate	1972	68	0	S3507	On passage
22	92	594	Senate	1972	77	0	S1478	On passage
23	92	716	Senate	1972	88	2	S2871	On passage

24	92	867	Senate	1972	71	0	HR10729	On passage
25	92	908	Senate	1972	74	0	S2770	Conference report
26	92	339	House	1972	361	8	HR7088	On passage
27	92	340	House	1972	352	7	HR12186	On passage
28	92	341	House	1972	340	7	HR12741	On passage
29	92	446	House	1972	314	0	HR10310	Suspension of rules
30	92	447	House	1972	312	5	HR14731	Suspension of rules
31	92	518	House	1972	325	2	HR5741	Suspension of rules
32	92	519	House	1972	332	1	HR11300	Suspension of rules
33	93	313	Senate	1973	92	0	S1983	On passage
34	93	470	Senate	1973	83	2	S2589	Amendment
35	93	565	Senate	1973	85	0	S2772	On passage
36	93	166	House	1973	389	4	HRES434	On passage
37	93	168	House	1973	399	4	HR5464	On passage
38	93	32	House	1973	392	2	HR5446	On passage
39	93	34	House	1973	387	1	HR5445	On passage
40	93	368	House	1973	376	2	HR10088	On passage
41	93	505	House	1973	349	8	HR11450	Amendment
42	93	531	House	1973	355	4	S1983	Conference report
43	93	81	House	1973	370	1	HR5451	Suspension of rules
44	93	696	House	1974	396	3	HR13221	Suspension of rules
45	94	482	Senate	1975	89	0	HR8841	On passage
46	94	268	House	1975	400	0	HR5608	Suspension of rules
47	94	412	House	1975	369	0	HRES734	Rule
48	94	414	House	1975	325	2	HR8841	Committee of the Whole
49	94	89	House	1975	370	5	HR3130	Suspension of rules
50	94	1077	Senate	1976	83	1	S3219	Amendment
51	94	1273	Senate	1976	74	0	HR15445	On passage
52	94	976	Senate	1976	85	1	S2150	Amendment
53	94	1069	House	1976	382	2	HRES1430	Rule

54	94	1234	House	1976	374	0	HRES1553	Rule
55	94	1235	House	1976	367	8	HR14496	On passage
56	94	777	House	1976	360	0	HR5523	Suspension of rules
57	94	778	House	1976	362	0	HR11505	Suspension of rules
58	94	789	House	1976	392	3	HR12234	On passage
59	94	853	House	1976	339	5	HR9560	On passage
60	95	185	Senate	1977	90	1	S252	Amendment
61	95	336	Senate	1977	96	0	HR3199	On passage
62	95	198	House	1977	402	9	HR6206	Suspension of rules
63	95	214	House	1977	384	4	HR5493	Suspension of rules
64	95	230	House	1977	395	2	S1279	Suspension of rules
65	95	260	House	1977	383	1	HRES589	Rule
66	95	261	House	1977	369	1	HR6161	Committee of the Whole
67	95	265	House	1977	380	1	HR6161	Committee of the Whole
68	95	587	House	1977	388	2	HRES798	Rule
69	95	607	House	1977	359	1	HR4297	On passage
70	95	703	House	1977	326	6	HRES935	Rule
71	95	704	House	1977	346	2	HR3199	Conference report
72	95	858	Senate	1978	2	87	S2899	Amendment
73	95	1053	House	1978	344	1	HR188	Suspension of rules
74	95	871	House	1978	380	5	HR10730	Suspension of rules
75	95	923	House	1978	384	5	HR11302	Committee of the Whole
76	96	523	House	1979	358	0	HR595	Conference report
77	96	600	House	1979	333	0	HRES473	Rule
78	96	601	House	1979	328	1	HRES416	Rule
79	96	762	Senate	1980	93	0	S2725	On passage
80	96	828	Senate	1980	83	0	S2189	Amendment
81	96	1147	House	1980	244	0	HR6865	Ordering a second
82	96	1170	House	1980	307	1	HR7020	Committee of the Whole
83	96	728	House	1980	384	2	HRES579	Rule

