

Representation

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Political representation has many facets and theoretical complexities (Pitkin 1967; Mansbridge 2003). For example, the history of political representation in America can be told in terms of changing patterns of *enfranchisement* and *political participation*—who is legally entitled to be represented and who chooses to engage in politics (Keyssar 2000)—or in terms of changing patterns of *descriptive* representation—the extent to which the social characteristics of political leaders do or do not resemble those of their constituents (Mansbridge 1999)—or in terms of changing *understandings* and *expectations* regarding the relationship between political leaders and the public (Fenno 1978). Rather than providing an inevitably fragmentary and dizzying whirlwind tour of the scholarly literatures on these aspects of political representation, we focus primarily on what we take to be the heart of the matter: the empirical relationship between what citizens want and what their elected representatives do.

Many changes have obviously occurred over the course of American history that might affect the nature and strength of “the electoral connection” (Mayhew 2004) between

citizens and their representatives. For example, the electorate has expanded significantly over time, affecting who reelection-minded politicians seek to represent (Burnham 1965; Valelly 2004). Significant changes in electoral rules and procedures—including changes in balloting, apportionment, the rise of direct primaries, and direct election of U.S. Senators—have affected politicians' incentives by altering how candidates are selected (Ware 2000; Ansolabehere, Gerber and Snyder 2002; Merriam and Overacker 1928; Gailmard and Jenkins 2009). The quantity and quality of information available to representatives regarding citizens' preferences, and to citizens regarding representatives' behavior, has increased significantly (Geer 1996; Prior 2007). The American party system has also undergone significant changes, giving rise to different eras of competition and fresh cleavages reflecting the emergence of new issues (Key 1955; Burnham 1970; Carmines and Stimson 1989; Bartels 1998).

While these developments have received significant scholarly attention, their implications for the nature and quality of political representation are not well understood. In our view, that is primarily because basic information about the nature and quality of political representation has itself been lacking. We seek, first, to offer an analytical framework for thinking about representation, and, second, to use that framework to present a systematic empirical examination of the changing relationship between the political preferences of American voters and the behavior of their elected representatives over the past 135 years.

Our characterization of representation in the United States involves a multi-stage statistical analysis focusing on the U.S. House of Representatives from 1875 through 2010. While there are daunting challenges to doing systematic empirical work over such a long period, we use the best available data on the behavior of House members and the preferences of their constituents to examine how the nature and extent of representation

have fluctuated over time. Our findings provide a plausible picture of significant historical change in the extent to which “the people’s House” represents the will of the people—both at the district level and at the national level—over more than a century.

1. Assessing Dyadic Representation: Congruence and Responsiveness

Elections are designed to create incentives for politicians to work on behalf of their constituents (*Federalist* 57). Ideally, elected officials who fail to represent their constituents’ preferences and interests face increased risks of being defeated in the next election; thus, the desire to retain power creates incentives to reflect the public’s views on policy. Without the threat of electoral replacement, elected officials’ may be driven by mechanisms ranging from conscientious behavior to outright bribery.

We begin by considering the *dyadic* relationship between a specific representative and his or her constituents. One way to describe and assess that relationship is by comparing the policy choices of the representative to the preferences of her constituents.¹ But “comparing” how, exactly? If representative *i*’s policy choice at time *t*, Y_{it} , and her constituents’ policy preference, X_{it} , are measured using the same scale, then perfect representation occurs if $Y_{it}=X_{it}$. We refer to this as a case of perfect *congruence* between constituents’ preferences and representatives’ policy choices. More generally, we may

¹ We recognize that citizens may have difficulty grasping policy debates and formulating cogent political preferences (Converse 1964; Kinder 1983; Bartels 2003). Nevertheless, we focus on citizens’ political *preferences* rather than their political *interests* as the relevant benchmark for assessing representatives’ behavior because it is so unclear how political interests might be operationalized and incorporated in empirical analyses of representation of the sort presented here (Bartels 1990). Absent a real-life incarnation of Plato’s Philosopher King or Rousseau’s Legislator, any assessment of citizens’ “true” political interests would require heroic and politically contentious assumptions.

think that $Y_{it} = X_{it} + \delta_{it}$ where the magnitude of the discrepancy between constituents' preferences and representatives' choices, $\delta_{it} (= Y_{it} - X_{it})$, reveals a lack of representation.

Unfortunately, scholars are rarely able to assess congruence directly, because of the many hurdles involved in measuring constituents' preferences and representatives' choices on the same scale; thus, most analyses rely on less direct comparisons and additional assumptions.² For example, the pioneering study of congressional representation by Miller and Stokes (1963) related the roll call votes cast by 116 members of Congress to the attitudes of random samples of their constituents in three policy domains: social welfare, foreign policy, and civil rights.³ They interpreted strong correlations between constituents' attitudes and legislators' roll call votes as evidence of "constituency influence," and weak correlations as evidence "that the Congressman looks elsewhere than to his district in making up his mind" (1963, 56). However, even a very strong correlation between constituents' preferences and roll call votes does not provide direct evidence of congruence, since it cannot rule out the possibility that the entire legislature is more conservative or more liberal than the public.

Achen (1977; 1978) suggested that the relationship between constituents' preferences and representatives' behavior might better be thought of within the framework of a linear

² Miller and Stokes (1963) asked similar—though not quite identical—policy questions of members of Congress and (random samples of) their constituents. Bafumi and Herron (2010) matched legislators' votes on a handful of specific bills with constituents' responses to survey questions intended to capture their preferences on the same issues. In these instances the assumption of direct comparability is unusually plausible, even if it is not airtight.

³ Unlike subsequent scholars working in this vein, Miller and Stokes (1963) also examined the extent to which members' own policy attitudes and their perceptions of their constituents' attitudes, measured in a separate survey of members, mediated the relationship between constituents' attitudes and representatives' behavior.

regression model, and he interpreted various parameters of the regression model in terms of substantive aspects related to representation such as “proximity,” “centrism,” and “responsiveness.” Subsequent analysts of congressional representation (e.g., Erikson and Wright 1980; Carson and Engstrom 2005; Engstrom and Kernell 2005; Clinton 2006; Hussey and Zaller 2011) have generally followed Achen’s lead and used the *slope* of the regression relationship between district opinions and representatives’ behavior as a measure of members’ *responsiveness* to their constituents’ preferences.

Using a linear regression model to characterize the relationship between the policy choice of representative i in year t and the preference of her constituents yields the relationship of $Y_{it} = \alpha + \beta X_{it} + \varepsilon_{it}$ where Y_{it} is a measure of the policy choice of representative i at time t , X_{it} is a measure of the preference of district i at time t , α and β are parameters to be estimated, and ε_{it} reflects idiosyncratic differences in the choices of representatives from similar districts.

