Partisan Polarization in the United States: Diagnoses and Avenues for Reform *

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Abstract

Over the several decades, observers of American politics have noted the sharp increase in partisanship and ideological polarization among members of Congress. While better ideological differentiation may provide voters clearer choices and increase accountability, the results of recent partisan and ideological battles have raised questions about the impact of polarization on good governance.

While much scholarly effort has gone into studying the root causes on congressional polarization, such research has been hampered by its sole reliance on the US House and Senate for data on legislative polarization. But new data on polarization of state legislatures provided by Shor and McCarty (2011) and updated with the generous support of the John and Laura Arnold Foundation expands our capacity to uncover the political, economic, and social factors that underlie our increasingly polarized system.

In this report, we review the evidence concerning the polarization of the US Congress and supplement it with analyses based on the experience of polarization in the US states. We show that while there is variation in polarization across states, in aggregate the patterns are very similar to the national experience. Moreover, analyses of the causes of polarization at the national level are generally confirmed by the data on the states. The richer data from the states, however, allows us to address new sets of questions which suggest some limited opportunities for reforms targeted at reducing polarization.

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1 Introduction

Over several years many observers of the American political system have lamented the seemingly ever increasing rise of partisanship and ideological divisions in Washington DC. This political polarization has been blamed both for gridlock and a variety of policy and governance failures. Consequently, political scientists been extremely active in their efforts to understand the origins and causes of political polarization as well as how it impacts governance and policymaking. At the same time, journalists and reform activists have also become interested in polarization, especially in terms of what can be done about it.

Unfortunately, much of the attention has focused on polarization at the national level. But as Shor and McCarty (2011) point out, many state legislatures are at least as polarized as the U.S. House and Senate. The neglect of polarization at the subnational level is unfortunate for a couple of reasons. First, state governments are responsible for formulating and implementing a whole range of policies that most directly effect Americans such as those in education and public safety. Additionally, they play an integral role in implementing many federal policies such as the state healthcare exchanges under the Affordable Care. So the extent to which polarization effects subnational governments is important for governance of society as a whole. In recent years, effects of polarization have been all too vivid in partisan fights over educational standards, Medicaid expansion, voting rights/ballot security, and the

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2For a sampling, see any of the following: Toobin (2003); Eilperin (2006); Lessig (2011); Edwards (2012); Draper (2012); Nocera (2013); Nagourney (2013); Walter (2013); Schumer (2014), and The Economist (2014).
role of public sector unions. A second reason for focusing polarization at the subnational is that the variation across the states may provide important clues about the causes and consequences of polarization at the national level. But most importantly, the states provide a useful laboratory to discern what reforms may or may not be effective in reducing polarization or mitigating its effects.

In this report, we use the data from Shor and McCarty (2011), which has been updated and extended through support of the John and Laura Arnold Foundation, to better understand the underlying causes of polarization and to suggest some possible avenues for political reform. We show that aggregate trends and patterns of polarization at the state level tend to match those of the US House and Senate. Given these similarities, we conclude that an examination of the polarization of state legislatures may help shed light on the causes of polarization at the national level. There is substantial variation in the levels in trends in polarization at the state level, however. This variation allows us and other scholars using our data to more precisely identify the political, economic, and social factors that contribute to polarized politics. To this end, we report on several studies that suggest options for political reform or identify potential unintended consequences of popular reform ideas.

This report proceeds as follows. In Section 2, we present the historical trends in polarization at the national and state levels. Although the Shor-McCarty measures only cover the past fifteen years, the trajectory of polarization of the state and national levels has been remarkably consistent over that period. In Section 3, we compare the distinct trends in the behavior of Republican and Democratic legislators. At the national level, polarization has been very asymmetric with the Republican party moving right at faster clip than the Democratic party has moved left. The results at the state level are more nuanced. Some regions
have witnessed Republican-led asymmetric polarization, but in other cases, the Democrats have polarized more. Section 4 discusses patterns of polarization at the district level. As noted by McCarty, Poole and Rosenthal (2009), polarization can occur in two ways. First, it might occur through *sorting* where Republicans begin to win all the conservative districts and Democrats become dominate in all of the liberal districts. Second, it might occur through *divergence* where Republicans and Democrats represent nearly identical districts in increasingly distinctive ways. We show that divergence is the dominant pattern at both the state and national levels. This finding has important implications for reforms directed at the districting process. In Section 5 we address the common belief that polarization is linked to a decline in inter-party electoral competition. We show that the decline in competitiveness in national and state legislative elections is not as as substantial as commonly believed and may have increased in recent years. Using data from the states, we argue that levels of inter-party competition at the district level is unlikely to influence the level of polarization in the state legislature. Section 6 discusses evidence that polarization at both the national and state levels is driven in part by changing levels of economic inequality.

In section 7, we discuss current research on polarization in the states that suggests both the promise and perils of several reform ideas. We focus on three areas: districting, party organization, and campaign finance regulation. In each of these area, scholars have identified important predictors of polarization that in principal could be manipulated by institutional reform. But because these “reforms” may involve important tradeoffs with other political values, we do not present fully formulated policy proposals. But we do hope that the findings can inform the debates around polarization and lead to more evidence-based proposals in the future.
2 The Trends in Polarization

Political scientists have developed a variety of tools to measure polarization and track it over time. The most important of these tools are statistical models to estimate the liberal/conservative position of legislators based on their observed roll call votes. These positions are called a legislator’s ideal point. The most commonly used measure of legislator ideal points for the United States House and Senate are those developed by McCarty, Poole and Rosenthal (1997) which are also known as DW-NOMINATE scores. Larger DW-NOMINATE scores represent more conservative positions. The simplest way to understand the statistical model that generates these scores 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. With these measures of individual DW-NOMINATE scores, polarization can be measured by aggregating the scores of Republican and Democratic legislators. Figure 1 provides these estimates of polarization for the U.S. House and Senate since 1877.

