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The Ideological Nationalization of
Partisan Subconstituencies in the American States

Devin Caughey[*]   James Dunham[†]   Christopher Warshaw[‡]

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Abstract

Since the mid-20th century, elite political behavior in the United States has become much more nationalized. In Congress, for example, within-party geographic cleavages have declined, roll-call voting has become more one-dimensional, and Democrats and Republicans have diverged along this main dimension of national partisan conflict. The existing literature finds that citizens have only weakly and belatedly mimicked elite trends. We show, however, that a different picture emerges if we focus not on individual citizens, but on the aggregate characteristics of geographic constituencies. Using biennial estimates of the economic, racial, and social policy liberalism of the average Democrat and Republican in each state over the past six decades, we demonstrate a surprisingly close correspondence between mass and elite trends. Specifically, we find that: (1) ideological divergence between Democrats and Republicans has widened dramatically within each domain, just as it has in Congress; (2) ideological variation across senators' partisan subconstituencies is now explained almost completely by party rather than state, closely tracking trends in the Senate; and (3) economic, racial, and social liberalism have become highly correlated across partisan subconstituencies, just as they have across members of Congress. Overall, our findings contradict the reigning consensus that polarization in Congress has proceeded much more rapidly and extensively than polarization in the mass public.

JEL codes and keywords: D72 (Political Processes: Rent-Seeking, Lobbying, Elections, Legislatures, and Voting Behavior), H1 (Structure and Scope of Government), R50 (General [Regional Government Analysis])

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[*]Associate Professor, Department of Political Science, MIT, `caughey@mit.edu`

[†]PhD Candidate, Department of Political Science, MIT, `jdunham@mit.edu`

[‡]Assistant Professor, Department of Political Science, George Washington University, `warshaw@gwu.edu`

1   Introduction

One of the most important findings to emerge from Poole and Rosenthal's joint research program is that the roll-call records of Democrats and Republicans in Congress, even those who represent the same constituency, diverge sharply from one another. Poole and Rosenthal (1984), for instance, show that Democratic and Republican senators from the same state vote very differently, suggesting that they represent extreme partisan subconstituencies rather than converging on the median voter in their state. In the three decades since that seminal article's publication, polarization in Congress has only increased, and the bulk of that polarization remains attributable to within-constituency differences between Democratic and Republican members. McCarty et al. (2009, p. 671), for example, demonstrate that over three-quarters of contemporary congressional polarization is explained by "intradistrict divergence," and less than a quarter to "sorting" of Democratic and Republican members into ideologically congenial districts. Congressional politics, in short, has become much more nationalized, with members' roll call records overwhelmingly determined by their party affiliation rather than their geographic constituency.

Despite Poole and Rosenthal's suggestion that intradistrict divergence was rooted in senators' electoral constituencies, subsequent research has downplayed the mass public's role in spurring elite polarization. Most scholars have instead concluded that ordinary citizens have followed political elites rather than leading them. Summarizing the state of the literature, Layman et al. (2006, p. 90) note that nearly every study "on the growing ideological and policy differences between the parties in the electorate assumes that they have occurred in response to the increasing polarization of the parties in government." Most scholarship also has emphasized the limited and incomplete nature of mass polarization. Although opinion differences between Democrats and Republicans in the mass public clearly have widened over the past half-century, both globally and within issue domains (Layman and Carsey, 2002; Levendusky, 2009b), party still explains much less of the variation in the issue positions of

citizens than of elites (Hill and Tausanovitch, 2015).[1] In short, notwithstanding a few contrary voices (most notably Jacobson, 2012), the dominant view is that partisan polarization in the mass public has both lagged behind and paled relative to polarization in Congress, and that little of elite polarization can be attributed to changes in the mass public.

Studies that compare members of Congress (MCs) with individual voters at the national level, however, arguably are using the wrong reference point. More relevant than individual voters, we contend, are the aggregate characteristics of MCs' electoral constituencies. The advantage of analyzing polarization at the level of the constituency rather than the nation is straightforward: senators and representatives are elected from states and districts, and partisan differences within those constituencies may not correspond to those at the national level.[2] But just as important is focusing on aggregate rather than individual-level patterns. This is true for both theoretical and methodological reasons. As a theoretical matter, models of electoral competition generally predict that candidates' locations should depend not on the distribution of all voter ideal points, but rather on the central tendency (i.e., median or mean) of that distribution. In particular, in two-party systems where candidates must first be nominated in a party primary before contesting the general election, the ideological divergence between the candidates should be an increasing function of the distance between the mean or median voters in their partisan subconstituencies (Grofman, 2004, pp. 28–30, cf. Fenno, 1978; Clinton, 2006). Focusing on aggregate quantities provides methodological advantages as well. Whereas individual citizens' issue attitudes are notoriously unstructured, unstable, and difficult to measure accurately, they appear much more coherent when mass publics are considered collectively (Converse, 2000, pp. 348–50). For all of these reasons, we are likely to gain greater insight on the mass roots of congressional polarization if we compare it to the polarization of MCs' partisan subconstituencies rather than to the polarization of

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[1]It is also debatable whether these differences are the result of true attitude polarization (Abramowitz and Saunders, 2008) or the mere sorting of liberals and conservatives into the "correct" parties (Fiorina et al., 2005).

[2]Lest this possibility seem merely hypothetical, consider the classic finding that for much of the 20th century, Democratic states had more conservative policies than Republican states, despite the fact that within every state Democratic officials were more liberal (Erikson et al., 1989; Caughey et al., 2017).

individual partisans.

Tracking ideological trends at the state (let alone district) level, however, poses formidable data-gathering and statistical challenges. The surveys with the most lengthy and consistent temporal coverage, most notably the American National Election Studies (ANES), employ cluster-sampling designs with relatively small total sample sizes, rendering them inadequate for subnational inference. Partly for that reason, longitudinal studies of ideological polarization in the mass public have either focused on the regional or national level (e.g., Fiorina et al., 2005; Levendusky, 2009b; Hill and Tausanovitch, 2015) or have relied on proxies for policy attitudes, such as ideological identification (Erikson et al., 2006).

To surmount the foregoing challenges, we rely on the combination of a wealth of new data and an ideological scaling model targeted directly at the objects of interest: partisan subconstituencies in each state. Specifically, we construct a comprehensive historical dataset of polls containing questions on both policy preferences and party identification. These survey data cover each year between 1946 and 2014 and contain over one million Americans' responses to 249 distinct policy questions on economic, racial, and social issues. To analyze this rich data source, we employ a dynamic group-level item-response model (Caughey and Warshaw, 2015, 2018), which yields annual estimates of the economic, racial, and social liberalism of the average Democrat, Independent, and Republican in each state. Using these estimates, we examine mass-level trends in within-state partisan divergence, ideological nationalization, and correlation between issue domains and compare them to analogous trends in the Senate.

Our focus on state-level partisan subconstituencies rather than individual partisans provides a very different perspective on the relationship between elite and mass polarization. First, we find that partisan divergence in the mass public has grown greatly in all three issue domains. On economic issues, for example, the average within-state difference between partisan subconstituencies has risen fourfold since 1946—a much larger proportional increase than in the Senate. Second, using a scale-free measure to compare senators and

their partisan subconstituencies directly, we find that senators and state-party publics have exhibited *ideological nationalization.* That is, in both arenas cross-state ideological variation within each party has declined precipitously, especially on racial and social issues, to the point where Republican and Democratic senators and publics from different states take very similar positions. Indeed, not only has ideological nationalization occurred in both the public and the Senate, but for each domain at each point in time, party has explained about the same proportion of variance across state-party publics as across senators. Third, we find that just as the "second dimension" of congressional ideology has declined in significance over the past half-century (Poole and Rosenthal, 2007), so too has the liberalism of state-party publics become increasingly correlated across issue domains, so much so as to be almost as one-dimensional as in the Senate. In short, our focus on state-party publics reveals a tighter correspondence between mass and elite polarization than the existing literature suggests.

