Substance and Change in Congressional Ideology: NOMINATE and Its Alternatives

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Abstract

Poole and Rosenthal's NOMINATE scores have been a boon to the study of Congress, but they are not without limitations. We focus on two limitations that are especially important in historical applications. First, the dimensions uncovered by NOMINATE do not necessarily have a consistent "ideological" meaning over time. Our case study of the 1920s highlights the challenge of interpreting NOMINATE scores in periods when party lines do not map well onto the main contours of ideological debate in political life. Second, commonly used DW-NOMINATE scores make assumptions that are not well suited to dealing with rapid or non-monotonic ideological change. A case study of Southern Democrats in the New Deal era suggests that a more flexible dynamic item response model provides a better fit for this important period. These applications illustrate the feasibility and value of tailoring one's model and data to one's research goals rather than relying on off-the-shelf NOMINATE scores.

1   NOMINATE and Congressional Development

Poole and Rosenthal's NOMINATE scores have been a boon to the study of congressional history and of American political development. By placing legislators and roll calls in a common ideological space, NOMINATE has permitted the development of measures of such concepts as partisan homogeneity and polarization that (potentially) "travel" across time, greatly facilitating the analysis and comparison of congressional politics across American history. A wide range of studies has employed NOMINATE-based measures to track these concepts over a long time span and to use the resulting measures as independent variables to test competing theoretical models.[1] It is fair to say that no data source has had a greater impact on the study of legislative politics—both historically and in the contemporary period—than the NOMINATE project.

NOMINATE scores provide a statistical summary of legislators' voting behavior. The scores themselves do not have any inherent meaning independent of the theoretical and substantive framework that we use to interpret them. For Poole and Rosenthal, this theoretical framework derives from a formal model of legislative behavior: NOMINATE scores are estimated based on a model for how members eval-

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1. See, for example, Eric Schickler, "Institutional Change in the House of Representatives, 1867–1998: A Test of Partisan and Ideological Power Balance Models," *American Political Science Review* 94, no. 2 (2000): 269–288; John H. Aldrich, Mark M. Berger, and David W. Rohde, "The Historical Variability in Conditional Party Government, 1877–1994," in *Party, Process, and Political Change in Congress: New Perspectives on the History of Congress*, ed. David Brady and Mathew D. McCubbins (Stanford: Stanford University Press, 2002), 23–51; Gary W. Cox and Matthew D. McCubbins, *Setting the Agenda: Responsible Party Government in the U.S. House of Representatives* (New York: Cambridge University Press, 2005); Hahrie Han and David W. Brady, "A Delayed Return to Historical Norms: Congressional Party Polarization after the Second World War," *British Journal of Political Science* 37, no. 3 (2007): 505–531; Matthew J. Lebo, Adam J. McGlynn, and Gregory Koger, *American Journal of Political Science* 51, no. 3 (2007): 464–481.

uate policy proposals in a spatial framework, along with a set of assumptions about the distribution of errors as members vote on these proposals and about change in members' preferences over time.

But when scholars interpret these scores as a measure of members' ideological positioning—as opposed to as a simple summary of patterns of voting behavior—the problem of interpreting the substantive meaning of the NOMINATE dimensions comes to the fore. Comparing the scores to substantively meaningful benchmarks is a key step in this interpretive process.

One such benchmark is to see how well members' scores on each dimension predict their votes in particular substantive domains, such as labor policy, regulatory policy, or civil rights. In their landmark book, *Congress: A Political-Economic History*, Poole and Rosenthal trace changes in the predictive power of each NOMINATE dimension for a wide range of issues across American history..[2] Based on this analysis, Poole and Rosenthal conclude that conflict over economic issues—the role of the government in the economy and battles over redistribution—have generally been central to the first NOMINATE dimension, while issues relating to race and region have tended to define the second dimension during eras when a single dimension has proven insufficient (such as the 1930s–70s).

Moving beyond specific issue areas, the argument that first-dimension NOMI-NATE scores reflect liberal–conservative ideology in contemporary politics is greatly bolstered by the finding that first-dimension scores are highly correlated with ideological scales that were created precisely to distinguish liberals from conservatives, such

2. Keith T. Poole and Howard Rosenthal, *Congress: A Political-Economic History of Roll Call Voting* (New York: Oxford UP, 1997).

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as Americans for Democratic Action scores and American Conservative Union scores. Given that such interest group scores are far more temporally limited than NOMI-NATE —while also suffering from important methodological weaknesses, such as the problem that interest groups may choose votes that generate "artificial extremism"— the case for preferring NOMINATE scores to these measures is a strong one.[3]

Our confidence that NOMINATE scores map well onto today's liberal–conservative continuum does not, however, tell us how to interpret these scores in earlier eras. Nor does it resolve the difficult problem of comparing scores measured at different points in time. This paper draws upon two extended cases studies to explore the uses and limitations of NOMINATE scores for understanding ideological conflict and change in American political development. These applications illustrate the feasibility and value of tailoring one's model and data to one's research goals rather than relying on off-the-shelf NOMINATE scores.

The first case study, focusing on congressional politics in the 1920s, considers the challenge of interpreting NOMINATE scores in periods when party lines do not map especially well onto the main contours of ideological debate in political life. Conservatives had considerable leverage within both parties in the 1920s, as evidenced by Democrats' nomination of pro-business corporate attorney John W. Davis to face off against Calvin Coolidge in the 1924 President election.[4] Dissatisfied with the perceived conservatism of the major parties, Robert La Follette of Wisconsin led a

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3. James M. Snyder Jr., "Artificial Extremism in Interest Group Ratings," *Legislative Studies Quarterly* 17, no. 3 (1992): 319–345.

4. In his New American Nation Series history of the 1920s, John Hicks argues that Davis and Coolidge were quite similar in outlook. More generally, Hicks highlights the similarity between Democrats and Republicans in the mid-1920s; John D. Hicks, *Republican Ascendancy: 1921–1933* (New York: Harper and Brothers, 1960).

faction of Progressive Republicans which outflanked both parties on the "left" during these years. In this paper, we assess how closely NOMINATE scores correspond to the progressive–conservative cleavage in Senate roll call voting. We find that first-dimension scores do distinguish conservative from progressive Republicans, but are much less effective in detecting the important, though less dramatic, differences among Democrats. Our evidence suggests that there was an identifiable progressive-conservative cleavage in voting behavior that is more clearly illuminated through alternative measures rather than NOMINATE scores.

The second case study examines Senate politics during the presidency of Franklin Roosevelt, an era of unusual ideological flux. Our focus is the ideological evolution of Southern Democrats, who began the period as strong supporters of Roosevelt's New Deal but ended it as frequent allies of Republicans in limiting and retrenching liberal advances. We use this application to illustrate the specific limitations of DW-NOMINATE, which constrains ideal points to move linearly through time, for examining rapid or non-monotonic ideological change. Based on estimates from a more flexible dynamic IRT model, we show that Southern senators' turn against New Deal liberalism occurred later and much more rapidly than first-dimension DW-NOMINATE scores imply.

Section 2 of the paper focuses on the 1920s case, while Section 3 discusses the New Deal era. Section 4 explores the implications of our findings not only for thinking about NOMINATE scores' historical applicability, but also for the question of how to conceptualize and measure ideological cleavages across time.

2 Ideological Substance: Senate Progressives in the 1920s

According to NOMINATE, Democrats and Republicans were highly polarized in the 1920s. Although the distance between their medians declined over the course of the decade, the two parties were still much farther apart than they would be from the 1930s through the 1950s. The overlap between Democrats and Republicans on the first NOMINATE dimension is also quite low in the 1920s. One way to see this is through Figure 1, generated by Poole and Rosenthal, which plots the 10th and 90th percentiles of senators' first-dimension DW-NOMINATE scores in each party over time. Notice that throughout the 1920s, the Republican who is at the 10th percentile of "conservatism" for the party (i.e., with a lower NOMINATE score than 90% of Republicans) is still more conservative than the Democrat at the 10th percentile of "liberalism" for his party (i.e., with a higher NOMINATE score than 90% of Democrats). This suggests a political world in which the parties are clearly separated along a dominant ideological dimension.

But this depiction of an ideologically polarized political world with little overlap across parties seems to conflict with other accounts of American politics in the 1920s. Frustration with the perceived conservatism of both parties in the first part of the decade led to several reformist movements which put forward a "progressive" program outside the two major parties. This program won greater support from Democrats than from Republicans, but its most die-hard supporters typically were found among Republicans.

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Senate 1879-2013
10-90% Ranges of Parties on Liberal-Conservative Dimension

90% Republican

10% Republican

10% Democrat

90% Democrat
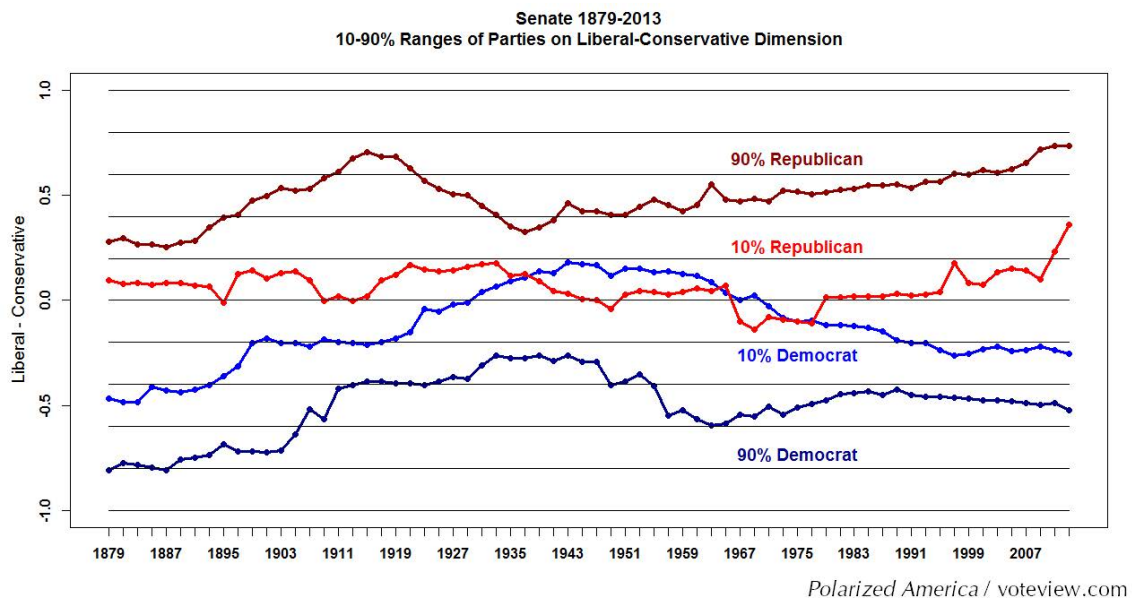
Polarized America / voteview.com

Figure 1: Polarization in the Senate. Reprinted from Keith T. Poole and Howard Rosenthal, *The Polarization of the Congressional Parties*, Last modified January 19, 2014, `http://voteview.com/political_polarization.asp`, 2014.