84	97	331	Senate	1981	89	1	HR4035	Amendment
85	97	101	House	1981	412	4	HR3520	Conference report
86	97	251	House	1981	392	5	HR3403	Committee of the Whole
87	97	252	House	1981	410	2	HR3403	On passage
88	97	265	House	1981	382	4	HR4503	Committee of the Whole
89	97	46	House	1981	322	3	HR3520	Suspension of rules
90	97	668	Senate	1982	76	0	S1210	On passage
91	97	554	House	1982	301	2	HRES528	Rule
92	97	624	House	1982	394	7	HR6323	Amendment
93	97	673	House	1982	342	8	HRES555	Rule
94	97	713	House	1982	370	1	HR3809	Committee of the Whole
95	97	722	House	1982	333	4	HR3809	Committee of the Whole
96	97	734	House	1982	345	6	HR3809	Committee of the Whole
97	98	567	Senate	1984	93	0	HR2867	On passage
98	98	520	House	1984	378	0	HR2899	Rule
99	98	521	House	1984	362	9	HR2899	On passage
100	98	598	House	1984	412	4	HR4585	Suspension of rules
101	98	599	House	1984	416	0	HJR537	Suspension of rules
102	98	824	House	1984	391	0	HR5640	Amendment
103	98	855	House	1984	398	0	HRE579	Rule
104	99	126	Senate	1985	94	0	S1128	On passage
105	99	400	House	1985	378	0	HR1083	Suspension of rules
106	99	487	Senate	1986	94	0	S124	Conference report
107	99	728	Senate	1986	96	0	S1128	Conference report
108	99	744	House	1986	416	4	HR2631	Suspension of rules
109	99	806	House	1986	329	4	HR2482	On passage
110	99	807	House	1986	390	4	HR5369	Suspension of rules
111	99	873	House	1986	408	0	S1128	Conference report
112	100	455	House	1987	343	0	HR1467	Rule
113	100	7	House	1987	406	8	HR1	On passage

114	100	466	Senate	1988	82	1	TREATYDOC100	Ratification
115	100	467	Senate	1988	83	0	TREATYDOC100	Ratification
116	100	673	Senate	1988	78	0	S675	Motion to proceed
117	100	691	Senate	1988	93	2	HR1467	On passage
118	100	720	Senate	1988	97	0	S2030	On passage
119	100	654	House	1988	407	0	HR4365	Suspension of rules
120	100	876	House	1988	417	0	HR5430	Suspension of rules
121	100	877	House	1988	415	2	HR4210	Suspension of rules
122	100	886	House	1988	419	0	S2800	Suspension of rules
123	101	168	Senate	1989	99	0	S686	On passage
124	101	335	House	1989	375	5	HR1465	On passage
125	101	315	Senate	1990	95	2	S1630	Amendment
126	101	317	Senate	1990	100	0	S169	On passage
127	101	341	Senate	1990	97	0	S1630	Amendment
128	101	348	Senate	1990	98	0	S1630	Amendment
129	101	379	Senate	1990	96	0	HR4404	Amendment
130	101	518	Senate	1990	99	0	HR1465	Conference report
131	101	576	Senate	1990	98	0	HR2061	On passage
132	101	492	House	1990	416	0	HR3030	Amendment
133	101	493	House	1990	411	5	HR3030	Amendment
134	101	671	House	1990	360	0	HR1465	Conference report
135	101	717	House	1990	407	7	HR5254	Suspension of rules
136	102	57	Senate	1991	97	0	TREATYDOC1017	Ratification
137	102	299	Senate	1992	96	0	S2166	Amendment
138	102	431	Senate	1992	89	2	S2877	On passage
139	102	823	House	1992	403	3	HR2194	Conference report
140	103	430	House	1993	425	0	HR2961	Suspension of rules
141	103	528	Senate	1994	97	1	S729	On passage
142	103	1012	House	1994	368	5	HR4308	Suspension of rules
143	103	826	House	1994	355	0	HR518	Amendment

144	104	588	Senate	1995	99	0	S1316	On passage
145	104	302	House	1995	414	4	HRES140	Rule
146	104	827	House	1995	412	0	HR2243	Suspension of rules
147	104	876	Senate	1996	98	0	S1316	Conference report
148	104	993	House	1996	407	0	HR1965	Suspension of rules
149	105	154	House	1997	407	1	HR1420	Suspension of rules
150	105	246	House	1997	399	8	HR1658	Suspension of rules
151	105	288	House	1997	416	6	HR765	Suspension of rules
152	105	418	House	1997	419	1	HR1420	Suspension of rules
153	106	583	Senate	2000	99	0	HR4578	Amendment
154	106	1119	House	2000	411	0	HRES610	Rule
155	106	1136	House	2000	407	1	HR34	Suspension of rules
156	106	713	House	2000	423	2	HR3671	On passage
157	106	728	House	2000	420	5	HR2328	On passage
158	106	729	House	2000	418	7	HR3039	On passage
159	106	743	House	2000	420	0	S1744	Suspension of rules
160	106	746	House	2000	418	6	HR2957	On passage
161	106	750	House	2000	416	5	HR1106	On passage
162	106	751	House	2000	411	7	HR673	On passage
163	106	786	House	2000	413	3	HR701	Recommit
164	106	844	House	2000	390	1	HR3535	Suspension of rules
165	106	851	House	2000	421	1	HR4435	Suspension of rules
166	107	237	Senate	2001	100	0	HR2311	Amendment
167	107	247	Senate	2001	96	0	HR2299	Amendment
168	107	87	Senate	2001	99	0	S350	On passage
169	107	158	House	2001	418	6	HR1157	On passage
170	107	588	House	2002	396	6	HR3958	Suspension of rules
171	107	755	House	2002	375	0	HR3937	Suspension of rules
172	107	789	House	2002	340	9	HR4609	Suspension of rules
173	107	888	House	2002	377	0	HR3880	Suspension of rules