2 Intrastate divergence

In the classic one-dimensional Downsian model, in which voters with perfect information choose between the platforms of candidates motivated solely by electoral victory, both candidates converge on the position of the median voter (Downs, 1957). As a consequence, the actual outcome of the election does not affect the ideological character of representation, for both candidates have (credibly) committed to implement the same policies. Thus, in that model, no intra-constituency divergence in representatives' policy positions is predicted. Rather, ideological variation across elected officials is a function entirely of differences in the ideal points of median voters across constituencies.

From a great deal of work in political science and political economy, we know that the Downsian prediction of complete convergence is not a good description of the empirical reality in the U.S. Congress (Levitt, 1996; Ansolabehere et al., 2001; Lee et al., 2004; Fowler and Hall, 2016). One of the earliest and most compelling demonstrations of that fact was

provided by Poole and Rosenthal (1984), who showed that pairs of U.S. senators from the same state but different parties exhibit large ideological differences in their voting patterns. This intrastate ideological divergence, they argued, was consistent with a model in which senators from different parties represented their respective partisan subconstituencies rather than the same median voter.

2.1 Senate ideal points

As Poole and Rosenthal's subsequent research has shown, since the early 1980s partisan polarization in Congress has increased markedly, reaching heights that may be unprecedented in American history. A natural question to ask is whether intraconstituency divergence has widened as well. To investigate that question, we estimate trends in ideological differences between senators from the same state but different parties. To parallel our subsequent analyses of public opinion, we examine intrastate divergence separately for economic, social, and racial issues.[3] We estimate senators' ideal points in each domain with a dynamic one-dimensional item-response theory (IRT) model, which allows legislator ideal points to evolve nonlinearly between congressional terms (Martin and Quinn, 2002).[4] For the economic domain, we estimate senators' ideal points in each congressional term between the 81th (1949–1950) and 113th (2013–2013). Because few roll call on social and race issues were voted on until the late 1950s, our estimates for these domains start in the 85th Congress (1957–1958). The ideal point estimates are coded so that larger scores are conservative and are standardized to have zero mean and unit variance across senator-congresses. Finally, for each term, we calculated the ideal-point differences between senators from the same state but different parties, and then we averaged the domain-specific differences within each term.

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[3]We obtained Senate roll call data from `voteview.com` and assigned roll calls to issue domains using the issue codes provided by the Policy Agendas Project (Adler and Wilkerson, 2017).

[4]We used the `R` package `MCMCpack` (Martin et al., 2011) to estimate the ideal points. To reduce computation time, we sampled 100 economic roll call votes in each congress. For the social and racial ideal points, we used all available roll calls (which always number fewer than 100 per congress). For a discussion of how dynamic IRT estimates differ from DW-NOMINATE scores, see Caughey and Schickler (2016).

[Figure 1 about here.]

The resulting domain-specific estimates of intrastate ideological divergence in the Senate are plotted in the top panel of Figure 1.[5] Consider first the trend in the economic domain, indicated by the solid line. Consistent with Poole and Rosenthal (1984), who examined the years 1959–1980, same-state senators from different parties have taken highly divergent positions on economic issues throughout the postwar era. Even at its low point in the late 1970s, the average mixed-party Senate pair differed in their economic conservatism by at least one standard deviation. Since 1980, intrastate divergence on economic issues has approximately doubled and is currently as high as it has ever been.[6]

Intrastate divergence on social and racial issues has increased to nearly the same height, but from a much lower starting point. In the late 1950s, when social and racial roll calls became frequent enough to estimate ideal points, the typical mixed-party Senate pair differed by only half a standard deviation on those issues. By the 1970s, however, intrastate divergence on social and racial issues had converged with divergence on economics, and the three domains subsequently trended in tandem with one another. By the 21st century, Republican senators were typically 1.5 to 2 standard deviations more economically, socially, and racially conservative than Democratic senators from their same state.

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[5]It is important to note that the estimates of intrastate ideological divergence in the Senate plotted in the top panel of Figure 1 are based on split-party delegations. However, the mix of states with split party delegations has fluctuated over time (Brunell and Grofman, 2018). Thus, some of the flux in intrastate ideological divergence in the Senate in Figure 1 could be due to changes in the mix of states with split-party delegations. We have used two approaches to assess how much changes in the mix of split party delegations affect our analysis in Figure 1. First, we have replicated the analysis in Figure 1 separately for northern and southern states. We find similar patterns across regions, which suggests that changes in the regional mix of split party delegations only have a small effect on our estimates of partisan polarization in the Senate. Second, we have replicated the analysis of the Senate in Figure 1 using a model that includes fixed effects for each state. This analysis purges the effect of changes in the mix of states with split party delegations by isolating the *within-state* trends in divergence. This analysis too shows very similar patterns as in Figure 1.

[6]Trends in intrastate divergence as measured by first-dimension DW-NOMINATE scores look similar to those as measured by our economic ideal points. In particular, according to both measures intrastate divergence in the contemporary Congress is about two standard deviations. This makes sense since the primary content of the first dimension has historically been economic issues (Poole and Rosenthal, 2007). The main difference between the two series is that according to DW-NOMINATE, the post-1960 decline in intrastate divergence persisted longer, and the subsequent increase occurred later and less gradually than our economic ideal points imply.

2.2 Mass issue positions

Have similar developments occurred in the mass public? That question is difficult to answer because of the lack of an existing time-series measure of within-state ideological differences between Democrats and Republicans. The first step in constructing such a measure is developing a comprehensive historical dataset of the domestic policy attitudes of Democratic and Republican identifiers. We constructed such a dataset, which includes nearly every policy question ever asked in a U.S. face-to-face or telephone survey that also included a party identification question.[7] The dataset includes canonical academic surveys, such as the ANES and the General Social Survey (GSS), but it also includes hundreds of polls from commercial polling organizations such as Gallup, CBS News/NYTimes, ABC News/Washington Post, Time Magazine, Pew, and many others. In total, the dataset contains over a million Americans' responses to 249 distinct survey questions, with a minimum of at least a thousand survey responses in each year between 1946 and 2014.

With these data in hand, the next question is how to analyze them. As a simple first cut, we calculated, for each question-term pair, the difference between the proportions of Democrats and Republicans who chose the conservative response option for that question.[8] For example, if a respondent expressed greater agreement with the statement "we need a strong government to handle today's complex economic problems" than with "the free market can handle these problems without government being involved", this response was coded as conservative (and vice versa if the preference was reversed). Then, within each term, we averaged the values of the question-specific partisan differences. We did this separately for questions pertaining to economic (e.g., social welfare and labor regulation), social (e.g., gun control and school prayer), and racial (e.g., desegregation and affirmative action) issues.

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[7]Our preliminary analysis indicates that online surveys, such as the Cooperative Congressional Election Studies, show more polarization and sorting than phone surveys. Thus, we omit online surveys in order to ensure the inter-temporal comparability of our results.

[8]We coded the polarity of questions based on the substantive valence of the question. For example, for economic questions we examined which response option implied a larger scope and size of government. We generally dichotomized multicotomous questions around the middle category.