When political historians and contemporary observers describe the political battles of the 1920s, such groups as the Farm Bloc and the "Progressive Bloc" loom large, setting up battles between conservative, Old Guard Republicans and various "insurgent" forces found in both parties. Thus, Murray writes that the 67th Congress (1921–23) was characterized by the "undisciplined and unpredictable partisanship of competing intra-party vested-interest groups."[5] These groups included conservative Old Guard Republicans, Southern Democrats who supported "favorable regional legislation but opposed almost everything else," urban members who were surfacing as a definable group, and most importantly, a Farm Bloc seeking to "force the government to help them out of the agricultural depression."[6] Murray traces the severe challenges facing Republican leaders as they sought to control the agenda amid these divisions, arguing that the tax and tariff legislation that emerged was severely compromised.[7] One contemporary observer concluded, "the blocs have written most of the domestic political history of the past three Congresses, and have made largely negative the role of the chief executive of the nation."[8] Progressives' success peaked in the closely divided 68th Congress (1923–25) when they emerged victorious on several significant matters, including the numerous amendments that "mutilated" Secretary of the Treasury Andrew Mellon's tax program.[9]

5. Robert K. Murray, *The Politics of Normalcy: Governmental Theory and Practice in the Harding-Coolidge Era* (New York: W.W. Norton, 1973), 43.

6. Ibid., 44.

7. See also Phillips Bradley, "The Farm Bloc," *Social Forces* 3, no. 4 (1925): 714–718; John Mark Hansen, *Gaining Access: Congress and the Farm Lobby, 1919–1981* (Chicago: University of Chicago Press, 1991), 37; Donald L. Winters, *Henry Cantwell Wallace as Secretary of Agriculture, 1921–1924* (Urbana: University of Illinois, 1970), 90.

8. John D. Black, "The McNary-Haugen Movement," *American Economic Review* 18 (1928): 405.

9. Lindsay Rogers, *American Political Science Review* 19 (1925): 762, 766; Roy Blakey and

Although Republicans controlled the majority in Congress throughout the 1920s, there were also politically consequential divisions among Democrats. The historian John Hicks suggests that Democrats had "even less cohesion than among the Republicans," citing the bitter primaries fought in the South between upper-class conservatives and lower-class radicals.[10] Hicks observes that the conservatives generally emerged victorious from those primary battles and thus, like Murray, depicts the Southern Democrats as largely conservative.[11]

By contrast, Olssen argues that most Southern Democrats supported progressive initiatives, particularly to regulate business, tax high incomes and corporations, and help farmers. But he also notes that there were important divisions between more conservative, pro-business Southerners, such as Oscar Underwood of Alabama, and such "radicals" as Thomas Heflin of Alabama and Morris Sheppard of Texas. Thus, Olssen traces a series of high-profile battles over tax and regulatory policy in which Democratic divisions played a prominent role.[12] For example, in the battle over public power at Muscle Shoals (which later gave rise to the TVA), Republican President Coolidge found a key ally in Underwood.[13] In any case, the division between conservative Democrats such as Underwood and Davis, and radical, agrarian Democrats deeply skeptical of concentrated wealth and of business power, was an important facet of politics in the 1920s.

Gladys Blakey, *The Federal Income Tax* (London, 1940), 223–46; Murray, *Politics of Normalcy*, 132–3.

10. Hicks, *Republican Ascendancy*, 92.

11. Murray, *Politics of Normalcy*, 137.

12. Erik Newland Olssen, "Dissent from Normalcy: Progressives in Congress, 1918–1925" (PhD diss., Duke University, 1970).

13. Donald R. McCoy, *The Quiet President* (New York: Macmillan, 1967), 274.

We bring to bear a new data source in an effort to illuminate the extent to which NOMINATE scores capture the progressive–conservative cleavage in Congress, as understood by political actors at the time.[14] The leading progressive organization in the early-to-mid 1920s, the Conference for Progressive Political Action (CPPA), identified 75 roll call votes in the Senate from 1919–24 that it used to evaluate the progressive bona fides of senators.[15] In addition, the Farm Bloc and the American Federation of Labor (AFL) each identified a subset of roll calls that were used to evaluate senators.[16] We have constructed ideal point estimates for senators based on each of these data sources, which we compare to NOMINATE scores below.

2.1   CPPA Ideal Points

The Conference for Progressive Political Action found its origins in a December 1920 meeting called amid concern that conservatives had captured both parties. Sixteen Railroad Labor Brotherhoods, the Non-Partisan League, Farmer-Labor Party, and Farmers' National Council met with Senators Robert La Follette (R-WI), George Norris (R-NE), and David Walsh (D-MA) to discuss strategy. The progressives created the People's Legislative Service (PLS) as a research organization to serve like-minded members of Congress; La Follette became President of the PLS and George Huddleston, a House Democrat representing industrial Birmingham, was its first Vice

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14. This is not to say that political actors' perceptions of the relevant cleavage necessarily trump other potential conceptualizations (see the concluding section for a discussion of this complicated question).

15. Olssen, "Dissent from Normalcy," 322.

16. Based on our reading of Olssen, it is less clear that the Farm Bloc used the votes in this way than is the case for the AFL and CPPA. As such, we recommend treating the Farm Bloc votes with greater caution.

President.[17] Funded largely by Railway Labor Unions, the PLS reflected an important shift in the meaning of progressivism, as concerns for labor rights were brought into a policy program that had, in the first two decades of the twentieth century, not been closely linked to labor unions.[18] The Conference for Progressive Political Action grew out of the PLS, leading the drive for La Follette's third party presidential bid in 1924. Although the CPPA disbanded after La Follette's defeat, progressive Republicans continued to collaborate with like-minded Democrats in opposing the pro-business designs of GOP leaders.

The seventy-five Senate roll calls identified by the CPPA give a sense for the progressive program in the early-to-mid 1920s. The positions associated with the progressive cause include: support for strong railroad regulation; protections for labor rights (e.g. deleting an anti-strike clause from railroad legislation); support for farmer cooperatives and regulation of agricultural processors; higher corporate taxes; publication of tax returns; higher inheritance taxes and taxes on high incomes; excess profits taxes; and the Child Labor Constitutional amendment. The single most common category of roll calls identified by the CPPA concerned taxation, with the group pushing for imposing a heavier burden on major corporations and the wealthy. None of the roll calls focused on tariff rates, an issue that clearly defined Democrats from Republicans but that had only an ambiguous relationship to progressivism.[19]

17. Olssen, "Dissent from Normalcy," 69–71.

18. Ibid.

19. Progressives in both Houses put forward a detailed a program for the 68th Congress that indicates the range of their policy goals: tightened railroad regulation, campaign finance restrictions, a Child Labor Constitutional amendment, opposition to reduced taxes on the wealthy, restoration of the excess profits tax, increased inheritance taxes, payment of the Veterans' Bonus, abolition of the Railroad Labor group, and limitations on the use of injunctions; ibid. See also "Progressives Call for Radical Laws; House Faces Tie-Up," *New York Times*, December 1, 1923, 1.

It is worth noting, though perhaps not surprising, that some of the concerns of liberalism in later decades found no place in the progressive program. For example, the anti-lynching bill considered in the 67th Congress (1921–23) is not mentioned. Indeed, one of the triumphs enjoyed by progressives in January 1924 was the defeat of Albert Cummins (R-IA) as Chair of the Interstate Commerce Committee and his replacement by Democrat Cotton Ed Smith of South Carolina.[20] Smith, of course, was a vigorous defender of Jim Crow.

We used a one-dimensional item-response (IRT) model to estimate senators' ideal points based on the roll calls identified by the CPPA.[21] With seventy-five roll calls, we pooled the data across the three Congresses with relevant votes rather than attempting to estimate separate scores for each Congress. Figure 2 provides a scatterplot of first and second-dimension NOMINATE scores and CPPA-scaled ideal points for all senators. We use each senators' mean DW-NOMINATE score over the three Congresses in which CPPA votes occurred.[22] Democrats are denoted with circles and Republicans are marked with triangles; the lighter the marker, the higher the CPPA score.

A few observations leap out from the data. First, for the Senate as a whole,

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20. Olssen, "Dissent from Normalcy," 220–5. Cummins had alienated Progressives due to his sponsorship of the Transportation Act of 1920, which was seen as, on balance, pro-railroad.

21. Like NOMINATE, item-response theory is a framework for estimating subjects' latent trait (e.g.,their ideal point) from their dichotomous choices (e.g., roll-call votes). We use IRT to scale the CPPA votes mainly for the sake of convenience. Though they differ in certain respects, NOMINATE and IRT typically yield very similar ideal-point estimates. See Royce Carroll et al., "Comparing NOMINATE and IDEAL: Points of Difference and Monte Carlo Tests," *Legislative Studies Quarterly* 34, no. 4 (2009): 555–591; Joshua D. Clinton and Simon Jackman, "To Simulate or NOMINATE?," *Legislative Studies Quarterly* 34, no. 4 (2009): 593–621.

