Two Decades of Polarization in American State Legislatures*

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Abstract

One of the most robust findings in American politics is the decades-long trends in the level of elite partisan polarization. Among the most consequential of these trends has been that of state legislators. Polarization among these officials has had significant ramifications for political representation, policy making, and the workings of the US federal system. In this paper, we update the analysis of Shor and McCarty (2011) with comprehensive data from 1996-2020 for the state legislatures of all fifty states. We extend the analysis of state legislative polarization back to 1977 for a select set of states. These updates reinforce our earlier findings about the pervasiveness of polarization and its links to national trends. The new data also highlight features of polarization that appear unique to the states. While the polarization US Congress has been characterized by an asymmetric pattern of GOP movement to the right, the predominant asymmetry in the states is one characterized by Democratic movement to the left. Additionally, we discuss the burgeoning literature on evaluating the causes of polarization using our measures as well that identifying its consequences.

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1 Introduction

Few developments in American politics has been as consequential as the rising levels of elite polarization the nation has experienced over the past 40 years. The dramatic increase in the ideological differentiation of the parties and extreme partisanship has reshaped almost all aspects of our constitutional order including the link between citizens and government, the capacity of the government to function, and the very legitimacy of electoral democracy. Notably, all levels of government have been inflicted by this increased polarization. The polarization of state legislatures has been especially consequential. Using a combination of newly acquired roll call votes from state legislatures and a candidate survey, Shor and McCarty (2011) provide clear evidence that state legislatures have been polarizing rapidly since the mid-1990s.[1] Although there was significant variation in the levels and trends of polarization across states, many states exhibited higher levels and faster growth than the US House and Senate. And just as it has in Congress, partisan conflict within state legislatures has become a central feature of policy making. Examples are easy to come by: abortion policies in Texas, collective bargaining in Wisconsin, or the expansion of Medicaid in the states under the Affordable Care Act.[2]

Like much of the literature on elite polarization, the findings about state legislative polarization are generally based on measures of positions on the liberal-conservative continuum as revealed through roll call voting.[3] Though various techniques for measuring the ideological positions or "ideal points" of legislators have been developed, they all produce very similar findings. By convention, larger estimated scores represent more conservative positions. The simplest way to understand these statistical models is that it associates a conservative position for legislators who vote often with conservatives and never with liberals. Liberals are those who vote with other liberals and never with conservatives whereas moderates are those who votes with both liberals and conservatives.[4] From these individual level scores, various measurements of polarization can be constructed. In this piece, we focus on the differences in median ideal points across parties.[5]

The phenomenon of the state-level polarization is intrinsically important, but the data on state legislative ideal points have proved useful for evaluating the proposed reforms designing to mitigate polarization or its consequences at all levels. A robust literature using the state legislative data to test the effects various

[1] See also Shor, Berry and McCarty (2010); Shor and McCarty (2011); Shor (2014, 2015).

[2] See Shor (2018) on the latter. For a review of the policy effects of polarization at the Federal level, see McCarty, Poole and Rosenthal (2013) and McCarty (2021).

[3] See for example, Poole and Rosenthal (1997); McCarty, Poole and Rosenthal (2006); Theriault (2008).

[4] See McCarty (2019) for a more extensive discussion of the measurement.

[5] Scholars have used other measures as well, such as the "overlap" between the parties which measures how many Democrats are more conservative than the most liberal Republican. A lower overlap score means less polarization. Another alternative is the standard deviation of scores within a chamber. The use of medians is the most conservative measure as it is the least influenced by party outliers, those legislators with positions atypical of their party. The difference in means is influenced both by extreme and moderate party outliers, while the overlap measure is greatly influenced by moderate outliers (a single conservative Democrat can make the party overlap score large). Still, nearly every method designed to measure polarization is highly correlated with every other method, increasing our confidence in the validity of our measures. Aldrich and Battista (2002) find very high correlations as well.

electoral institutions on polarization has emerged, including work on primary elections (McGhee et al. 2014; Kousser, Phillips and Shor 2016), redistricting reform (Kousser, Phillips and Shor 2016; McCarty et al. 2018), and campaign finance reform (Barber 2016; Hall 2014, 2016; La Raja and Schaffner 2015).[6]

Data on state legislative ideal points and polarization is also useful for testing theories of policy making and examining the effects of polarization on legislative performance and public opinion. For example, Caughey, Xu and Warshaw (2017) find that polarization increases the effect of partisanship on state policy outcomes.[7] Birkhead (2016) finds that polarization leads to budgetary delays. Hicks (N.d.) finds that polarization affects state legislative capacity. Banda and Kirkland (2018) find that polarization leads to public distrust of legislative institutions.

Given the usefulness of state legislative ideal point data in the study of polarization, representation, and policy making, we have continued to update our data to the present and extend it backward where feasible. Such additions allow us to understand contemporary developments in party politics, their effects on state governance and federalism, and to get a better sense of the origins of state-level polarization in the 1970s and 1980s. This paper provides an update to our earlier work highlighting both contemporary developments and longer historical trajectories.

The paper is organized as follows. Section 2 describes our original data and estimation procedures and provides information about recent updates. In section 3, we provided updated evidence on the trends and levels of legislative polarization and how that vary across states. In section 4, we provide new estimates of polarization for the past 40 years in a handful to states that show that the trajectory and timing of polarization in the states roughly matches that of the US Congress. In the next three sections we apply our updated estimates to a variety of substantive issues in the study of legislative polarization. In section 5, we consider whether polarization at the state-level matches the GOP-led asymmetric polarization at the national level. As we show, the state-level data do not exhibit the same asymmetry. In fact, the Democrats have moved to the left in states at a slightly faster clip than the Republicans have moved to the right. In section 6, we reexamine the correlation between legislative polarization and polarization among voters. We find that the association between legislative polarization and the polarization of voters across and within districts have both increased in the last decade. Section 7 establishes that polarization within states has been complemented by increased heterogeneity across states. This finding is consistent with findings of increased diversity in state policy outcomes as well as increased conflict between the states and the federal government. Section 8 concludes.

[6] McCarty and Shor (2016) provides an overview.

[7] However, see Anzia and Moe (2017) for an alternative perspective in the context of punlic pensions.

2 Data

Prior to Shor and McCarty (2011), measurement of state legislative ideal points and polarization was hindered in two ways: the lack of data on roll call voting records and the inability to comparing voting patterns across states. To address the first problem, we downloaded or purchased copies of the legislative journals of all 50 states, originally covering the period from 1996 to 2006. The hard copies of these journals were disassembled, photocopied, and scanned. These scans were converted to text using optical character recognition software. To convert the raw legislative text to roll call voting data, we developed dozens of data-mining scripts. Because the format of each journal is unique, a script had to be developed for each state and each time a state changed its publication format. The original data included 16,732 unique state legislators and 1,378 chamber-years of data across the 50 states.

In recent years, the availability of state legislative journals and roll calls online has increased substantially. Projects such the OpenStates initiative and Legiscan have aggregated these electronic archives to increase the accessibility of roll call voting data. Our continued efforts supplemented with these new data sources have allowed us to extend our analysis through the legislative sessions of 2020. Currently, our data covers 27,080 unique state legislators (a 62% increase), with more than 2,688 chamber-state-years (a 95% increase).[8] The aggregate and legislator level data is available for download online.[9]

The second constraint on the study of state-level polarization is the lack of comparability of voting indices across states. In general, the ideal points of two legislators are comparable only if we can observing them voting on the same issues.[10] But two legislators from different states rarely cast votes on exactly the same issue. Thus, to make comparisons across states we use a survey of federal and state legislative candidates that asks similar questions across states and across time. The National Political Awareness Test (NPAT) is administered by the nonpartisan Project Vote Smart to serve as voter guides.[11]

We process the raw NPAT data by merging substantially identical questions and disambiguating unique respondents across states and time. Our updated data includes nearly 6,000 state legislators who comprehensively answered a Project Votesmart NPAT survey and subsequently served in office. The distribution of NPAT response rates across states is included in the appendix.[12]

Then, by combining the data on roll call votes with the processed NPAT survey data from 1996 to 2018,

[8] The larger increase for the latter reflects the long tenures of state legislators and our increased success in obtaining historical roll call data.

[9] See http://www.americanlegislatures.com.

[10] An exception to this rule is that if legislators have consistent positions over time, we can compare two legislators so long as they both have voted on the same issues as a third legislator.

[11] NPAT was later renamed the Political Courage Test (PCT), but we use the original moniker for consistency.

[12] See Figure 24.

we generate universal coverage of state legislators who have served in the states for which we have the roll call data. As in our earlier work, we take a two-step approach. After estimating roll call-based ideal points for all legislators in each state, we project them into the space of NPAT ideal points using OLS. The fitted values of these regressions generate predicted NPAT scores for the non-respondents.[13] Note that each state has its own specific mapping parameters. This allows us to map ideology from the idiosyncratic roll call space of each state into a comparable NPAT common space. It is important to note that the primary source of within-state variation is that provided by the roll call ideal points.

To validate our measures, there are a number of concerns that we must address. First, a key concern for using NPAT surveys in cross-state research is whether its samples are ideologically representative of the universe of state legislators. This is less a concern for our method, because our Monte Carlo work suggests that the sample of bridge actors or issues need not be representative, just as OLS does not require the independent variables to be drawn from a representative sample (Shor, McCarty and Berry 2008). Our procedure, however, allows us to assess how ideologically representative NPAT respondents are. In Figure 1, we plot the average ideal points for NPAT respondents and non-respondents by state. In those states above the 45° line, the respondents are more conservative than the non-respondents from that state. But with few exceptions, the states lie close to the line. Figure 2 repeats this analysis at the state-party level. Again the correlations are quite high and respondents differ significantly from their non-respondent co-partisans in very few states.[14]

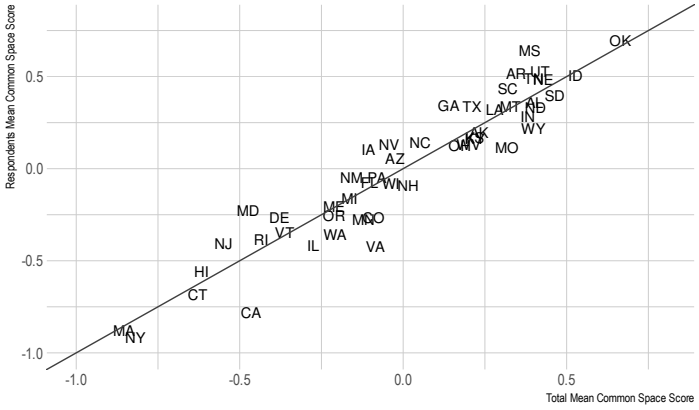


Figure 1: *Within-state scatterplot. Above the 45° line, NPAT respondents are more conservative than the state legislatures they come from; below the line, more liberal.*

Figures 3 plots the distribution of correlations and p-values for roll call ideal points and survey-only ideal

[13] Projection of the ideal points into the NPAT space is simply a matter of convenience. We could also project the results into any of the roll call ideal point spaces (such the U.S. House). But this would involve an additional set of regressions which would induce more error.

[14] For an independent assessment of the validity of our measures, see Remmel and Mondak (2020).

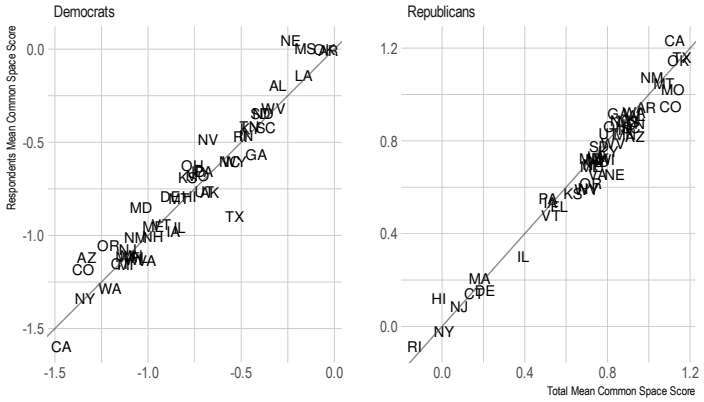


Figure 2: *Within-state, within-party scatterplot. Above the 45° line, NPAT respondents are more conservative than the state legislatures they come from; below the line, more liberal.*

points by state. All in all the results confirm that the strong degree of similarity between roll call-based ideal points and survey-only ideal points needed to bridge ideal point observations. Figure 25 in the appendix demonstrates that the correlations within state parties are a bit lower but still quite high.

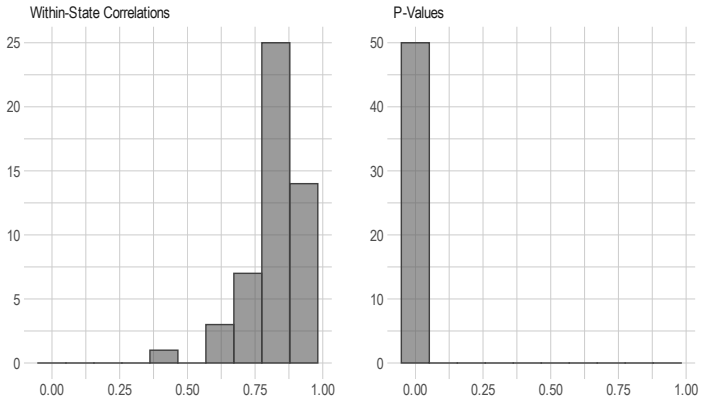


Figure 3: *Within-state correlation between roll call-based ideal points and survey-only ideal points.*

3 Polarization

With our updated data and estimates, we can reexamine the levels and trends in state legislative polarization. First, we focus on the distribution of ideal points of all legislators across the fifty states. Figure 4 displays a comparison of these distributions for 1996 and 2020. In 1996, there was a significant overlap between the two

parties in the aggregate. About 14% of Democrats have ideal points to the right of the 5th percentile Republican and 16% of Republicans are left of the 95th percentile Democrat. This overlap represents a combination of overlaps within states and regional variation in ideological position of the parties. But by 2020, the overlap is gone. Only 0.2% for Democrats are the the right of the fifth percentile Republican and and a minuscule 0.05% Republicans are to the left of the 95th percentile Democrat. This change reflects a significant decline in the overlap associated with regional variation and the near complete elimination of within state overlap.[15]

Note that nowadays this overlap is predominantly *between* parties across states; there is rarely much ideological overlap *within* states between the two parties anymore. This feature is apparent from Figure 5 which plots the 2020 densities by state grouped by region. Today, only Rhode Island and Hawaii show any amount of within-state partisan overlap (primarily due to the relative moderation of the GOP in those states).