Although X_{it} represents constituents’ preferences in both equations, it no longer assumes that constituents’ preferences and legislators’ policy choices are measured on the same scale. Simply comparing X_{it} and Y_{it} will therefore not provide a meaningful assessment of congruence between preferences and policy choices.

Assessing representation in this context shifts the question from “Does representative i vote as her constituent would like?” to the more indirect question of “Do representatives from more conservative districts vote in a more conservative manner?” This shift reflects the fact that we are unable to specify what policy choice (Y_{it}) would reflect a given district’s preference (X_{it}). While we can be fairly confident that representation is poor if $\beta \leq 0$, it is much less certain whether representation is “good” if $\beta > 0$ because a strong positive

correlation tells us nothing about the proximity between policy choices and preferences.⁴ Even if β measures the “responsiveness” of elected officials in Achen’s (1978) sense, “responsiveness” does not necessarily imply good representation.

Another issue potential issue is that representing constituency opinion as a single variable, X_{it} , requires aggregating individual preferences within each congressional district to produce a suitable measure of “constituency opinion.” Scholars typically treat the mean or median opinion of individual constituents as reflecting what a representative should be representing, but actual representation may give more influence to the views of attentive “issue publics” (Hutchings 2003), the incumbent’s co-partisans (Clinton 2006), affluent constituents (Bartels 2008, chap. 9), or other constituencies (Fiorina 1974; Bishin 2010).

A regression equation may provides a useful way for thinking about the relationship between constituents’ preferences and representatives’ behavior, but using it to characterize substantive representation across time requires us to measure the inputs of the political process—citizens’ policy preferences—and the outputs—representatives’ policy choices. Neither task is easy; there are many measures of inputs and outputs, each with distinct strengths and limitations (e.g., Wright et. al. 1985; Ardoin and Garand 2003; Levendusky et. al. 2008; Matsusaka 2010; McCarty 2011; Warshaw and Rodden 2012; Tausanovitch and Warshaw 2012).

⁴ If β is too large, the policy choices of representatives from the most liberal and most conservative districts may be too extreme. Of course, the value of the parameter α can always be chosen so as to make the (squared) discrepancies between actual and predicted policy choices as small as possible. However, there is no way to tell if the *entire distribution* of policy choices is much more liberal or much more conservative than the corresponding district preferences unless the respective scales on which they are measured can somehow be directly compared.

Recently, the most commonly used technique for measuring representatives' behavior is Poole and Rosenthal's (2007; McCarty, Poole and Rosenthal 2006) DW-NOMINATE algorithm, which produces a summary of each legislator's voting behavior based on every (non-lopsided) recorded roll call vote in every Congress throughout American history.⁵ While representation on specific issues is obviously important (e.g., Page, et al. 1984; Bartels 1991; Bailey and Brady 1998), a measure summarizing congressional behavior over many different issues provides a powerful basis for assessing overall representation. The summary of each legislator's roll call votes provided by the DW-NOMINATE algorithm is typically interpreted as an estimate of the legislator's "ideal point"—the point in an ideological space that is most consistent with her observed voting behavior under the assumptions of a simple spatial model of congressional voting. There is a robust debate regarding exactly what these "ideal points" represent. Personal preferences (e.g., Levitt 1996)? Party influences (e.g., Snyder and Groseclose 2000)? However, that ambiguity is irrelevant for our purposes; descriptive analyses of representation along the lines suggested by equation (2) hinge on the empirical relationship between legislators' behavior and citizens' preferences, regardless of *why* legislators behave the way they do.

The meaning of the summary scores produced by DW-NOMINATE—or any similar roll call scaling procedure—can be subtle. As Poole and Rosenthal (2007, 55) note, the first-dimension DW-NOMINATE scores "can be thought of as ranging from strong loyalty to one party ... to weak loyalty to either party to strong loyalty to the second, opposing party." Put differently, the first dimension captures the extent to which there is variation in members' voting behavior on those issues where the parties disagree. While the resulting dimension is often labeled "liberal-conservative ideology," this label is an *ex post* interpretation of the

⁵ See also the chapter by McCarty in this volume and the non-technical discussion of "NOMINATE and American Political History" provided by Everson, Valelly and Wiseman (no date).

recovered pattern; nothing in the scaling procedure requires or ensures that the recovered dimension will have anything to do with “ideology” in the classical meaning of that term.

As with any scaling procedure, the choice of how many summary dimensions to extract from the data can also be difficult. Poole and Rosenthal (2007) have argued that a single dimension is sufficient to summarize congressional voting behavior quite accurately for most of the history of the United States, and subsequent analysts have mostly followed their lead and focused on first-dimension DW-NOMINATE scores.⁶

Comparing “ideal points” over time or across chambers require considerable care. To connect data on roll call behavior in different Congresses involving different issues and contexts, Poole and Rosenthal’s DW-NOMINATE algorithm assumes that each legislator’s ideal point can only change over time in a parametrically specified manner which generally rules out dramatic shifts in “ideal points” of individual legislators from one Congress to the next. Over relatively short periods of time this sort of “bridging” assumption is unlikely to do too much violence to reality; but there is plenty of scope for substantial shifts in the

⁶ The second-dimension DW-NOMINATE scores that are reported for each representative in each Congress reflect a residual dimension of political conflict involving cross-cutting issues that divide the major parties at any given time. For example, Poole and Rosenthal (2007) argue that second-dimension DW-NOMINATE scores in the late nineteenth century primarily reflected intra-party conflicts on issues that pitted the industrial Northeast against the agrarian South and West, such as currency issues, while second-dimension DW-NOMINATE scores in the mid-twentieth century primarily reflected intra-party conflicts on racial policy issues. As these examples show, the relationship between specific issues and DW-NOMINATE dimensions is not fixed; and if issue preferences become increasingly split along partisan lines rather than within parties—as was the case with currency debates in the 1890s (Poole and Rosenthal 2007) and racial issues in the 1960s (Carmines and Stimson 1989)—a second-dimension issue may become incorporated into the first dimension.

meaning of DW-NOMINATE scores over decades due to shifts in the substance of partisan conflict and in the concrete content of political ideologies.

To measure constituents' preferences, analysts of contemporary American politics often rely on data from public opinion surveys. For example, Miller and Stokes (1963) tabulated opinions on domestic issues, civil rights, and foreign policy of survey respondents in each congressional district; Erikson et al. (1993) aggregated survey data on liberal-conservative ideology in each of the 50 states; and Bafumi and Herron (2010) asked random samples of constituents in each congressional district survey questions mimicking specific policy choices faced by members of Congress. Unfortunately, data of this sort are largely limited to the post-World War II era.