22. The mean DW-NOMINATE scores correlate at 0.99 with the DW-NOMINATE score in each Congress.
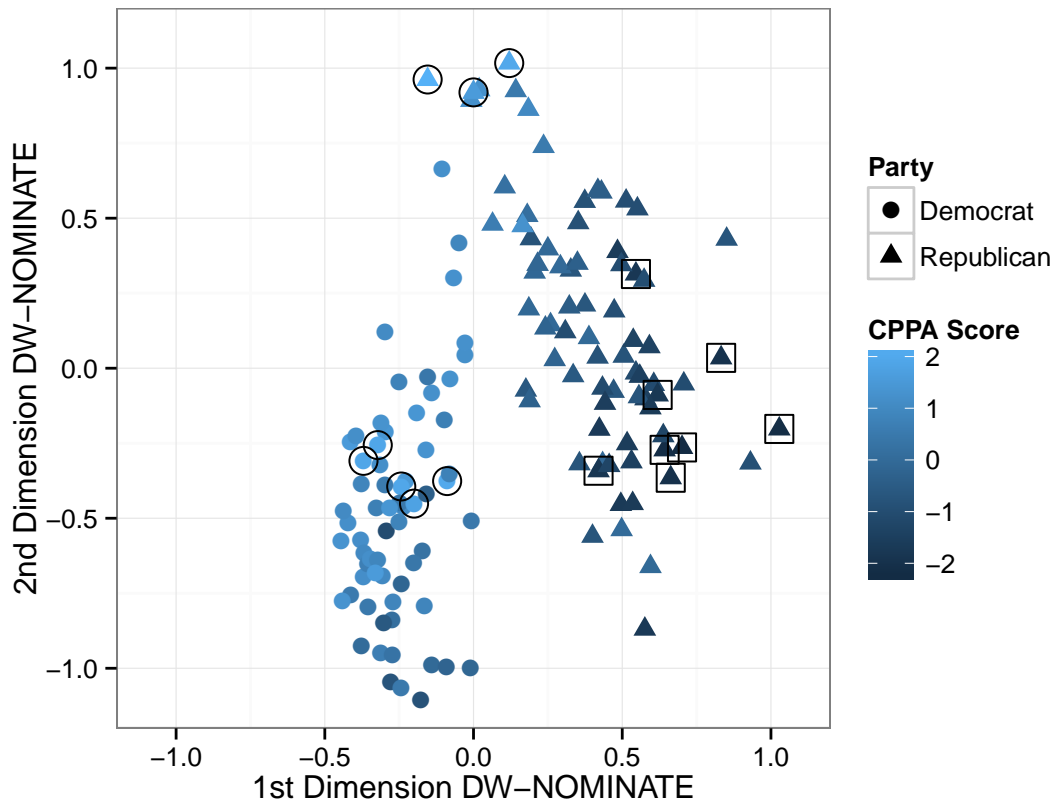
Figure 2: Senate CPPA scores in two NOMINATE dimensions. The eight senators with the highest CPPA scores and the eight with the lowest are identified with, respectively, hollow circles and hollow squares.

there is a very strong relationship between progressivism/conservatism on the CPPA scale and first-dimension NOMINATE scores. As the figure shows, the light marks are concentrated on the left side of the NOMINATE dimension; thus, members who score high on progressivism generally score low (i.e. "left") on the NOMINATE scale. The bivariate correlation between the two scores is an impressive -0.80, higher than the correlation between CPPA scores and party ($r = 0.65$), though not as high as the correlation between NOMINATE and ADA or ACA scores in more recent congresses. Second, the first NOMINATE dimension also does an effective job of distinguishing progressive from conservative Republicans, as measured by the CPPA ideal points. Again, the relationship is quite strong: -0.79.

Interestingly, first-dimension NOMINATE scores do not perform well at all in tracking the relative progressive bona fides of Democrats. The bivariate correlation among Democrats is a mere -0.13.[23] This is in part attributable to the smaller range in progressivism among Democrats: Republicans span the entire available space on the CPPA scale, with the most progressive (score $= 2.18$) and conservative members (score $= -2.25$) coming from the GOP. By contrast, Democratic ideal points on the CPPA scale range from -1.01 to 1.95. The standard deviation is 0.67 for Democrats, as compared to 0.96 for Republicans.

Still, there is appreciable variation among Democrats in CPPA scores, which seems to correspond to important political cleavages. For example, press coverage repeatedly treated Oscar Underwood (D-AL) as a member of the conservative or, at

23. The second NOMINATE dimension does more to separate Democrats on the CPPA scale: the bivariate correlation is 0.51, but this is still well below the second dimension's correlation with CPPA scores for Republicans, 0.68.

best, moderate faction of Democrats.[24] When Underwoord ran for President in 1924, more progressive Democrats him as "too conservative to make the Democratic party thoroughly progressive." One referred to him as "reactionary and wet," and another as "the Republican Administration's candidate for the Democratic nomination."[25] Underwood's CPPA score (0.29) placed him more than one standard deviation below the party mean (0.97).[26] However, Underwood's NOMINATE score generally indicated that he was located right at the Democratic mean (e.g. his score of -0.27 in the 68th Congress placed him slightly to the left of the party mean of -0.23).[27] Similarly, Carter Glass of Virginia was widely regarded as a moderate (and later, conservative) Democrat. His CPPA score of 0.45 placed him to the right of the typical Democrat, yet his NOMINATE score was to the left of the Democratic mean.[28]

When one examines the eight senators with the highest CPPA scores (denoted with hollow circles) and the eight lowest scorers (denoted with hollow squares), the relationship with NOMINATE is complex. The high scorers are clustered in two very different places in the NOMINATE space: the Democrats are essentially in the middle of their party along both dimensions. By contrast, the Republican progressives on the CPPA scale are on the far left of the party on the first NOMINATE dimension,

24. "Democrats Face Battle Royal in Convention Ring," *Chicago Tribune*, January 20, 1924, 3; "Bryan Scores Underwood," *New York Times*, February 27, 1924, 2; "Selection of West Virginian is Made Unanimous on 103D Ballot," *Washington Post*, July 10, 1924, 1–2; "Underwood Favors Cut in Surtaxes," *Los Angeles Times*, June 10, 1925, 1.

25. These descriptions of Underwood are quoted in George Brown Tindall, *The Emergence of the New South* (Baton Rouge: Lousiana State University Press, 1913–1945, 1967), 242.

26. The Democratic mean is from the 68th Congress, when Underwood competed for the Presidency. His CPPA score of 0.29 was well below the Democratic mean throughout the period.

27. Underwood's average NOMINATE score from the 66th to 68th Congresses was also -0.27, again just a bit to the left of the Democratic mean over the same period.

28. Glass's first-dimension DW-NOMINATE score ranged from -0.40 to -0.34 in the Congresses covered by the CPPA measure.

while having very high scores on the second dimension. The 8 lowest scorers on the CPPA are all Republicans, but they have a wide range of first and second-dimension NOMINATE scores. In short, CPPA scores do not seem to map onto two-dimensional NOMINATE space in any straightforward way.

Substantively, a seemingly "liberal" score on the first-dimension NOMINATE scale in the mid-1920s for a Democrat was consistent either with being a strong supporter of redistributive taxation targeting the wealthy and corporations (as was the case for David Walsh of Massachusetts, Morris Sheppard of Texas, and Clarence Dill of Washington) or with spearheading efforts to scale back surtaxes on the wealthy (as Underwood and Glass advocated). Indeed, when Treasury Secretary Mellon moved in 1925 to undo progressives' successful tax initiatives from the preceding Congress, Underwood—referred to by the *Los Angeles Times* as "one of the conservative leaders of the Democratic party"—showed himself "in sympathy in large measure" with Mellon's program.[29] In particular, Underwood backed a large cut in the surtaxes imposed on high incomes, linking himself "with Senator Glass of Virginia in a program of tax reduction diametrically opposed to the plan of Democratic leaders."[30] The *New York Times* noted that Underwood "might be trying to lay the foundation of a conservative effort" to end the previous year's Democratic alliance with "the radical Republicans."[31] In positioning themselves on tax policy, Underwood and Glass were well to the right of such progressives as La Follette, Norris, and Frazier, despite these Republicans' more conservative first-dimension scores. Underwood and

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29. *Los Angeles Times*, "Underwood Favors Cut in Surtaxes."
30. "Underwood's Plea Stirs Democrats," *New York Times*, June 14, 1925, 1.
31. Glass favored a surtax on high incomes of no greater than 25%, which was Mellon's position; ibid.; see also Olssen, "Dissent from Normalcy," 252.

Glass also clearly took a more conservative position on taxes than the Progressive Democrat Walsh, who backed higher rates on the wealthy. Interestingly, Walsh's first-dimension NOMINATE score placed him a bit to the right of Underwood and Glass (his score was -0.17 in the 68th Congress), yet his CPPA score of 1.37 clearly identified Walsh as Progressive.[32]

One possibility is that Underwood and Glass were both generally loyal Democratic partisans and so score within the mainstream of their party on the first NOMINATE dimension. But their personal conservatism (and that of their most important constituents) led them to vote more conservatively than other Democrats on core economic issues related to wealth redistribution. Although the Underwood and Glass cases are suggestive, a more detailed examination of how well CPPA and NOMINATE scores reflect contemporary understandings of Democrats' conservatism in the 1920s will be necessary before firm conclusions can be reached.[33]

Another way to compare the NOMINATE data to the CPPA measure is to consider the degree of party overlap. Based on the first dimension NOMINATE measure,

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32. Though not in the Senate, leading Democrat and future Speaker John Nance Garner also "did not agree with the progressives" on taxation, standing "well to the right of the progressive Democrats"; Olssen, "Dissent from Normalcy," 213. Indeed, Garner had backed Mellon's 1921 tax plan and favored less aggressive changes than the progressives in 1924; ibid., 227–34. Yet Garner's NOMINATE score placed him well to the left of the Democratic median in the House; indeed, his DW-NOMINATE score in the mid-1920s was at the far end of the Democratic spectrum, placing Garner to the left of such well-known liberals as Adolph Sabath, the Chicago Democrat who in the late 1930s and 1940s fought against Garner's conservative Democratic allies on the House Rules Committee.