There are several points about Figure 1 that are worth noting. The first is that levels of polarization in Congress have varied widely over the past 150 years. In the latter part of the 19th Century following Reconstruction, partisan differences were naturally quite large. But the partisan gaps started following around 1920 with the emergence of the Progressive movement which found adherents in both political parties. By the Great Depression and

\[3\text{See McCarty, Poole and Rosenthal (2006) for a non-technical discussion of how ideal points are estimated.} \]
World II partisan differences reached a low point. Reinforced by an emerging coalition of Republicans and southern Democrats, average differences the positions of the parties remained modest until the 1970s. Our current era of increasing polarization began in the middle to late 1970s and was detectable by academics as early as 1982. This fact belies common narratives that pivots on a single event or “great person.” The trend precedes the election of Ronald Reagan, the defeated nomination of Robert Bork, the impeachment of Bill Clinton, and the election of Barack Obama. If the year labels of Figure 1 were removed, even the most astute political observers would be hard pressed to locate those events on the figure. Furthermore, these long-term patterns raise skepticism about the potential efficacy of many proposed reforms. Consider that gerrymandering was less legally constrained, campaign finance less regulated, and primaries more closed during the less polarized 1950s than they are today.

The second takeaway point is that the House and the Senate have remarkably similar histories with respect to polarization. The two time series tend to decline together, stabilize together, and increase together. Generally, there is a little less polarization in the Senate, but there are periods in which the Senate was the more polarized body. Although polarization in the Senate leveled off in the early 2000s, it has increased faster than its has in the House over the past half-dozen years.

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Figure 1: Polarization in the U.S. Congress 1877-2014 Computed from DW-NOMINATE scores (McCarty, Poole and Rosenthal 1997). The polarization measure is the difference in the mean score for Republicans and the mean score for Democrats.

The similar trajectories of the House and Senate also have implications for evaluating reform ideas. Any compelling reform proposal ought to be one which addresses a mechanism present in both the House and the Senate. For example, Figure 1 casts doubt about the importance of congressional redistricting reform since one cannot blame gerrymandering for Senate polarization.

Standard arguments for the causes of polarization also do not provide much help in explaining the almost identical patterns at the state level. Figure 2 presents the partisan polarization of state legislators using measures developed by (Shor and McCarty 2011).5

5These measures are analogous to DW-NOMINATE scores but are measured on a slightly different scale.
Because those measures are unavailable for several states before 1996, Figure 2 is limited to the past twenty years. Nevertheless it shows that the dramatic increase in polarization is observed at the national level is mirrored in the states. Moreover the difference between legislators serving in lower chambers from those serving in upper chambers is much smaller than the House and Senate differences identified in Figure 1. This fact limits the scope for arguments based on electoral frequency and district size because state senators have on average longer terms and larger districts.

![Image of Figure 2](image_url)

**Figure 2: Polarization in the U.S. States 1996-2015** Computed from NPAT Common Space Scores (Shor and McCarty 2011). The polarization measure is the difference in the mean score for Republicans and the mean score for Democrats all state legislators by chamber.

But importantly, there is significant variation in the levels and trends in polarization
across states and regions. Figure 3 plots polarization of lower chamber legislators across the four U.S. census regions for the 1996-2015 period. The figure indicates that polarization tends to be lowest in the South (due to more moderate Democratic parties) and the Northeast (due to more moderate Republicans parties). The West and North Central regions have the most polarized parties. Until very recently, the Northeast and the North Central region have witness more modest increasing in polarization than those occurring in the South and West.

![Figure 3: Polarization Across U.S. Census Regions 1996-2015 Computed from NPAT Common Space Scores scores (Shor and McCarty 2011). The polarization measure is the difference in the mean score for Republicans and the mean score for Democrats all state legislators serving in lower chambers.](image_url)

Figure 3: Polarization Across U.S. Census Regions 1996-2015 Computed from NPAT Common Space Scores scores (Shor and McCarty 2011). The polarization measure is the difference in the mean score for Republicans and the mean score for Democrats all state legislators serving in lower chambers.
3 Asymmetric Polarization

Figure 4 presents another historical fact about polarization that is important to account for when discussing reform. Polarization at the national level has been asymmetric. Rather than a pattern where parties moving toward the poles, polarization over the past forty years has been overwhelmingly associated with the increased movement of Republican legislators to the right. Each new Republican cohort has compiled a more conservative record than the returning cohort. Importantly this has been the case since the 1970s, it is not a reflection of the emergence of the “Tea Party” movement.\footnote{At least in the case of the Senate, the Tea Party might have decreased polarization through its support of extreme candidates such as Christine McDonnell, Richard Mourdock, and Todd Akin that ultimately cost the Republican party seats that were won by moderate Democrats.}

The Democratic party has not followed the same pattern. Some new cohorts are more liberal than the returning caucus on average, but many are more moderate. The slight movement of the Democratic party to the left can be almost fully accounted for by the increase of African-American and Latino legislators in its caucus. Outside of “majority-minority” districts that tend to elect ethnic and racial minority legislators, the average position of the Democratic party has changed very little.

The pattern of polarization at the state level has been considerably more symmetric, however. Table 1 shows the average rate of change in the positions of the average lower house legislator for each region and party. Republican movement has considerably greater in the Northeast and North Central while the Democratic movement has been greater in the South and West.
Figure 4: *Party Positions in the U.S. House 1877-2014* Figure shows average DW-NOMINATE scores by party.