Because our interest in representation extends further back in time, we use votes in presidential elections to capture the ideological leanings of congressional districts. An advantage of this measure is that every voter in (almost) every district confronts the same choice in (almost) every presidential election; in that sense, at least, the measure is comparable across districts.⁷ Nevertheless, there are ample reasons for caution in employing votes as a measure of preferences.

First, we know that many citizens do not cast votes in presidential elections. Women and African-Americans, among others, were legally denied the opportunity to participate in the electoral process through much of American history. Even among the subset of people eligible to vote, turnout is far from universal, and non-voting is correlated with a variety of significant social and political characteristics; thus, the preferences of non-voters may

⁷ We ignore the fact that ballot access is controlled by states, which has occasionally produced different Democratic tickets in different parts of the country. We also ignore the fact that the one-sidedness of the district presidential vote may only imperfectly reflect the preference extremity of a district's median voter (Kernell 2009).

differ significantly from those of voters (Herron 1998). From a practical perspective, the omission of non-voters may not pose a significant problem for empirical analysis, since we expect politicians to focus on representing voters rather than non-voters. However, from a normative perspective it would be a mistake to equate responsiveness to the preferences of *voters* with responsiveness to the preferences of *citizens*.

Second, because the issues that shape voters' responses to the presidential candidates are not necessarily those considered in subsequent sessions of Congress, representatives' roll call voting behavior may not be strongly correlated with district voting behavior *even if representatives are perfectly representative*. For example, a presidential election may turn on "valence" issues (Stokes 1963) with little or no ideological content and little or no connection to subsequent legislative business. The occasional presence of significant third-party candidates (and even fourth party candidates, as was the case in 1912) can also affect how well two-party presidential votes measure district preferences.

Despite these caveats, there is reason to think that presidential votes are reasonable proxies for district preferences. For starters, Clinton (2006) and others have shown that direct measures of the ideology of congressional districts based on opinion surveys are generally very highly correlated with presidential votes, in contemporary settings where both are available. Moreover, aspects of district opinion that are *not* reflected in presidential votes may not be observable by elected officials themselves, and thus may have little or no impact on their behavior. While election outcomes may be difficult for politicians and political observers alike to interpret, they are at least readily observable. We therefore follow the lead of many other scholars (e.g., Schwarz and Fenmore 1977; Erikson and Wright 1980; Ansolabehere et al. 2001; Canes-Wrone et al. 2002; Masket 2007, Mayhew 2011) in using presidential votes as an indirect measure of citizens' preferences.

2. Shifting Patterns of Responsiveness

Having outlined the basic structure and assumptions of our framework for analyzing congressional responsiveness, we now examine how the extent and nature of congressional responsiveness have varied over the past 135 years. Our analysis covers American history from the end of Reconstruction almost to the present day—1875 to 2010 (the 44th through 111th Congresses). For the first half of this period (presidential elections from 1872 through 1948), we rely on district-level estimates of presidential votes derived from county-level election returns by Ansolabehere, Snyder and Stewart (2001).⁸ For the modern period (1952 through 2008) we use district-level returns as reported by the Census Bureau. To characterize representatives' behavior we rely on the first-dimension DW-NOMINATE scores of Poole and Rosenthal (2007).

Given that the one-party South was an enduring feature of American politics during much of the period we examine (Key 1949; Katznelson in the volume), we estimate total congressional responsiveness—the strength of the relationship between individual legislators' roll call behavior and their constituents' presidential votes—for each Congress from 1875 through 2010 separately for the South and non-South.⁹ The distinctive one-party politics of the “Jim Crow” South are clear in Figure 1; while we find significant fluctuations in responsiveness through the first half of the period covered by our analysis outside the South, responsiveness in the South was low and gradually declining throughout

⁸ These data are incomplete due to difficulties in matching county-level election returns with congressional districts; 18% of districts are missing, primarily in large cities and the Northeast. Our graphical representations of responsiveness include breaks between the early and later data to underscore this limitation. In addition, we omit the 88th Congress (1963-1964) due to missing data stemming from congressional redistricting in the early 1960s.

⁹ The South includes the eleven former Confederate states.

the early 20th century. The transformation of southern politics beginning in the 1950s produced a substantial increase in the responsiveness of southern members of Congress to the views of their constituents as expressed in presidential votes. Levels of congressional responsiveness in the South and in the rest of the country have been quite similar, and have mostly fluctuated in parallel, since the 1970s.

[Figure 1]

The responsiveness depicted in Figure 1 can be decomposed into distinct parts. For example, conservative districts may receive more conservative representation in two distinct ways. First, they may be more likely to be represented by Republican legislators, who are generally more conservative than Democratic legislators—even than Democratic legislators representing similar districts. Second, the specific Republican legislators representing more conservative districts may be more conservative than their Republican colleagues representing less conservative districts. We refer to the first—*inter-party*—difference in representation as “electoral responsiveness,” and to the second—*intra-party*—difference as “incumbent responsiveness.”

The distinction between “electoral responsiveness” and “incumbent responsiveness” can be more formally expressed by the system of equations

$$(1) \textit{DW-NOMINATE}_{it} = \alpha_t + \beta_t \textit{District Presidential Vote}_{it} + \pi_t \textit{Republican Seat}_{it} + \varepsilon_{it}$$

and

$$(2) \textit{Republican Seat}_{it} = \mu_t + \gamma_t \textit{District Presidential Vote}_{it} + \zeta_{it} .$$

The parameter β_t in equation (1) reflects the *direct* impact of *District Presidential Vote* on House members’ *DW-NOMINATE* scores *holding constant which party holds a seat*; this is our measure of “incumbent responsiveness.” The *indirect* impact of *District Presidential Vote* on *DW-NOMINATE* scores *via partisan turnover of seats* is represented by the *product*

of the parameter π_t in equation (1) and the parameter γ_t in equation (2); thus, our measure of “electoral responsiveness” is $\pi_t \times \gamma_t$.¹⁰

[Figure 2]

Figure 2 shows how each of these two distinct components of total responsiveness varies over the last 140 years. Figure 2 suggests that the fluctuations in total responsiveness shown in Figure 1 are mostly due to fluctuations in electoral responsiveness, which declined irregularly through most of the first half-century of our analysis, plateaued in the next half-century, and then increased fairly suddenly with the Republican takeover of the House in 1994. By comparison, incumbent responsiveness has almost always been a much less important component of total responsiveness. The level of incumbent responsiveness has also generally been much more stable from year to year, though there has been a significant gradual increase since the 1930s.¹¹

¹⁰ Our analysis here generally parallels that of Hussey and Zaller (2011), but differs in its treatment of the South. Whereas Hussey and Zaller allow southern legislators as a group to be more or less conservative than non-southern legislators in each Congress, our more general model allows for the additional possibility that the relationship between constituents’ presidential votes and legislators’ roll call votes in each Congress may be different in the South and the rest of the country.