We distinguished between these three domains because, as we show in Section 4, economic, social, and racial conservatism were much less correlated in the mid-20th century than they are today (see also Caughey and Warshaw, 2018). The result is a measure of how much Democrats and Republicans in the same state differed in their responses to individual survey questions in each domain.

The middle panel of Figure 1 plots domain-specific trends in this measure of intrastate divergence. Economic, social, and racial issues track each other more closely on this measure than they do in the Senate, especially after 1960. Intrastate differences on economic and racial issues averaged 10–15 percentage points between the mid-1960s and mid-1980s, after which they rose sharply. Partisan differences on social issues have been about 5–10 points smaller than on economic and racial issues, but they too have increased dramatically. By 2010, same-state Democrats and Republicans differed in their support for conservative policy positions by at least 30 points on all three domains.

It is worth noting that the superficial correspondence among the three domains conceals important regional differences. As far back as our data extend, Republican identifiers have always been more economically conservative on average than same-state Democrats. This was true even in Southern states, though in the 1950s the differences were quite small. On racial issues, by contrast, this was true only outside the South (see Schickler, 2013). In Southern states, Republicans generally expressed more liberal racial attitudes than same-state Democrats. Finally, on social issues there were few consistent partisan differences in either direction until the late 1960s in non-Southern states and until the late 1970s in Southern ones. In short, it was not until several decades into this period that attitudes on all racial and social issues were positively correlated with partisanship within each state. Only after all issues were ideologically aligned with partisanship were increases in intrastate divergence driven solely by a widening partisan gaps on individual issues.

Although raw opinion differences have the advantage of simplicity and transparency, they are an imperfect metric for examining ideological change over time. As Poole and Rosenthal

(1984, p. 1063) themselves note, unadjusted percentages are sensitive not only to ideological differences between individuals but also to the ideological content of the survey questions. It is therefore conceivable that the apparent trends in ideological divergence portrayed Figure 1's middle panel were driven not by true ideological shifts, but rather by changes in the kinds of questions asked over time. Thus, just as Poole and Rosenthal (1985) developed NOMINATE as a method for scaling legislators' ideologies independent of the congressional agenda, we too turn to ideal-point modeling as a means of estimating mass conservatism comparably across time.

2.3 Mass policy ideology

The use of scaling methods to estimate survey respondents' latent ideology, to which Poole (1998) was a key contributor, has burgeoned in recent years, with much of the most recent work employing an item-response theory (IRT) framework (e.g., Treier and Hillygus, 2009; Jessee, 2009; Tausanovitch and Warshaw, 2013). Extending those methods historically, however, presents substantial challenges because IRT models typically require many items per respondent. Until recently, however, very few surveys—primarily academic ones like the ANES—included more than a handful of policy questions, let alone multiple questions in different issue domains. Given these surveys' small sample sizes and uneven subnational coverage, studies such as Hill and Tausanovitch (2015) that seek to scale respondents comparably across time have been forced to focus on national or regional quantities of interest. Applying other scaling methods to the much richer—but also much sparser—survey dataset described above requires an alternative to the conventional individual-level IRT model.

The alternative we employ is a group-level IRT model, as developed by Caughey and Warshaw (2015) and implemented by the R package dgo (Dunham et al., 2016). Unlike conventional IRT models, which derive aggregate quantities from individual-level ideal points, a group-level IRT model estimates those quantities directly, marginalizing over the distribution of individual ideal points. Specifically, the target of inference in a group-level IRT model

is the *average* score on a latent trait in each subpopulation. Because the model does not estimate individual ideal points, it does not require many items per individual, but rather many items per group, which may be spread across multiple polls. In our case, we estimated the average domain-specific conservatism of groups defined by the cross-classification of state and party identification. We also employed a dynamic version of the model that improved the accuracy of period-specific estimates by pooling information across time with Bayesian priors. We allowed the item difficulties (i.e., intercepts) of questions asked across multiple years to evolve over time, but to aid comparability we constrained the discrimination parameters of consistent question series to be constant across periods (for more details, see online appendix A). We also standardized estimates to be mean zero and unit variance across state-party-biennia.

This model yields estimates of the average economic, social, and racial conservatism of Democrats, Independents, and Republicans in each two-year congressional term. The estimates for economic conservatism cover terms between 1947–1948 and 2013–2014, and the ones for social and racial conservatism cover 1957–1958 to 2013–2014. To estimate intrastate divergence from those estimates, we again calculate within-state differences in the average conservatism of Democrats and Republicans and average this differences across states within years. The results, plotted in the bottom panel of Figure 1, are similar but not identical to the middle panel's plot of partisan differences in raw proportions. The most obvious difference is that because the IRT approach accounts for differences across questions, the estimates are less affected by changes in the question mix and therefore are more stable over time. A second difference is that for almost the entire pre-2000 period, divergence on economic issues was greater than on social and racial issues. Moreover—and in constrast to the Senate—mass economic divergence increased fairly steadily from 1960 on, whereas social and racial divergence did not begin in earnest until the late 1970s. Notwithstanding that later start, by the 21st century the three domains all had converged at a much higher level of divergence than early in the period. Notably, the proportional increase in ideological

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divergence was larger in the mass public than in the Senate, especially on racial and social issues, which began from a starting point of almost no divergence.

The results reported in this section reinforce previous research in certain respects and challenge it in others. On one hand, in the first half of the period party had larger standardized effect on Senate conservatism than on the conservatism of state-party publics. That evidence comports with, for example, the finding of Bafumi and Herron (2010) that most members of Congress take more extreme positions than the median party member in their respective constituencies. The second half of the period, when party's predictive value is about the same for senators and state publics, provides less support for that view. Of course, since the Senate and mass public are not jointly scaled, we cannot say anything firm about their relative locations. We are on firmer ground, however, when comparing trends over time. In that respect, the fact that mass divergence on economic issues began its long-run growth at least a decade before the Senate—as well as the fact that in all three domains the proportional increase in divergence was much greater at the mass level—runs contrary to the conventional view of mass polarization as a faint echo of elite polarization.

3 Ideological nationalization

Given the problems with comparing measures of intrastate divergence between the Senate and the mass public, we now turn to a scale-free measure: the proportion of the variance in senators' and state-party publics' conservatism explained by party (Poole and Rosenthal, 1984; Hill and Tausanovitch, 2015). On one hand, if partisans (in the Senate or in the public) differ little within party but greatly across states, almost none of the total variance will be attributable to party. For an example of such a situation, consider the two panels labeled "Racial" in the middle row of Figure 2. The left panel plots the racial conservatism of Republican and Democratic identifiers in Georgia, and the right panel plots the analogous quantities in New York. In the 1950s, the publics of the two states differed massively in

their racial conservatism, but on average Democrats and Republicans within each state took almost identical positions. In other words, party explained almost none of the variance in racial conservatism across state-party publics. Contrast this with the same quantities at the end of the period, when Democrats and Republicans were not only polarized on racial issues but took almost identical positions across states. Thus, whether because of changes in the composition of the party coalitions or shifts partisans' issue attitudes, the explanatory power of party on racial issues increased hugely over this period and that of state correspondingly declined.[9] We refer to this process as the "ideological nationalization" of partisan subconstituencies (on the nationalization of American politics generally, see Lunch, 1987; Hopkins, 2018).

[Figure 2 about here.]