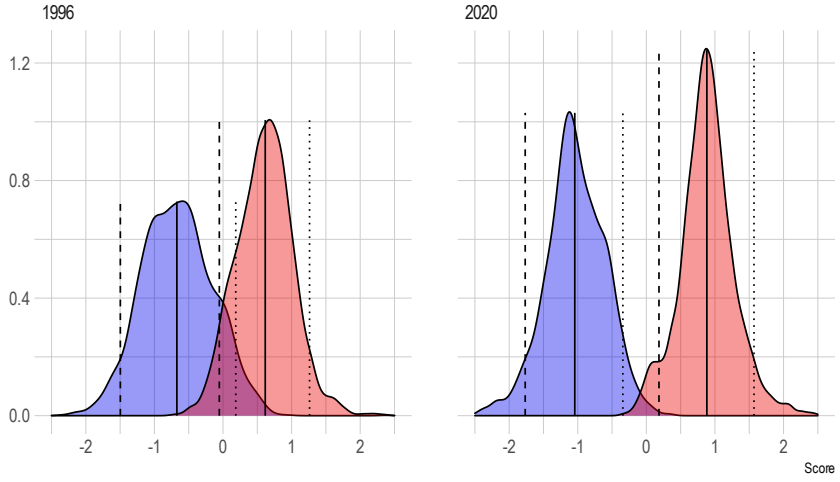


Figure 4: *Legislator level ideal point densities, all state legislators in 1996 and 2020. Solid lines are medians, dashed lines 5th percentile, dotted line 95th percentile.*

In addition to the evaporating overlap, there is a clear increase in the distance between the median Democrat and Republican. In 1996, the gap was approximately 1.5 units on the NPAT scale. BY 2020, it is almost 2 full units. Finally, although both parties became more homogeneous over the past 25 years, the change in the Democratic party is the more striking. Of course, this reflects the declining numbers of conservative white Democrats in Southern legislatures.

We now examine levels and trends in polarization as measured by the differences between the party medians within states. Figure 6 averages the distance between party medians over time and across chambers to

[15]The appendix provides these distributions for each year.

capture the differences in the level of polarization across states. Although all states are polarized, the variation in the levels of polarization across states is striking.

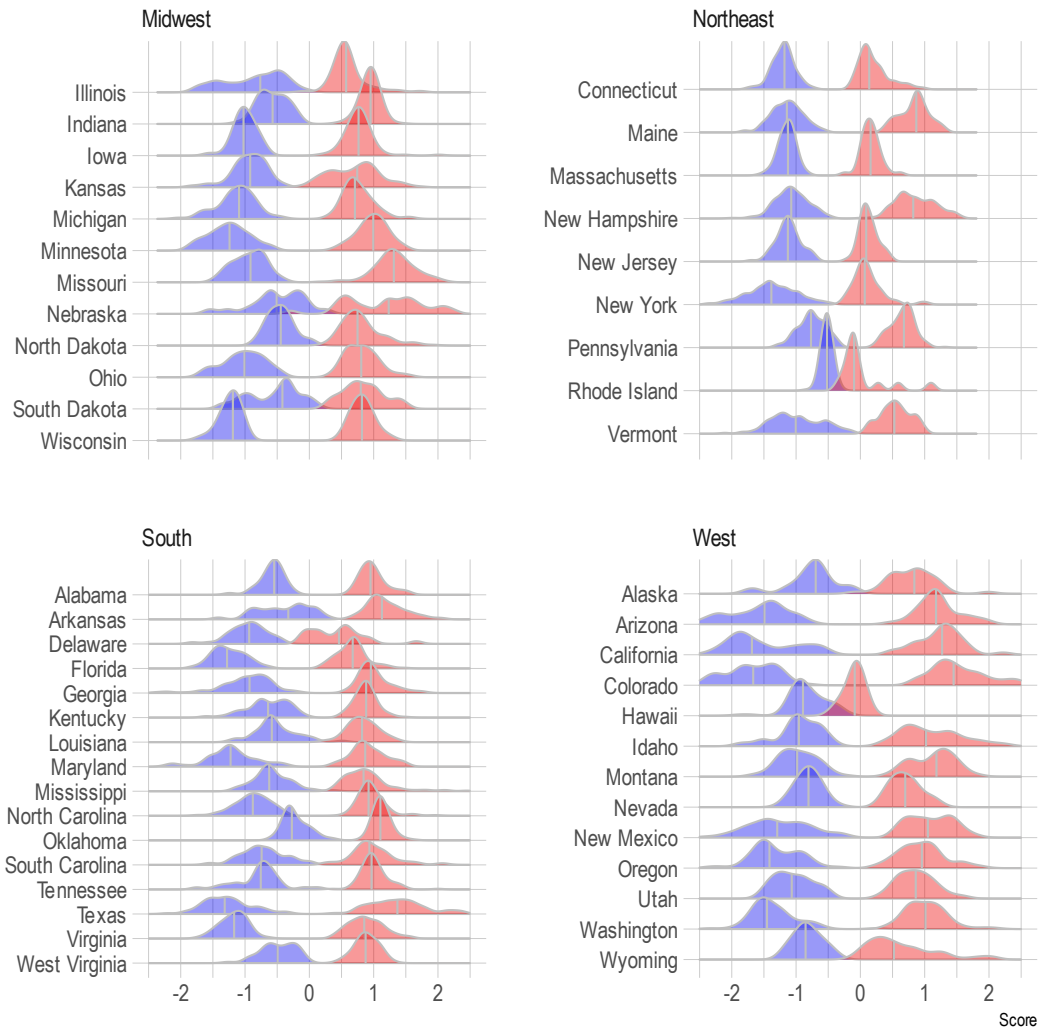


Figure 5: *Legislator level ideal point densities aggregated by state within region, 2020 only. Medians indicated by vertical line.*

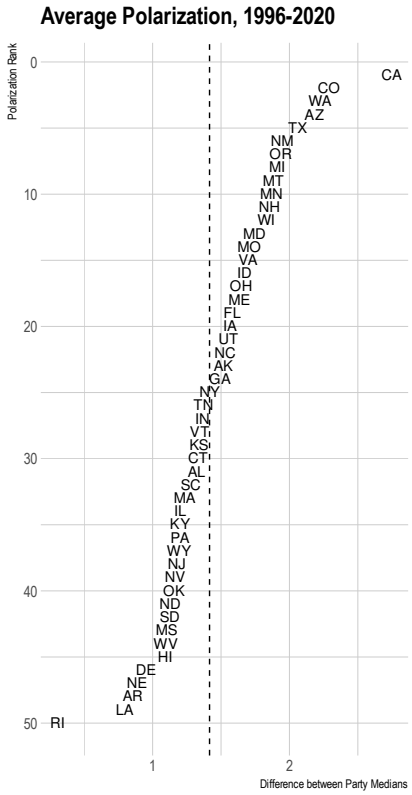
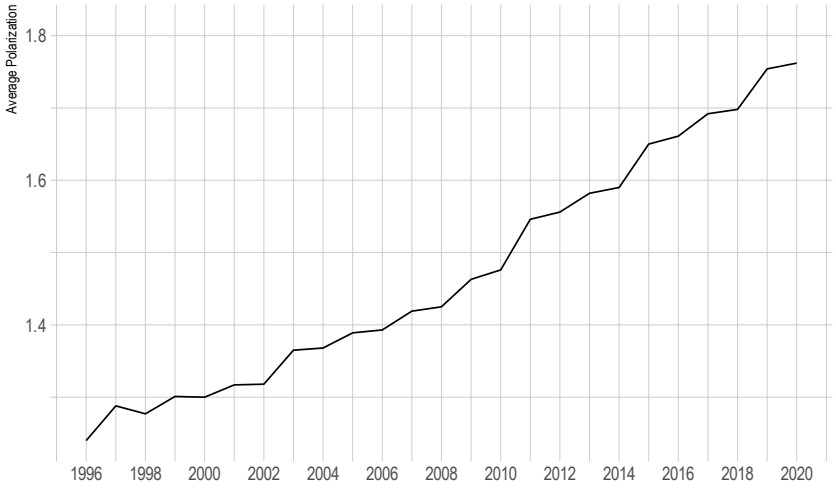


Figure 6: *Comparison of polarization averaged across chambers for all 50 state legislatures, 1996-2020.*

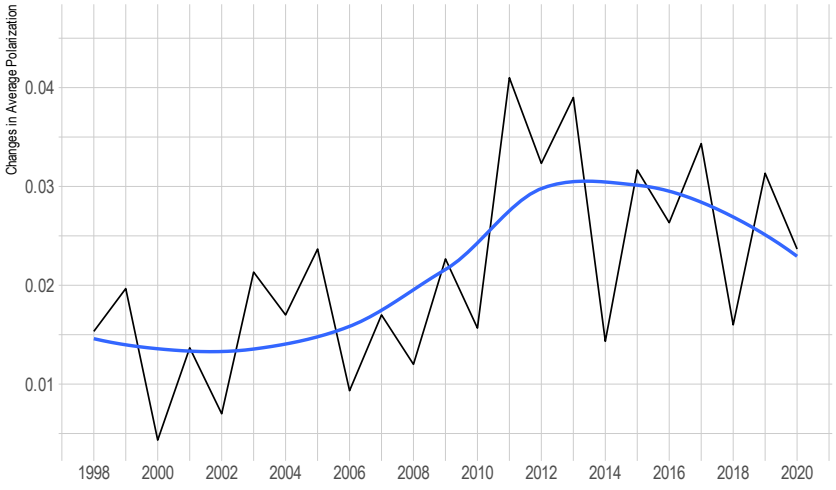
We now aggregate the polarization measures to compare polarization across time. Figure 7 averages polarization across chambers within-state[16] and then averaged again across states. Polarization in state legislatures has increased every election cycle, though the pace of that increase varies slightly. The most obvious increase is that associated with the 2010 election.[17]

[16]Because the correlation of polarization measures at the year level is 0.99, researchers often average the chamber-specific measures for simplicity.

[17]The change in polarization tends to dip in even-numbers years as only five states hold state legislative elections in odd-numbered years.



(a) Level



(b) Change

Figure 7: *Trends in state legislative polarization, levels and changes. Loess added to smooth variation primarily associated with the number of states holding elections.*

Figure 8 shows these trends by chamber. The lower chambers appear more polarized than the upper chambers, though the size of that difference has gotten much smaller in recent years. Unlike in the US Congress, upper and lower chambers do not have a different representational structure, in part because of the Supreme Court ruling in *Reynolds v Sims* (1964).[18]

[18] In any case, representational structure may be an overrated source of variation in polarization as shown by the fact that the US House and Senate have very similar levels and trends in polarization.

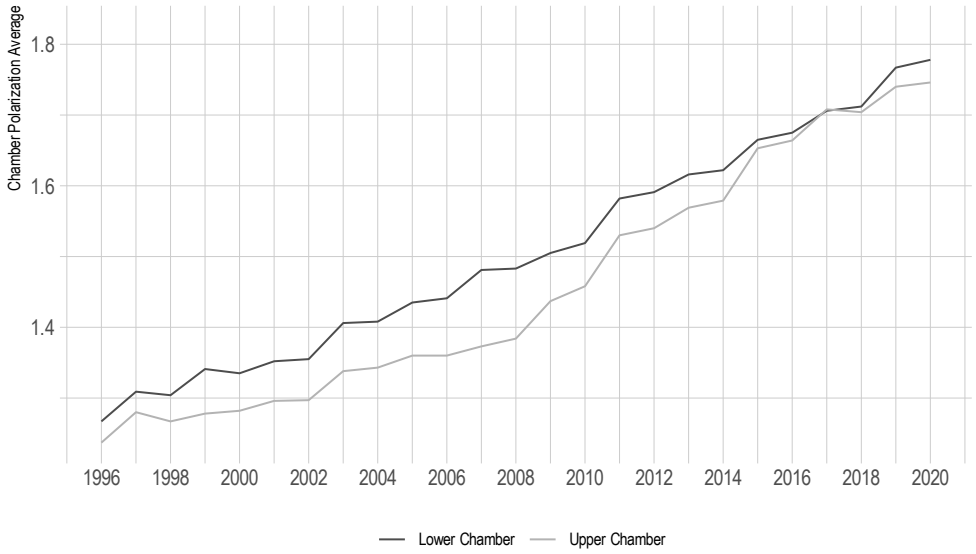


Figure 8: *Polarization by state legislative chamber over time.*

The trends and levels of polarization vary significantly across regions. Figure 9 averages the polarization trend across the four major regions. States in the West are both the most polarized and are polarizing the fastest. The South began as the least polarized region, but has been polarizing fairly quickly and overtook the Northeast in 2007, which is the region with the lowest growth polarization. The Midwest trails only the West in polarization. Slopegraphs show the path of polarization, divided by region (Figures 10 through 13).[19]

Focusing on individual states, we see a tremendous amount of variation in levels and trends within region. Figures 14 plots the coefficients from regressing the difference between chamber party medians on time. As with the US Congress, all 99 state legislative chambers are polarized, that is, with party medians significantly different from each other. In 88 of those 99 chambers, the parties are getting even more significantly distant from each other over time. In eight of them, the parties are roughly stable, not trending towards or away from each other. In three chambers, the parties are actually depolarizing.