Table 1: Average Annual Position Change by Party and Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Democrats</th>
<th>Republicans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>-0.004</td>
<td>0.013</td>
</tr>
<tr>
<td>North Central</td>
<td>-0.006</td>
<td>0.009</td>
</tr>
<tr>
<td>South</td>
<td>-0.017</td>
<td>0.012</td>
</tr>
<tr>
<td>West</td>
<td>-0.019</td>
<td>0.011</td>
</tr>
</tbody>
</table>
4 Patterns of Polarization

There are two logical ways in which a legislative body can be polarized.\textsuperscript{7} The first is what we call geographic \textit{sorting}. Polarization due to sorting occurs when liberal Democrats become increasingly likely to win elections in liberal districts while conservative Republicans are increasing likely to represent conservative districts. Such sorting can produce polarization even when the parties differ very little in how they represent moderate districts. Such a hypothetical pattern is shown in the left panel of Figure 5. In the figure, the x-axis represents the conservatism of the district while the y-axis represents the conservatism of the representative. The Democrats (token D) represent almost all of the liberal districts and the Republicans (token R) represent almost all of the conservative districts. But Democrats and Republicans represent the moderate districts very similarly. This hypothetical legislature would have a polarization score of .9.

The second pattern is what I call \textit{divergence}. Divergence occurs when Democratic and Republican legislators represent otherwise identical districts in increasingly extreme ways.\textsuperscript{8} Divergence may lead to polarization even if there is a low correlation between the party of the representative and the preferences of the median voter of her constituency. Panel b of Figure 5 illustrates polarization due to divergence. In that panel, both Democrats and Republicans represent liberal and conservative districts, but there is a gap between the parties at each level of district conservatism. The hypothetical legislature in panel b also

\textsuperscript{7}See McCarty, Poole and Rosenthal (2009) for a more extensive discussion.

\textsuperscript{8}Such a pattern is also consistent with what Bafumi and Herron (2010) call “leapfrog” representation where liberal and conservative legislators rotate in office with the same constituency.
Figure 5: Polarization from Sorting and Divergence The panels show the relationship between voter preferences and legislative positions for two hypothetical legislatures. In panel a), the legislature is polarized due to the sorting of Republicans legislators into conservative districts and Democratic legislators into liberal districts. In panel b), the legislature is polarized because Democrats and Republicans represent districts in divergent ways. "D" represents Democratic members and "R" represents Republican members.

has a polarization score of .9.

These two different forms of polarization have distinct implications for thinking about the causes of polarization and the potential for reform. If polarization is caused by sorting, then polarization may be addressed by reducing the number of extreme districts. But if polarization is primarily a reflection within district divergence, engineering moderate districts may be ineffectual or even counter-productive (McCarty et al. 2014).

The available evidence shows that the contemporary trend is mostly a process of divergence. This pattern is demonstrated by comparing the two panels of Figure 6.
Figure 6: Sorting and Divergence 1973 and 2008 The figure plots DW-NOMINATE scores against Republican presidential vote for two congressional terms. A lowess smoothing line is included for each party. The widening gap between the parties at each level of presidential vote indicates greater divergence.

This figure plots the conservatism score for each House member against the Republican presidential vote (a measure of district conservatism) for two different elections – 1972 and 2004. The solid line for each party shows the expected conservatism of a member at each level of presidential vote. A larger gap between these lines indicates a greater degree of divergence. A simple comparison reveals how the gap between the parties in moderate districts has grown since the 1970s.

Figure 6 does show some sorting. Those districts that vote overwhelmingly for Democratic presidential candidates almost always elect liberal Democrats to Congress. But these sorted districts are overwhelmingly urban and minority districts. There are few sorted Republican
districts even though it is the Republicans that have polarized most.

McCarty, Poole and Rosenthal (2009) develop a procedure to decompose measures of polarization into the components related to divergence and sorting. Using these measures, they find that from the 1970s to the mid-2000s, divergence accounted for 80%.

These findings are echoed in state legislatures. Figure 7 applies McCarty, Poole and Rosenthal (2009)’s technique to state legislatures. For each state, the figure reports the percentage of total polarization attributable to divergence. Clearly, divergence rather than sorting is the dominant pattern in state legislatures. In all but four states, divergence accounts for more than 80% of the level of polarization.

Figure 7: Ratio of Divergence to Polarization in State Houses The figure plots the ratio of divergence to polarization in state lower houses using the technique of McCarty, Poole and Rosenthal (2009). The figure is reproduced from ?.
In sum, any proposed reform for tackling polarization must account for the fact that Democrats and Republicans represent nearly identical districts in very distinctive ways. As McCarty, Poole and Rosenthal (2009) argue, a focus on gerrymandering is hard to square with divergence-based polarization. The underlying hypothesis linking gerrymandering to polarization is that politicians draw maps that minimize electoral competition. Thus, if gerrymandering were to be the cause of polarization, the mechanism be through greater sorting. Not only do McCarty, Poole and Rosenthal (2009) show that the rise of polarization is caused primarily by divergence, they find little evidence of a consistent pattern of sorting rising following the decennial reapportionment. Conversely, the argument that gerrymandering is the cause of polarization provides little explanation as to why Republicans and Democrats would represent moderate districts in increasingly divergent ways.

5 Polarization and Electoral Competitiveness

Another common belief is that polarization is strongly associated with declining inter-party electoral competition. This assumption is most clearly held by those who propose districting reform. The “gerrymandering” hypothesis discussed above is based on the notion that state legislators draw district boundaries that artificially depress inter-party competition. Without competition from the other party, legislators cater to their bases and extreme interest groups. Arguments about primary election reform also rely on the belief in a lack of inter-party competition. If general elections are not competitive, the partisans who dominate the primary electorates have very little reason to nominate “electable” candidates who appeal to the political center. Despite the widespread belief in declining competition, however,
the evidence that legislative elections have become less competitive or that non-competitive elections causes polarization is not very strong.

A common way of measuring the competitiveness of a legislative district is based on the presidential vote share. A district is deemed competitive if its presidential votes are divided roughly equally between the candidates of the two major parties. The underlying premise is that presidential vote share is a good measure of district partisanship. Districts that vote heavily Democratic in presidential elections are unlikely to elect Republican representatives and vice versa. But districts that split their presidential votes are more likely to see competitive legislative elections. Thus, scholars have used the presidential vote as a measure of district competitiveness on the premise that it is uncontaminated by other features of legislative campaigns. If legislative elections were becoming less competitive, we would expect to see average district presidential vote share margins growing or see fewer districts at parity in presidential voting.