174	108	168	House	2003	413	2	HR866	Suspension of rules
175	108	632	House	2003	419	0	HR1006	Suspension of rules
176	108	68	House	2003	424	0	HR417	Suspension of rules
177	108	69	House	2003	414	6	HR699	Suspension of rules
178	108	748	House	2004	401	10	HR2408	Suspension of rules
179	109	145	Senate	2005	92	1	HR6	Amendment
180	109	224	Senate	2005	92	0	SJRES20	Sense of Congress
181	109	79	House	2005	431	1	HR1270	Suspension of rules
182	109	1026	House	2006	366	1	HR2563	Suspension of rules
183	109	1062	House	2006	358	4	S1496	Suspension of rules
184	110	123	House	2007	425	0	HR569	Recommit
185	110	128	House	2007	427	0	HR700	Recommit
186	110	77	House	2007	426	2	HR365	Suspension of rules
187	110	1331	House	2008	411	10	HR5501	Amendment
188	110	1544	House	2008	364	0	HRES1114	Suspension of rules
189	110	1570	House	2008	411	0	HCONRES318	Suspension of rules
190	110	1588	House	2008	406	0	S2146	Suspension of rules
191	110	1840	House	2008	411	9	HR6460	Suspension of rules
192	110	1844	House	2008	393	5	S906	Suspension of rules
193	111	123	House	2009	391	10	HRES224	Suspension of rules
194	111	159	House	2009	413	2	HR1404	Amendment
195	111	199	House	2009	419	0	HR1145	Amendment
196	111	256	House	2009	428	0	HR2187	Amendment
197	111	548	House	2009	400	0	HR2188	Suspension of rules
198	111	743	House	2009	418	1	HR1053	Suspension of rules
199	111	77	House	2009	420	0	HRES83	Suspension of rules
200	111	1077	House	2010	375	1	HRES1079	Suspension of rules
201	111	1339	House	2010	410	0	S3473	Suspension of rules
202	111	1341	House	2010	360	0	HRES1409	Suspension of rules
203	111	1367	House	2010	420	1	HR5481	Suspension of rules

204	111	1402	House	2010	412	0	HRES1460	Suspension of rules
205	111	1461	House	2010	416	0	HRES1543	Suspension of rules
206	111	989	House	2010	379	0	HRES1002	Suspension of rules
207	113	117	Senate	2013	95	0	S601	Amendment
208	113	559	House	2013	417	3	HR3080	On passage
209	113	612	House	2013	384	0	HR3588	Suspension of rules
210	113	1174	House	2014	410	7	HR3572	Suspension of rules
211	113	1193	House	2014	416	0	S1000	Suspension of rules
212	114	10	Senate	2015	98	1	S1	Amendment
213	114	87	Senate	2015	99	0	SCONRES11	Amendment
214	114	376	House	2015	398	1	HR2576	Suspension of rules
215	114	1217	House	2016	423	1	HR5620	Amendment
216	114	767	House	2016	416	2	HR4470	Suspension of rules
217	114	972	House	2016	360	7	HR1815	Suspension of rules
218	115	648	House	2017	409	8	HR3017	On passage
219	115	550	Senate	2018	99	1	S3021	On passage
220	115	810	House	2018	392	6	HR4465	Suspension of rules
221	116	687	House	2019	409	7	HR2548	Suspension of rules
222	116	920	House	2020	395	4	HR4611	Suspension of rules

Appendix C

This appendix lists the number of roll calls analyzed by WNOMINATE as well as the number of roll calls dropped per Congress from the 91st Congress (1969-70) to the 116th Congress (2019-20).

		House			Senate		
#	Congress	Analyzed	Dropped	Total	Analyzed	Dropped	Total
1	91	3	9	12	8	6	14
2	92	29	9	38	23	8	31
3	93	19	9	28	18	3	21
4	94	52	11	63	30	4	34
5	95	32	13	45	26	3	29
6	96	26	6	32	21	2	23
7	97	25	11	36	13	2	15
8	98	24	6	30	5	1	6
9	99	23	5	28	9	3	12
10	100	15	6	21	10	5	15
11	101	28	5	33	25	8	33
12	102	10	1	11	11	3	14
13	103	18	3	21	12	1	13
14	104	60	3	63	24	2	26
15	105	27	4	31	14	0	14
16	106	33	12	45	12	1	13
17	107	13	5	18	7	3	10
18	108	8	5	13	13	0	13
19	109	17	3	20	10	2	12
20	110	40	9	49	5	0	5
21	111	36	14	50	14	0	14
22	112	146	0	146	13	0	13
23	113	94	4	98	7	1	8