¹¹ Electoral responsiveness, in the sense captured by Figure 2, is a product of two distinct factors: the extent to which districts casting more Republican presidential votes elect more Republican members of Congress, and the extent to which the roll call votes of Republican members of Congress differ from those of Democrats representing similar districts. The first of these factors is closely related to the “swing ratio,” which gauges the relationship between vote shifts and seat shifts in a given party system (Tufté 1973), and depends significantly on the distribution of safe and marginal seats (Mayhew 1974; Jacobson 1987); however, since the relevant relationship here is between *presidential* votes and *congressional* seats, the varying strength of presidential “coattails” (Ferejohn and Calvert 1984) also matters. The second factor is closely related to standard measures of partisan polarization (McCarty, Poole and Rosenthal 2006); the key difference is that we are focusing on the difference in roll call behavior between Democrats and Republicans *representing*

3. Information and Responsiveness

For politicians to represent the views of their constituents on any given issue, they must first know what those views are. How elected officials assess what the public wants is therefore critical for assessing the nature of representation. As Abraham Lincoln put it (Geer 1996, 50-51), “what I want to get done is what the people desire to have done, and the question for me is to find that out exactly.” But how did Lincoln, or any politician of his era, determine the people’s desires? Put differently, what kind of information did politicians possess to make responsiveness possible—and how has that changed over time?

Politicians clearly rely on a variety of different indicators of public opinion. For example, when deciding to reinforce or evacuate Fort Sumter, Lincoln relied on the tone of newspaper coverage for hints of public opinion in the North (Geer 1996, 50). Newspapers were major sources of public opinion for politicians (Bryce 1895)—so much so that President McKinley had his staff cull newspaper articles on the pressing issues of the day for him to read at night, which served as his “chief guide to public opinion” (Hilderbrand 1981, 12). Besides newspapers, politicians have also relied on the results of previous elections, the size of political rallies, the content of personal letters, the views of local party leaders, and discussions with financial contributors. Using this varied indicators, politicians attempted to build a clear picture of the public’s thinking.

These sources have two aspects worth discussing in the context of representation. First, they are all *indirect* indicators of public opinion. Results from any election speak directly to whether voters favored one candidate over the other, but they tell us little about the reasons for that preference or the public’s thinking on specific issues (Kelley 1983). Second, most of these indicators are likely to reflect disproportionately the views of the

politically similar districts, rather than the overall difference in behavior between Democrats and Republicans.

more engaged and more extreme segments of the electorate. Prior to the rise of scientific surveys, Russell Neuman (1986, 3) remarked, the “voice of the people was the voice of those who chose to speak out—those who voted, wrote letters to the editor, went to public meetings, wrote to legislators, or hired professional lobbyists to represent their interests in the corridors of power.” In the same vein, Benjamin Ginsberg (1986) argued that public opinion in the pre-poll era was shaped by those who cared most about the issue—and public opinion scholars have often demonstrated that those who care enough to write letters, attend protests, and publicize their opinions are also likely to hold relatively extreme ideological positions (Converse 1964; Fiorina 1999).

These two facts have important implications for what politicians thought they knew about public opinion, and thus for their ability to represent constituents (insofar as they desired to do so). First, estimates of public opinion based on these indicators were probably wrong in systematic ways. By giving more attention to the more engaged segments of society, they probably exaggerated the extremity of public opinion. Second, because of their indirect nature, these measures of public opinion left considerable *uncertainty* about what the public actually thought about any specific issue. As a result, disagreements about what the public thought were common, and there was no easy way to know which side was right. For example, both Woodrow Wilson and Henry Cabot Lodge claimed, based on the indicators they had at their disposal, that the public backed their position on the League of Nations (Geer 1996). Perhaps it is for these reasons that James Bryce (1921, 155) wrote about the “drift” of public opinion and its “perplexing” effect on politicians, and Walter Lippmann (1925) titled his treatise on the topic *The Phantom Public*.

Many aspects of this information environment changed over time, but one change worth highlighting is the rise of scientific survey research. Done correctly—an important caveat, to be sure—surveying a random sample of the population can provide a *direct*

indicator of what the public thinks about specific matters of policy. Rather than trying to infer what the public thinks about an issue from the intensity of a political rally or the surge of letters on a topic, elected officials can consult the answers citizens give to questions they are asked. For example, in August 2012, any elected official could learn that only 15% of Americans believed that abortions should be “illegal in all circumstances,” and that 54% felt that the Medicare program needed no changes or only minor changes.¹² In contrast, President Lincoln could only guess at the level of public support, and those guesses could never be particularly precise given the limits of the available information.

In addition to providing more information about public opinion on specific issues, polls are also likely to provide more accurate readings of the opinions of *average* Americans. Whereas ordinary citizens used to have to bear the costs of expressing their opinion on an issue, now pollsters bear many of those costs because of their desire to poll a representative sample. As a result, public opinion polls effectively empower the less politically engaged. While some believe that giving voice to those who might not otherwise express an opinion may be problematic (Ginsberg 1986; Nisbet 1975; Herbst 1993), insofar as representation entails reflecting the views of more than just the politically engaged, polls provide an opportunity to hear from citizens who might not otherwise be heard. For this reason, George Gallup and many of his contemporaries thought that polls were important and advanced the cause of democracy (see Gallup and Rae 1940). While advocates were overly optimistic about what could be learned from polls, the critical point is that they improved the quality of information that was available to elected representatives interested in acting in accordance with their constituents’ opinions.

The shift from an information-poor environment to an information-rich environment may help to account for the changing pattern of “incumbent responsiveness” documented

¹² These data are from CNN and NBC News polls, respectively.

in Figure 2. The apparent rise of incumbent responsiveness beginning in the 1930s corresponds nicely with the rise of public opinion polling; just as the quantity and quality of available information regarding public preferences increased, incumbent legislators generally seem to have become more responsive to those preferences. The correspondence suggests that incumbent responsiveness may have increased, not because of any change in the *desire* of politicians to represent their constituents (although this is certainly also possible), but rather because of an increased *ability* to do so (Geer 1996).