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9While political scientists have used presidential vote alongside a variety of other measures of competitiveness, the use of presidential vote is very common in journalistic and activist circles. For example, see http://www.fairvote.org/research-and-analysis/congressional-elections/monopoly-politics-2012/.

10Suppose one were to use legislative vote shares instead. Such a measure would conflate the underlying features of the district with decisions about candidate entry, quality, and spending.
Figure 8: **Average Absolute Mean Deviated Presidential Vote Margin Across Congressional Districts** The figure is based on mean-deviated presidential vote share for each Congressional district and for each presidential election. Each marker shows the average absolute margin for each combination of congressional term and presidential election.

Figure 8 shows the average absolute mean-deviated vote share for congressional districts for all elections since 1992. For example, a district with a 56% Democratic vote when the average district has a 48% share has an absolute mean deviated vote of 8. Under the same scenario, a district with a 38% Democratic vote has a score of 10 while the average district has a score of 0.\(^{11}\) So this average measures the overall level of competitiveness where higher scores mean less competitive.

Figure 8 does appear to indicate declining competition as the average vote margins have increased. But it is important to note that the increase has little or nothing to do with

\(^{11}\)The main purpose of the mean deviation is to eliminate election specific effects unrelated to the underlying competitiveness of House districts.
congressional districting. Figure 8 plots the vote share variable for multiple presidential elections for the same congressional districts. Thus, we can determine how much the measure changes based on districting and how much is just the peculiarities of each presidential election.

Note that redistricting in 2002 and 2012 had no impact on the measure when the results of the same presidential election are compared. When the 2000 election results are applied to the pre-reapportionment districts, the average mean-deviated vote margin is about 11.4 and rises only to 11.5 under the districts drawn in 2002. Similarly, when the 2008 election returns are applied to the 2010 congressional districts, the average margin is 12, the same margin under the post-reapportionment districts. The apparent decline in competition following the latest reapportionment is an artifact of using the 2012 presidential election.

The use of the average margin may be misleading if what one wants to know is how many districts are in play in any given election year. So Figure 9 plots the percentage of districts where the absolute mean-deviated presidential vote margin is less than 10 points. Using this measure, there was a slight decline in competitiveness following the reapportionment in 2000 – roughly the equivalent of 8 seats. But there is no similar decline following the 2010 reapportionment.
Figures 8 and 9 are consistent, however, with a decline in electoral competition unrelated to redistricting. The most-likely culprit is the longer term regional realignment in presidential voting. Such a realignment is unlikely to be reversed through electoral engineering.

Measures of electoral competitiveness based on presidential votes have certain conceptual limitations. Ultimately, inter-party competition should be measured as the ex ante likelihood that a seat could switch partisan hands. Such ex ante measures are difficult, but we can look at the ex post likelihood by examining the magnitude of partisan swings over time. Figure 10 plots the absolute swing in party seat share for every election since the 1930s as well as the associated three-election moving average. It is hard to see any trend that matches
up with the polarization trend. The magnitude of the swings declines from the 1930s to the 1970s when polarization was low. There is no obvious trend following the 1970s. It appears that there may be a new upward trend beginning in 2006. Every swing from 2006 to 2014 exceeded every swing from 1996 to 2004. So inter-party electoral competition appears to remain robust.

Figure 10: *Partisan Swings in the U.S. House* The figure shows the absolute swing in the partisan seat shares for each election from 1936 to 2014.

The evidence of a decline of competitiveness is also not very strong at the state level. Table 2 reports the average percentage of state lower house districts with a presidential vote margin of less than 10%. Despite the dramatic increase in polarization at the state level over the past decade, the average state saw only a 1.4 point decrease in the number of competitive
districts.\footnote{I thank Steve Rogers for providing these data.}

Figure 11 replicates Figure 10 but for elections to state lower houses. To account for changing number of legislative seats, the partisan swings are measured in percentage terms. Clearly, the pattern of partisan swings in state legislatures mirror that of the US House. There is a long term decline in the magnitude of the swings, but much of it predates the era of growing polarization. Over the period for which we can measure state level polarization, the magnitude of the partisan swings is on the rise. This does not suggest a strong relationship between inter-party competition and polarization.

![Figure 11: Partisan Swings in State Lower Houses](image)

The figure shows the percentage absolute swing in the partisan seat shares in state lower chambers for each election from 1936 to 2014. Using the Shor and McCarty (2011) data on state level polarization, we can go further in
asking whether there is a cross-sectional relationship between the level of popularization and
the degree of inter-party competition at the district level. We consider whether the number
of state lower house districts that are competitive at the presidential level correlate with the
level of polarization observed in the lower house. Column 3 of Table 2 presents the simple
correlation for three presidential elections between lower house polarization and percentage
of a state’s districts with a presidential vote margin of less than 10%.

Table 2: Correlation Between Polarization and District-Level Inter-Party Competition

<table>
<thead>
<tr>
<th>Election</th>
<th>Competitive Dists (State Average)</th>
<th>Correlation of Polarization and Competition</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>23.1%</td>
<td>0.024</td>
<td>0.865</td>
</tr>
<tr>
<td>2004</td>
<td>22.1%</td>
<td>-0.014</td>
<td>0.930</td>
</tr>
<tr>
<td>2008</td>
<td>21.7%</td>
<td>0.391</td>
<td>0.025</td>
</tr>
</tbody>
</table>

If low levels of inter-party competition at the district level produced higher levels of legis-

lative polarization, we would expect to see a negative and statistically significant correlation

for each election. There is a negative correlation, however, for only one election. But the

magnitude is very small and the p-value indicates that we cannot reject the null hypothesis

of no relationship between inter-party district-level competition and polarization. The only

statistically significant correlation is for 2008 where the correlation is positive. In sum, these

data do not suggest that district-level electoral competitiveness affects polarization at the

legislative level.\(^\text{13}\)