24	114	126	4	130	23	2	25
25	115	78	2	80	5	1	6
26	116	48	2	50	3	0	3

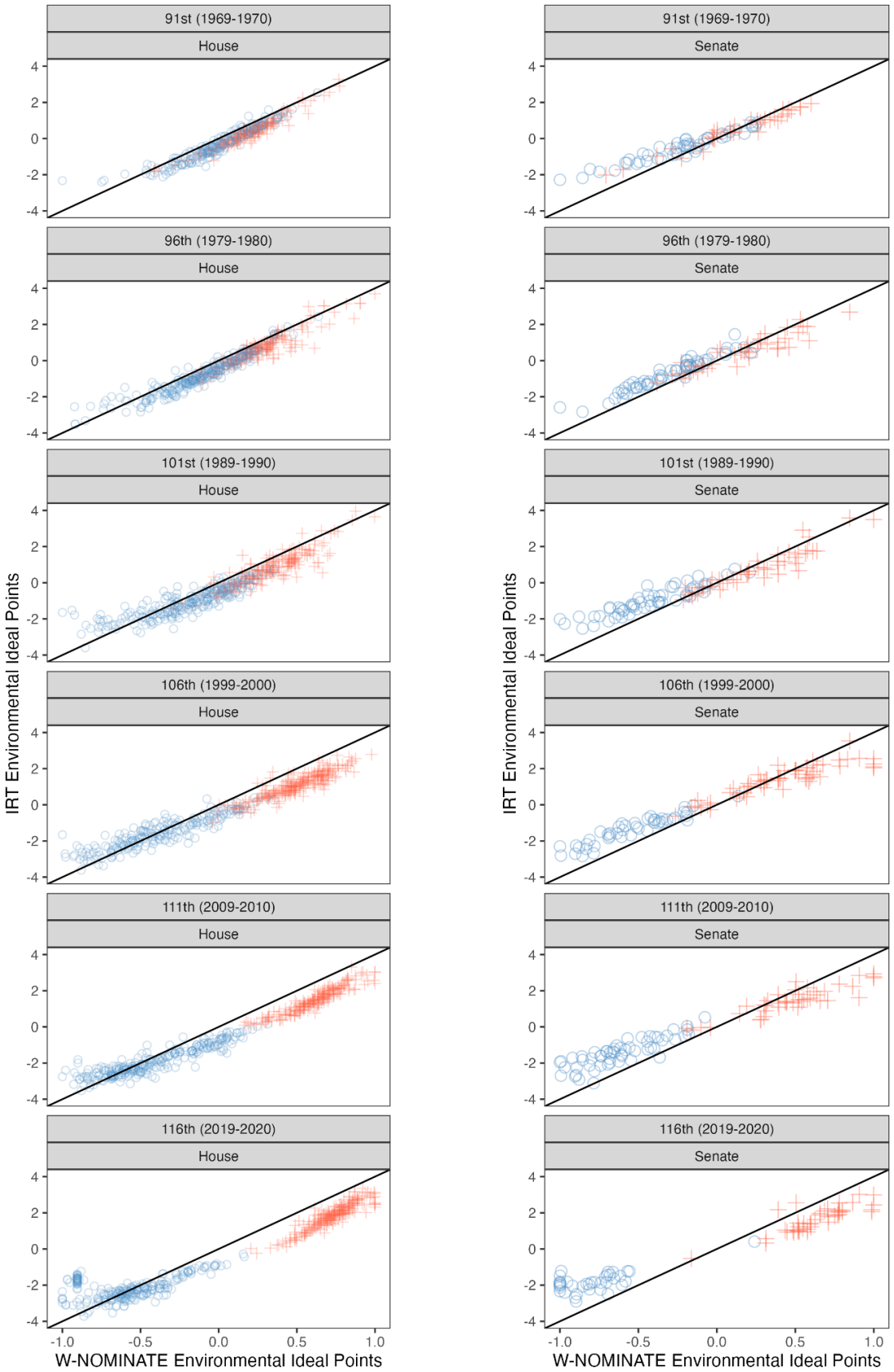
Appendix D

This appendix lists the thirteen roll calls tracked by the League of Conservation Voters (LCV) in the Senate in 2020.