[19] See Tufte (2002).

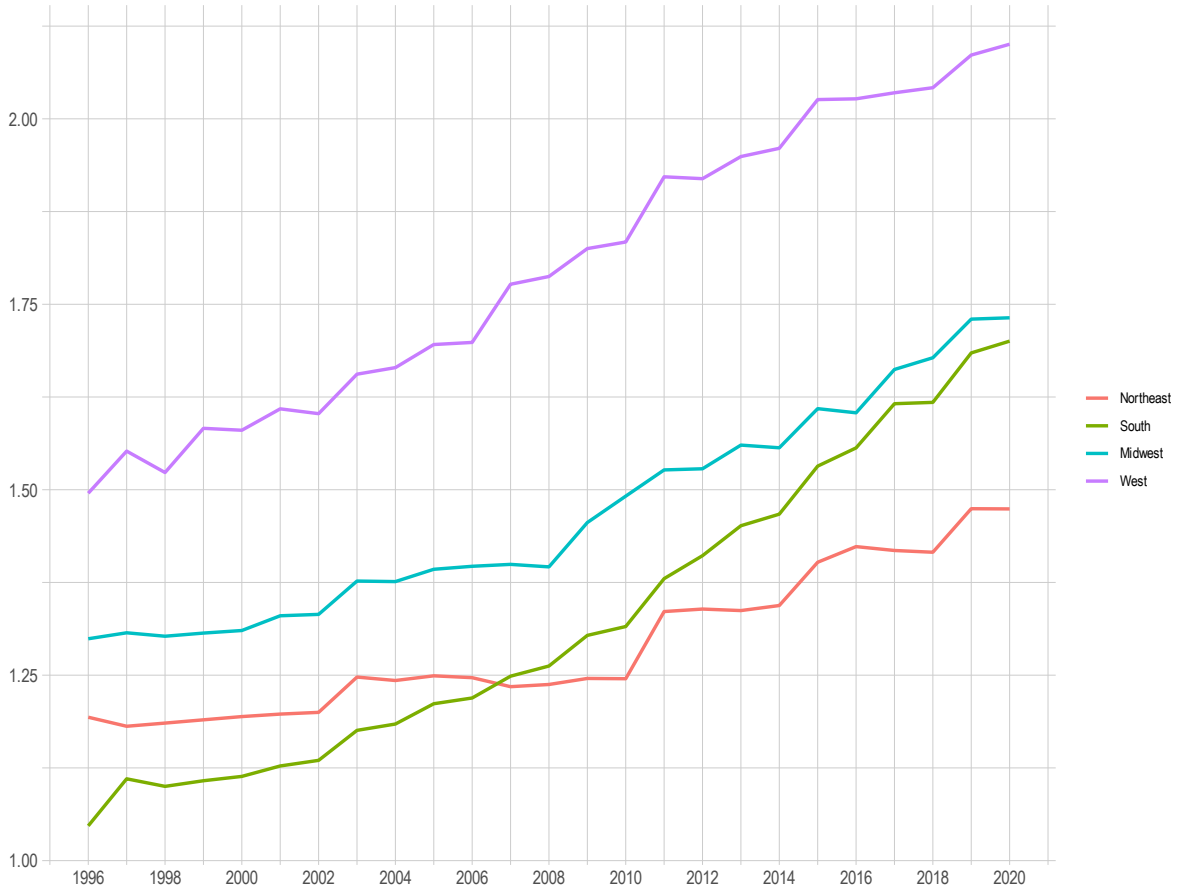


Figure 9: *Polarization by region.*

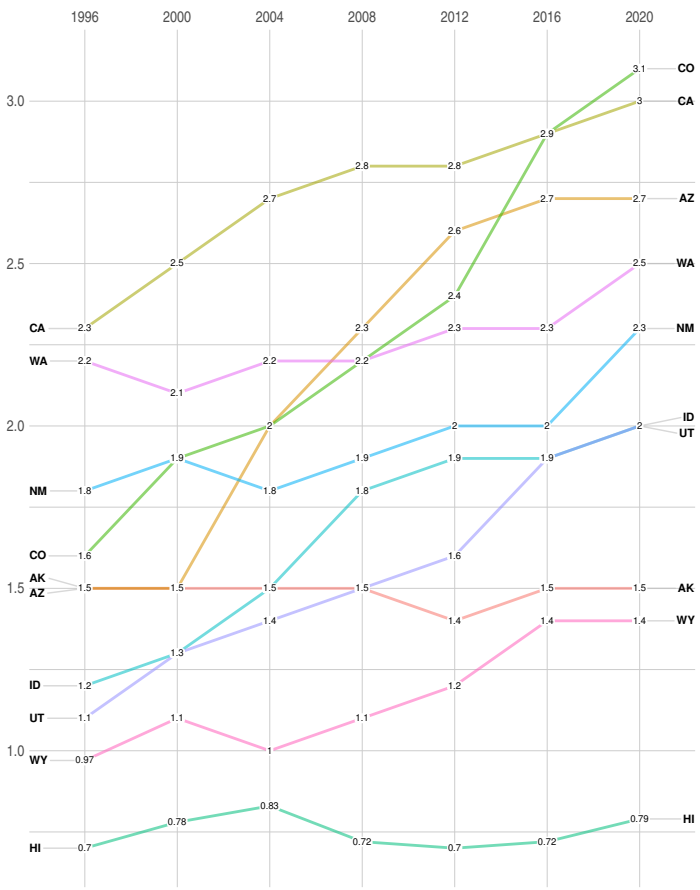


Figure 10: *Polarization in the West.*

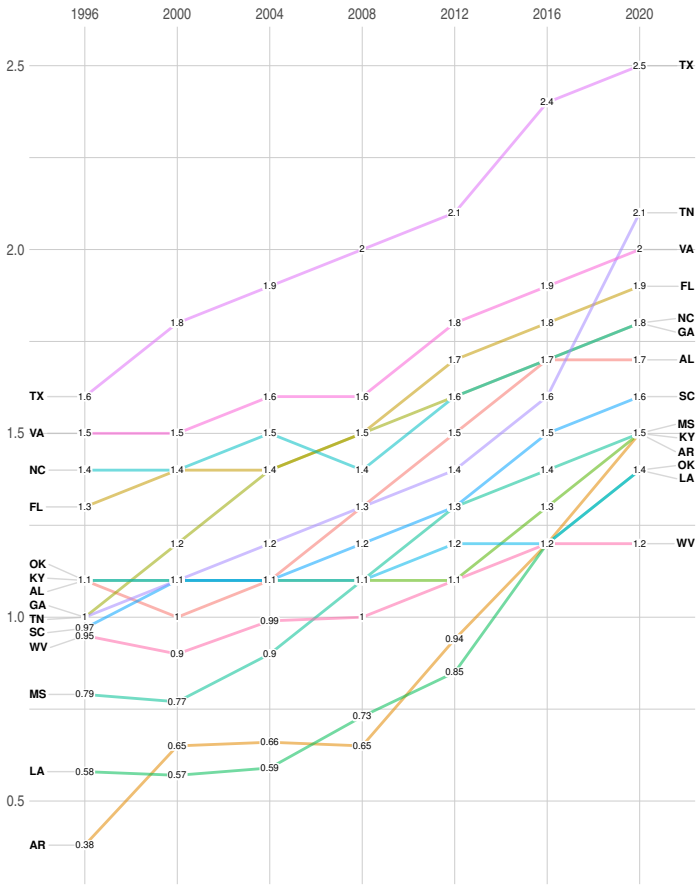


Figure 11: *Polarization in the South.*

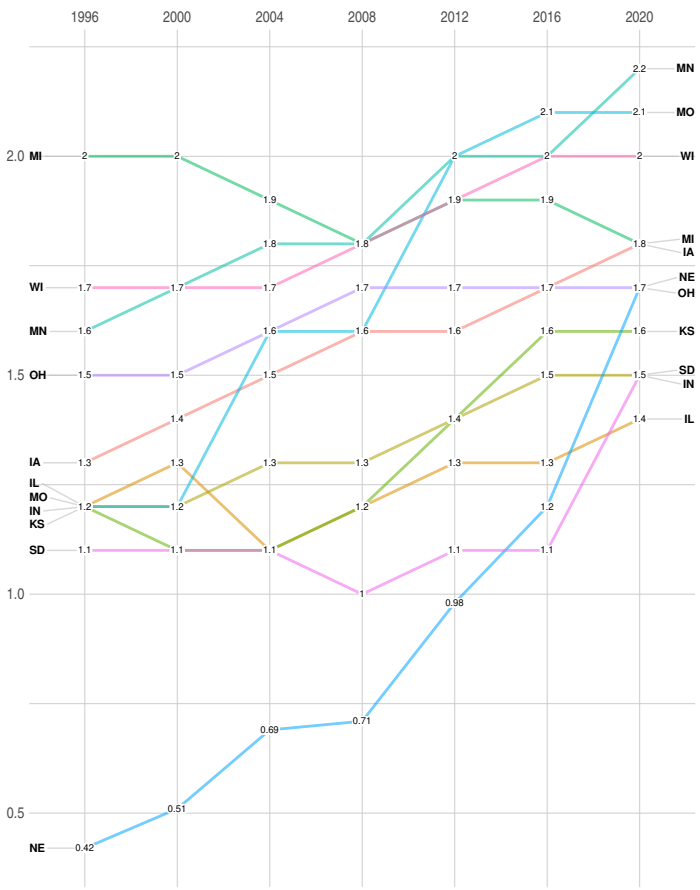


Figure 12: *Polarization in the Midwest.*

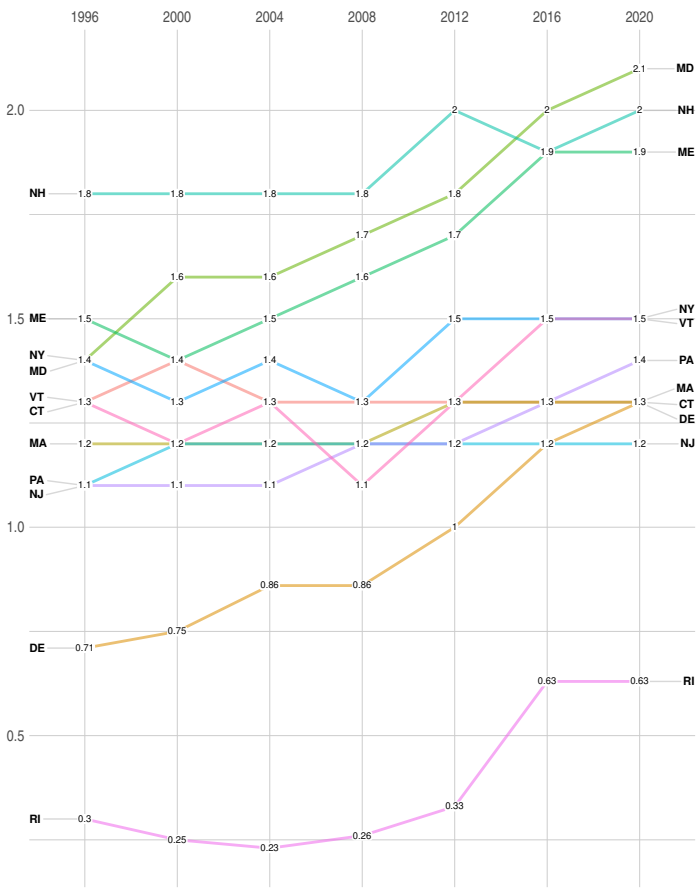


Figure 13: *Polarization in the Northeast.*

But the data clearly reveal that the states are diverse. The five most polarized states in the country in 2020 are, in order, Colorado, California, Arizona, Texas, and Washington State. While California was for a long time the most polarized state, it was overtaken by Colorado in 2017. The five least polarized are Rhode Island, Hawaii, West Virginia, North Dakota, and New Jersey. The other states are pretty variable in both their levels of polarization and their trends, though of course most of the trends are upward.

While polarization mostly increases, there are some states at some times were polarization has decreased. For example, in 2016, conservative Republicans in Kansas suffered historical losses in primaries, general elections, and retirements. This was attributed to the unpopularity of Governor Sam Brownback's tax reforms which led to big budget cuts.

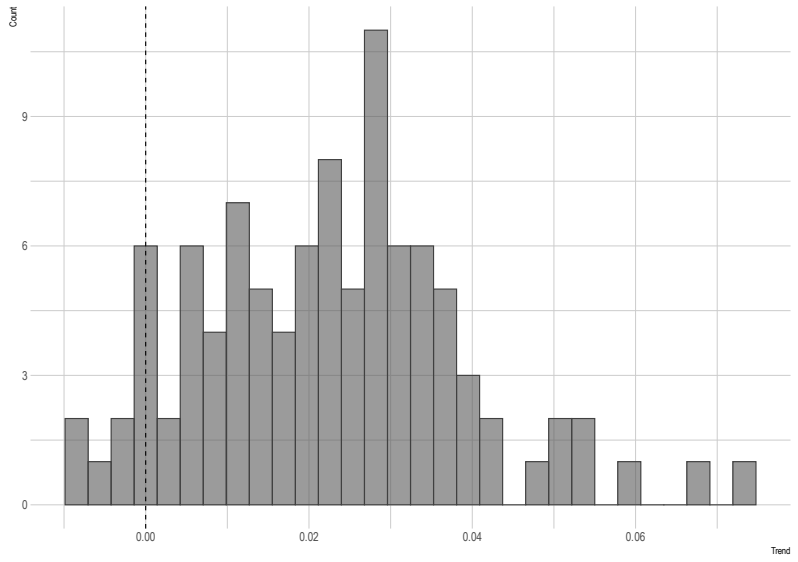


Figure 14: *Difference in party medians. Higher values indicate more polarization.*

4 Longer Trends

For ten states, we have ideal point estimates from before the early 1990s.[20] For five states the data extend to 1977 and five more extend to 1986. Several states including Arkansas, Georgia, Iowa, and Texas stand out with a dramatically rising levels of polarization legislatures. Indeed, the only states that did not see significant polarization are Hawaii and Washington (where the party gap was already quite large). Several other patterns

[20]We use the same procedure as described in Shor and McCarty (2011). So to go back to the 1970s, we take advantage of the fact that legislators have long, overlapping careers to be able to estimate within-state roll call-based ideal points, which are then remapped into NPAT survey score space. Note that this technique relies on the strong assumption that parameters mapping roll call space into survey space are constant over decades. Testing this assumption is beyond the scope of this paper. However, we note that within-state roll call scores without remapping are available for those interested in within-state trends.

stand out. Despite the common emphasis of the Southern Realignment as an early source of polarization at the national level, we can see that polarization started rising early in many non-Southern states.