In summary, the evidence does not support the widely held notion that polarization has

resulted from a lack of inter-party competition at the constituency level. Standard measures

\(^{13}\text{See Brunell and Grofman (2008) for parallel evidence casting doubt on the idea that U.S. House polar-
ization is related to the degree of inter-party competition.}\)
of competitiveness based on presidential vote appear to be driven by the particularities of the
the presidential elections rather than aspects of the allocation of voters across districts while
competitiveness measured by seat swings does not appear to have declined. Evidence from
state legislatures finds no impact of district-level competitiveness on polarization. These
empirical facts call into question the underlying arguments used to support reforms to re-
districting and primary institutions. Given the lack of support for the underlying premises,
it is not surprising that such little evidence has been mustered from the direct effects of
gerrymandering or partisan primaries on reform.

6 Polarization and Inequality

While changes in electoral competition especially those presumed to be influenced by leg-
islative districting have limited power to explain trends and patterns in polarization, there
is considerable evidence that polarization may be affected by longer term changes in the
American economy and society.

McCarty, Poole and Rosenthal (2006) have demonstrated that there is a very strong
historical connection between the level of polarization in the US Congress and the degree
development of economic inequality. Figures 12 and 13 demonstrate this connection. In Figure 12, the
McCarty, Poole and Rosenthal (2006) measure of polarization in the House is juxtaposed
against the Gini Index of family income. The Gini Index is a measure of income inequality
where higher values represent more unequal incomes. Note that both the polarization mea-
sure and the Gini index remain at quite low levels before both series turned sharply upward
at about the same time in late 1970s.
Figure 12: *Polarization and the Gini Index*  The figure plots the McCarty, Poole and Rosenthal (2006) measure of polarization in the US House again the Gini index of family income. The Gini index is a measure of inequality that ranges from 0 (pure equality) to 1 (complete concentration of income).

Unfortunately, the Gini index is available only back to the 1940s so Figure 13 uses a different measure of inequality, the share of income going to the top 1% of taxpayers as computed by Piketty and Saez (2003) and subsequently updated. The use of this extended measure shows that high polarization and high inequality tend to move roughly in tandem going back at least as far as the introduction of the income tax.

Despite this suggestive evidence, scholars have not been able to precisely asses the extent to which income inequality causes polarization. First, the relationship might be the other way around so that polarization causes inequality through its impact on the policymaking capacity of the federal government. Indeed there is some suggestion of such an effect in Figure 13 as polarization appears to lead changes in the top income share especially during
the first part of the 20th Century. Second, it is also possible that the relationship between inequality and polarization as would be the case if both were caused by some third factor.

![Graph](image)

**Figure 13: Polarization and the Income Share of the Top 1%** The figure plots the McCarty, Poole and Rosenthal (2006) measure of polarization in the US House against Piketty and Saez (2003) measure of the income share of the top 1% of taxpayers.

But recently Voorheis, McCarty and Shor (2015) use data from Shor and McCarty (2011) and Voorheis (2014) to test for a causal relationship between inequality and polarization in the states.\(^\text{14}\) They find that that income inequality has a large, positive and statistically significant effect on political polarization. Economic inequality appears to cause state Democratic parties to become more liberal. Inequality, however, moves state legislatures to the right overall. Such findings suggest that the effect of income inequality impacts polarization by replacing moderate Democratic legislators with Republicans.

\(^\text{14}\)Because this study can leverage variation across states and over time, it is less susceptible to biases caused by omitted variables. Moreover, they use a statistical procedure to minimize the effects of reverse causation.
These findings about the link between polarization and inequality suggest that our political divisions are in a large degree related to deeper social and economic changes. So tackling political polarization may require policies designed to target economic inequality and economic growth for the middle and working classes. Yet polarization negatively impacts the capacity of policymakers to deal with those problems.

7 Reform Avenues

While the evidence discussed above suggests deeper roots of polarization casts considerable doubt about many of the most popular remedies, recent work using the data from Shor and McCarty (2011) suggests that there may be some opportunities for policies and reforms that might mitigate polarization.

Drawing on this work, we outline three possible policy approaches to polarization: homogenize legislative districts, strengthen parties, and regulate individual campaign contributions (but not necessarily corporate contributions). Many observers will find these recommendations to be counter-intuitive if not perverse. Clearly, there may be other normative considerations unrelated to polarization that may make these reforms undesirable. So our point is not to advocate for such changes, but to demonstrate the complex trade offs and potential unintended consequences of electoral reform targeted at polarization.

7.1 Creating Homogeneous Electorates

For those who contend that declining district-level inter-party competition is a cause of polarization, the answer is to create more heterogeneous districts. Such districts would be
more likely to swing back and forth between Democratic and Republican representatives and would therefore induce competition that would reduce the chances of electing an extreme legislator.

Existing political science research, however, questions the wisdom of heterogeneous legislative districts. Brunell (2010) argues that heterogeneous districts maximize the average preference divergence between citizens and their representative. To support this argument, he shows that citizens in competitive legislative districts report less satisfaction with Congress. Gerber and Lewis (2004) show that legislators from heterogeneous districts compile voting records less congruent with the median voters of their district. Similarly, Levendusky and Pope (2010) find that House members representing districts with heterogeneous voter preferences compile more extreme voting records.

Recently, we and some collaborators have added to the evidence against heterogeneous districts by demonstrating how such districts produce greater levels of partisan divergence. Our argument is that heterogeneity creates greater levels of electoral uncertainty. Such uncertainty weakens the centripetal incentives toward convergence and allows policy-motivated candidates to pursue policy goals that diverge from the preferences of the median voter.