Figure 3 generalizes this analysis of ideological nationalization to all states, plotting the proportion of state-party publics' ideological variation explained by partisanship in each domain and comparing it to the same quantity in the Senate.[10] The left panel of Figure 3 plots nationalization of the roll-call behavior in the Senate and public opinion on the economic domain. Past work indicates that over the past half-century, the bulk of the variation in senators' economic conservatism has been explained by party (Poole and Rosenthal, 1984, p. 1067). Indeed, we find that with the exception of a dip during the 1960s–1970s, party has explained over half the variance in senators' economic conservatism for the vast majority of

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[9]Our aggregate-level data limit our ability to evaluate how much these developments were driven by changes in the demographic composition of the parties versus changes in individual issue attitudes. We suspect, however, that both factors were at play. We know, for example, that in the 1960s African Americans, who were and continue to be much more racially and economically liberal than whites, became much more likely to identify as Democrats (e.g., Petrocik, 1987). This compositional change, along with conservative Southern whites' more gradual countervailing shift toward the Republican Party (Green et al., 2002, pp. 140–63), likely explains much of the increase in divergence in Southern states, especially on racial issues. On the other hand, we also know that at least some of the growth in polarization is due to individuals' changing their issue attitudes to match their party's positions (Levendusky, 2009a; Lenz, 2012), and thus intrastate divergence is likely also a product of the changing issue attitudes of individuals who remained loyal to one party.

[10]Specifically, within each biennium, we used analysis of variance to decompose variation in conservatism across senators/subconstituencies into between-party and within-party components. The proportion of variation explained by party is simply the between-party sum of squares divided by the total sum of squares.

the past half century. The explanatory power of party affiliation increased markedly in the 1980s, to about 75%, of the total variance, and has continued to rise since then.

[Figure 3 about here.]

Economic issues have long divided the parties at the mass level as well (e.g., Stimson, 2015, p. 70). In our data, we find that aside from a sharp but brief drop in the 1950s,[11] party explains most of the variation in economic conservatism across state-party publics throughout the period we examine. Indeed, since the mid-1960s party has explained a greater proportion of variation across state-party publics than across senators. Moreover, party-explained variance has continued to increase, from 75% around 1970 to over 95% in 2010, leaving very little additional variance to be explained by differences across states.

Changes on racial issues (Figure 3, middle panel) were much more dramatic as well as more tightly linked between the Senate and the mass public. In the late 1950s, when our racial estimates begin, party explained almost no variance in racial conservatism in either arena. Over the next half century, the Senate and public time series rise in tandem, with little difference between them aside from an early spike in the mass public in the 1960s. The timing of that spike is consistent with Carmines and Stimson's (1989) argument that the clear division over civil rights in the 1964 presidential elections prompted racial liberals to realign their partisanship, though their analysis examined national rather than within-state shifts.[12] However, contrary to the claim that racial realignment had run its course by 1980 (Stimson, 2015, p. 64), our data indicate that differences between the parties continued to widen through the end of the 20th century, in the Senate as well as in the mass public. By the 2000s, party explained about 80% of the variance in senators' racial conservatism and nearly 100% of the variance in the mass public.

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[11]In addition to being a period of unusually low partisan polarization, especially in presidential politics, the 1950s were also a dry spell for survey questions that tapped into ideological differences over economic policy (see Erskine, 1964, pp. 154–5). Both factors may help explain the sudden drop in the explanatory power of party in this decade.

[12]Carmines and Stimson's analysis was based primarily on a handful of ANES questions. In contrast, we use nearly all available data on public opinion about race during this period from 46 question series across 73 polls.

Lastly, the right panel of Figure 3 examines the nationalization of public opinion and roll call votes on social and moral values issues. Past work has argued that social issues were unrelated to party until the 1990s, and the public sorted in the wake of greater clarity on national party positions (Adams, 1997; Stimson, 2015). Building on that work, which relied primarily on a handful of ANES and GSS questions, Figure 3 shows the nationalization of public opinion on social issues across dozens of survey questions and hundreds of surveys. It indicates that only modest within-state variation in opinion across parties existed in the early 1970s. Opinion gradually sorted between the mid-1970s and mid-1990s. Consistent with past work, the nationalization of opinion really took off after 1990, and the explanatory power of party rose over the next decade or so and plateaued around 2000. Over the past decade and a half, party consistently has explained about 70% of the variation in state-party publics. Once again, the pattern in the Senate mirrors the pattern in the mass public. On social issues, party is only slightly more predictive of the positions of senators than it is of average opinion in their partisan subconstituencies.

Overall, we find that the ideological patterns of both senators and state-party publics clearly have nationalized on all three issue domains. Indeed, party explains the vast majority of the ideological variation for both the Senate and the public on all three domains over the past decade and a half. Moreover, the nationalizing trends in the Senate and the mass public parallel each other closely throughout the period. In fact, at any given point in time the variance in ideological positioning explained by party has been very similar in the public and the Senate.

4 Collapsing dimensionality

Another salient trend identified by Poole and Rosenthal (2007), related to but conceptually distinct from partisan polarization, is the increasingly one-dimensional character of congressional roll-call voting (but see Aldrich et al., 2014). Whereas congressional voting on civil

rights and other issues once were predicted poorly by the main, primarily partisan dimension of ideological variation, over the last half-century the importance of within-party cleavages has declined markedly. In the contemporary Congress, a single dimension is sufficient to capture the vast majority of systematic variation in the congressional roll-call voting.

[Figure 4 about here.]

Much less consensus, however, has emerged over the dimensionality of issue attitudes in the American mass pubic. Some studies assert that a single dimension is sufficient to summarize mass preferences, at least in the modern era (e.g., Jessee, 2009; Tausanovitch and Warshaw, 2013; Hill and Tausanovitch, 2015). Others highlight the importance of multiple dimensions, either in earlier decades (e.g., Poole, 1998; Shafer and Claggett, 1995; Caughey and Warshaw, 2018) or continuing up to the present (e.g., Ansolabehere et al., 2008; Treier and Hillygus, 2009; Peress, 2013; Broockman, 2016). Although our mass conservatism estimates, which assume unidimensionality within domain, cannot resolve this debate fully, they can shed light on how the dimensionality of mass opinion has changed over time, as well as on how the changes compare to those in Congress. To do so, we compare the correlations between economic, racial, and social conservatism in the Senate and the mass public. For the Senate, we calculate at each point in time the pairwise correlation between senators' ideal points in each domain. For the mass public, we calculate analogous correlations for the average conservative in state-party publics in each domain. We then examine how the associations across domains have changed over time in each arena.

The results in this analysis are summarized in Figure 4. The figure's top panel, which plots trends in the Senate, shows that the association between senators' economic, racial, and social conservatism has increased dramatically over time. Consistent with Poole and Rosenthal's finding that civil rights primarily were a "second dimension" issue that divided the parties along regional lines, in the 1950s senators' racial conservatism was almost uncorrelated with their conservatism on economic issues, the primary domain of ideological conflict in Congress in that era. Economic conservatism was only modestly more correlated

with social conservatism, which was instead most closely aligned with conservatism on race. By the 1970s, however, racial and social conservatism had become highly correlated with economic conservatism, suggesting that the same underlying dimension structured all three domains.[13]

Trends in the mass public (Figure 4, bottom panel) were broadly similar. In the 1950s, the economic conservatism of state-party publics was unrelated to their racial and social conservatism, which were strongly correlated with each other. As in the Senate, the three domains had become roughly equally correlated by 1970, but the relationships among them remained relatively modest into the 1980s. Consistent with the "conflict extension" documented by Layman and Carsey (2002), however, the alignment across issue domains risen steadily through the end of the century. By the 2000s, mass conservatism was just as highly correlated across domains as was Senate conservatism.