Second, Nebraska, despite an officially nonpartisan legislature, has polarized extremely rapidly, contrary to earlier depictions of legislative behavior in a party-free chamber as being unorganized and unpolarized (Wright and Schaffner 2002; Masket and Shor 2015). Finally, of these states, only Hawaii, a very noncompetitive one-party state, has avoided significant polarization.[21] In fact, it is about as polarized today as Georgia or Texas were in the late 1970s.

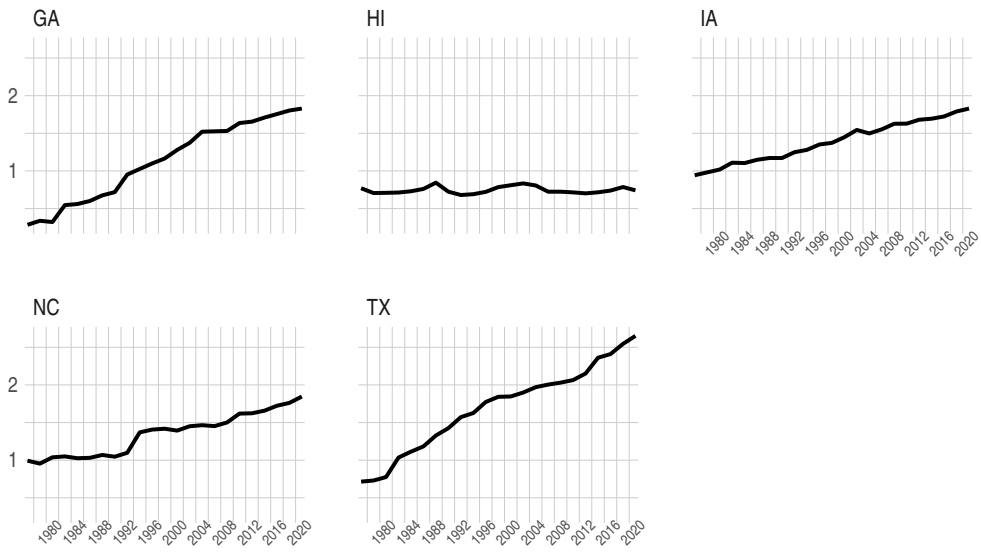


Figure 15: *Trends in polarization for Georgia, Hawaii, Iowa, North Carolina, and Texas, 1977-2020.*

[21] Over this period, the Hawaiian GOP has never held more that 40% of the seats in either chamber and current hold only 5 of 76 seats in the two chambers combined.

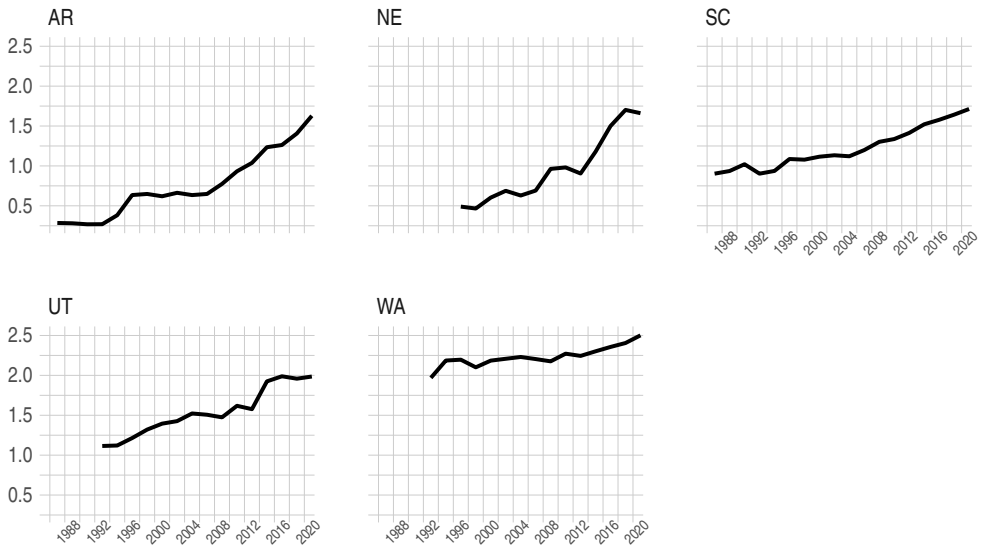


Figure 16: *Trends in polarization for Arkansas, Nebraska, South Carolina, Utah, and Washington State, 1986-2020.*

5 Asymmetric polarization

One of the most notable features of the polarization of the US Congress is its distinctive asymmetry. The data clearly reveal a sharp shift to the right by the GOP while the trends in the Democratic party have been far more variable and muted. [22] But the evidence for such an asymmetry in state legislatures is less clear.

Figure 17 shows that both parties have been polarizing over the past two decades. However, the rate of change for the Democrats has been larger, especially in the past decade. Surprisingly, the GOP movement to the right seems to have slowed while Democratic movement to the left has accelerated.

To explore what is behind this unexpected finding, we disaggregate by region. The regional patterns are presented in Figure 18. The slight leveling off of the GOP appears to be driven primarily by the South and West, regions where the GOP was already quite conservative.[23] The leftward acceleration of Democrats seems to be concentrated in the South and West. The southern trend is likely related to increased representation of black and other minority constituencies. The western trend is likely due to increased Latino representation combined with the representation increasingly progressive views on sexuality and the environment.

Figures 34 through 37 in the Appendix disaggregate even further down to the state level. In the Western states, the major shifts to the left are Wyoming, Utah, and Colorado. That the Colorado GOP has moved become the most right-wing western party is responsible for making Colorado the most polarized state in 2020. The shift of the Arizona GOP is also notable.

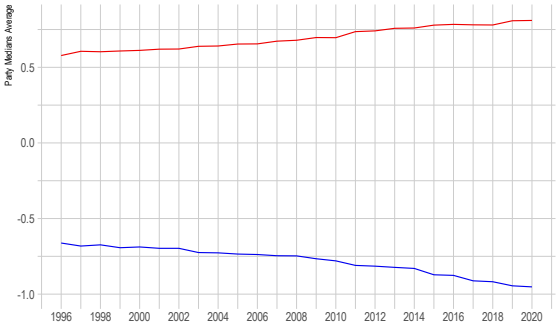
In the South, almost all Democratic parties have moved to the left. The largest movements are Texas, Florida, and Georgia. The GOP trends are quite varied with Florida representing the largest shift while maintaining its status as the most moderate Southern GOP party. Texas has also witnessed a big jump, but only after a fairly long period of stability.

As noted above, the Midwest and Northeast have been relatively stable in comparison. But there have been large shifts by Missouri, Nebraska, and Delaware Democrats as well as big movements by Republicans in in Nebraska, Missouri, and Illinois.

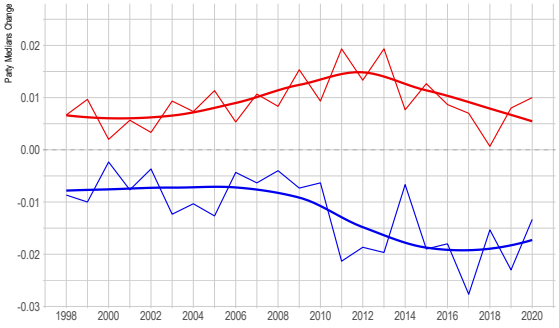
Figure 19 plots the slope coefficients from regressing party medians on time for each state-chamber. Note

[22] It is possible that there is a similar shift to the left in the US House that has for technical reasons not been picked up in DW-NOMINATE and other scaling procedures. The reason is that many House progressives including Alexandria Ocasio-Cortez, Ilhan Omar, Ayanna Pressley, and Rashida Tlaib often vote against the position of the Democratic leadership which increases the similarity of their voting record to conservative Republicans. This leads the DW-NOMINATE algorithm to place them in a moderate position on the ideological scale. In the future, when the GOP regains control of the agenda, we would expect their placement to move back to the far left.

[23] This observation raises the methodological question of whether roll call and survey analysis can pick up movements to the extreme right or left. For example, our procedures are unable to discriminate among GOP legislators with a perfectly conservative voting record and conservative answers to all NPAT questions (See Poole and Rosenthal (1997) on the problem of perfect extremists.)



(a) Level



(b) Change

Figure 17: *Trends in state legislative party polarization, levels and changes.*

there are more observations to the right of zero for Democrats than there are observations to the left of zero for Republicans. To make the difference even more visually explicit, Figure 20 shows the difference in the coefficients by state. On average, Democrats are polarizing faster in 47 chambers, while Republicans are polarizing faster in 51. However, this masks the size of that movement; the median Democratic state party chamber is polarizing 30% more than Republicans.

It is beyond the scope of this paper to fully disentangle why state-level polarization has been much less asymmetric than the national trends and slightly pro-Democratic. But we can offer several conjectures. First, it may well be the case that the impact of the contemporary progressive movement was felt first in state legislatures before making its way to Congress. The lower costs of enter and higher turnover of state legislatures may offered early opportunities to the progressives. Second, state legislative agendas may be such that there are better opportunities than in Congress to empirically distinguish progressives from centrist Democrats. Third, it may be the case that many GOP parties are close to reaching the point at which we can't measure further shifts based only on roll call votes and survey responses.

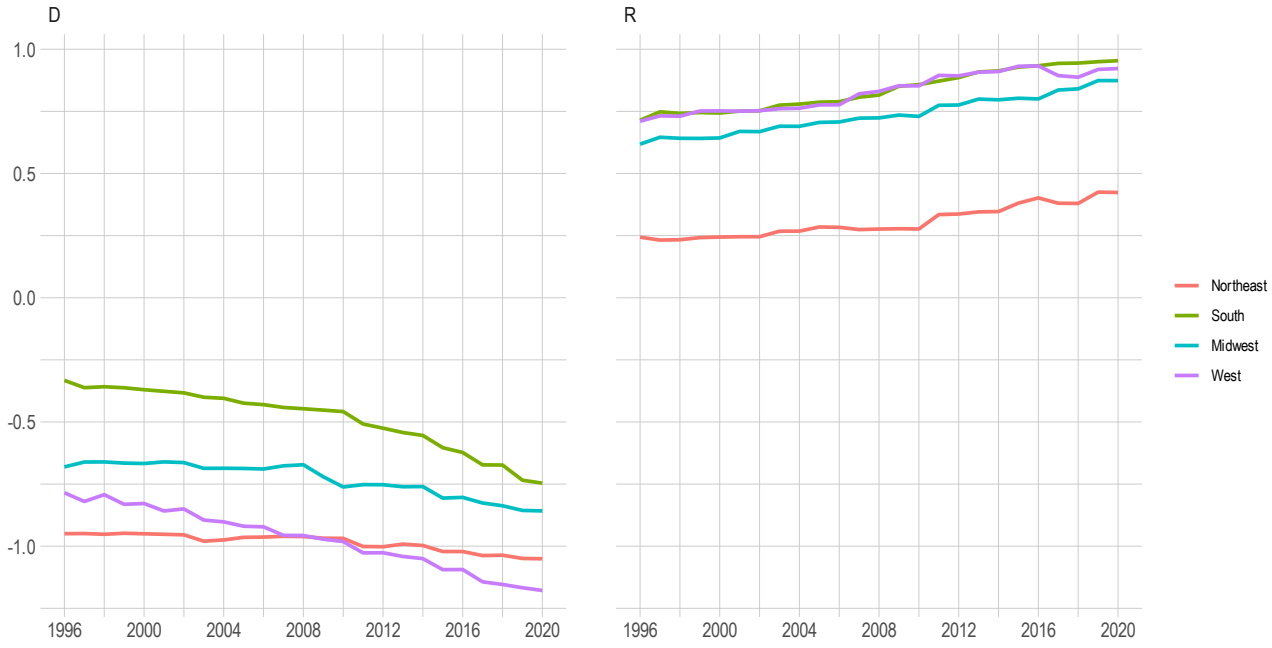


Figure 18: *Party polarization by region.*

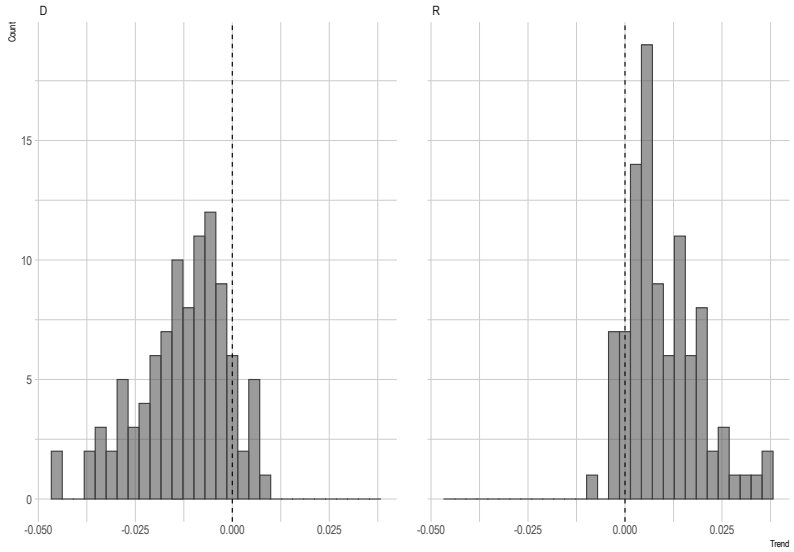


Figure 19: *Trends in party medians for 99 chambers.*

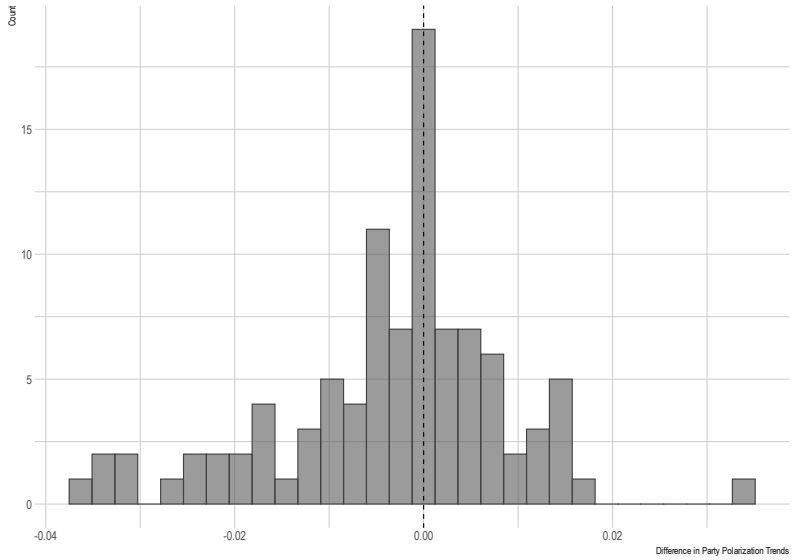


Figure 20: *Differences in trends in party medians for 99 chambers. Bars to the right of 0 indicate Republicans are polarizing faster, to left indicate Democrats are polarizing faster.*