To provide support for this argument, we supplement the Shor and McCarty (2011) data on the ideal points of state senators with data on the distribution of preferences within each state senate district. The data on citizen preferences is drawn from Tausanovitch and Warshaw (2013). The citizen preference data is computed by linking the responses on policy questions across a number of large surveys to produce estimates of the liberal-conservative

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15See McCarty et al. (2014).
16See also Calvert (1985) and Wittman (1983).
position of over 350,000 respondents. With such a large sample, we are able to estimate the political heterogeneity of each senate district as the standard deviation of the respondents’ policy positions.\textsuperscript{17}

First, we demonstrate that polarization in a state senate is strongly related to the average preference heterogeneity of its districts. Figure 14 plots the state average of our measure of heterogeneity against the difference in party medians derived from the Shor-McCarty ideal points. The figure reveals a strong positive correlation between the average district heterogeneity and the polarization of the state senate. This correlation is just as large as the correlation between polarization and the variation of median ideal points across districts. Thus, the variation of voter preferences within districts matters as much as the variation across districts.

Unlike many arguments about polarization that are predicated on ideological sorting across districts, our argument explicitly predicts that the link between polarization and district heterogeneity operates through divergence. Thus, our primary empirical finding is that Republicans and Democrats represent heterogeneous districts in divergent ways. Figure 15 demonstrates this point. The sample of state senate districts is divided into three groups based on the standard deviation of citizen preferences. For each group, the Shor-McCarty ideal points are plotted against the mean voter preference. Clearly, as one moves from the least heterogeneous districts to the most heterogeneous districts, the gap between Democratic and Republican legislators grows at each level of citizen preference.

\textsuperscript{17}We replicate our analysis for the U.S. House and for state lower chambers. The results for the U.S. House are very similar. The results for state lower chambers are somewhat weaker because our measures of heterogeneity are far less precise at that level.
Figure 14: District Heterogeneity and Legislative Polarization The x-axis plots the average standard deviation of voter preferences across state senate districts using the data from Tausanovitch and Warshaw (2013). The y-axis plots legislative polarization using the difference in party medians from Shor and McCarty (2011). See McCarty et al. (2014) for more details.

The results of Figure 15 are robust when we control for a number of factors that might confound the relationship between district heterogeneity and partisan divergence.\textsuperscript{18} Our results indicate that Democrats and Republicans representing districts at the 75th percentile of district heterogeneity diverge 0.1 units on the Shor-McCarty scale more than those representing districts at the 25th percentile. The magnitude of this effect is about 25\% of the inter-quartile range of polarization measures across the states.

\textsuperscript{18}As an even stronger test for a causal relationship, we look at what happens when a district goes from Republican to Democratic hands or vice versa. The resulting difference in the ideal points of the new legislator and old legislator is considerably larger in the heterogeneous districts, as our argument would predict.
Figure 15: Voter Heterogeneity and Divergence Each panel represents a tercile of state senate districts based on the heterogeneity of citizens’ preferences. The x-axis of each panel plots the mean citizen preference. All preference measures are derived from Tausanovitch and Warshaw (2013). The y-axis shows the ideal point of state senators from Shor and McCarty (2011).

Inducing political competition by striving for more heterogeneous districts runs into additional problems. Given the strong residential clustering of citizens with similar social, economic, and political profiles, the creation of heterogeneous districts also certainly requires creating what legal scholar Nicholas Stephanopoulos calls “spatially diverse” districts. Spatial diversity refers to the variation of individual attributes (e.g. income, race, education) across geographic space. For example, a spatially diverse district might be one where conservative, wealthy white neighborhoods are combined with low income, liberal, minority neighborhoods. Stephanopoulos argues that spatially diverse districts tend to perform poorly on many indicators including voter engagement, participation, and representation. But most importantly for this discussion, he finds a greater degree of ideological polarization among

\[\text{Stephanopoulos (2011).}\]
members of the House of Representatives who represent spatially heterogeneous districts than those representing other types of districts.

The upshot of these findings is that a primary objective of redistricting should be to create legislative districts where the vast majority of the citizens share common political preferences. Achieving this goal will likely require greater deference to existing municipal and administrative boundaries as well as the relaxation of compactness constraints so that similar communities can be connected together into districts despite often unfavorable geographic residential patterns.

### 7.2 Strengthening Party Organization

The academic literature and public discussions of legislative polarization in the United States often conflates polarization and partisanship.\(^\text{20}\). This confusion arises naturally because the two phenomena are hard to distinguish empirically. For example, it is very difficult to discern whether those increased partisan differences in legislative behavior reflect true ideological changes or simply increased intra-party cooperation and inter-party conflict. Given the difficulty of distinguishing, scholars often use the terms polarization and partisanship almost interchangeably.

This conflation of polarization and partisanship is relevant for discussions of political reform. Many popular prescriptions for reducing polarization call for decreasing the role of political parties. But if polarization in the United States is the consequence of relatively weak parties rather than strong parties, as I argue may be the case, then such reforms will

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\(^{20}\)This section draws heavily on McCarty (2015).
be counter-productive.

To illustrate, consider two scenarios. The first is one with strong legislative parties. Assume that parties are so strong that they behave as unitary actors. The second scenario is one where parties are very weak. The organizations and leaders impose no discipline on candidates and therefore party labels convey no information to voters.

The strong party scenario perfectly conforms to the model of Anthony Downs.\textsuperscript{21} In his model, unified political parties have very strong incentives to converge to the median voter. Any party that fails to position itself in the political center will be defeated by one that does. This convergence prediction continues to hold even if the parties have policy preferences. So with strong parties, there is very little polarization. Both parties cater to the preferences of the median voter.

Now consider the weak party scenario. The autonomous candidates of each party have incentives to converge on the median voter in each district. Voters would be indifferent between the candidates and would metaphorically flip coins. Consequently half the districts would be represented by Democrats and half represented by Republicans. Moreover, the Democratic districts would be statistically identical to the Republican districts. So there is no polarization on average and Democrats and Republicans represent districts ranging across the spectrum. Both parties are very heterogeneous, but the distributions of legislator positions are the same.