Once again, then, a comparison between senators and their partisan subconstituencies reveals a surprising degree of similarity between the two. In both the Senate and the mass public, racial and social conservatism at midcentury varied along a distinct, mostly regional dimension that largely was orthogonal to ideological conflict over economics. By century's end, conservatism at both levels had become highly correlated across domains. The primary difference between elite and mass trends is that ideological conflict collapsed to one dimension earlier in the Senate than in the public. Overall, however, the correspondence is again striking.

5   Conclusion

Among the most important long-term developments in American politics has been the nationalization of the party system. Classic works on American parties described them as decentralized, pragmatic, and relatively non-ideological confederations (e.g., Schattschneider,

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[13]This too is consistent with the analysis of first- and second-dimension NOMINATE scores in Poole and Rosenthal (2007).

1942; Key, 1964). In those accounts, state and local party organizations, through their control over patronage and nominations, enjoyed substantial autonomy from, even dominance over, their national counterparts. With party workers motivated less by policy achievements than by the spoils of office, state parties tended to be ideologically flexible, often deviating substantially from—or even reversing—the policy positions taken by Democrats and Republicans elsewhere.[14] Since the mid-20th century, however, state and local party organizations have withered while national party institutions have grown in influence and importance (e.g., Epstein, 1982; Lunch, 1987). State party platforms have become more distinct ideologically (Paddock, 1992) and more national in content (Hopkins and Schickler, 2016), and party control of state offices now has both a strong correlation with and a clear causal effect on the liberalism of state policies (Caughey et al., 2017).

As the research of Poole and Rosenthal (among many others) has demonstrated, an important manifestation of this nationalizing trend has been the growing ideological homogeneity of the congressional parties and the decline of geographic cleavages within the parties. Today, the roll call records of Democrats and Republicans in Congress diverge sharply from one another. That is true even if they represent districts with similar partisan preferences (Ansolabehere et al., 2001; McCarty et al., 2009), are elected in a knife-edge race (Lee et al., 2004; Fowler and Hall, 2017), or even share exactly the same constituency (Poole and Rosenthal, 1984; Levitt, 1996). Moreover, the ideological gap between the two parties in Congress has grown dramatically over time (Poole and Rosenthal, 2007). Across issue domains, members of Congress from the same party now vote very similarly regardless of where they are from.

Despite consensus in the literature on large and growing polarization among elites, previous studies have downplayed the degree of polarization between Democrats and Republicans in the mass public as well as the mass public's role in spurring elite polarization. Data and

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[14]By the 1940s, for example, even as the Democratic Party in the South remained synonymous with white supremacy (Mickey, 2015), state Democratic parties outside the South had become clearly more liberal on civil rights than their Republican counterparts (Feinstein and Schickler, 2008).

statistical limitations, however, have forced previous studies to either focus on changes in the ideological polarization of the mass public at the national level (Levendusky, 2009b; Hill and Tausanovitch, 2015) or use proxies for policy attitudes such as ideological identification (Erikson et al., 2006). That is problematic because in order to compare the polarization of the parties' mass constituencies and elites that represent them, we need measures of the ideological preferences of the average voter in each state-party and how these preferences are changing over time.

In this paper, we overcome the methodological limitations that have stymied past work on polarization in the mass public using a comprehensive, new dataset with over one million survey respondents from hundreds of individual polls. Overall, our findings contradict the previous consensus that polarization in Congress has proceeded much more rapidly than polarization in the mass public. In short, our focus on state-party publics reveals a much tighter correspondence between mass and elite polarization than the existing literature suggests.

We find that partisan divergence in the mass public has widened dramatically on all three issue domains we examine. Moreover, though partisan divergence in the American public has accelerated in the last few decades, it started earlier than existing accounts suggest. In addition, the proportional increase in divergence between the parties actually has been larger in the mass public than in the Senate. Whereas within-state differences in economic conservatism between Democratic and Republican senators have roughly doubled since the 1970s, intrastate divergence between partisan subconstituencies has increased fourfold.

To be sure, our data does not allow us to measure the ideological preferences of Congress and the public on the same scale. Thus the fact that the constituencies of each party have diverged substantially does not necessarily indicate that the divergence has reached the same level in Congress. However, using a scale-free measure to compare the explanatory power of party in the Senate and the mass public, we find strikingly similar trends between senators and their partisan subconstituencies. Ideological patterns of both senators and state-party

publics have become substantially more nationalized.[15] The proportion of ideological variation explained by party grew especially dramatically in the social and racial domains. At any given point in time the variance in ideological positioning explained by party has been very similar in the public and the Senate.

Moreover, we examined the dimensional structure of the mass public's preferences and find that state-party publics' preferences on different domains were for much of the past six decades correlated only weakly. The liberalism of state-party publics was distinct on different domains. But the preferences of state-party publics increasingly have become correlated across issue domains as they have all collapsed to the same main dimension that divides the national parties (Stimson, 2015, pp. 60–2). In fact, in recent years the ideological preferences of state-party publics are almost as one-dimensional as in the Senate.

Overall, our results show that intrastate polarization between the parties' constituencies has increased dramatically in recent decades. Moreover, the trends in mass polarization largely mirror the trends in elite polarization originally identified by Poole and Rosenthal (1984) and examined in more depth in Poole and Rosenthal (2007). We emphasize that our findings do not speak directly to the causal relationship between mass opinion and elite behavior. We cannot assess whether senators are responding to changes in mass polarization or the other way around, or whether both are driven by some omitted variable, such as changes in the economy. But our findings do suggest that the political decisions in Congress are not wildly out of synch with the views of voters. Moreover, they suggest that more attention should focus on the dyadic links between the preferences of the mass public and elites.

The ideological nationalization of the US party system has a number of consequences for American politics. It has limited the two parties' abilities to tailor their positions to local conditions (see Ansolabehere et al., 2001). Moreover, it has led to greater geographic

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[15]See Hopkins (2018) for a detailed description of how voting patterns in state elections have also nationalized in recent decades.

concentration of the parties' respective support coalitions.[16] The combination of those factors has reduced the number of states wherein each party can compete effectively for statewide office. One manifestation of this nationalizing trend is the growing percentage of states with two senators from the same party, which increased from 50% in 1980 to over 70% in 2018 (Brunell and Grofman, 2018; DeSilver, 2018; cf. Poole and Rosenthal, 1984, pp. 1064–6). Today, across all offices, conservative states nowadays largely are dominated by Republicans, whereas the opposite is true of liberal states. The ideological nationalization of the party system thus seems to have undermined party competition at the state level.

Finally, at a methodological level, this article highlights one of the many possible substantive applications using estimates of public opinion at the level of states or state-parties that vary over time. Future work could examine how the growing divergence between the parties' constituencies in the mass public has affected the positioning of individual senators. It also could examine the effect of mass polarization on the ideological positioning of state elected officials (e.g., Shor and McCarty, 2011) as well as the policies that state governments produce (e.g., Caughey et al., 2017).

Ackowledgements

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[16]There is an active debate about how much of the growing geographic concentration of each party's coalitions is due to residential sorting (Bonica et al., 2017; Mummolo and Nall, 2017), cohort effects (Ghitza and Gelman, 2014), racial polarization and geographic changes in the distribution of minority populations (Bowler and Segura, 2011), or individuals' switching parties (e.g., Levendusky, 2009a; Highton and Kam, 2011).

Stumm. Upon publication, the data and code necessary to replicate the analysis in this article will be posted in the Harvard Dataverse.