Better information about constituents' preferences may also have contributed, albeit less directly, to the smoothing out of electoral responsiveness evident in Figure 2. Major shifts in electoral responsiveness from year to year reflect major changes in the translation of voters' preferences into congressional election outcomes or major changes in the ideological implications of partisan representation (or both). Just as individual incumbents probably gained new insights from polls regarding the preferences of their own constituents, parties probably also gained a clearer sense of the likely electoral costs or benefits of alternative platforms and strategies, making those platforms and strategies—and, thus, the relationship between presidential votes and congressional election outcomes—more consistent and predictable. To be clear, many other trends are also likely correlated with the changes in representation evident in Figure 2 and we have no way to isolate the causal impact of this specific shift. Even so, the rise of polling provides one plausible explanation for the significant changes we observe in the observed pattern of congressional representation over the past century.

4. Assessing Collective Representation

The historical pattern of responsiveness depicted in Figure 2 suggests that individual members of Congress are much more responsive to the preferences of their constituents

now than their counterparts were 80 or even 20 years ago. We have suggested that this increased responsiveness may be at least partially due to the fact that elected officials now have more and better information about their constituents' preferences. This seemingly happy story differs from other scholars' assessments of the changing relationship between public preferences and elite political behavior in contemporary America. For example, Jacobs and Shapiro (2000, 4) argue "A growing body of evidence suggests that since the 1970s the policy decisions of presidents and members of Congress have become less responsive to the substantive policy preferences of the average American."

This apparent contradiction stems in significant part from a crucial distinction: between "responsiveness" as a feature of the cross-sectional relationship between the choices of individual members of Congress and the preferences of their constituents, and "responsiveness" as a feature of the overall relationship between government policies and citizens' preferences. In support of their conclusion, Jacobs and Shapiro cited work by Page and Shapiro (1983) and Monroe (1979; 1998) relating national preferences on a wide variety of policy issues to subsequent shifts in national policy.

The distinction between "dyadic representation" and "collective representation" was first highlighted by Weissberg (1978). Writing in the wake of Miller and Stokes's (1963) highly influential dyadic analysis of "Constituency Influence in Congress," Weissberg argued that "there is no historical or theoretical reason to limit analysis to dyadic representational relationships" (1978, 537) and that "citizen preferences can indeed be represented collectively even if particular legislators ignore their constituencies" (1978, 545). Jacobs and Shapiro (2000, 344) went even further, arguing that "What matters most is whether the decisions of the national government reflect what Americans as a whole want."

Unfortunately, the issue-by-issue approach to assessing collective representation is extremely labor-intensive, requiring analysts to match hundreds or thousands of policy preferences in national surveys to corresponding government policies. Moreover, systematic opinion surveys—which provide the raw material for assessing policy preferences—are only available for recent decades. Thus, in order to provide a longer and broader perspective on the extent of collective representation of citizens’ preferences over the course of American political history, we redeploy the data and analyses we have already used to examine dyadic responsiveness. In particular, we use the observed relationship between presidential election returns and congressional roll call voting patterns to *infer* the degree of overall congruence between citizens’ collective preferences and policy outcomes. This sort of inference requires some strong—and undoubtedly questionable—assumptions. Nonetheless, we feel that the value of opening up decades of American political history to systematic empirical analysis of collective representation outweighs the limitations of our approach.

To characterize the ideological complexion of the policies adopted by the federal government over the past 135 years, we again rely on DW-NOMINATE scores from the U.S. House of Representatives. In particular, we focus on the DW-NOMINATE score of the median House member. While models of collective choice under open rule (Black 1958; Krehbiel 1998) may provide some theoretical justification for using the preferences of the median voter to summarize the collective choices of the chamber, we readily acknowledge that many other theories predict non-median outcomes due to institutional factors such as bicameralism and the presidential veto (Krehbiel 1998) or durable agenda-setting coalitions in the form of party caucuses (Cox and McCubbins 2005). Moreover, detailed empirical analysis suggests that enacted policies may not be as centrist as the preferences of the median voter would suggest (Clinton 2012). However, using the chamber median as

our measure of government policy produces the most moderate possible characterization of the House. Given our results, choosing a more extreme characterization—such as the median preference of the majority party—would only exacerbate the magnitude of the discrepancies we document between representatives and voters.

To measure the aggregate preferences of the national electorate, we again rely on election returns from the immediately preceding presidential election, on the assumption that voters' choices between the two major-party candidates in each election reveal their preferences regarding the major political issues that dominate the subsequent policy-making process in Washington—and, more specifically, roll call votes in the House. To avoid possible distortions in the aggregation of opinion due to malapportionment and variations in turnout, we measure national opinion using the national popular vote.¹³

An analysis comparing national presidential votes and House median DW-NOMINATE scores would seem to be subject to the same limitation as our dyadic analysis of district votes and individual representatives' DW-NOMINATE scores—the lack of direct correspondence between our measures of mass preferences and elite behavior. However, we can finesse this limitation by assuming that the “appropriate” translation of presidential votes into House roll call votes in each Congress is revealed by the observed cross-sectional relationship between presidential votes in each congressional district and the DW-NOMINATE scores of the corresponding House members. Because we allow this cross-sectional relationship to vary from one Congress to the next, there is no need to assume that the meaning of presidential voting behavior is constant over time, or that a given DW-

¹³ Using the average presidential vote in congressional districts instead of the national popular vote yields substantively identical conclusions. Using the *median* presidential vote in congressional districts makes the public as a whole look somewhat more conservative in recent years, because the median is insensitive to large Democratic vote margins in majority-minority districts.

NOMINATE score in one Congress is ideologically equivalent to the same DW-NOMINATE score in another Congress.

Thus, in each election year from 1874 through 2008, in every non-southern district for which we have presidential voting data, we estimate:¹⁴

$$(3) \text{ DW-NOMINATE}_{it} = \alpha_t + \beta_t \text{ District Presidential Vote}_{it} + \varepsilon_{it},$$

where DW-NOMINATE_{it} is the score for the representative from district i following the election in year t , ε_{it} is a stochastic disturbance term, and α_t and β_t are Congress-specific parameters to be estimated.¹⁵ Substantively, α_t normalizes the average district presidential vote to have the same mean as the DW-NOMINATE score for the House elected in election t . The coefficient β_t accounts for differences in the variation in presidential vote and DW-NOMINATE scores and describes how a change in presidential vote relates to a change in DW-NOMINATE space. Since we allow the relationship between presidential votes (our proxy for district preferences) and roll call behavior to differ in each Congress, we estimate 68 different Congress-specific versions of equation (3). We use the 68 sets of regression coefficients to project DW-NOMINATE scores in each Congress on the basis of the national two-party popular vote in the preceding presidential election using the relationship:

$$(4) \text{ Predicted National DW-NOMINATE}_t = a_t + b_t \text{ National Presidential Vote}_t,$$

where a_t and b_t are the least squares estimates of the regression parameters α_t and β_t in equation (3). We perform this rescaling separately using both the first and second dimensions of DW-NOMINATE.