So neither the extremely weak or extremely strong party system should be very polarized. So consider an intermediate case. Jim Snyder and Michael Ting offer a theory that

\textsuperscript{21}Downs (1957).
closely approximates this middle ground.\textsuperscript{22} In their model, voters wish to use party labels to make more informed choices about legislative candidates. If Republican candidates are more conservative on average than Democratic candidates, a voter might use this information in casting her vote in a legislative election even if she did not know the exact locations of the specific candidates. Snyder and Ting also assume that voters prefer the candidate whose party label provides more precise information about her position. Consequently, voters prefer candidates from homogeneous parties to those from heterogeneous parties.

This aspect of voter preferences gives each party a strong incentive to screen candidates who deviate too far, left or right, from the party’s prevailing position. Strong parties are assumed to be better at screening candidates and thus better able to reduce the variance in the positions of its candidates. A party that can perfectly screen is equivalent to the Downsian party. If both parties are perfect screeners, each will position itself on the median voter and screen out any candidates with different positions.

But when parties are weaker, they screen candidates imperfectly. For such parties, Snyder and Ting obtain a distinct prediction. That such parties cannot screen out relatively more extreme candidates forces them to position themselves away from the median voter. Thus, weak parties will take divergent positions. Consequently, Republican candidates will tend to win conservative districts and Democratic candidates will win the liberal districts. Consequently, there will be considerable polarization in equilibrium.

So polarization is only obtained in an ”anti-Goldilocks” case where the parties are not too strong nor too weak. So the question of how to best reform the party system to reduce polarization is an empirical one – would reducing the influence of party organization reduce

\textsuperscript{22}Snyder Jr and Ting (2002).
polarization as some would claim, or would it move us toward the anti-Goldilocks point with higher polarization. If the latter, a reform agenda designed to reduce polarization should strive to strengthen the role of party organizations both by enhancing their role in the selection and discipline of candidates and giving them an enhanced capacity to withstand the pressure of extreme interest groups and voters.

To evaluate the effect of party organization on polarization, we draw upon and extend the work of Krimmel (2013) who argues that the national parties polarized at least in part because they were forced to turn increasingly to organized interests for resources as traditional partisan resources such as patronage declined. In addition to historical and archival evidence for this change in partisan strategy, Krimmel provides some quantitative evidence that there is lower legislative polarization in states that have historically strong party organizations. Specifically, she finds a strong negative correlation between state legislative polarization as measured by Shor and McCarty (2011) and David Mayhew’s measure of “traditional party organizations” (TPO).23

We now extend Krimmel’s analysis. First, we show the relationship between the differences in party medians for state lower and upper chambers and Mayhew’s TPO scores. Each dot represents an annual level of polarization for each state legislature. The data cover the period of 1996 to 2008. Both Figure 16 and Figure 17 show that on average there is a

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23Mayhew (1986) classifies the state party systems of the late 1960s. He identifies states with traditional party organizations as those with local political organizations that meet five criteria. Such organizations 1) are largely autonomous from candidates and outside interests 2) have longevity 3) use hierarchical structures 4) try to influence nominations for office and 5) rely substantially more on “material” incentives than on “purposive” incentives. That Mayhew’s ratings pertain to the situation in the states during the late Sixties has the advantage of making them plausibly exogenous to contemporary levels of polarization.
negative relationship between polarization and historical strength of party organizations in the state.

To further explore the relationship between polarization and party strength, we use multiple regression to control for other variables that might impact polarization. The dependent variable of each model is either a polarization measure or a measure of the position of a party’s legislative delegation. All of these data are drawn from Shor and McCarty (2011). The main independent variable is Mayhew’s TPO measure. We include a small set of control variables. First, we include Year to capture the trend toward greater polarization. We also include an indicator South to capture regional variation in both polarization and the prevalence of traditional party organizations. Data on Percent African-American and Income Inequality (the Gini coefficient of family income) are also included.
McCarty (2015) reports the estimates of these models for lower and upper chambers, respectively. In both models, states with a recent history of traditional party organization have less legislative polarization than those that do not. States with traditional party organizations have differences in party medians that are about 0.4 lower than states with weaker party organizations. The magnitude of this effect is equivalent to a one-standard deviation reduction in polarization and two-thirds of the inter-quartile range. So the correlation of party organization and polarization is both large and statistically significant. Importantly, the results are robust to the inclusion of controls for region, economic inequality, and racial composition.
Figure 17: *Polarization and Traditional Party Organization in State Upper Chambers*. Polarization is measured as the difference in the median position of Republican and Democratic legislators drawn from Shor and McCarty (2011). The Measure of Traditional Party Organization is from Mayhew (1986).

So the take away is that most academic observers, journalists, and activists share a too simplistic view of the relationship between party organizations. This view tends to blame polarization on a strengthening of political parties. Instead, the opposite view is better supported empirically. Perhaps instead of sidelining parties in the nomination process and campaign finance system, we should be enhancing the role of parties. While America’s anti-party political culture may preclude any explicit attempt to strengthen parties, it is important to remember that any tinkering of the campaign finance system, congressional rules, primary nomination systems, or redistricting may have unintended consequences related to
weakening parties.\textsuperscript{24}

\subsection*{7.3 Regulating Individual Campaign Contributors}

Following the Supreme Court’s controversial decision in \textit{Citizen’s United}, concerns about an influx of corporate and labor union independent expenditures into American elections has topped the list of concerns for reformers. While the decision and the new campaign finance regulatory regime that it represents raises many valid worries, political scientists have been very dubious of any direct link between corporate and labor union election financing and polarization. Although labor unions do tend to concentrate their funding on liberal and pro-labor Democrats, corporations are not nearly as ideological. While some corporations concentrate their money on conservative, pro-business Republicans, ”access-oriented” corporations spread their largess across the ideological spectrum. As a result, McCarty, Poole and Rosenthal (2006) demonstrate that extreme legislators obtain no fundraising advantages from corporate political action committees (PACs).