#	Year	Roll Call	Vote Name	Issues
1	2020	14	USMCA Trade Deal	Climate Change, Other
2	2020	36	Brasher Confirmation (Eleventh Circuit Court of Appeals)	Judiciary
3	2020	41	Kindred Confirmation (U.S. District Court for the District of Alaska)	Judiciary
4	2020	60	MacGregor Confirmation (Interior Deputy Secretary)	Dirty Energy, Climate Change, Lands/Forests, Oceans, Drilling, Wildlife
5	2020	72	Danly Confirmation (Federal Energy Regulatory Commission)	Dirty Energy, Clean Energy, Climate Change
6	2020	118	Defeating Effort to Derail the Great American Outdoors Act	Lands/Forests
7	2020	121	Great American Outdoors Act	Lands/Forests
8	2020	123	Walker Confirmation (D.C. Circuit Court of Appeals)	Judiciary
9	2020	125	Wilson Confirmation (Fifth Circuit Court of Appeals)	Judiciary
10	2020	126	Inadequate Policing Reform	Judiciary, Other
11	2020	168	Inadequate COVID Relief Package	Other
12	2020	222	Barrett Cloture Vote (Supreme Court)	Judiciary
13	2020	224	Barrett Confirmation (Supreme Court)	Judiciary

Appendix E

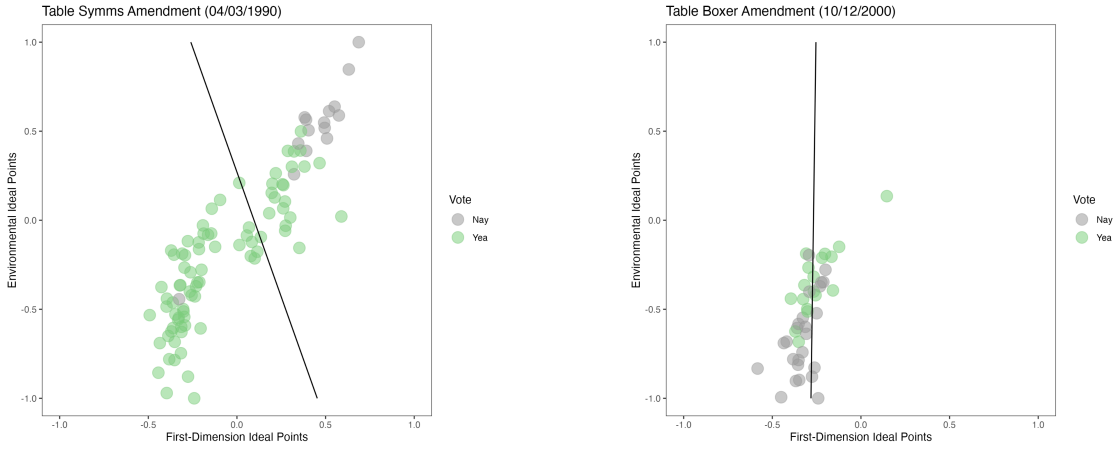
This appendix includes the results of applying a one-dimensional dynamic IRT model to the environmental roll calls I collected. This is the same method used in Bergquist and Warshaw (2020). As the figure below shows, the correlation between legislators' ideal point estimates calculated by dynamic IRT and by WNOMINATE is quite strong. In later Congresses, there is a tendency for Republicans and Democrats in the House to appear below the 135-degree line, which indicates WNOMINATE possibly overestimated legislators' conservatism. In the Senate, the trend holds for Republicans. In contrast, Democrats appear above the 135-degree line, which indicates WNOMINATE possibly overestimated the liberalism of Senate Democrats. For the most part, however, the two measures are in agreement on which legislators to class as centrists and as extremists. Although the IRT estimates provide slightly less polarized scores than the WNOMINATE estimates, general agreement on how to group legislators as well as strong correlations do not suggest IRT estimates wield an overwhelming advantage over WNOMINATE estimates.


91st (1969-1970)
House
96th (1979-1980)
House
101st (1989-1990)
House
106th (1999-2000)
House
111th (2009-2010)
House
116th (2019-2020)
House
91st (1969-1970)
Senate
96th (1979-1980)
Senate
101st (1989-1990)
Senate
106th (1999-2000)
Senate
111th (2009-2010)
Senate
116th (2019-2020)
Senate
IRT Environmental Ideal Points
W-NOMINATE Environmental Ideal Points
4
2
0
-2
-4
-1.0
-0.5
0.0
0.5
1.0