¹⁴ We exclude southern states from these calculations because the lack of two-party competition for most of the South through most of the period we examine makes cross-district variation in presidential votes an unreliable measure of district preferences.

¹⁵ Our unit of analysis is the representative. In some cases we have more than one representative associated with the same district, due to multi-member districts or mid-cycle replacements.

This approach rests on the strong substantive assumption that each Congress is *ideologically unbiased*, so that the average DW-NOMINATE score of representatives from moderate districts is neither more conservative nor more liberal than the preferences of constituents in those districts. Under that assumption, the linear relationship between DW-NOMINATE scores (Y_{it}) and presidential votes (X_{it}) in equation (3) can be used to translate an observed presidential vote into the corresponding expected preference measured on the same scale captured by DW-NOMINATE scores.¹⁶ While this is undoubtedly a strong assumption, we note that the most careful attempt to directly compare legislators' behavior and constituents' preferences on the same issues (Bafumi and Herron 2010) produced results roughly consistent with the assumption.¹⁷

To assess how collective representation has changed over the past 135 years, we compare the DW-NOMINATE score of the median member of the U.S. House in each Congress with the contemporaneous normalized preference of the national electorate calculated on the basis of equation (5). The results of this comparison are presented in Figure 3. The thin line in the figure denotes the location of the House median legislator, the thick line denotes the normalized preference of the national electorate, and the shaded region represents the divergence between the median legislator and the national electorate. The top panel of the

¹⁶ If we entertain the possibility that moderate members of Congress *on average* are more conservative or more liberal than their constituents, it is impossible to draw any conclusions at all regarding absolute discrepancies on the basis of incommensurate scales. One observer could always assert that congressional Democrats' roll call votes accurately reflected their constituents' views and that Republicans were much too conservative, while another observer insisted on the basis of the same observable data that Republicans were moderate and Democrats were much too liberal.

¹⁷ On an ideological scale ranging from approximately -3 to $+3$, Bafumi and Herron (2010, 534) calculated an averaged discrepancy between House members and their constituents of $-.10$ in the Republican-majority 109th Congress and $+.06$ in the Democratic-majority 110th Congress.

figure presents the relationship using the first dimension of DW-NOMINATE, and the bottom panel depicts the relationship using the second dimension of DW-NOMINATE.

[Figure 3]

Figure 3 reveals some interesting and important aspects of the relationship between “the people’s House” and national political sentiment. First, the House median (thin line) is almost always higher (more conservative) than national opinion when the Republicans are in the majority, and almost always lower (more liberal) when the Democrats are in the majority. That is, the House is consistently more ideologically extreme than the national electorate – a conclusion that is perhaps especially striking given that we characterize the preferences of the House using the most moderate measure possible, the chamber median.

Second, even when voters replace the majority party, the amount of divergence between citizens’ preferences and policy does not dramatically decrease. Perhaps reflecting the “leap-frog” representation that Bafumi and Herron (2011) find in recent Congresses, replacing the party in control of the House does not systematically bring the House any closer to national opinion. Changing which party controls the House usually quickly leads to a large divergence in the opposite direction.

Third, the relationship between the House median and the national electorate has changed significantly over time. On issues captured by the first-dimension DW-NOMINATE scores, Figure 3 suggests that there was relatively little divergence between the House median and national sentiment between about 1920 and 1980, but much more divergence before and after that period. The closer relationship between the national electorate and the House median during this period presumably reflects the heterogeneous composition

of the majority Democratic Party in the House.¹⁸ The Democratic congressional delegation throughout this period was a fragile coalition including a substantial northern liberal faction and a more conservative southern faction. The southerners exercised considerable policy influence, often by allying with Republicans in a “conservative coalition” to frustrate the more liberal impulses of northern Democrats.¹⁹ As a result, the median House member was generally much more moderate during this period than before or since—and, as a result, closer to the public.

While the peculiar politics of the South during the Jim Crow era may have contributed to a better overall match between citizens’ preferences and policy on issues captured by the first-dimension DW-NOMINATE scores, the corresponding pattern for the second-dimension DW-NOMINATE scores hints at one aspect of the political cost of that arrangement. Much of the period of minimal divergence between national preferences and the House median in the first dimension (presented in the top panel of Figure 3) was a period of significantly *increased* divergence in the *second* dimension (presented in the bottom panel of Figure 3). We suspect that these two facts are not unrelated.

The content of the second dimension of DW-NOMINATE is defined by the substance of recorded votes that significantly split either or both of the major parties in a given

¹⁸ Democrats were the majority party in the House in 29 of the 31 Congresses between 1933 and 1994, thanks in significant part to their near-monopoly of congressional seats in the “Solid South.”

¹⁹ The influence of conservative southern Democrats in Congress was magnified by the custom of allocating committee chairmanships to members of the majority party on the basis of seniority; the very low levels of electoral responsiveness in the region through most of this period ensured that southerners would be heavily overrepresented among the most senior members of the Democratic caucus.

Congress.²⁰ Because it is akin to a “residual” dimension, the content of the dimension changes over time as the issues that the House chooses to consider change. Based on their examination of specific roll call votes that are well-predicted by second-dimension DW-NOMINATE scores, Poole and Rosenthal (2007, 58-59) characterized the second dimension in the 1950s and 1960s as primarily reflecting issues related to race. Thus, the substantial divergence between second-dimension preferences and the House median in this period suggest that the House was significantly more conservative than the national electorate on racial issues during this period. This divergence is consistent with the common contention that the political coherence of the Democrats’ New Deal coalition—such as it was—depended on southern Democrats being given an effective veto on racial issues.