33. Senate Democrats' ideological divisions were not confined to taxation. When it came to Muscle Shoals, Underwood worked out a deal with Secretary of War John Weeks to promote private development in 1925. Conservative Democrats generally backed the Underwood plan while progressive Democrats supported Norris's public power alternative ibid., 268–73. Southern Democrats split nearly evenly in what Olssen characterizes as a "revolt of the conservative Democrats, led by [William] Bruce [of Maryland] and Underwood" (273).

3.3% of senators from the 66th to 68th Congress were closer to the opposing party's median than to their own party's median. All of these senators were Republicans (the rate was 6% for Republicans, and 0% for Democrats). Using the CPPA measure, party overlap is substantially higher: 13% overall, with 9% of Democrats and 16% of Republicans closer to the opposing party's median.[34]

A final observation is that second-dimension NOMINATE scores track CPPA scores less well than do first-dimension scores. Figure 3 presents the relevant scatterplots for the full Senate, for Republicans, and Democrats. For the chamber as a whole, there is no relationship between CPPA scores and second-dimension NOMINATE scores ($r = -0.01$). Among Republicans, however, there is a reasonably strong relationship: high second dimension scores tend to correspond to greater progressivism ($r = -0.68$). The same pattern holds among Democrats, though the relationship is a bit weaker than among Republicans ($r = -0.51$).

In sum, the comparison of NOMINATE scores and CPPA ideal points suggests some of the strengths and limitations of our workhorse measure of member ideology. It is striking that the overall correlation between the two sets of scores is so high in an era when the two main parties' ideological reputations were far from clear. The fact that CPPA scores correlate more closely with first-dimension NOMINATE scores than they do with party indicates that the variation in NOMINATE scores in the 1920s partly reflects genuine variation in senators' progressivism, net of party. However, first-dimension NOMINATE scores do much better in capturing variation

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34. These figures were calculated by comparing each member's score in a given Congress to the party medians in that Congress. For CPPA scores, each member's score was constant across Congresses but the party medians did shift a bit due to member turnover.
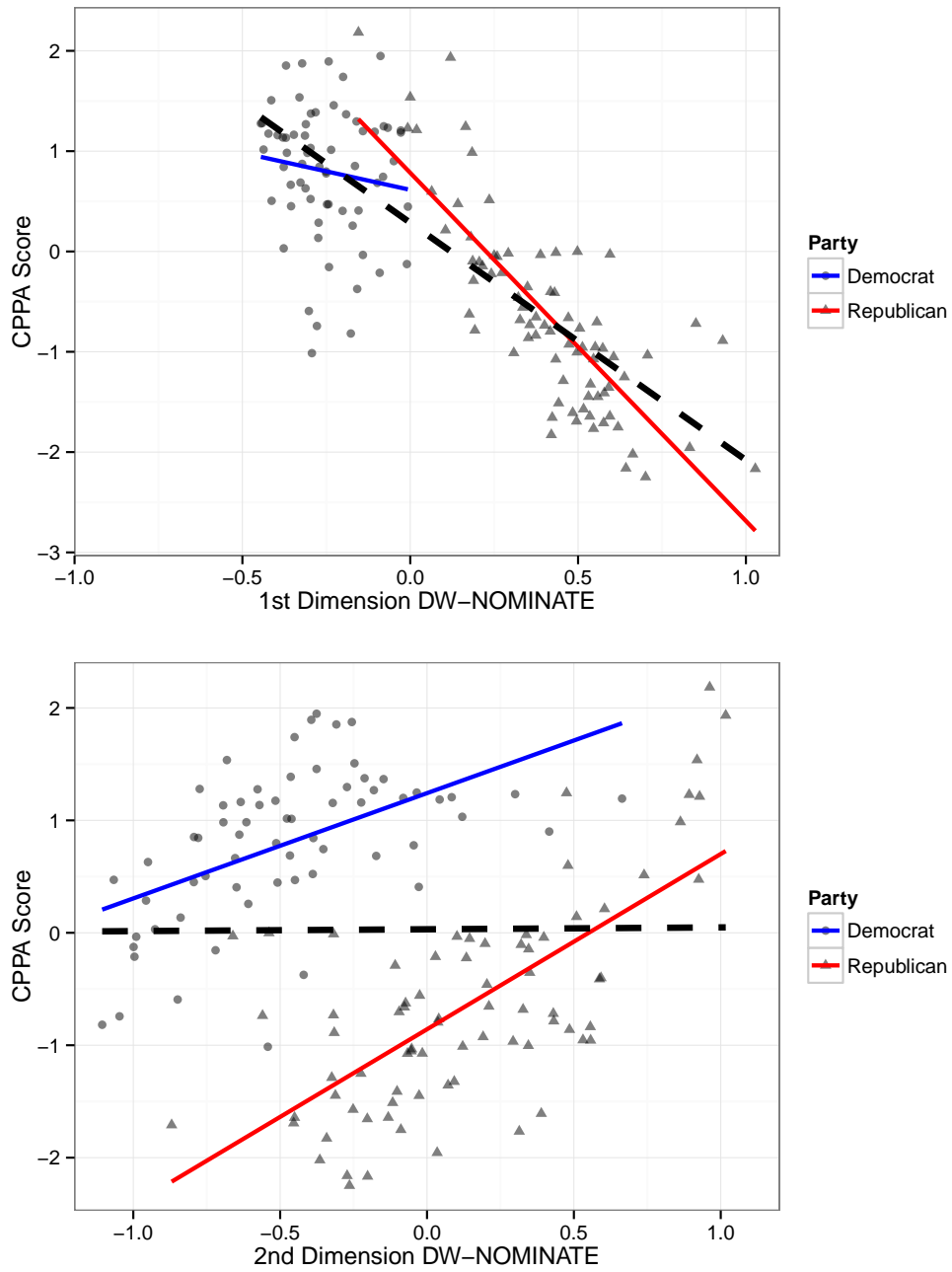
Figure 3: Senate CPPA scores by 1st and 2nd dimension NOMINATE scores. The black dashed line indicates the relationship for all senators, and the colored lines indicate the within-party relationships.

in Republicans' progressivism than in Democrats' progressivism. To be sure, this is partly due to the more limited range in Democrats' positioning. Nonetheless, it is striking that contemporary observers—and the CPPA scale—seem to have been able to pick up on systematic variation in Democrats' conservatism/progressivism that is only barely, if at all, reflected in the members' first-dimension NOMINATE scores. This raises a deeper question about the interpretability of the scale: can one use Democrats' score on the first-dimension at all as a measure of their relative liberalism, as distinct from their Democratic partisanship, if their NOMINATE scores do not reflect intra-party variation in support for the progressive program?

2.2   AFL Ideal Points

The AFL was the leading labor organization in the country in the early twentieth century. Though the group often refrained from direct involvement in electoral politics, it did track legislators' support for their policy goals. Olssen uncovered a list of 26 roll calls identified by the AFL in the 1920s.

Given the AFL's somewhat ambiguous ideological reputation, it is not self-evident whether one should treat their key votes as an indicator of progressivism. However, the topics covered by the AFL overlap fairly closely with the CPPA list, including railroad regulation, progressive income taxation, publicity of income tax returns, and public power development. Several votes related to labor policy, of course, but the AFL also included votes in favor of McNary-Haugen and other legislation sought by farmers. Most of the positions backed by the AFL in these roll calls were consistent with the outlook that more clearly "liberal" unions—such as the CIO—would put forward in the late 1930s. The one exception is that the AFL coded support for the

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restrictive Immigration Act of 1924 as pro-labor, a position that the CIO and other labor liberals of the late 1930s and 1940s would not have taken.[35]

The AFL-based ideal points track first-dimension NOMINATE scores and CPPA scores fairly closely. For the Senate as a whole, AFL scores correlate at -0.75 with NOMINATE scores and at 0.87 with CPPA scores.[36] Once again, AFL scores correspond much more closely to the first NOMINATE dimension for Republicans than for Democrats: the correlation between the two measures is -0.69 for Republicans and just -0.13 for Democrats. In other words, the first NOMINATE dimension has almost no predictive power with respect to Democrats' AFL support scores. By contrast, CPPA and AFL scores do track one another fairly well for Democrats, with a correlation of 0.64 (as compared to 0.79 for Republicans). The AFL and CPPA indices thus suggest that there was a structure to Democratic voting on a progressive–conservative dimension that is essentially orthogonal to the first NOMINATE dimension.[37]

2.3   Farm Bloc Ideal Points

The Farm Bloc rose to prominence in 1920–21 but faded as Progressives became a more organized force in Congress by 1923. In the interim, the group pushed an aggressive program of policies designed to bail out farmers facing severe economic

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35. The CIO sided with immigration advocates and against nativists when the industrial union rose to prominence in the late 1930s. Progressives were generally split on immigration restriction, with most Progressive Democrats, along with George Norris, Lynn Frazier, and Edwin Ladd favoring restrictions, while others, such as David Walsh, Royal Copeland, Henrik Shipstead, and Smith Brookhart opposed drastic restrictions; Olssen, "Dissent from Normalcy," 240.

36. The AFL scores correlate at 0.61 with party.

37. The AFL scores correlate more closely with second-dimension NOMINATE scores for Democrats: .53.

challenges in the aftermath of World War I. Olssen compiles a list of thirty-three roll calls that he attributes to the Farm Bloc program.[38]

Estimated ideal points on the Farm Bloc votes correlate reasonably strongly with first-dimension NOMINATE scores. For the full chamber, the correlation is -0.74 (for senators serving in the 66th and 67th Congresses, which is the time period for the Farm Bloc votes). Among Republicans, Farm Bloc votes are very closely tied to first-dimension NOMINATE scores ($r = -0.78$ on the first dimension, $r = 0.77$ on the second dimension). Among Democrats, the relationship is again much weaker ($r = -0.43$ for first dimension scores, 0.30 for the second dimension). Farm Bloc votes are also closely correlated with both the CPPA and AFL indices: for the full chamber, all of the correlations are in the 0.79 to 0.86 range. Similarly, the three sets of scores (AFL, Farm Bloc, CPPA) are correlated at 0.77 to 0.88 for Republicans. Among Democrats, the Farm Bloc scores are fairly closely related to CPPA ($r = 0.62$) and AFL ($r = 0.50$) ideal points.