But recent research has found much more promising evidence for a different channel through which campaign finance may affect polarization – increased contribution activity by ideological individuals. While growth contributions by political action committee contributions has been relatively flat, contributions from individual citizens have been growing dramatically. Candidates have become correspondingly more reliant on individual contributions. Barber (2014) reports that the median federal candidate now obtains 80\% of her funds from individual donors, up from only 20\% two decades ago.\textsuperscript{25} Moreover, Barber (2014)

\textsuperscript{24}For complementary arguments about strengthening parties, see Persily (2015a) and Pildes (2015).

\textsuperscript{25}See Figure 1. The reliance of state candidates on individuals is 50\%, also up from about 20\% over the
and Bonica (2014) have shown that individual contributors are far more ideological than are PACs. Consequently, candidates for federal and state office are now far more reliant on ideologically-motivated contributions than was the case in the 1990s.

Barber (2014) provides two important pieces of evidence that suggest that this rise in money from ideological individuals contributes substantial to polarization in legislatures. First, he finds that there is a significant correlation between the extremity of a legislator (where extremity is measured as the absolute value of the DW-NOMINATE score for federal legislators and by the absolute value of the Shor-McCarty scores for state legislators and the percentage of campaign funds raised from individuals. Although such a correlation is consistent with an impact of individual contributions on polarization, it is difficult to know which way to direct the causal arrow. Rather than ideological contributors forcing candidates to extreme positions, it might be the case that legislators than hold extreme positions for other reasons are simply better at raising money from individuals or that they are punished by organizational donors. But even if the donors are not causing the polarization, the success of extreme legislators in tapping into individual money can help sustain it.

The second piece of evidence is more plausibly interpreted as indicating a causal relationship between reliance on individual contributors and polarization. To establish such a link, Barber uses within-state variation in contribution limits on individuals and PACs. Such laws provide plausibly exogenous variation in the reliance of legislators on individual

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26See Table 3.

27His research design does not utilize cross-state variation in laws due to concerns about omitted variables which might be correlated with campaign finance laws and polarization.
contributors. If a state has tight limits on individual contributors, Barber argues that candidates will be forced to seek funds from corporations, labor unions, and PACs, and vice versa.

Barber shows that the fundraising portfolios of legislators are responsive to contribution limits – as individual limits are lowered, incumbents raise less money from individuals. But the most important finding is that legislators from states with high or no legal limits tend to have more extreme ideological positions, ceterus paribus. In a state that switches from unlimited individual contributions to one with limits, legislators will moderate by about a third of a standard deviation of the absolute values of the Shor-McCarty scores. The effect is considerably larger in the more professionalized state legislatures.

But while Barber’s results lend considerable support to arguments for tighter regulation of individual contributions, his findings about regulations on political action committees are almost the mirror image of those for individual contributions. Legislators are least polarized in states that have high or no limits on PAC contributions. Thus, the reform implications may be unsettling to some – clamp down on individuals but deregulate PACs.

Tackling polarization through campaign finance reform involves a significant dilemma. As Bonica et al. (2013) shows, small donors are considerably more ideological and extreme than larger donors. While some large donors such as Charles Koch or George Soros have very clear ideological agendas, many wealthy contributors are more centrist and pragmatic.

\(^{28}\) Consistent with this finding, Barber also shows that tighter contribution limits lead to small contributions on average and more donors “maxing out” with a contribution at the legal limit.

\(^{29}\) Of course, there may be many reasons unrelated to polarization for tightening restrictions on corporate and labor union money.
and employ strategies similar to corporations. Smaller contributors, however, are more likely to allocate their donations according to ideological criteria.\textsuperscript{30}

Yet at the same time, wealthy individuals have come to play an increasingly outsized role in campaign finance. Figure 18 (drawn from Bonica et al. (2013)) shows how campaign contributions have increasingly been concentrated at the top of the income distribution. The figure presents the proportion of contributions made by the top .01\% of American citizens in each election since the 1980s. In the 1980s, the top 0.01\% accounted for only 10 to 15\% of the total contributions in federal elections. In 2012, more than 4 out of every $10 in contributions came from one of these top donors. For comparison, the figure includes updates of the Piketty and Saez (2003) estimate of the income share of the 0.01\%. Growth in the concentration of campaign contributions has outstripped the spectacular growth of income inequality.

\textsuperscript{30}See Bonica et al. (2013), figure 7 and the discussion on pages 115-116.
Consequently, if reformers want to target polarization, small donors should be targeted at the expense of large donors. But those who wish to target an ever increasing source of political inequality should do the opposite.
8 Conclusions

Successful reforms must be based on a foundation of good evidence. Academic research can play a more central part in the debates about how to improve democracy and governance in the United States. Clearly, political scientists need to do more to engage and communicate our ideas and findings. My hope is that this article contributes to that endeavor.31

Unfortunately, those who tout certain reform ideas as solutions to polarization often dismiss social scientific evidence. Instead, they prefer to rely on intuitions based on their preconceptions about the underlying causes of polarization. This is not a fruitful approach to promoting fundamental reform of our democratic institutions. The mixture of social, economic, and strategic considerations that underlie the creation of our partisan and ideological divisions are too complex to be reduced to simplistic analysis and common sense.

Even reformers who accept social scientific evidence often believe that it is beside the point. The argue that bipartisan redistricting commissions, non-partisan primaries, and curbs on corporate spending are good ideas independent of any affect on polarization. Undoubtedly, it is true that there are good non-polarization arguments in favor of these and many other reforms. Those are the arguments that should be made. Marketing ideas on undeliverable benefits is surely the best way to undermine reform efforts.

31 See Mansbridge and Martin (2013) and Persily (2015b) for other laudatory efforts.
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