Appendix F

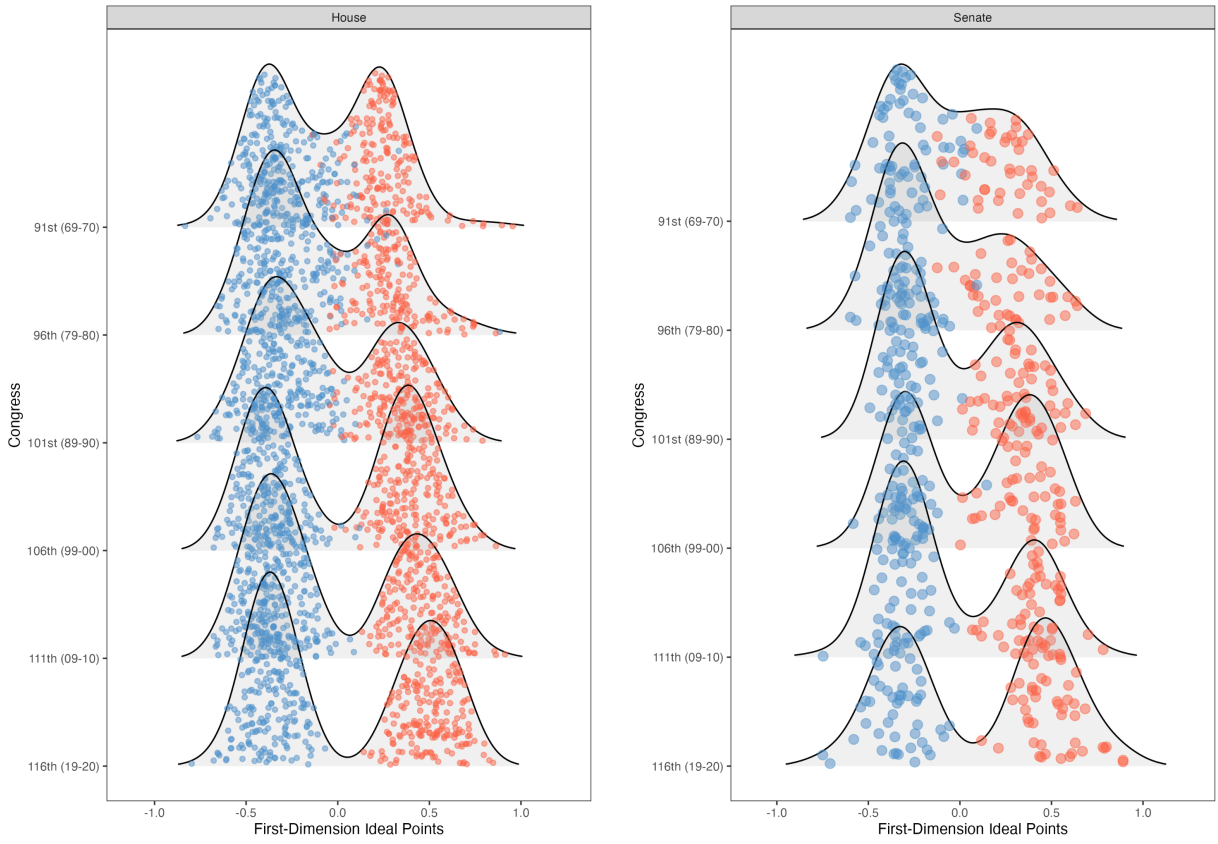
This appendix includes figures showing roll calls in which the first dimension rather than the environmental dimension appears to be more effective in sorting legislators' votes. The first figure plots the ideal point estimates in the first dimension and the environmental dimension for all senators in the 101st Congress (1989-90). The vote was on a motion to table the Symms amendment, which would grant communities local control on whether plants had to abide by EPA emission standards. Although the environmental dimension appears slightly present, which is indicated by the slantedness of the line, senators' votes are best separated along the first dimension.

The second figure clearly shows the first dimension is the primary dimension as the line is close to vertical. The figure plots the ideal point estimates in the first dimension and the environmental dimension for all Democratic senators in the 106th Congress (1999-00). The vote was on a motion to table the Boxer amendment, which sought to strike policy riders that delayed the EPA from implementing standards on arsenic in drinking water.