6 Mass Opinion

One of the most important questions in the polarization literature is the relationship between elite polarization and the polarization of the voters. State-level data obviously provides a useful contribution to this debate by allowing us to examine how elite and mass polarization are correlated across states and the extent to which such correlations vary with electoral laws and other institutional features.

These questions are addressed in McCarty et al. (2018) which used data from Tausanovitch and Warshaw (2013) to construct distributions of voter ideal points within and across state legislative districts.[24] That paper focused on the relationships between elite and mass polarization for the decade following the 2000 redistricting. But with updated data from Tausanovitch and Warsaw, we can assess the extent to which the correlations have changed.

First, McCarty et al. (2018) document a very strong correlation between the polarization of a state legislative chamber and the variation of the median ideal point of voters across its electoral districts. Such a finding is consistent with a high degree of representational responsiveness of legislators to the policy positions of their median resident. The left panels of Figure 21 replicates this finding with updated legislative data for 2003-2012. The right panels show the patterns for the period between 2013 and 2020 with updated opinion and legislative data. The correlations are substantially higher in the more recent period, rising from 0.23 to 0.37 for upper chambers and from 0.33 to 0.43 for lower chambers.

The increase in the correlation between legislator ideal points and the median constituent opinion may reflect one or more of several mechanisms. First, there may have been an increase in the geographic sorting of voters along ideological lines. This may be the result of locational choices, local conformity, or redistricting. Second, increased party sorting might increase the correlations between legislative behavior and voter opinion. This shift would occur if voting in state legislative elections is primarily partisan and voters are adjusting their policy preferences to be more in line with their preferred party. Finally, the increased correlation may result from the increased nationalization of state elections. If more voters are casting ballots on based national issue considerations, the association between the general ideology of voters and legislative behavior should increase. Sorting out the role of these various mechanisms is beyond the scope of this paper and is left to future research.

McCarty et al. (2018) also documents a second, more subtle relationship between mass opinion and legislative behavior in the states. They find that how voters are distributed within districts matters as much or more than it does how they are distributed across districts. Figure 22 presents the correlations between legislative polarization and the average variance of voter ideal points withing districts for state upper chambers.

[24] See Kirkland (2014) for an earlier paper on state level opinion heterogeneity.

The left panel, which covers 2003-2012, replicates the earlier finding that the relationship between polarization and within-district heterogeneity is stronger than for across-district voter opinion polarization. New opinion data for the 2010s allows us to see that the later time period displays a tighter relationship between within-district opinion heterogeneity and legislative polarization, as compared with the 2000s (0.52 vs 0.43).

Several of the mechanisms discussed above may help account for the increased association between district heterogeneity and legislative polarization. And to these, we might also add the possibility of the role of primary elections to screen candidates on ideology. But none of these explanations can fully account for the phenomenon as they do not explain a central finding of McCarty et al. (2018) that Republican legislators get more conservative as their Democratic constituents get more liberal (and vice versa). Instead, the authors propose that heterogeneous electorates create the uncertainty about electoral outcomes which encourages policy-motivated parties to nominate more extreme candidates. Whether this mechanism can explain the increased correlation in 22 is left to future research.

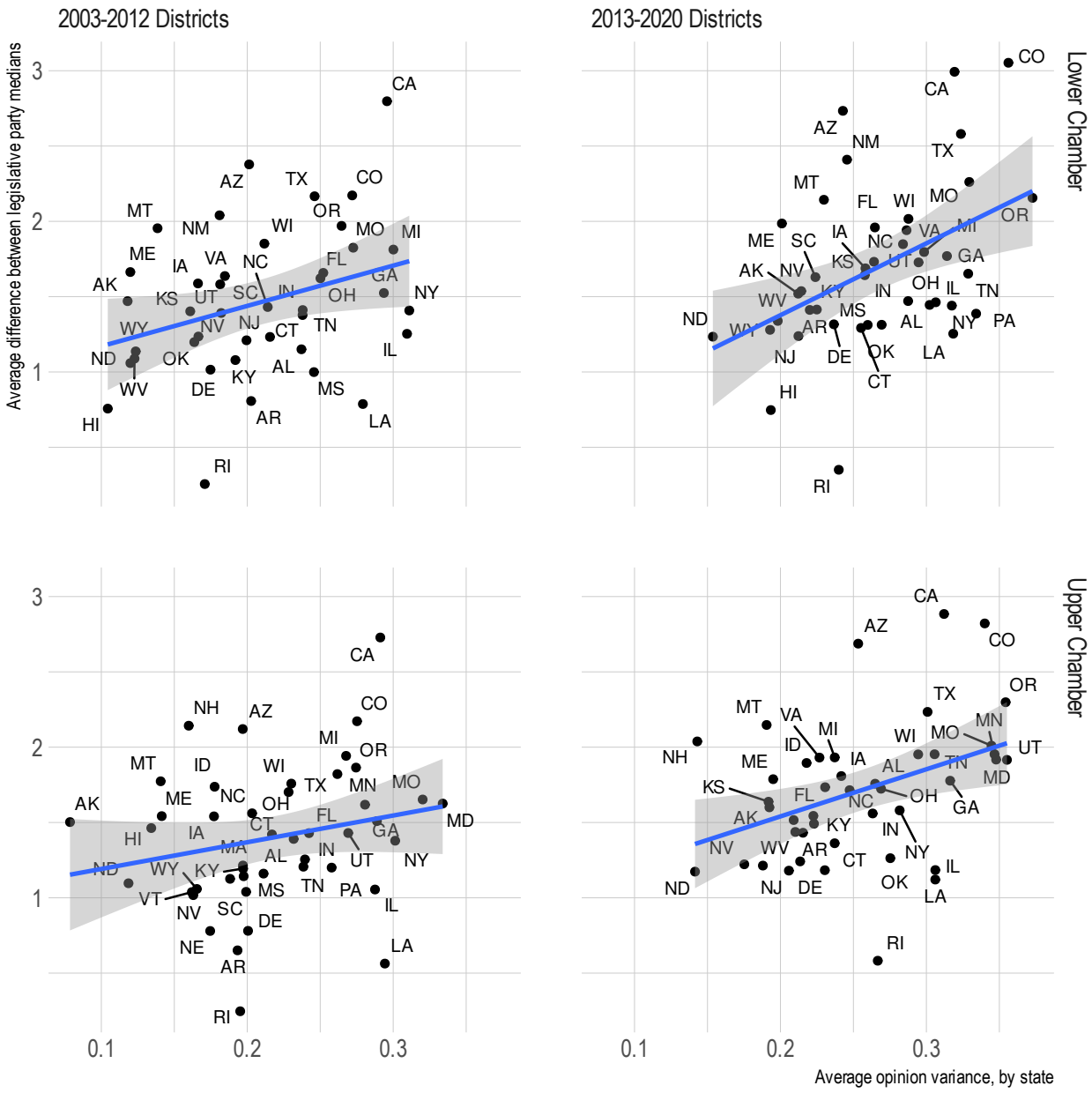


Figure 21: *Scatterplot of across-district opinion polarization and legislative polarization by chamber.*

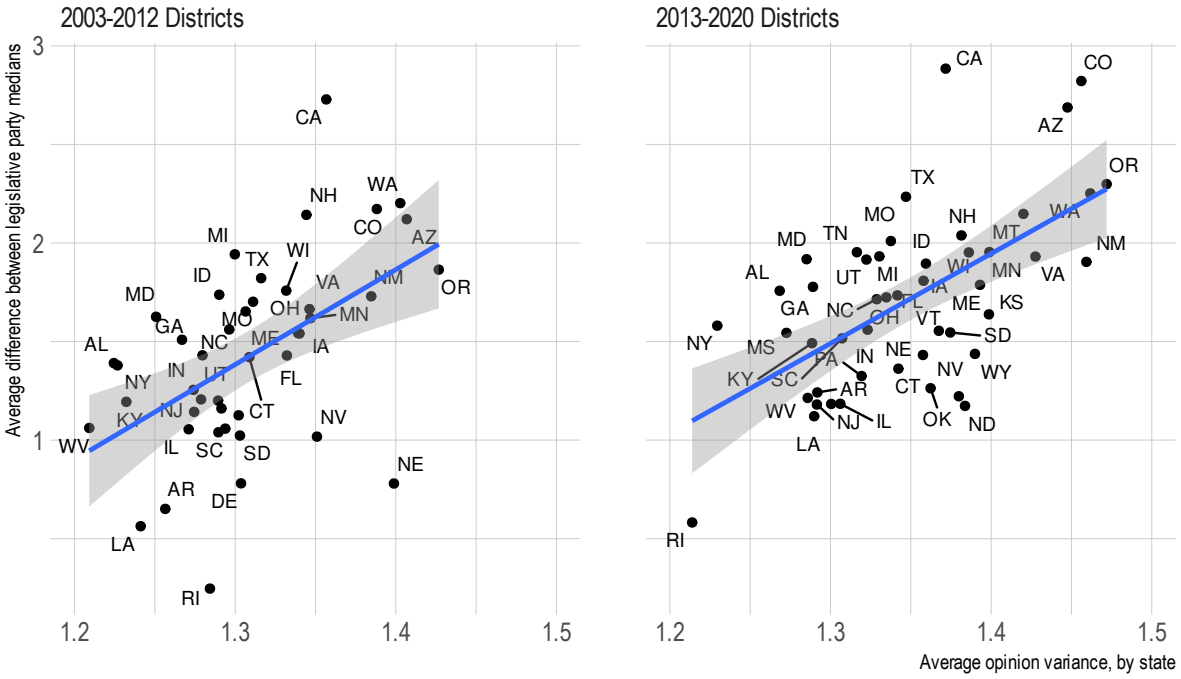


Figure 22: *Scatterplot of within-district opinion polarization and legislative polarization by chamber.*

7 Federal Polarization

Much of the literature on state-level polarization has focused exclusively on the increases in partisan differentiation within states, McCarty (2021) notes a dramatic increase in the polarization across states. This is reflected in Figure 23 which plots the trend in the variance of legislative medians across states over time.[25]

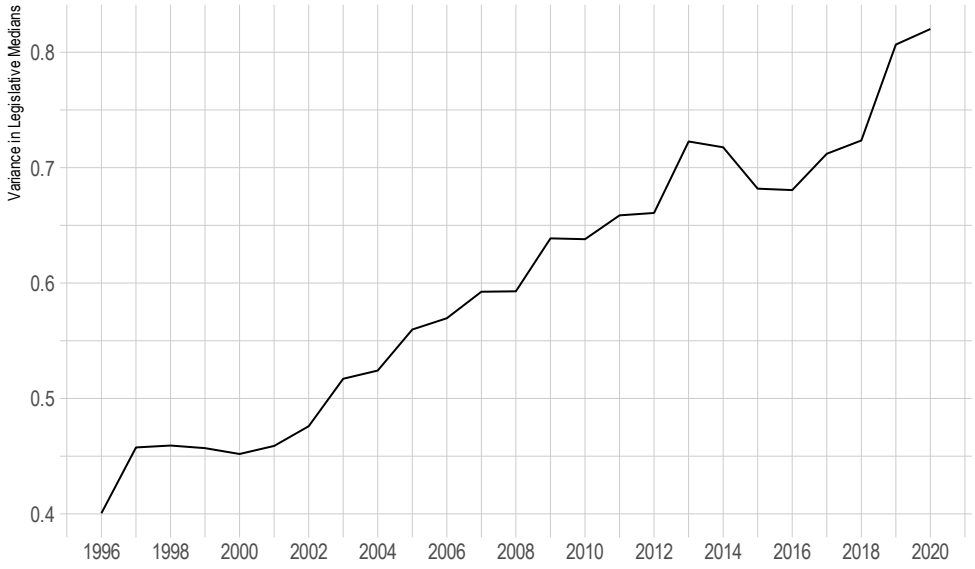


Figure 23: *Standard deviation of legislative chamber medians over time.*

When combined with the increasing propensity for electing unified governments, the upshot of Figure 23 is that the states are much more ideologically divided than they were 25 years ago. Such a pattern has at least two direct implications. First, we should expect to see policy outcomes increasing vary across states. Such an effect is consistent with the recent findings of Caughey, Xu and Warshaw (2017) and Grumbach (2018). Second, we should expect to see greater conflict between states and the federal government as more liberal states will be in opposition to conservative national administrations and more conservative state governments in opposition to liberal administrations.[26]

While it is beyond the scope of this paper to fully explore the sources of this cross-state polarization, a few observations are in order. Perhaps the most obvious hypothesis is that cross-state polarization, as well as the rise in unified party control, are caused by increased state-level sorting of voters on partisan or ideology.