It is worth noting, however, that there is very little divergence between our estimate of national preferences and the position of the House median on second-dimension issues in the 1930s and 1940s. Does that suggest that southern Democrats had no outsized influence on racial issues in that period? On the contrary, we suspect that the southerners’ effective veto on racial issues was even more effective in the 1930s and 1940s than it was thereafter. The key to this apparent puzzle is to recall that DW-NOMINATE scores reflect positions on *issues that came to a vote in Congress*. Given the composition of the Democratic Party in the New Deal era, issues involving race were intentionally kept off the congressional agenda during much of this period. In the absence of roll call votes, we have no way of calibrating the relationship between national preferences and policy. Nevertheless, it seems clear that non-action on racial issues generally suited the

²⁰ More precisely, due to the constraints on shifts in individual members’ “ideal points” imposed by the DW-NOMINATE algorithm, the second dimension reflects the set of issues that split either or both of the parties *over a series of Congresses in which the composition of the House is relatively stable*.

preferences of southern Democrats in Congress quite well. Indeed, the emergence of a visible divergence between national opinion and congressional positions on the second dimension in the 1950s and 1960s may reflect a *weakening* of the political position of southern Democrats vis-à-vis their northern counterparts: whereas they had previously succeeded in preventing significant racial legislation from even coming to a vote, they now found themselves fighting (with variable success) on the House floor to moderate the pace of racial policy change.

As for why the parties have been persistently more extreme than the national electorate—even in the contemporary era, when opinion surveys provide a good deal of reliable evidence regarding constituency opinion—we can only speculate. Empirically, there is a strong relationship between the amount of divergence between the House median and the national electorate and the extent to which the parties are polarized. The parameter π_t in equation (1) provides a natural measure of partisan polarization: the average difference in House roll call voting behavior between Republicans and Democrats representing districts with similar political preferences (as reflected in presidential election returns).²¹ As Figure 4 shows, this measure of partisan polarization is strongly correlated (.69) with the extent of divergence between the House median “ideal point” and the imputed preference of the national electorate. There are instances where the trends diverge—for example, following the election of 1894, which led to the majority party Democrats in the House losing 125 seats due to the Panic of 1893; in 1904, when the sweeping election of President Theodore Roosevelt bolstered the Republican majority in

²¹ A more common measure of partisan polarization—the raw difference in House roll call voting behavior between Republicans and Democrats—is arguably less relevant in this context, and turns out to be slightly less strongly correlated with the extent of divergence between the House median “ideal point” and the estimated preference of the national presidential electorate.

the House; and following the 1920 election, in which the Republicans gained 62 House seats and ended up controlling 90% of the seats outside the South—but the overall trends are quite similar. Historical periods of high partisan polarization are generally also periods in which there is increased divergence between the House median member and the estimated “ideal point” of the national electorate.

[Figure 4]

To be clear, our claim is not that polarization *causes* divergence—in fact, the elections referenced above all reduced the amount of divergence between voters and the median House member despite polarized parties. However, it is nonetheless the case that divergence is generally greater when the parties are further apart. This relationship nicely coincides with the importance of electoral responsiveness we documented earlier. If responsiveness occurs primarily through the selection of partisan representatives, then when the parties are highly polarized the aggregate results of those selections are likely to produce a more extreme House than the national electorate would prefer.

The results of our analysis square with the results of other analyses employing very different data and methods. Perhaps the most influential recent analysis of collective representation in the American political system is Stimson, MacKuen, and Erikson’s (1995; Erikson, MacKuen, and Stimson 2002) work on “dynamic representation” and *The Macro Polity*. Building on Stimson’s (1999) distillation of “public mood” from hundreds of policy questions in public opinion surveys from 1952 through 1996,²² Stimson, MacKuen, and Erikson estimated the impact of year-to-year shifts in public mood on policy activity by the House, Senate, President, and Supreme Court. They found “that government policy making responds over time to movements in public opinion,” and that “large-scale shifts in public opinion yield corresponding large-scale shifts in government action” (Erikson, MacKuen,

and Stimson 2002, 320). However, their analysis suggested that shifts in “public mood” influenced public policy primarily through their impact on election outcomes. For example, their statistical evidence implies that the expected change in presidential policy associated with a shift from the most liberal public mood on record to the most conservative public mood on record would be dwarfed by the expected policy change associated with a shift from a typical Democratic administration to a typical Republican administration. In the language of the framework we have set out here, representation in *The Macro Polity* seems to occur much more through *electoral responsiveness* than through *incumbent responsiveness*.

5. Conclusion

We have characterized the history of political representation in America in terms of two distinct relationships: the extent to which the policy choices of individual members of the House of Representatives are responsive to the political views of their own constituents, and the extent to which the collective policy choices of the House as a whole (as reflected by the ideological stance of the median House member) are consistent with the political views of the national electorate.

The central irony highlighted by our analysis is that, over most of American political history, the quality of *collective* representation of Americans’ political preferences by the House of Representatives—and, plausibly, by the federal government as a whole—has generally been *inversely* related to the degree of responsiveness of *individual* members of Congress to the preferences of their own constituents. The period of maximum congruence between national public preferences (as measured by presidential election returns) and the roll call voting behavior of the median House member occurred between 1920 and 1980—a period dominated by the peculiar one-party politics of the Jim Crow South, and a

period in which individual responsiveness (especially via electoral turnover) was at a historically low ebb even outside the South. Over the past three decades, individual responsiveness has increased fairly steadily and substantially, both in the South and elsewhere; but the divergence between the “ideal points” of the median House member and the national electorate has also increased substantially.

Our results, obviously, rest on some strong assumptions. Many may quibble with them and we might even agree with some of those quibbles. But such discussion misses the larger point of this essay. We sought to characterize how representation has worked over the last 140 years. To generate our estimates, we establish a framework to help structure our thinking about representation and the estimates that result offer insights into the workings of representation. That the results do not paint a simple or consistent picture should hardly come as a surprise. Representation, as reflected by the many long standing debates on the topic, is a complicated topic that requires careful thought and investigation. Even though we have tended to paint in broad strokes, we think that the resulting canvass offers some provocative new insights and questions about representation that we hope prompts further inquires from the many scholars who are interested in a topic that is central to the study of democratic government.