In sum, the three alternative measures of member voting behavior—derived from votes identified by the CPPA, AFL, and Farm Bloc—track one another quite well, particularly for Republicans. Even among Democrats, however, it is striking that the three alternative measures seem to pick up on common variation in voting behavior that is less evident when the NOMINATE measure is used to estimate ideal points.

From a substantive standpoint, the meaning of first-dimension scores seems clear-cut when one considers Republicans: it taps into a sharp cleavage between progressive

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38. While the votes do reflect the position favored by the bloc and its leaders, it is not altogether clear that the bloc itself compiled this list of votes. As such, treating it as a "scorecard" is more problematic than is the case for the CPPA and AFL votes. Still, the votes can be considered a measure of support for the programs advocated by the Farm Bloc.

and conservative party members. Yet the scale's meaning seems far less clear among Democrats, where it does not coincide with scales that are explicitly intended to measure progressivism. This raises the difficult question of whether the very low party overlap evidenced with NOMINATE scores or the higher levels of overlap found with the CPPA is a better characterization of the underlying degree of polarization in the 1920s.[39] More generally, if first-dimension scores fail to capture Democrats' relative progressivism/conservatism in this period, how do we interpret party polarization and homogeneity measures derived from these scores?

3 Ideological Change: Southern Senators in the 1930s–40s

If Progressives found the 1920s a time of frustration with both major parties, the 1930s brought a welcome increase in ideological clarity to the American party system. Franklin Roosevelt's embrace of activist regulatory, developmental, and social-welfare policies positioned the Democratic Party—or at least its presidential wing—clearly on the left of the political spectrum, occasioning an exodus of prominent conservatives from the party during his first term.[40] Nevertheless, the party remained something of a "schizophrenic" hybrid due to the continued prominence within it of the white South, for whom Democratic loyalty was essential to their defense of regional autonomy and white supremacy.[41] Although Southern members of Congress

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39. The AFL and Farm Bloc ideal points suggest even greater party overlap than the CPPA scores.

40. James L. Sundquist, *Dynamics of the Party System: Alignment and Realignment of Political Parties in the United States*, Revised (Washington, DC: Brookings, 1983).

41. The epithet "schizophrenic" is from Anthony J. Badger, *The New Deal: The Depression Years, 1933–1940* (Chicago: Ivan R. Dee, 2002), 271. On one-party Democratic politics as a central prop

gave enthusiastic support to the early New Deal, their support waned in reaction to its increasingly urban and social-democratic orientation and the incorporation of Northern blacks and organized labor into the Democratic coalition. By the end of Roosevelt's long presidency, Southern Democrats in Congress had begun allying with Republicans to limit and retrench important elements of the New Deal.[42]

The 1930s and 1940s were thus decades of tremendous flux in congressional politics. The majority party, the policy agenda, and voting alignments all changed dramatically in a short period of time. Arguably, no approach provides a better means of summarizing and visualizing these changes than Poole and Rosenthal's NOMINATE, as these scholars have shown with their own analyses.[43] At the same time, however, this period also highlights the limitations of off-the-shelf NOMINATE scores and the potential payoffs to using a model and data chosen specifically for a particular research question. While such customization was once out of the reach of practitioners due to its steep technical and computational requirements, advances in statistical software and computing power have made it much easier to implement.

In this section, we use Southern senators' ideological evolution with respect to the New Deal to illustrate the advantages of a tailored approach over an off-the-

of the South's exclusionary racial and political system, see V. O. Key Jr., *Southern Politics in State and Nation* (New York: Knopf, 1949); Robert W. Mickey, *Paths Out of Dixie: The Democratization of Authoritarian Enclaves in America's Deep South* (Princeton, NJ: Princeton UP, forthcoming 2014).

42. James T. Patterson, *Congressional Conservatism and the New Deal: The Growth of the Conservative Coalition in Congress, 1933–1939* (Lexington: University of Kentucky Press, 1967); Ira Katznelson, Kim Geiger, and Daniel Kryder, "Limiting Liberalism: The Southern Veto in Congress, 1933–1950," *Political Science Quarterly* 108, no. 2 (1993): 283–306; Eric Schickler and Kathryn Pearson, "Agenda Control, Majority Party Power, and the House Committee on Rules, 1937–52," *Legislative Studies Quarterly* 34, no. 4 (2009): 455–491.

43. See, for example, pages 42–62 and 135–42 in Keith T. Poole and Howard Rosenthal, *Ideology & Congress* (New Brunswick, NJ: Transaction Publishers, 2007).

shelf one. We focus on three kinds of choices open to empirical researchers: how to model spatial change over time, what roll calls to include in the data, and how many dimensions to estimate. Each choice can have important consequences for the model estimates and their interpretation.

3.1   Models of Spatial Change Over Time

Comparing ideal points across different institutions or time periods is one of the most difficult and fragile aspects of ideal-point estimation. Doing so requires assumptions that "bridge" the model across contexts. One approach is to assume that actors who move between contexts, such as state legislators moving to Congress, remain spatially constant.[44] A second approach is to bridge using positions taken by actors in different contexts on the same choice, such as Supreme Court cases or congressional bills.[45] For the purposes of measuring ideal-point changes in Congress, the first approach is unsuitable. The second is possible in theory but infeasible in practice due to limited repetition of votes and changes in the policy status quo over time.[46] As a result, most studies of Congress have relied on a third approach, which is to impose statistical

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44. See, for example, Boris Shor, Christopher Berry, and Nolan McCarty, "A Bridge to Somewhere: Mapping State and Congressional Ideology on a Cross-institutional Common Space," *Legislative Studies Quarterly* 35, no. 3 (2010): 417–448.

45. See, for example, Michael A. Bailey, "Comparable Preference Estimates across Time and Institutions for the Court, Congress, and Presidency," *American Journal of Political Science* 51, no. 3 (2007): 433–448 and Stephen A. Jessee, "Spatial Voting in the 2004 Presidential Election," *American Political Science Review* 103, no. 1 (2009): 59–81. More technically, the bridging assumption is that the item characteristic curve that maps observed dichotomous (yes/no) responses to the latent ideal-point space is invariant across contexts.

46. For an interesting effort to bridge over time using votes repeated across congresses, see Nicole Asmussen and Jinhee Jo, "Anchors Away: A New Approach for Estimating Ideal Points Comparable Across Time and Chambers" (Unpublished manuscript. Available for download at `http://my.vanderbilt.edu/nicoleasmussen/files/2011/08/Anchors-Away-updated-March-28-2011.pdf`, 2011).

restrictions on members' spatial movement over time.

DW-NOMINATE, the dynamic form of W-NOMINATE, constrains ideal points to move as a polynomial function of time (e.g., a straight line or a parabola). Since Poole and Rosenthal have found that a simple linear trend provides the best model of change over time, the DW-NOMINATE scores available for public download are based on a linear dynamic model.[47] Under this assumption, ideal points are cardinally comparable across time—that is, it is possible to say that member A moved X distance between congresses. A downside of the linearity assumption is that any spatial movement in a legislator's ideal point is apportioned evenly across their entire congressional career. Thus, while the assumption of a linear trend may be adequate for most purposes, it is not well suited for analyzing rapid or non-monotonic change.[48]

An alternative to the linear-change restriction is to bridge the model over time via Bayesian priors about the distribution of ideal-point shifts between congresses.[49] In this approach, shifts between congresses are typically assumed to follow a normal distribution centered at zero—that is, legislators may jump to the left or right, but their expected location in a given congress is their location in the previous congress.[50]

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47. Ideal points are constrained to be constant within congresses. In addition, the ideal points of members who serve in only a few congresses are constrained to be constant over time. For details on DW-NOMINATE, see Royce Carroll et al., "Measuring Bias and Uncertainty in DW-NOMINATE Ideal Point Estimates via the Parametric Bootstrap," *Political Analysis* 17, no. 3 (July 2009): 261–275.

48. Poole and Rosenthal, *Ideology & Congress*, 93–6 acknowledge this, and also note that the years 1931–37 were a period of unusual temporal instability in the Senate.

49. Martin and Quinn use this approach to estimate a dynamic model of Supreme Court justices' ideal points; Andrew D. Martin and Kevin M. Quinn, "Dynamic Ideal Point Estimation via Markov Chain Monte Carlo for the U.S. Supreme Court, 1953–1999," *Political Analysis* 10, no. 2 (2002): 134–153.

50. This is called a "local level" or "random walk" prior; see Simon Jackman, *Bayesian Analysis for the Social Sciences* (Hoboken, NJ: Wiley, 2009), 471–2.

A legislator's ideal point in congress t is estimated as a weighted combination of their location in the congress $t-1$ and the location implied by their voting record in congress t, where the weight on congress t is determined by the (typically large) variance of the normal distribution.[51] Even though this model allows ideal points to move very flexibly over time, the ideal points are bridged across congresses by the assumption that their expected value in t is their value in $t-1$.[52]

3.2 Policy Domains and Dimensionality

In Section 2, we scaled roll-call votes chosen by advocacy organizations to score members of Congress. To the extent that the positions of these organizations derive from a coherent political ideology, ideal-point estimates based on these votes have an ideological interpretation in an ideational as well as a statistical sense.[53] An alternative way to imbue ideal-point estimates with greater substantive interpretability is to restrict the roll-call data to a particular policy (as opposed to ideological) domain.

In this application, our substantive interest is Southern senators' changing support for New Deal liberalism over the course of the Roosevelt administration. Given that first-dimension NOMINATE scores are often interpreted as measures of conservatism, particularly (in this era) economic conservatism, we could use them to

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51. In Bayesian terminology, the posterior distribution of the ideal point parameter is proportional to its prior distribution (from congress $t-1$) times its likelihood (in congress t).