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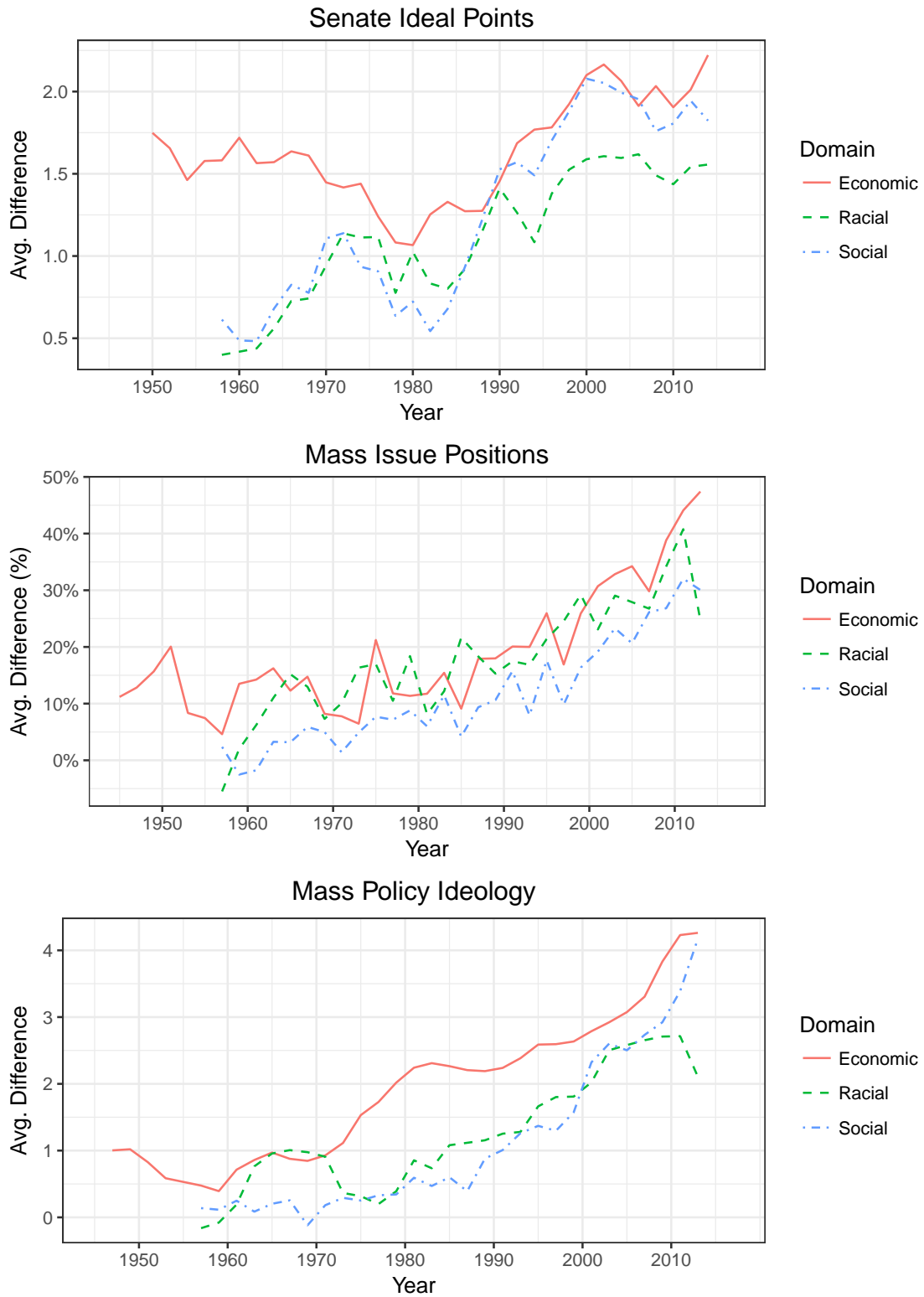
Figure 1: Intrastate partisan divergence in Senate ideal points (top), mass issue positions (middle), and mass policy ideology (bottom).
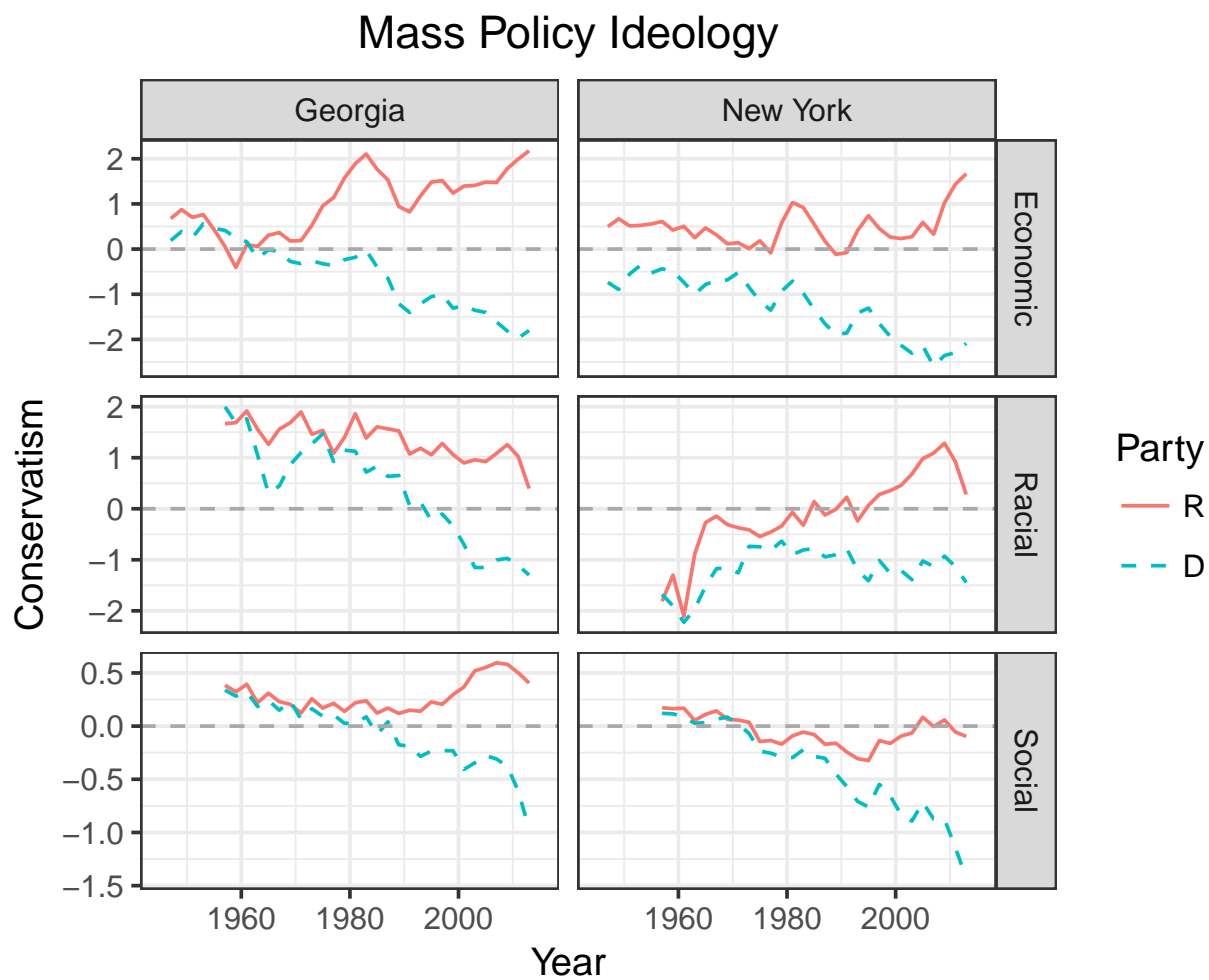
Figure 2: Ideological trends among Democrats and Republicans in Georgia and New York.
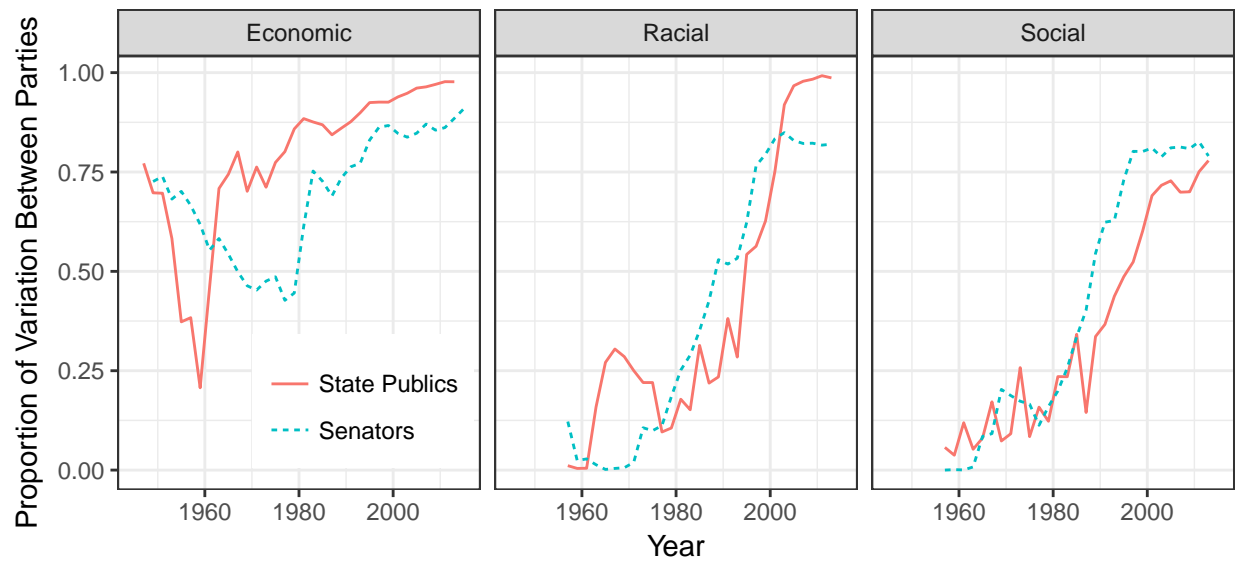
Figure 3: Nationalization of mass opinion based on group-level IRT model. These plots show the percentage of variation in state-party public and Senate ideology on each domain explained by party.