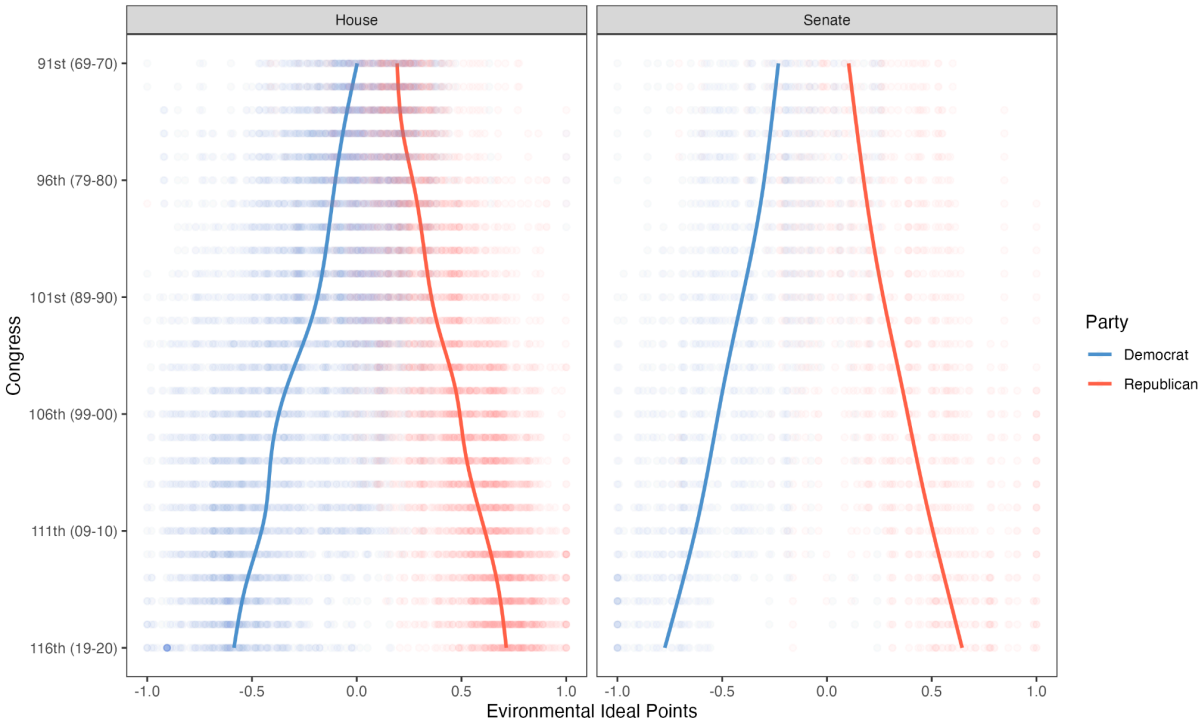
Appendix G

This appendix includes plots of the distributions of the first-dimension ideal point estimates of Democrats and Republicans in both chambers in each decennial Congress following the 91st Congress (1969-70). Note unimodality is not present in earlier Congress. Rather, starting in the 91st Congress, the distributions of first-dimension ideal point estimates already display bimodal tendencies.



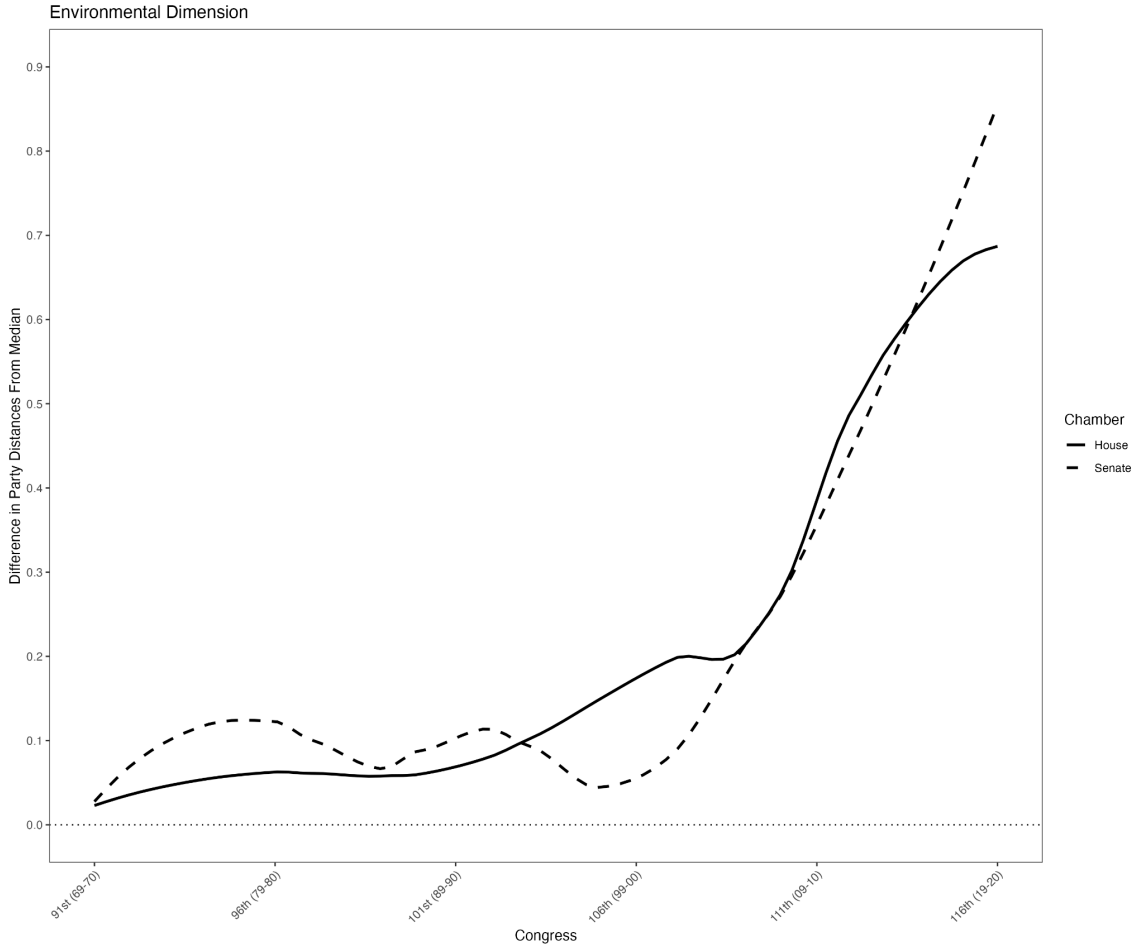
Appendix H

This appendix plots the averages of the environmental ideal points estimates of Democrats and Republicans in both chambers from the 91st Congress (1969-70) to the 116th Congress (2019-20). It is well-known that general polarization developed asymmetrically (Hacker and Pierson 2005 Mann and Ornstein 2012; Russell 2018). In contrast, as the figure shows, environmental polarization developed symmetrically. *Both* parties drifted away from the median in similar increments over time.