52. Like DW-NOMINATE, the dynamic IRT model does not account for aggregate spatial movement in Congress as a whole. If no legislators retired between periods and all moved a constant amount to the right, the model would not detect any ideological change among legislators. More subtly, if a large bloc of legislators became more conservative while all others remained constant, the estimated movement of the bloc would be biased toward zero and that of the constant legislators biased away from zero.

53. The assumption that the organizations' positions reflect a broad ideology is most plausible for the CPPA and least applicable to the Farm Bloc.

chart Southerners' ideological evolution. But in addition to the issues raised by the dynamics detailed above, the problem with DW-NOMINATE scores is that they are estimated using all roll calls, including those that have nothing to do with the New Deal. It is thus difficult to interpret them as direct measures of opposition to New Deal liberalism.

A second, subtler issue with using first-dimension DW-NOMINATE is that it represents only one dimension in a two-dimensional space. While two-dimensions may provide a better fit to the roll-call data than one,[54] using only one dimension when two have been estimated distorts the space away from the best-fitting single dimension. Given that the substantive question at hand—degree of support for the New Deal—is almost inherently one-dimensional, this is undesirable for our purposes.[55]

3.3 Southern Senators' Ideological Evolution

The New Deal altered the character of Southern politics in important ways, even if in the short term it did not fundamentally undermine its exclusionary one-party

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54. Though see John H. Aldrich, Jacob M. Montgomery, and David B. Sparks, "Polarization and Ideology: Partisan Sources of Low Dimensionality in Scaled Roll Call Analyses," *Political Analysis* (forthcoming 2014).

55. It is not just our question that presumes a unidimensional ordering of legislators: any reference to liberalism or conservatism does as well. More subtly, so does any reference to a "pivotal voter," which is classically defined as the member of a sequential coalition whose vote is the last needed for the measure to pass; see L. S. Shapley and Martin Shubik, "A Method for Evaluating the Distribution of Power in a Committee System," *American Political Science Review* 48, no. 3 (1954): 788. The stipulation that the coalition be sequential implies a single ordering of the voters. If coalitions form in ideological order, with the most "enthusiastic" voting first, then the pivotal voter will be an ideological moderate—the median, in the case of a majority vote (791–2). Examples of works on Congress that emphasize the notion of pivotality include Keith Krehbiel, *Pivotal Politics: A Theory of U.S. Lawmaking* (Chicago: University Of Chicago Press, 1998); Ira Katznelson and Quinn Mulroy, "Was the South Pivotal? Situated Partisanship and Policy Coalitions during the New Deal and Fair Deal," *Journal of Politics* 74, no. 2 (2012): 604–620.

regime.[56] The economic emergency forced Southern members of Congress to reconsider—and in most cases, temporarily abandon—their usual hostility to federal intervention in their region. Through the mid-1930s, only a few Southern senators, most notably Josiah Bailey of North Carolina and Virginia's Harry Byrd and Carter Glass, maintained their commitment to fiscal conservatism. Most others, out of party loyalty and deference to Roosevelt's overwhelming popularity among their constituents, swallowed any personal objections to the New Deal, or else risked being denied renomination for insufficient fealty to Roosevelt.[57] At the same time, the New Deal clarified the ideological divisions within the one-party system, spawning a "new generation" of New Dealish Southern politicians for whom alignment with Roosevelt gave them the means to challenge the region's conservative leadership.[58] These developments were particularly salient in the Senate, which saw the entry of such strong New Dealers as Theodore Bilbo (MS) in 1934, Joshua Lee (OK) in 1936, and Lister Hill (AL) and Claude Pepper (FL) in 1937.

Though Roosevelt remained personally popular, Southern support for further liberal reform began to wane by the second half of the 1930s, first among the region's industrial and business elite and eventually among the white public at large.[59] By the

56. Anthony J. Badger, "How Did the New Deal Change the South?," chap. 2 in *New Deal/New South* (Fayetteville: University of Arkansas Press, 2007), 31–44; Gavin Wright, "The New Deal and the Modernization of the South," *Federal History* 2010, no. 2 (2010): 58–73.

57. James T. Patterson, "A Conservative Coalition Forms in Congress, 1933–1939," *Journal of American History* 52, no. 4 (1966): 757–772.

58. Anthony J. Badger, "Whatever Happened to Roosevelt's New Generation of Southerners?," chap. 4 in *New Deal/New South* (Fayetteville: University of Arkansas Press, 2007), 58–71.

59. Robert A. Garson, *The Democratic Party and the Politics of Sectionalism, 1941–1948* (Baton Rouge: Louisiana State University Press, 1974); Eric Schickler and Devin Caughey, "Public Opinion, Organized Labor, and the Limits of New Deal Liberalism, 1936–1945," *Studies in American Political Development* 25, no. 2 (2011): 1–28.

75th Congress (1937–38), usually cited as the origin of the Conservative Coalition between Republicans and Southern Democrats, the typical Southern senator had become slightly less supportive of the New Deal than the party average.[60] Southern disaffection with New Deal liberalism, especially with regard to labor policy, intensified through the end of Roosevelt's presidency, manifesting itself in convention battles, congressional investigations, and a generally uncooperative mood on Capitol Hill.[61]

Here, we use the tools of spatial modeling to examine the effects of these political dynamics on roll-call voting in the Senate during the Roosevelt administration (the 73rd to 79th congresses).[62] We gauge senators' support for the New Deal using two congress-specific measures: first-dimension DW-NOMINATE scores and ideal-point

60. Patterson, *Congressional Conservatism*, 329–30.

61. Garson, *Politics of Sectionalism*; Katznelson, Geiger, and Kryder, "Limiting Liberalism"; Howard L. Reiter, "The Building of a Bifactional Structure: The Democrats in the 1940s," *Political Science Quarterly* 116, no. 1 (2001): 107–129; Schickler and Pearson, "Agenda Control."

62. Clinton, Katznelson, and Lapinski have engaged in a similar exploration of voting patterns in this time period, with a focus on partisan polarization, which they argue is poorly captured by DW-NOMINATE scores in this era; see Joshua D. Clinton, Ira Katznelson, and John S. Lapinski, "Where Measures Meet History: Party Polarization During the New Deal and Fair Deal," in *Governing in a Polarized Age: Elections, Parties, and Representation in America* (New York: Cambridge UP, Forthcoming 2014). As an alternative, they compute re-centered and re-scaled W-NOMINATE scores using the method suggested by Tim Groseclose, Stephen D. Levitt, and James M. Snyder Jr., "Comparing Interest Group Scores across Time and Chambers: Adjusted ADA Scores for the U.S. Congress," *American Political Science Review* 93, no. 1 (1999): 33–50. The adjusted W-NOMIANTE scores are comparable over time under the assumption that a member's estimated ideal point in a given congress is a function of their long-run average ideal point, "shift" and "stretch" parameters specific to that congress, and an i.i.d. random shock. The shift and stretch adjust for changes in the agenda across periods. (Note, however, that Poole and Rosenthal claim that NOMINATE is quite robust to agenda differences.) See pages 45–9 of Groseclose, Levitt, and Snyder's "Comparing Interest Group Scores" for an insightful discussion of the assumptions of this model and its relationship to NOMINATE. The random shock allows ideal points to deviate randomly in each congress, creating an effect similar to the random walk prior in Martin and Quinn's dynamic IRT model. The primary difference between the two models is that the former treats ideal points in each congress as deviations from legislators' average over their entire career, whereas the latter treats them as deviations from their ideal point in the previous congress.

estimates from a one-dimensional dynamic IRT model. The DW-NOMINATE scores were downloaded from Keith Poole's `www.voteview.com`. The IRT ideal points were estimated in `R` using the function `MCMCdynamicIRT1d`.[63] Only roll calls involving social welfare or economic regulation—the core of the New Deal issue complex— were used to estimate the IRT model.

To get a feel for the differences in the two sets of estimates, we first consider the career of Mississippi Democrat Theodore Bilbo, who served in the 74th to 79th congresses (he died in 1947). Bilbo is now remembered as one of the last full-throated racial demagogues in the Senate, to an extent that embarrassed even his fellow Southerners.[64] Yet Bilbo's embrace of racial demagoguery occurred relatively late in his political career. Until the early 1940s, Bilbo was best described as a "redneck liberal" who expressed a flamboyant form of economic populism.[65]

After two progressive terms as governor of Mississippi, Bilbo challenged incumbent senator Hubert Stephens, whose lukewarm support for the New Deal left him electorally vulnerable. Bilbo defeated Stephens in the Democratic primary and, according to his biographer, entered the Senate as a typically solid Southern supporter of Roosevelt. In contrast to most of his Southern colleagues, however, "as the New

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63. R Core Team, *R: A Language and Environment for Statistical Computing* (Vienna, Austria: R Foundation for Statistical Computing, 2013), `http://www.R-project.org/`; Martin and Quinn, "Dynamic Ideal Point Estimation"; Andrew D. Martin, Kevin M. Quinn, and Jong Hee Park, "`MCMCpack`: Markov Chain Monte Carlo in `R`," *Journal of Statistical Software* 42, no. 9 (2011): 1–21.

64. Billy R. Weeks, "The Pledge 'To Plow a Straight Furrow': The 1947 Senatorial Campaign of John C. Stennis" (master's thesis, Mississippi State University, 1974); Keith M. Finley, *Southern Opposition to Civil Rights in the United States Senate: A Tactical and Ideological Analysis, 1938–1965*, Ph.D. Dissertation. Louisiana State University, Baton Rouge, 2003.