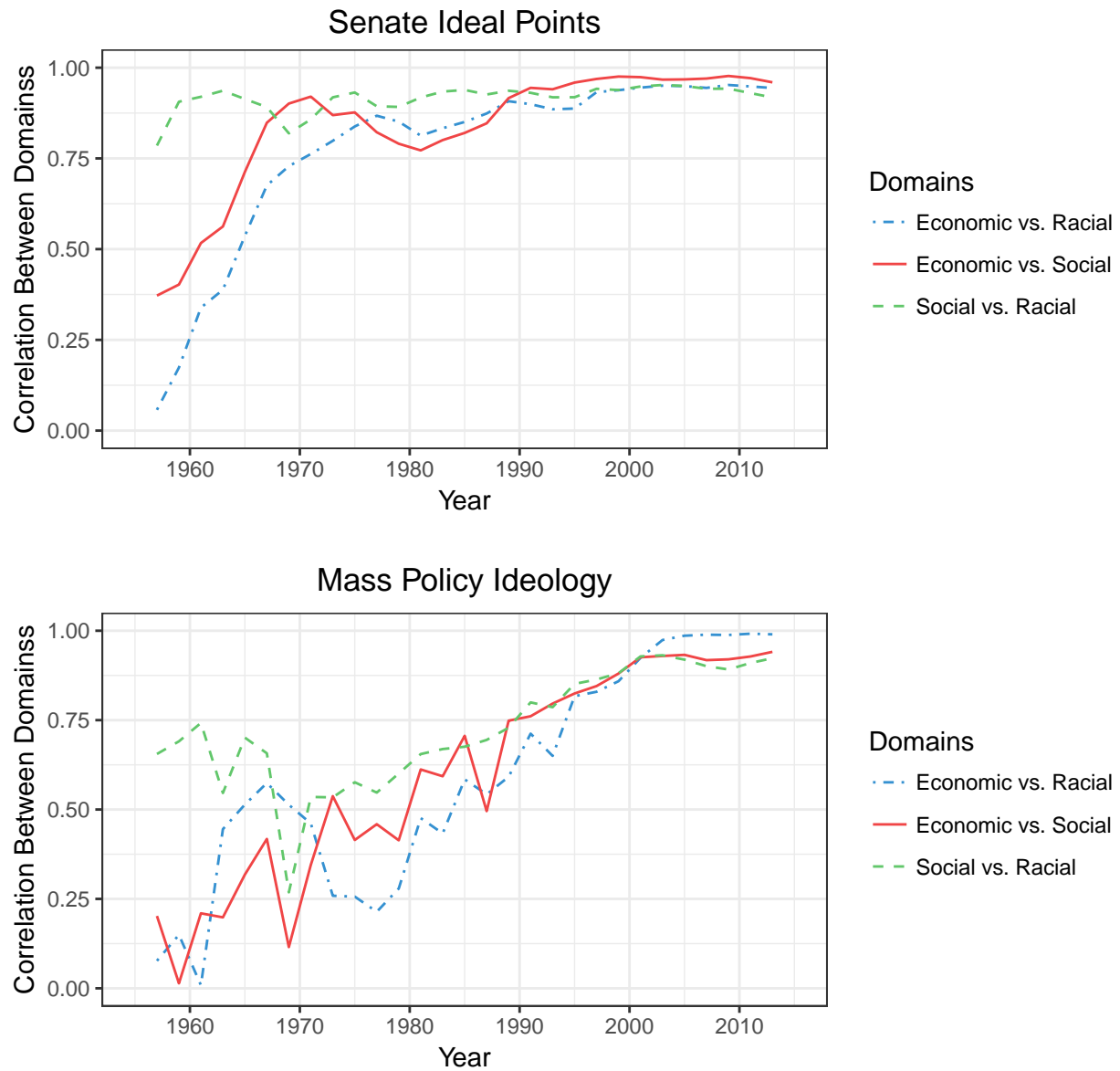
Figure 4: Dimensionality in the Senate and mass public. The top panel shows the pairwise correlations between Senators' ideal points on the economic, social, and racial dimensions. The bottom panel shows the same estimates for mean state-party positions on the same three dimensions, by year (i.e., averaging within years over state-parties). The dot-dashed blue line shows the correlations between the economic and racial dimensions; the solid red line shows those between the economic and social dimensions; and the dashed green line shows those between the social and racial dimensions.