Further inspection, however, reveals the symmetricality of polarization is diminishing. In the figure below, I plot a measure of symmetricality, which is estimated by taking the absolute difference between the respective distances of the party averages on environmental policy from the floor median. If both parties are equidistant from the median, the difference should be zero. The higher the value of the difference, then the more asymmetricality there is. For the sake of simplicity, I take the absolute

difference to show simply that there is more asymmetricality. Future study should explore whether the changes observed in the figures below correspond to actual changes or if they are a result of estimation errors or improper analysis (i.e., my method of taking the absolute difference between the distances of both parties from the median). If the results are valid, it would be important to investigate where the asymmetry is coming from.



Appendix I

This appendix breaks down all roll calls analyzed by WNOMINATE by motion or request. I used data from Voteview. Especially in earlier Congresses, roll calls were not categorized into a specific motion or request. To remedy this, I hand-coded the motion or request using the general descriptions provided for all roll calls. Similarly, if the result of the voting outcome was not available, then I hand-coded the result according to the voting tally and the voting threshold required for the motion or request to pass. In the cases where the votes were split very narrowly or were even and I lacked any additional information, I categorized the outcome as indeterminate. For more information on what each of these motions or requests are intended for, see Davis (2023).

#	Motion or Request	# of Roll Calls	Passed	Failed	Indeterminate
1	On the amendment	811	264	537	10
2	On passage of the bill	235	235	0	0
3	Suspend the rules and pass or agree	179	161	18	0
4	On the motion table	98	82	13	3
5	On agreeing to the rule	81	80	1	0
6	On the motion to recommit	58	4	54	0
7	On the previous question	44	44	0	0
8	On agreeing to the conference report	34	34	0	0
9	Reconciliation or waiver of other statutes	20	7	13	0
10	Invoking cloture	13	6	7	0
11	Sense of Congress	12	10	2	0
12	On the motion to concur	7	3	3	1
13	On the motion to proceed	7	4	3	0
14	Overriding veto	5	4	1	0
15	On motion to instruct to conferees	3	3	0	0

16	On ratification (treaty)	3	3	0	0
17	On the motion to reconsider	2	2	0	0
18	On the motion to commit	1	0	1	0

Appendix J

In this appendix, I list the thirty-six roll calls on rules setting forth the consideration, amending process, and passage of environmental policy bills. I rely on the House Rules data from the Bipartisan Policy Center, which codes rules into one of three options: open, restricted, or closed (Wolfensberger 2022). Open rules allow any legislator to offer germane amendments in the Committee of the Whole under the five-minute rule. A restricted rule limits the scope of the amendments that can be offered as specified in the rule. Closed rules essentially eliminate the option of considering amendments.

#	Congress	Roll #	Chamber	Related Bill	Type
1	112	1025	House	HRES566	Restricted
2	112	1100	House	HRES614	Restricted
3	112	229	House	HRES203	Restricted
4	112	461	House	HRES316	Restricted
5	112	463	House	HRES316	Restricted
6	112	561	House	HRES347	Restricted
7	112	720	House	HRES406	Restricted
8	112	742	House	HRES419	Open
9	112	789	House	HRES431	Restricted
10	112	899	House	HRES487	Restricted
11	113	1097	House	HRES693	Restricted
12	113	1160	House	HRES756	Restricted
13	113	1185	House	HRES770	Closed
14	113	554	House	HRES385	Restricted
15	113	573	House	HRES403	Restricted
16	113	645	House	HRES455	Restricted
17	113	733	House	HRES497	Restricted
18	114	116	House	HRES138	Restricted

19	114	180	House	HRES231	Not listed in dataset
20	114	738	House	HRES583	Not listed in dataset
21	114	807	House	HRES635	Closed
22	114	934	House	HRES742	Closed
23	114	974	House	HRES767	Restricted
24	115	1047	House	HRES1001	Not listed in dataset
25	115	1125	House	HRES1142	Closed
26	115	197	House	HRES229	Closed
27	115	203	House	HRES233	Not listed in dataset
28	115	271	House	HRES348	Restricted
29	115	382	House	HRES451	Restricted
30	115	640	House	HRES631	Closed
31	115	804	House	HRES762	Closed
32	115	881	House	HRES879	Restricted
33	115	93	House	HRES123	Closed
34	116	172	House	HRES329	Restricted
35	116	702	House	HRES779	Restricted
36	116	912	House	HRES1161	Not listed in dataset

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