65. Chester M. Morgan, *Redneck Liberal: Theodore G. Bilbo and the New Deal* (London: Louisiana State University Press, 1985).
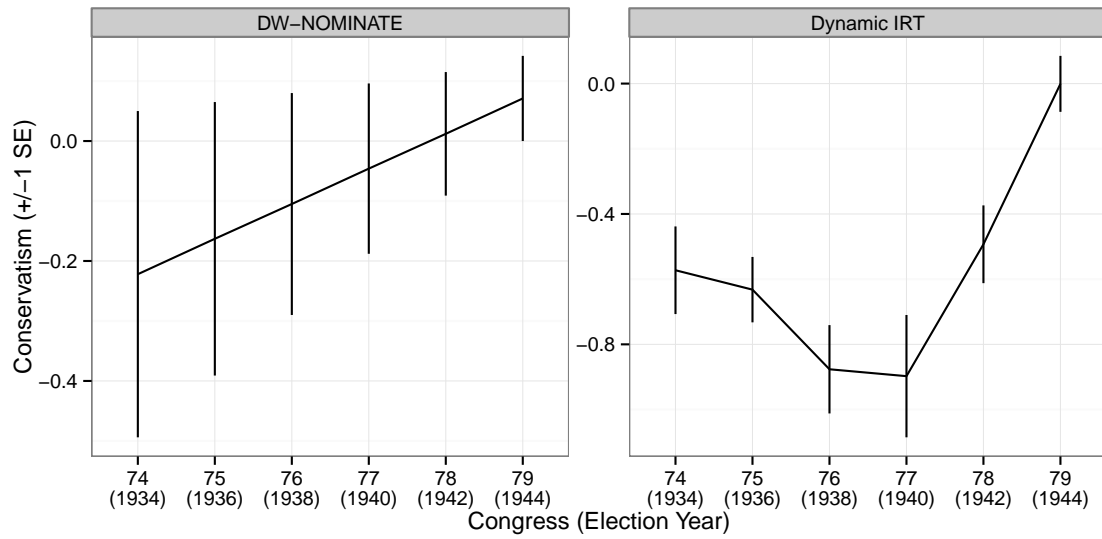
Figure 4: The ideological evolution of Senator Theodore Bilbo (D-MS) between teh 74th (1935–37) and the 79th (1945–46) congresses. Both scales are centered around 0, but the standard deviation of DW-NOMINATE scores is around 0.26 and that of IRT scores is about 0.66.

Deal moved towards welfare liberalism after 1935, Bilbo's enthusiasm waxed rather than waned."[66] Through the end of the 1930s, Bilbo was a strong supporter of such liberal measures as the Wagner Act, the Fair Labor Standards Act, and the Farm Security Administration. Only in the early 1940s, as race began to eclipse economics in political salience, did Bilbo embrace racial demagoguery and turn sharply against the New Deal.[67]

Figure 4 compares DW-NOMINATE and dynamic IRT estimates of Senator Bilbo's conservatism in each congress in which he served. The two scaling methods tell very different stories. As required by its linear time trend, DW-NOMINATE portrays Bilbo as having become monotonically more conservative in each time period. According to this measure, Bilbo was the 17th-most-liberal senator in the 74th Congress (1935–36), the 45th-most in the 77th (1941–42), the 53rd-most in the 79th (1945–46). Clearly, the linear conservative trajectory implied by first-dimension DW-NOMINATE does not match Bilbo's biographer's assessment that the senator's liberalism "waxed rather than waned" in the late 1930s before he turned sharply to the right in the 1940s.

By contrast, the dynamic IRT estimates fit much better with qualitative descriptions of Bilbo's career. According to the IRT model, Bilbo's liberalism ranks in the 74th, 77th, and 79th congresses were, respectively, 16, 7, and 50. Thus, while the DW-NOMINATE and IRT models essentially agree on the starting and ending points of Bilbo's career, they convey very different pictures of his ideological trajectory over time. In particular, DW-NOMINATE portrays him as one of the most conservative

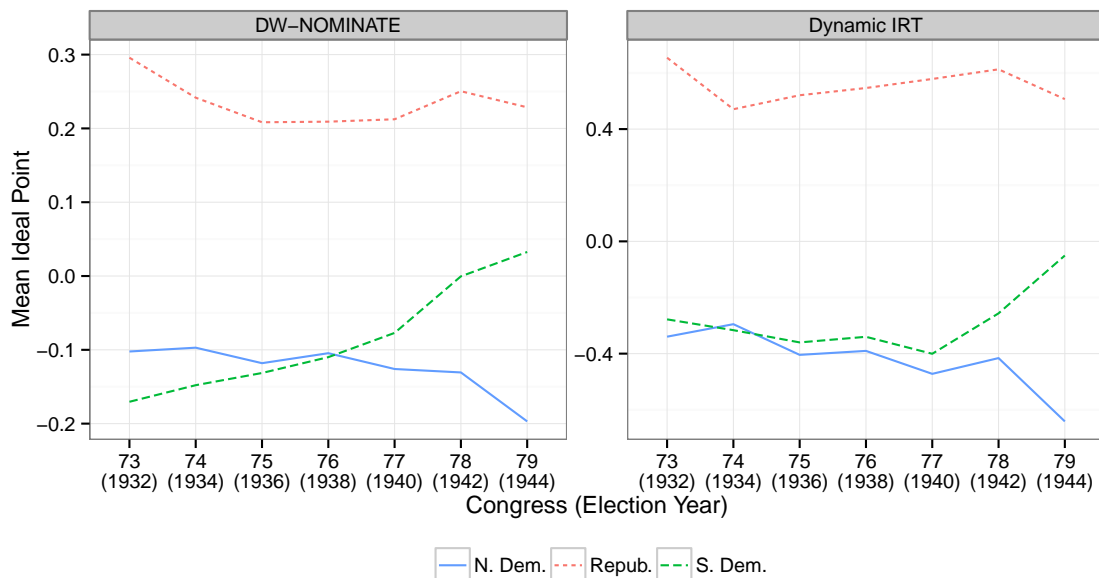66. Morgan, *Redneck Liberal*, 3–4.
67. ibid., 247–50.

Figure 5: The ideological evolution of Northern Democrats, Southern Democrats, and Republicans in the Senate between the 73rd (1933–35) and 79th (1945–46) congresses

Democrats in the Senate between 1939 and 1942, whereas the IRT model estimates him to be among the most liberal on economic issues.

While Bilbo's ideological journey was unusual for its extreme swings, a similar pattern can be discerned for Southern Democrats as a whole. Figure 5 plots the average ideal points of Northern Democrats, Republicans (all of whom were Northern), and Southern Democrats in the Senate, as estimated by DW-NOMINATE and dynamic IRT. The trends for Republicans and Northern Democrats are quite similar across the two measures, but for Southern Democrats the measures diverge, as they did with Senator Bilbo. Based on DW-NOMINATE, Southern Democrats began the New Deal period clearly to the left of their Northern co-partisans, and their subsequent ideological trajectory is roughly linear. According to the IRT model,

however, Southern Democrats tracked Northern Democrats quite closely until the 78th Congress, when they turned sharply to the right.[68]

The point of the foregoing analysis is not that the IRT estimates are correct and the DW-NOMINATE scores are not. Rather, it is that the estimates generated by an ideal-point method can depend significantly on the assumptions of the model. No method is assumption-free, of course. But the appropriateness of different assumptions varies according to the structure and goals of the analysis. For most purposes and for most of congressional history, DW-NOMINATE's linear change assumption seems to work well. In this era of ideological flux, however, it provides a poor fit to the data and to the historical record, whereas a dynamic IRT model is more plausible.

4 Implications and Advice

In this final section, we draw out some larger lessons from the case studies we have examined. At the outset, we wish to re-emphasize our appreciation for the NOMINATE research program and its contributions to the study of congressional history and development. Our goal is not to criticize NOMINATE but to encourage historically oriented congressional scholars to think more deeply about the interpretation of NOMINATE scores and to consider alternative approaches that may be better suited to their research goals.

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68. Though Southern Democrats who entered the Senate in the 78th and 79th congresses were a little more conservative on average than those they replaced, Southerners' rightward turn in these congresses is mostly attributable to the adaptation of continuing members; see Devin Caughey, "Congress, Public Opinion, and Representation in the One-Party South, 1930s–1960s" (PhD diss., University of California, Berkeley, 2012), Chapter 2.4. This contrasts with Poole and Rosenthal's finding that in general replacement dominates adaptation in the U.S. Congress; see Poole and Rosenthal, *Ideology & Congress*, 72.

NOMINATE and other scaling methods are tools for summarizing legislators' voting behavior in parsimonious form. While this summarization alone is useful, it takes on additional meaning to the extent that the statistical assumptions of the scaling model faithfully represent the decision-making process of legislators. This is not a one-size-fits-all question. Assumptions that are reasonable in one setting may not be in others; similarly, approximations that are acceptable for one research goal may not be for another. The important issue is that applied researchers understand the assumptions of their chosen method and interpret its estimates appropriately.

NOMINATE scores have substantial advantages. The first is ease of use: researchers can download them easily (along with related information) from `www.voteview.com`. The second is comprehensiveness: they cover all legislators and roll calls throughout congressional history. Third, NOMINATE has been subject to extensive scrutiny, validation, and explication.[69] Finally, NOMINATE scores come in several varieties that are suited for different purposes.

W-NOMINATE scores, for example, are estimated separately by congress and thus are not cardinally comparable across time. DW-NOMINATE achieves such temporal comparability, but at the cost of restricting ideal points to move linearly across time.[70] Common-space NOMINATE scores are comparable across institutions (e.g., House and Senate), but they constrain ideal points to be constant over time.

69. See, e.g., Poole and Rosenthal, *Ideology & Congress*; Carroll et al., "Comparing NOMINATE and IDEAL"; Clinton and Jackman, "To Simulate or NOMINATE?"; Nolan McCarty, "Measuring Legislative Preferences," in *The Oxford Handbook of the American Congress*, ed. Eric Schickler and Frances Lee (New York: Oxford UP, 2011).

70. As Groseclose, Levitt, and Snyder, "Comparing Interest Group Scores," 46–7 note, the linearity restriction means that hypotheses positing rapid ideological change—such as final-term shirking or responses to redistricting—cannot be tested using DW-NOMINATE.

A hybrid of these approaches is Nokken-Poole NOMINATE, which involves first estimating roll-call locations with a constant ideal-point model and then estimating congress-specific ideal points conditional on the roll-call estimates.[71]

As versatile as NOMINATE scores are, it often is better to use ideal-point estimates tailored to particular research goals. Section 3's case study of the Southern Democrats during the New Deal, for example, highlights the difficulty of using off-the-shelf DW-NOMINATE scores to examine rapid, nonlinear spatial change. As an alternative, it uses scores from a one-dimensional dynamic IRT model estimated using roll-call data restricted to the New Deal issue complex. The IRT model hews more closely to the substantive outcome of interest (support for New Deal liberalism) and more accurately detects Southern senators' sharp rightward turn in the early 1940s.