Supplementary Appendix for: "The Ideological Nationalization of Partisan Subconstituencies in the American States"

A A Measurement Model for Citizen Policy Ideology

Until recently, the lack of a valid, time-varying measure of citizen policy liberalism has been one of the main barriers to the study of polarization in the mass public. To overcome this challenge, we apply a modified version of the dynamic, hierarchical group-level item-response-theory (IRT) model developed by Caughey and Warshaw (2015), which estimates the average policy liberalism of defined subpopulations (in our case, Democrats, Republicans, and Independents in each state).[17] This approach builds upon three important approaches to modeling public opinion: IRT, multilevel regression and poststratification (MRP), and dynamic measurement models. Crucially, the model does not require multiple questions per respondent, allowing the use of the vast number of historical surveys that do not meet this standard.

Our model allows us to combine multiple survey questions into scaled measures of ideology. It begins by adopting the general framework of IRT. In an IRT model, respondents' question responses are jointly determined by their score on some unobserved trait—in our case, their domain-specific policy liberalism—and by the characteristics of the particular question. The relationship between responses to question q and the unobserved trait θ_i is governed by the question's threshold κ_q, which captures the base level of support for the

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17. Our approach bears a close relation to that in the literature on "public policy mood" (Stimson 1991). Works in this tradition use Stimson's Dyad Ratios algorithm to estimate changes in public preferences for government activity (i.e., left-liberalism). Recently, Enns and Koch (2013) have combined the Dyad Ratios algorithm with multilevel regression and post-stratification (MRP) to generate state-level estimates of policy mood. As McGann (2014) observes, though, the Dyad Ratios algorithm has several unappealing features, most notably its ideological asymmetry and its lack of grounding in a coherent individual-level model. As an alternative, he proposes a group-level IRT model for national mood that is similar to the approach we take. However, our dynamic group-level IRT model, accommodates cross-sectional and over-time variation within a common framework.

question, and its dispersion σ_q, which represents question-specific measurement error. Under this model, respondent i's probability of a liberal response

$$\pi_{iq} = \Phi\left(\frac{\theta_i - \kappa_q}{\sigma_q}\right), \tag{1}$$

where the normal CDF Φ maps $(\theta_i - \kappa_q)/\sigma_q$ to the $(0,1)$ interval.[18] The model assumes that greater liberalism (i.e., higher values of θ_i) increases respondents' probability of answering liberally. The strength of this relationship is inversely proportional to σ_q, and the threshold for a liberal response is governed by κ_q. Estimating the relationship of each question to the latent trait in this way allows the model to overcome the first challenge outlined above, considerably reducing the model's sensitivity to which questions are asked when.

The fact that each respondent answers no more than a few questions (sometimes only one) prevents us from using an IRT model to estimate the liberalism of individual respondents. Our ultimate interest, however, is not individuals but rather groups defined by the cross-classification of party identification and state. We therefore estimate instead a group-level IRT model, building on the work of Mislevy (1983), Enns and Koch (2013), McGann (2014) and particularly Caughey and Warshaw (2015). The focus of this model is estimating the average liberalism $\bar{\theta}_g$ in each state party g, for which there are many observations in a given survey. Under the assumption that θ_i is normally distributed within groups, the probability that a randomly sampled member of group g correctly answers item q is

$$\pi_{gq} = \Phi\left(\frac{\bar{\theta}_g - \kappa_q}{\sqrt{\sigma_q^2 + \sigma_\theta^2}}\right), \tag{2}$$

where σ_θ is the standard deviation of θ_i within groups. We connect Equation (2) to the data

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18. A common alternative way of writing the model in Equation (1) is $\Pr(y_{iq} = 1) = \Phi(\beta_q \theta_i - \alpha_q)$, where $\beta_q = 1/\sigma_q$ and $\alpha_q = \kappa_q \times \beta_q$. This exposition assumes dichotomous response choices; we discuss ordinal choices below.

through the sampling model

$$s_{gq} \sim \text{Binomial}(n_{gq}, \ \pi_{gq}), \tag{3}$$

where n_{gq} is group g's total number of non-missing responses to question q and s_{gq} is the number of those responses that are liberal.[19] The estimates of $\bar{\theta}_g$ may be of interest in themselves, or they can be poststratified, for example into estimates of average liberalism in each state (cf. Park, Gelman, and Bafumi 2004).

Even with our large set of public opinion data, many group cells are likely to be small or empty in a given year. To address this sparseness, we use a dynamic linear model to smooth the estimated group means across both time and states. The magnitude of change between years is constrained by a prior that predicts $\bar{\theta}_{gt}$ based on its value in the preceding year, year-specific changes common to all groups, and changes in other groups with characteristics (i.e., state or party ID) similar to those of group g. The specific model we use, which is similar to that described in Caughey and Warshaw (2015), is

$$\bar{\theta}_{gt} \sim N(\delta_t \bar{\theta}_{g,t-1} + \xi_t + \mathbf{x}'_{g.} \gamma_t, \ \sigma^2_{\bar{\theta}t}), \tag{4}$$

where $\bar{\theta}_{g,t-1}$ is g's mean in the previous year, ξ_t is a year-specific intercept, and $\mathbf{x}_{g.}$ is a vector of attributes of g (e.g., its state or party). Each group-year mean is thus modeled as a function of the group's mean in the previous year, year-specific changes common to all groups, and changes in the relative liberalism of groups with similar characteristics (i.e., the same party or state). The posterior estimates of $\bar{\theta}_{gt}$ are a thus compromise between this prior and the likelihood implied by Equations (2) and (3), with the relative weight placed on the likelihood determined by the prior standard deviation $\sigma_{\bar{\theta}t}$, which is estimated from

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19. Following Ghitza and Gelman (2013) and Caughey and Warshaw (2015, 202–3), we adjust the raw values of s_{gq} and n_{gq} to account for survey weights and for respondents who answer multiple questions. The latter is particularly important in this application because of the way that we deal with ordinal questions, which is to break each such question into a set of dichotomous questions, each of which indicates whether the response is above a given response level. For example, a question with three ordinal response choices, (1) "disagree", (2) "neutral", and (3) "agree," would be converted into two dichotomous variables respectively indicating whether the response is above "disagree" and above "neutral."

the data and allowed to evolve across years. When a lot of survey data are available for a given year, the likelihood will dominate. If no survey data are available at all, the prior acts as a predictive model that imputes $\bar{\theta}_{gt}$.

For comparability of our estimates over time, we use question series with consistent wording and response categories as bridge items. While no item appears consistently from 1946 to 2014, there are many survey questions that are asked consistently for shorter periods of time. These items glue our estimates from one time period together with our estimates for other time periods. We also do not use any "relative" questions (e.g. whether government should "do more") as bridge items in our model because changes in the policy status quo mean that they are not in an absolute sense comparable over time (contrast with Enns and Koch 2013). Instead, we sometimes include these relative items as separate question series in each year they are asked. In other words, we do not use them to bridge the model together over time, but we do sometimes use them to increase the cross-sectional precision of our estimates.

Our dynamic group-level IRT model estimates opinion in groups defined by states and party ID (Democrat, Independent, or Republican). In order to mitigate sampling error for small states, we model the state effects as a function of states' proportions of Evangelical or Mormon, Hispanic, and urban residents. The inclusion of state attributes in the model partially pools information across similar geographical units, improving the efficiency of state estimates (e.g., Park, Gelman, and Bafumi 2004).

To generate annual estimates of average opinion in each state, we pre-weight our survey data to match raked targets for gender and education level in each state public, based on data from the U.S. Census (Ruggles et al. 2010). Our model produces estimates of the ideology of Democrats, Republicans, and Independents in each state-year. We aggregate these estimates up to the national level based on post-stratification weights generated by a model of the smoothed proportions of Democrats, Republicans, and Independents in each state-year.

A major advantage of simulation-based estimation is that it facilitates proper accounting for uncertainty in functions of the estimated parameters. For example, the estimated mean opinion in a given state is a weighted average of mean opinion in each demographic group, which is itself an estimate subject to uncertainty. The uncertainty in the group estimates can be appropriately propagated to the state estimates via the distribution of state estimates across simulation iterations. Posterior beliefs about average opinion in the state can then be summarized via the means, standard deviations, and so on of the posterior distribution. We adopt this approach in presenting the results of the model in the application that follows.

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