[25] Chamber medians are averaged within-state.

[26] See Bulman-Pozen and Gerken (2009) and Bulman-Pozen (2014) for discussions of the implications the emergence of "uncooperative" federalism.

Consistent with such a hypothesis, Hopkins (2017*b*) notes that presidential contests at the state level have become less competitive over recent years. But McCarty (2021) finds that contrary to this expectation the state of residence not increasingly predictive of voting, partisanship, or ideological self-placement in the ANES.

A second, perhaps more promising, hypothesis is that of the nationalization of state and local elections.[27] To the extent that voters now increasingly cast ballots in state elections based on national political issues, we should expect for Democratic-leaning states to elect uniformly liberal state governments and Republican-leaning ones to elect conservative ones. Thus, even if sorting is constant, it is possible that nationalization pushes different states in different partisan and ideological directions. Finally, the patterns of cross-state polarization may related to increased activity of national-level interest groups at the state level.[28]

8 Conclusion

Even as polarization increases in most American legislatures, so too does scholarly understanding of the phenomenon. Work continues on documenting the extent of polarization in the 50 states forward and backward in time. In addition, considerable new research is coming on line that tackles the possible causes of polarization, including new research on public opinion (McCarty et al. 2018), income inequality (Voorheis, Shor and McCarty 2018), partisan competitiveness (Hinchliffe and Lee 2016), and institutional variation across the states (Masket and Shor 2015). The "smoking gun," however, remains elusive. No one "cause" has been identified as dominant, nor is there likely to be one. Scholars can only hope to chip away at individual explanations driven by theoretical expectations. Finally, a new and exciting body of work is starting to examine the consequences of polarization in politics and policy. More legislative gridlock is likely, for example, to lead to governors leaning on unilateral action.

A final caveat is in order. Unlike the US Congress–which has been fairly closely divided in the past two decades–unified party government is a common reality in many states. When a single party holds both chambers of the legislature and the governorship, and is not burdened by supermajoritarian rules (Anzia and Jackman 2013), polarization is far less "weaponized." Recent developments in California, Colorado, Michigan, and Wisconsin show that polarization need not slow down a unified party leadership intent on making far-reaching policy changes.

[27] See Rogers (2016) and Hopkins (2017*a*).
[28] See Hertel-Fernandez (2019) and Kroeger (2016).

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9 Appendix

9.1 NPAT

Figure 24 shows the distribution of the number of NPAT survey responders within-state.

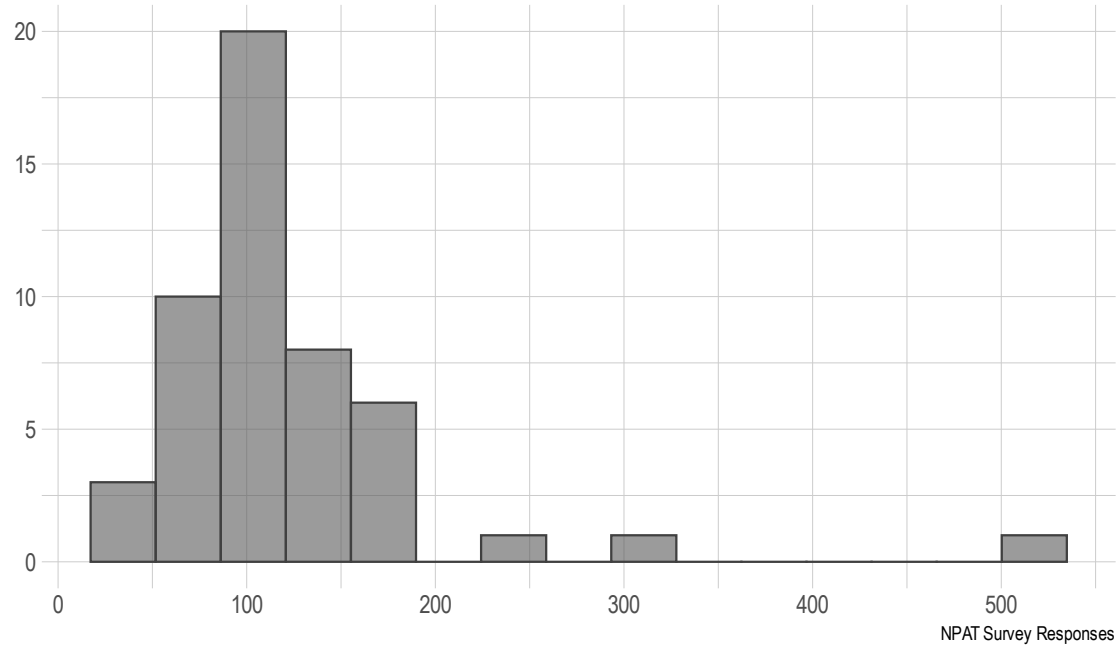


Figure 24: *Counts of NPAT survey responses within states*

Figure 26 is a scatterplot of survey-only scores with within-state roll call based scores. The overall correlation is 0.77, and the within-party correlations range between 0.33 (Republicans) and 0.39 (Democrats). Figure 27 subdivides the data by region.

Figure 28 shows that within-party, within-state coefficients are uniformly positive. With two exceptions (Delaware at 0.06 and Rhode Island at 0.3), p-values are all essentially zero.

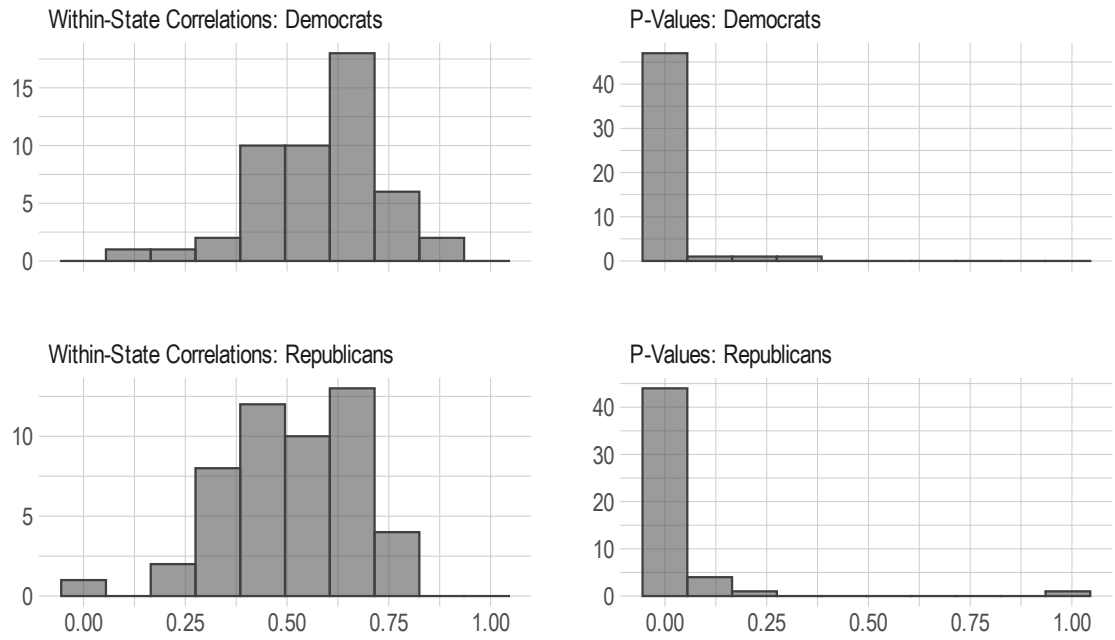


Figure 25: *Within-state, within-party correlation between roll call-based ideal points and survey-only ideal points.*

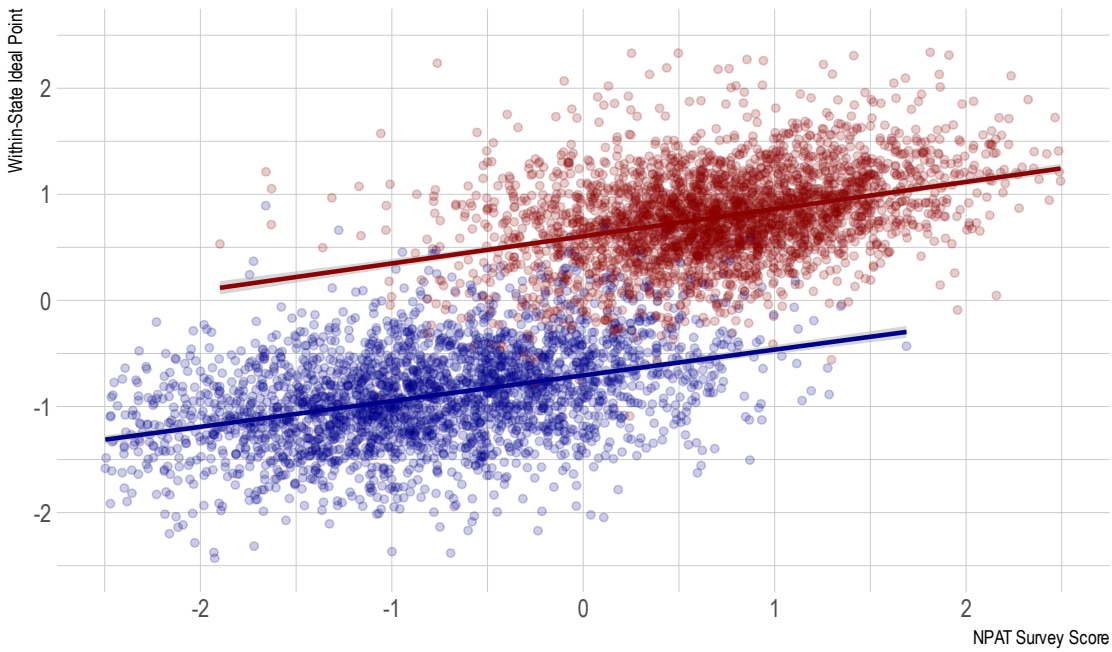


Figure 26: *Scatterplot of NPAT survey scores and within-state scores*

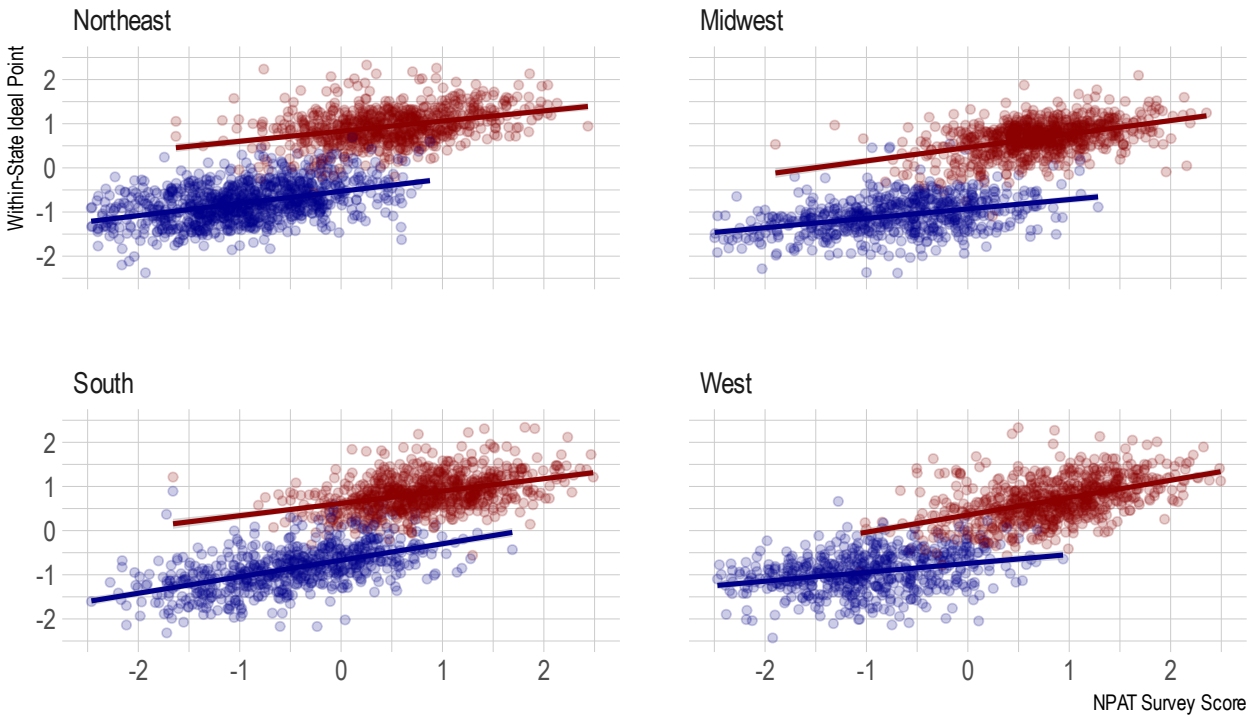


Figure 27: *Scatterplot of NPAT survey scores and within-state scores, by region*