How should congressional scholars, particularly those with a historical bent, choose an approach to measuring spatial change over time? At the risk of over-generalization, we offer the following advice. First, for many if not most purposes, congress-specific measures such as W-NOMINATE—which allow comparisons of legislator' positions relative to one another—should work fine. Only for cardinal comparisons across time are dynamic measures such as DW-NOMINATE required.[72] It should be emphasized, however, that even dynamic measures cannot detect spatial shifts common to all legislators.[73]

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71. Timothy P. Nokken and Keith T. Poole, "Congressional Party Defection in American History," *Legislative Studies Quarterly* 29, no. 4 (2004): 545–568.

72. An additional reason to use a dynamic measure is that pooling information across time can result in more accurate estimates of legislator locations in any given congress.

73. This is true unless information available to bridge the choices available to legislators in different time periods; see Bailey, "Comparable Preference Estimates."

DW-NOMINATE should accurately portray spatial change, especially of groups of legislators, in periods when the dimensional structure of voting alignments is stable and ideological change is driven primarily by member replacement. Because DW-NOMINATE scores are based on a two-dimensional model, it is best to avoid including one dimension in a regression specification and not the other dimension.[74] In addition, since DW-NOMINATE scores are affected by past and future votes, they are not well suited for use as control variables in a causal inference analysis unless the causal variable of interest does not affect legislators' future votes.[75] Finally, although it is possible to derive estimates of additional quantities, such as the location of the chamber median, from DW-NOMINATE scores, the uncertainty (i.e., the standard error) of these estimates is not derivable from publicly available data.[76]

An alternative to relying on publicly available data is to estimate a dynamic model tailored to a particular application. One option, though hardly the only one, is the dynamic IRT model we used in Section 3, which lacks the rigidity and other drawbacks of DW-NOMINATE. Nevertheless, the dynamic IRT model is not without its costs. Foremost among these is computation time.[77] Accurate estimation of legislators' ideal points and their uncertainty requires many thousands of Monte Carlo

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74. McCarty, "Measuring Legislative Preferences."

75. Controlling for a variable that is affected by the cause or "treatment" of interest leads to "post-treatment bias" in the estimated causal effect; see Paul R. Rosenbaum, "The Consquences of Adjustment for a Concomitant Variable That Has Been Affected by the Treatment," *Journal of the Royal Statistical Society. Series A (General)* 147, no. 5 (1984): 656–666.

76. The uncertainty of auxiliary quantities such as the median can, however, be estimated via bootstrap simulation; see Carroll et al., "Bias and Uncertainty in DW-NOMINATE."

77. Another cost of a dynamic IRT model is the lack of a software program for estimating more than one spatial dimension. Though we are not aware of any existing implementation, a two-dimensional dynamic IRT model could in theory be estimated using a Bayesian simulation program such as `Stan`.

simulations, which can require several weeks or more to complete.[78] For contemporary scholars used to statistical analyses taking seconds rather than weeks, this may feel prohibitively time-consuming, though it is probably a fraction of the total time they will spend on the project.

The case study of progressivism in the 1920s raises a different methodological and conceptual question: how should scholars identify and assess the main ideological cleavage in politics at a particular moment in time? The simplest answer would be to say that the relevant ideological cleavage is whatever emerges from a one- or two-dimensional estimation of ideal points based on all roll calls in Congress. The advantage of this assumption is its simplicity: it allows one to assess behavior across time without relying on potentially subjective coding decisions or expert judgments. Many consumers of NOMINATE scores implicitly (or at times explicitly) make this move when they treat the scale as providing a consistent measure of ideological polarization, party homogeneity, and so on.

One potential criticism of this approach is that the first dimension identified by NOMINATE may be as much a partisan dimension as it is an identifiable ideological dimension.[79] From this perspective, it is striking that Poole and Rosenthal refer to the first NOMINATE dimension as both a partisan dimension and a liberal–conservative dimension. One might resolve the apparent tension between a partisan

78. Estimating the dynamic version of the model is much more computationally intensive than estimating a static version for each congress. The simulations required for the progressivism case study in Section 2 took less than an hour.

79. See, for example, Frances E. Lee, *Beyond Ideology: Politics, Principles and Partisanship in the U.S. Senate* (Chicago: University of Chicago Press); Aldrich, Montgomery, and Sparks, "Polarization and Ideology"; Hans Noel, *Political Ideologies and Political Parties in America* (New York: Cambridge University Press, 2014).

and ideological interpretation of the first dimension by arguing that the relevant ideological cleavage at a given point time is simply what the two major parties choose to focus on, perhaps inspired by the main organized groups constituting each party's coalition.[80] These items will tend to dominate the congressional agenda and thus dictate the contours of the first dimension. High polarization on the first dimension means that the two parties' members vote in opposition to one another on the issues subject to many roll call votes in a given Congress.

The results presented about the 1920s suggest, however, that the behavioral voting dimension uncovered by NOMINATE can correspond quite imperfectly to other, seemingly plausible conceptualizations of ideological divisions. In particular, the disjuncture between NOMINATE and CPPA scores in assessing Democrats' positioning and in measuring party overlap problematizes the assumption that NOMINATE scores are a valid indicator of ideology in the 1920s. When two sets of scores diverge in this way, what are the grounds for preferring one over the other?

We would argue against the idea that there is a global answer to this question. The purpose of one's study is crucial. If one is interested in party-based cleavages, NOMINATE's limitations are of much less concern. But if one is seeking to understand the "liberalism," "progressivism," or "conservatism" of particular members or factions, the fit between NOMINATE and alternative metrics at a given point in time is central.

What would make an alternative metric a valid indicator of ideological position-

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80. See, for example, John Gerring, *Party Ideologies in America, 1828–1996* (New York: Cambridge UP, 1998); Kathleen Bawn et al., "A Theory of Political Parties: Groups, Policy Demands and Nominations in American Politics," *Perspectives on Politics* 10, no. 3 (2012): 571–597.

ing? Hans Noel has highlighted the role of political thinkers—such as pundits and policy intellectuals—in crafting ideological terms of debate and alignments.[81] From this standpoint, magazines such as the New Republic and the Nation provide one way to identify a liberal or progressive program. Indeed, the New Republic was founded in 1914, at least in part to try to persuade politicians, activists, and voters that the true conflict in politics was between conservatives and progressives rather than between the two parties' espoused positions at the time.

But simply because the dominant intellectuals of the day are talking about one set of problems does not mean those problems are the "real" conflict and that what NOMINATE picks up is less important. After all, party coalitions were defined largely by region and section for most of American history, while the predominant intellectual voices have tended to be concentrated in a handful of cities, such as New York, Boston, and Chicago, far from the lived experience of most Americans (and American politicians).

Our admittedly tentative answer to these challenges is that validating an alternative measure—such as the CPPA—involves showing that practicing politicians themselves recognized the underlying dimension that the scale purports to assess. This recognition need not be universal or comprehensive, but to the extent that political actors themselves see the relevant dimension of conflict similarly to the measure, we can be confident that the scores capture something meaningful rather than being a reification of a dimension that was not operative for individual politicians. Ideology is, in part, a heuristic that people use as they evaluate new proposals and issues. For

81. Noel, *Political Ideologies and Political Parties in America*.

it to operate as a heuristic, however, the relevant actors have to "see" the relevant dimension.

Our initial examination of the 1920s suggests that many political actors did view the cleavage highlighted by the CPPA as corresponding to the key political battle of the era. For example, news coverage routinely labeled politicians as progressive or conservative, based, evidently, on their position on the issues highlighted by the CPPA. There is also some evidence that politicians themselves—even outside of the Progressive group—saw the progressive–conservative cleavage as central. Thus, for example, a handful of conservative Democrats formed the "Thomas Jefferson League" following the 1924 election in order to "educate the American people in the ways of the Constitution."[82] These Democrats—including William Bruce of Maryland, Thomas Bayard of Delaware, and Edwin Broussard of Louisiana—were among the most conservative Democrats on the CPPA scale and explicitly sought to distance their party from the progressive Republican "radicals." A systematic analysis of press coverage and members' own statements, however, is needed before firm statements can be made about how well the progressive–conservative cleavage, as articulated by the CPPA and reflected in its scale, corresponded to members' self-perception of the political conflicts of the 1920s.

At a minimum, however, our results indicate that the first NOMINATE dimension in the 1920s only imperfectly reflected the redistributive and anti-corporate agendas that were a core concern of the CPPA, and that resonate with later understandings of liberalism as articulated in the 1930s and beyond. Where NOMINATE tells us

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82. Olssen, "Dissent from Normalcy," 267.

that such prominent Senate Democrats as Oscar Underwood and Carter Glass—as well as John Nance Garner in the House—were mainstream "liberal" Democrats in the 1920s, the CPPA scores (and the later behavior of Glass and Garner as the New Deal unfolded) suggests that these were loyal Democratic partisans in the 1920s, but were by no means advocates of heavy redistribution or attacks on corporate control of utilities.

For students of congressional history, our case studies of progressivism in the 1920s and of Southern Democrats in the New Deal era suggest both the promise and pitfalls of efforts to use existing approaches to scaling members of Congress' ideal points. There is little doubt that the NOMINATE technology has made possible a far richer understanding of patterns in member behavior and has allowed a much closer conversation between historically oriented scholars and mainstream quantitative analysts.

At the same time, efforts to use scaled ideal points across a long time span face difficult challenges. First, the underlying dimensions being estimated cannot be assumed to have a common meaning across time, at least insofar as that meaning is given an ideological interpretation. Second, the appropriate identifying assumptions for estimating ideal points will depend, in part, on both the historical context and the analysts' purposes. The linear change assumption in DW-NOMINATE is appropriate in many contexts and for many purposes, but in times of major ideological or policy upheaval, alternatives that allow for more flexibility in the evolution of members' positions may be preferable.