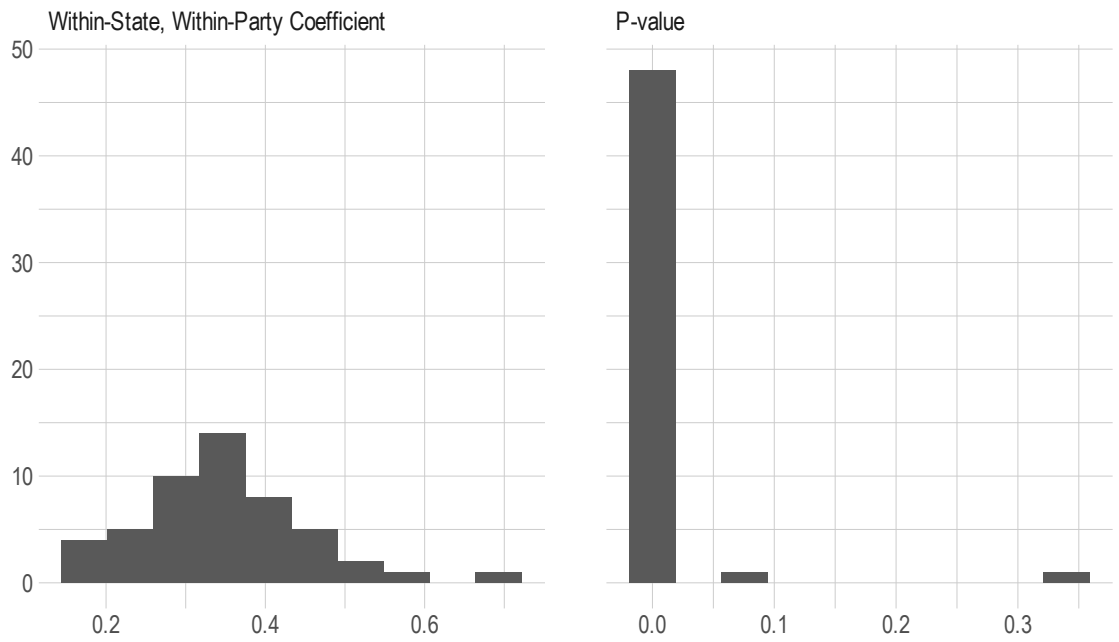


Figure 28: *Coefficient and p-values from regressing NPAT scores on within-state ideal points.*

9.2 Other Cross State Comparisons

Comparing across time, Figure 29.

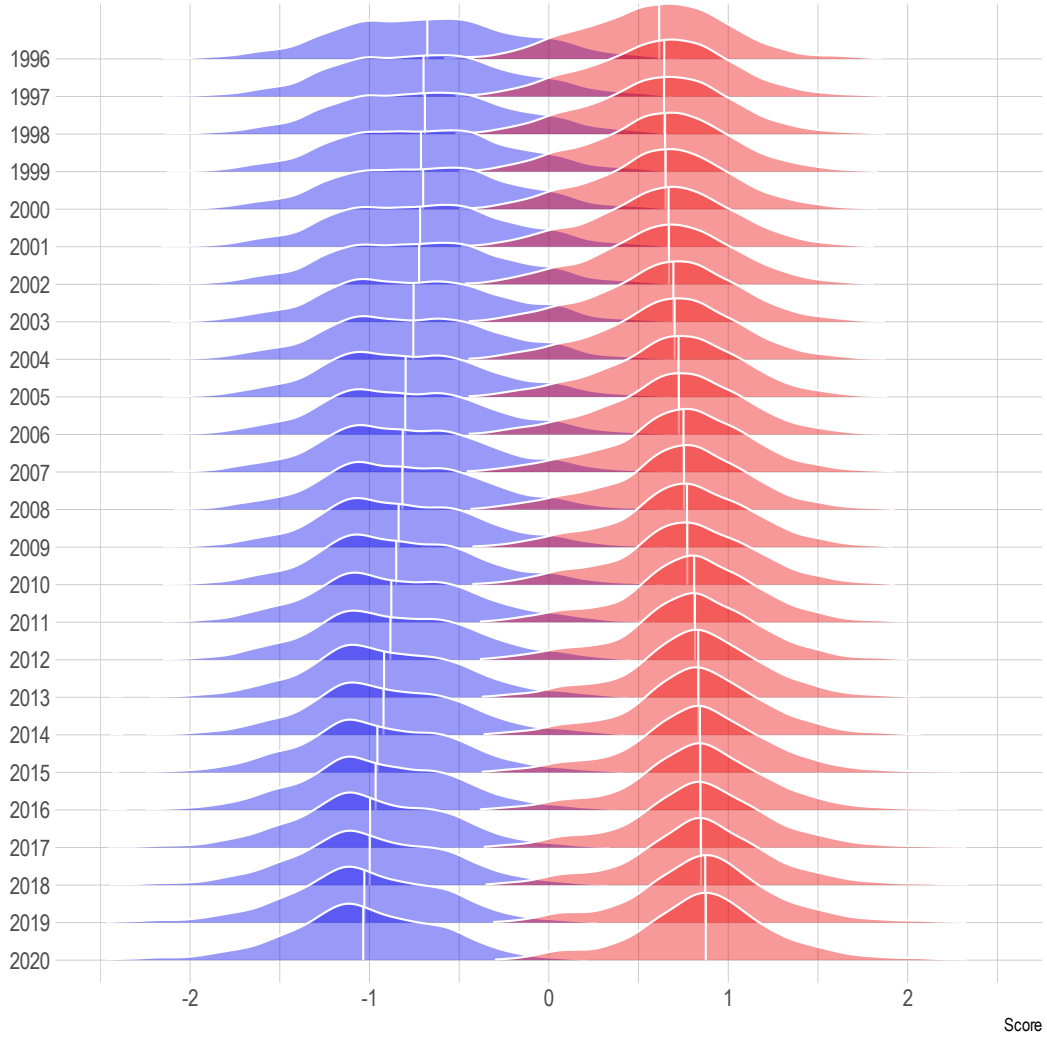


Figure 29: *Legislator level ideal point densities, 1996-2020. Medians indicated by vertical line.*

While we usually operationally measure polarization by differences in party *medians*, one might instead choose differences in party *means*. The latter might better capture the tails of the party ideology distributions which the median measure might miss. Figure 30 shows that mean differences are consistently higher than median differences.

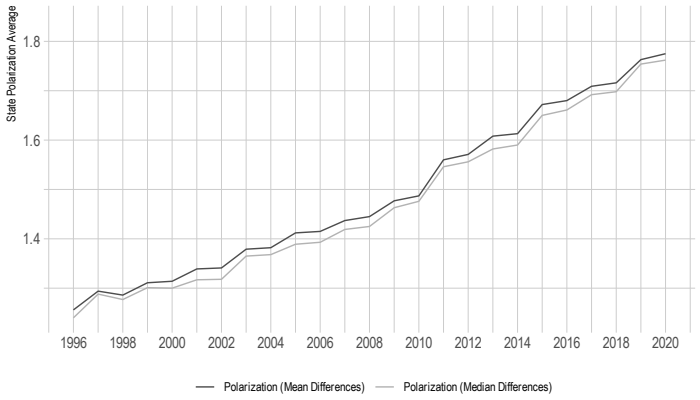


Figure 30: *Trends in state legislative polarization over time, as measured by median and mean differences.*

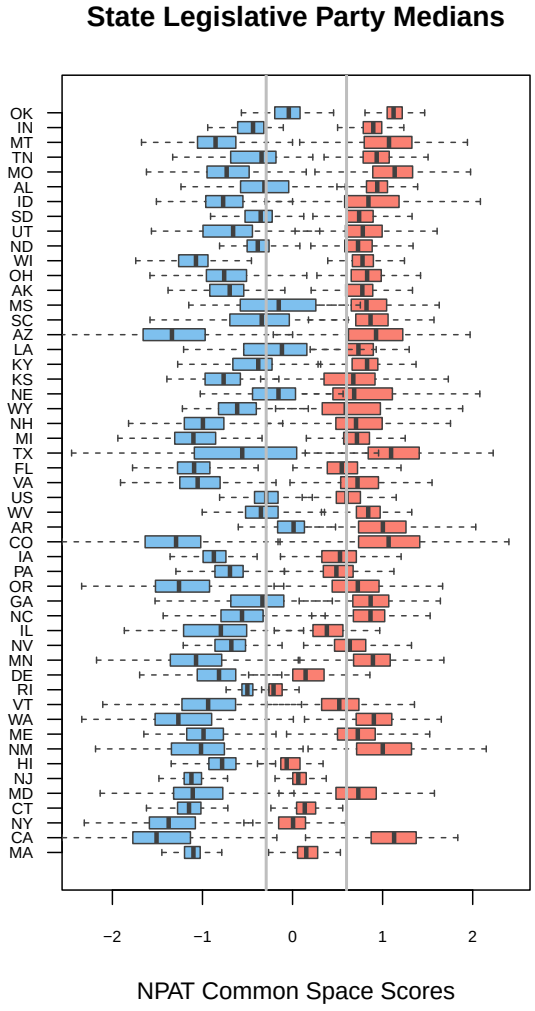


Figure 31: *Boxplot of the distribution of ideology across and within states; states ranked by average ideology.*

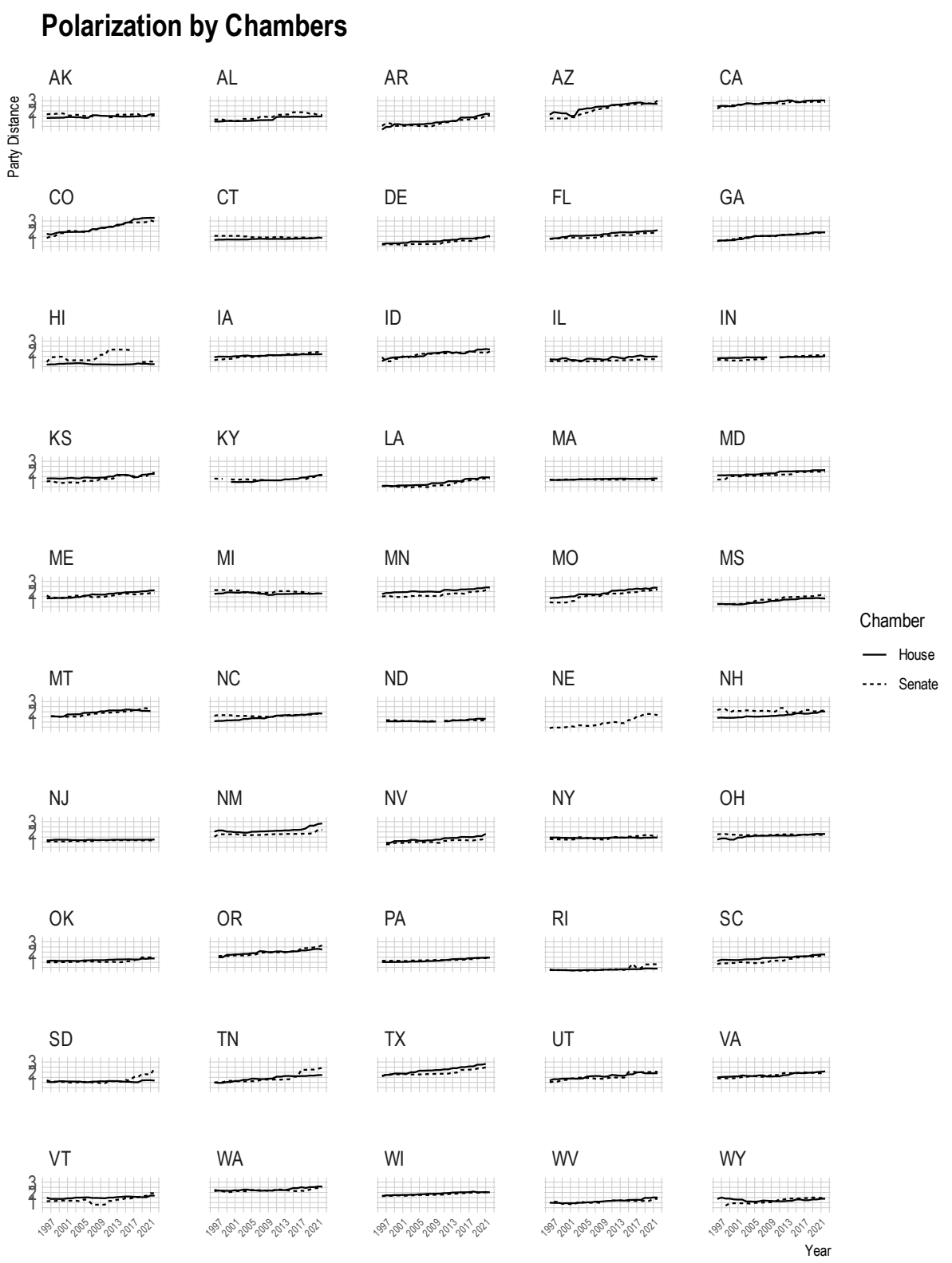


Figure 32: *Difference in party medians. Higher values indicate more polarization.*

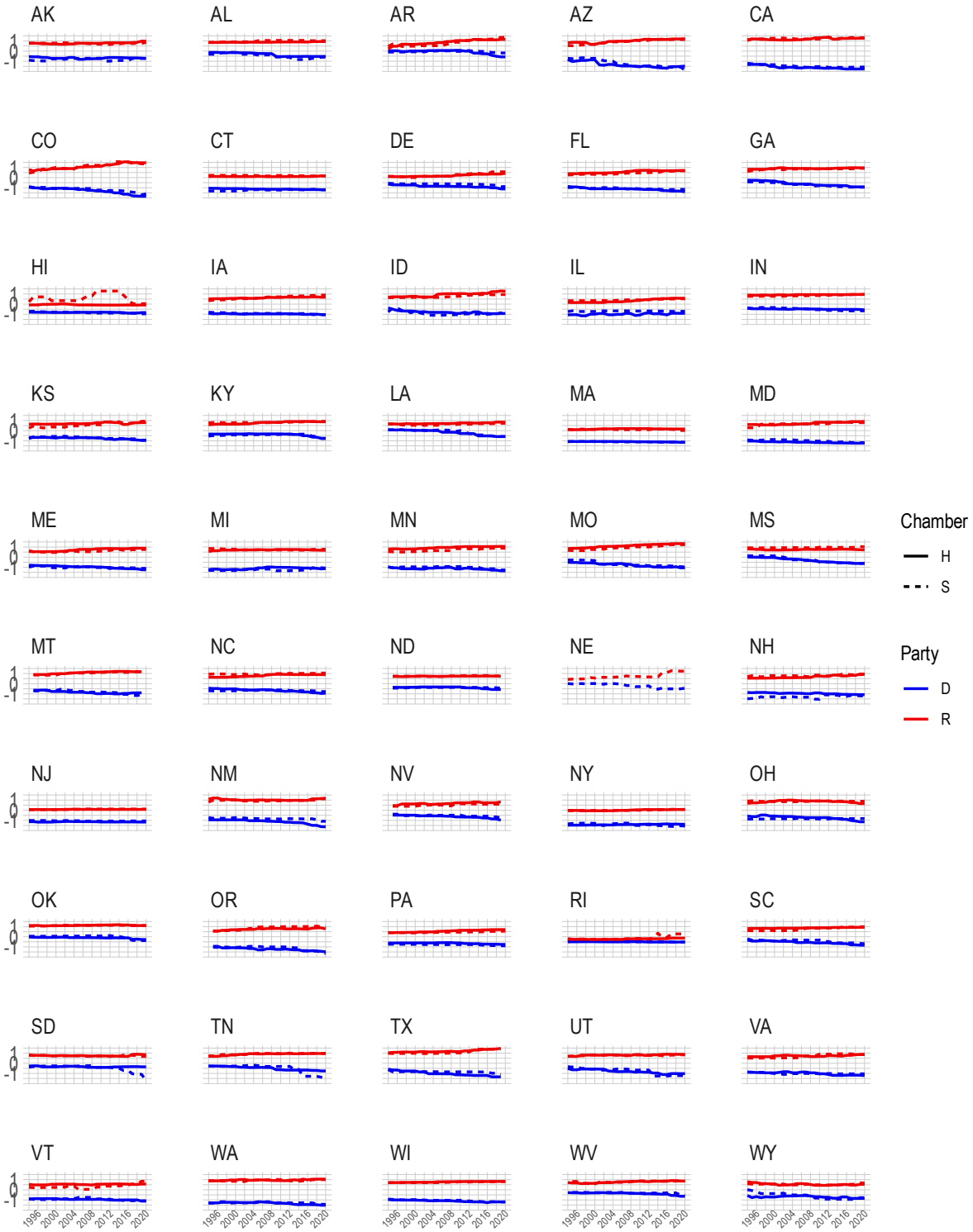


Figure 33: *Chamber party medians*

9.2.1 State Party Slopegraphs

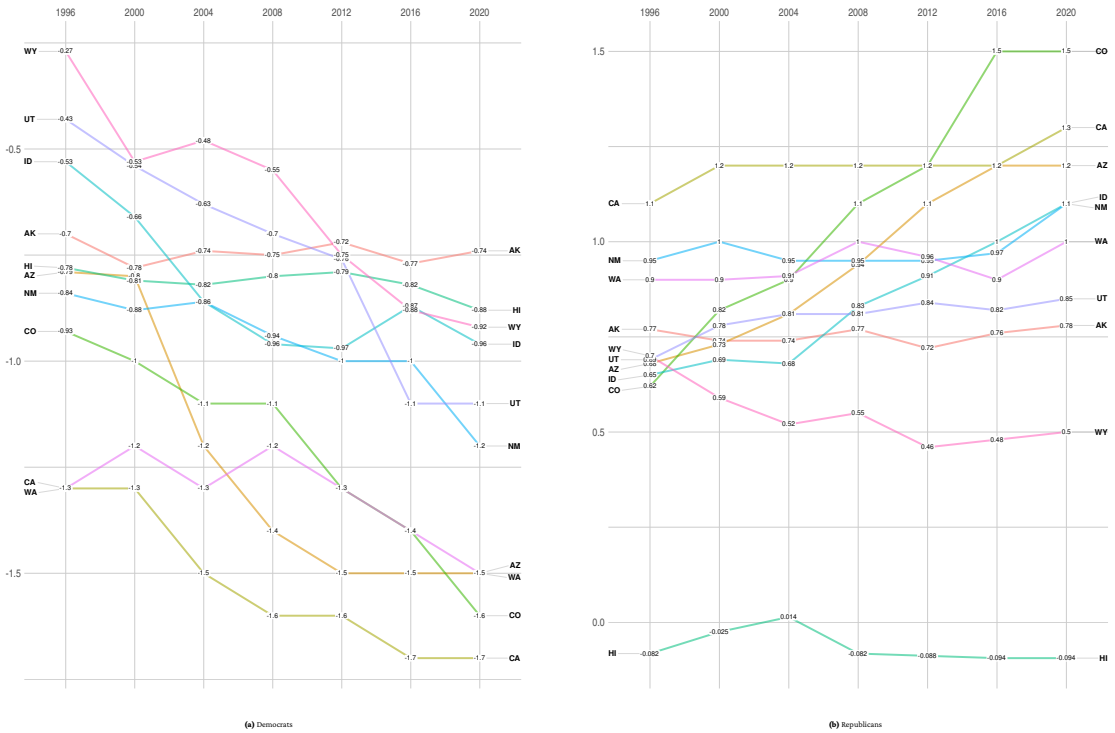
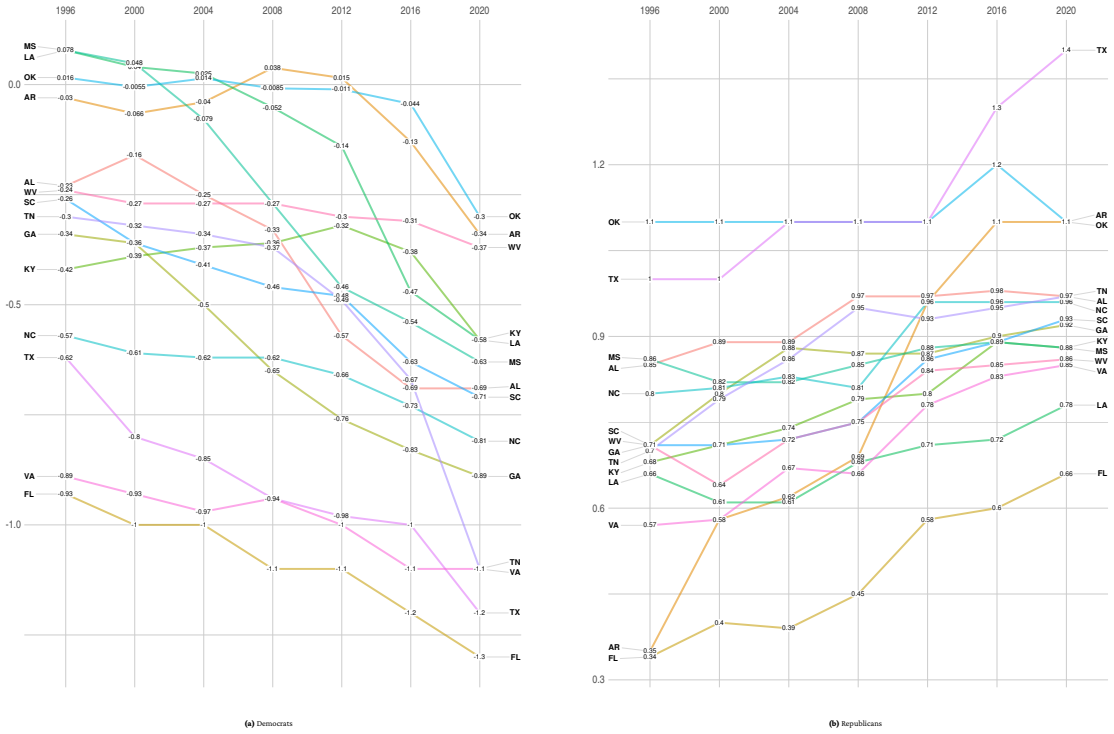


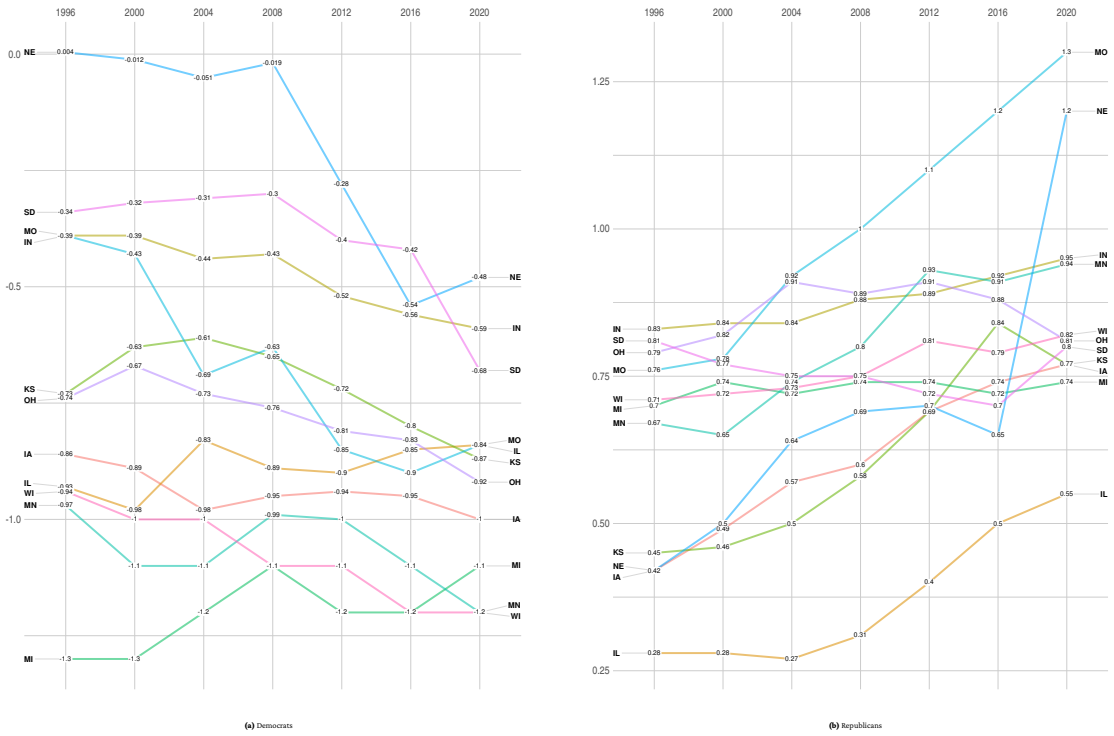
Figure 34: *Party Polarization in the West*



(a) Democrats

(b) Republicans

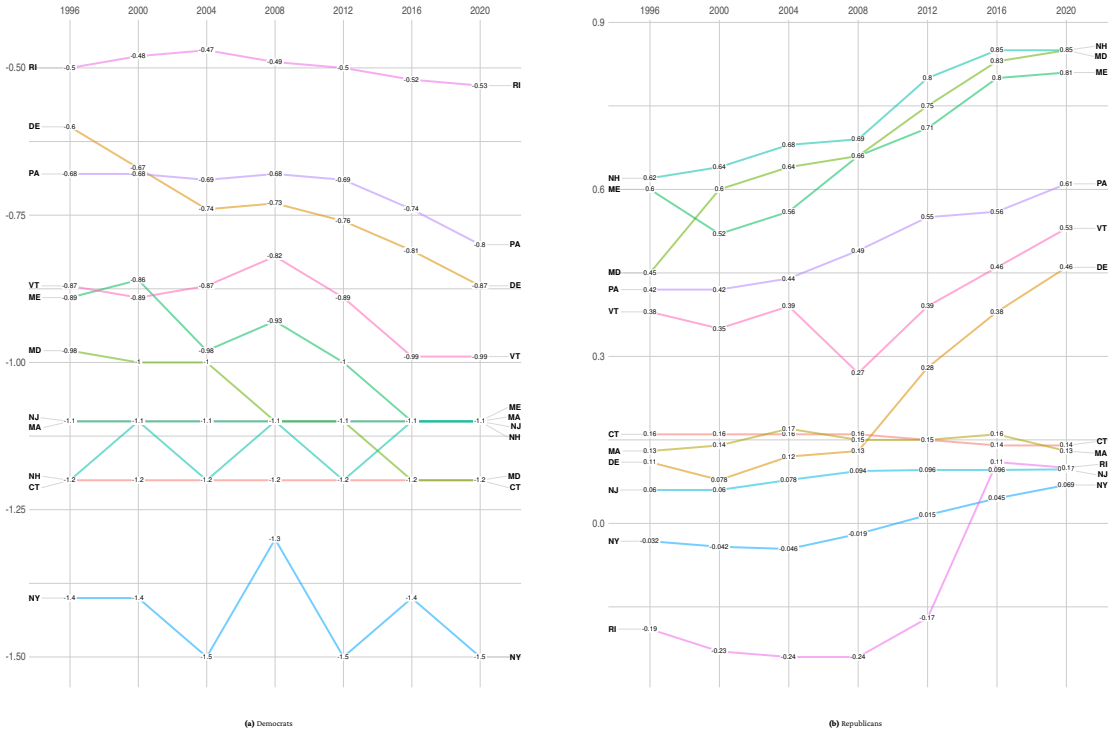
Figure 35: *Party Polarization in the South*



(a) Democrats

(b) Republicans

Figure 36: *Party Polarization in the Midwest*



(a) Democrats

(b) Republicans

Figure 37: *Party Polarization in the Northeast*