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Figure 1: Congressional Responsiveness by Region
 (change in DW-NOMINATE "ideal point" associated with a 1% change in district presidential vote margin)

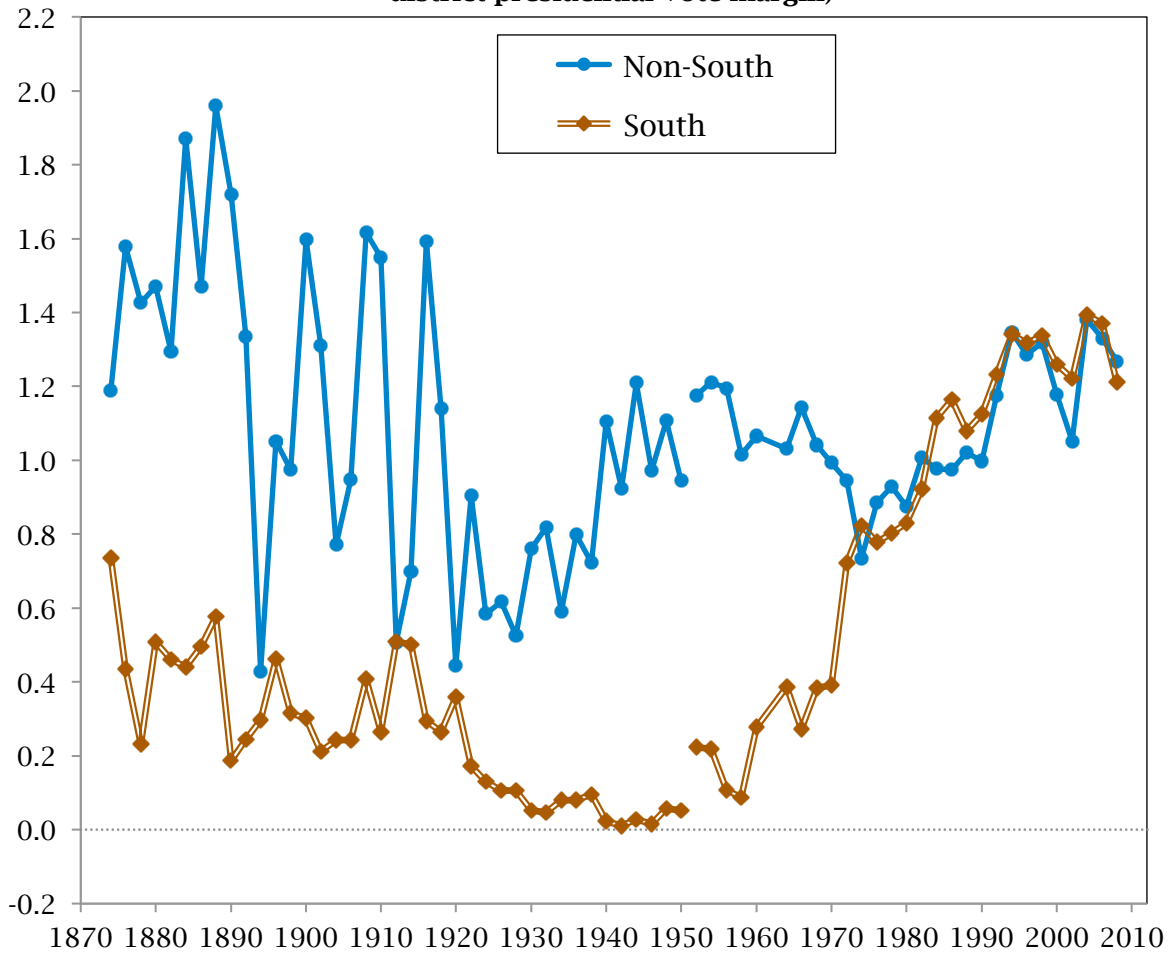


Figure 2: Congressional Responsiveness by Type
 (change in DW-NOMINATE "ideal point" associated with a 1% change in district presidential vote margin)

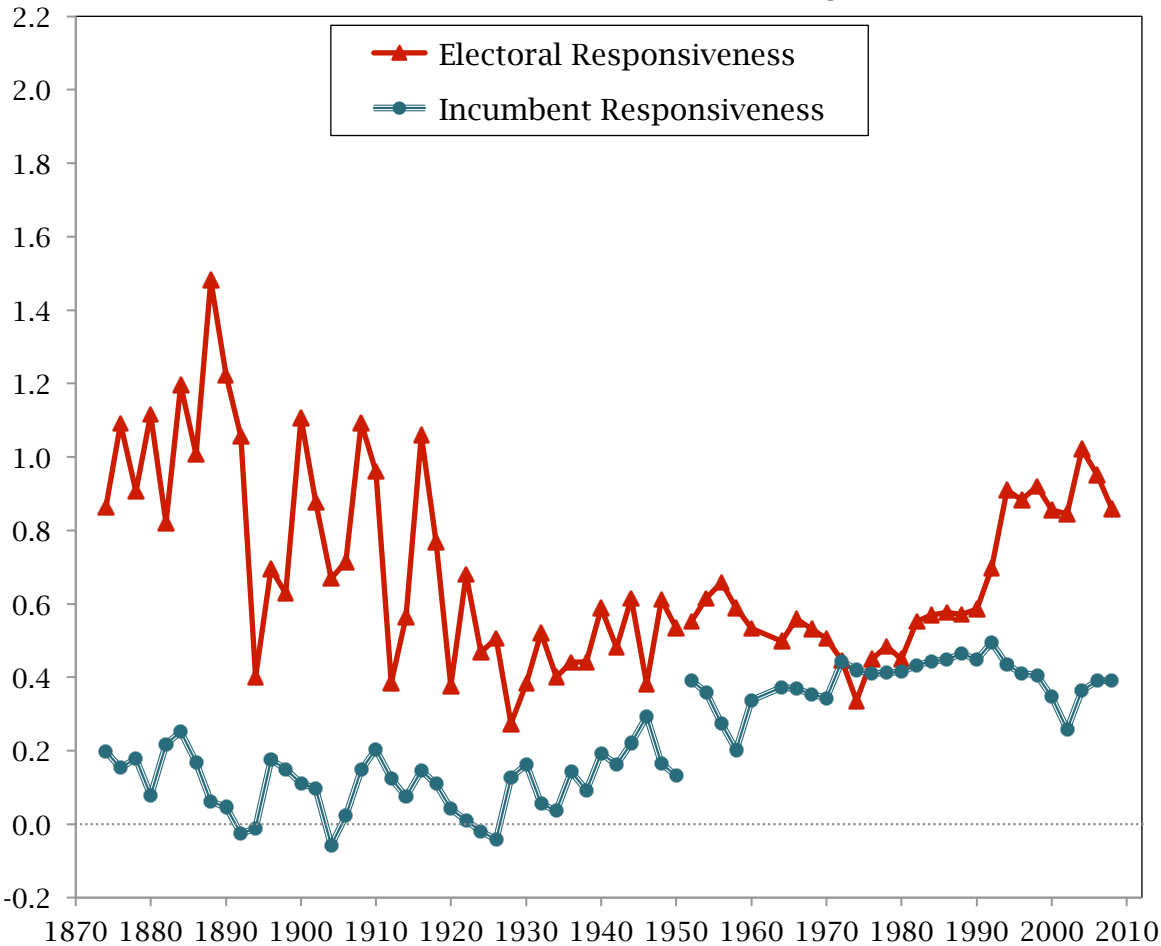
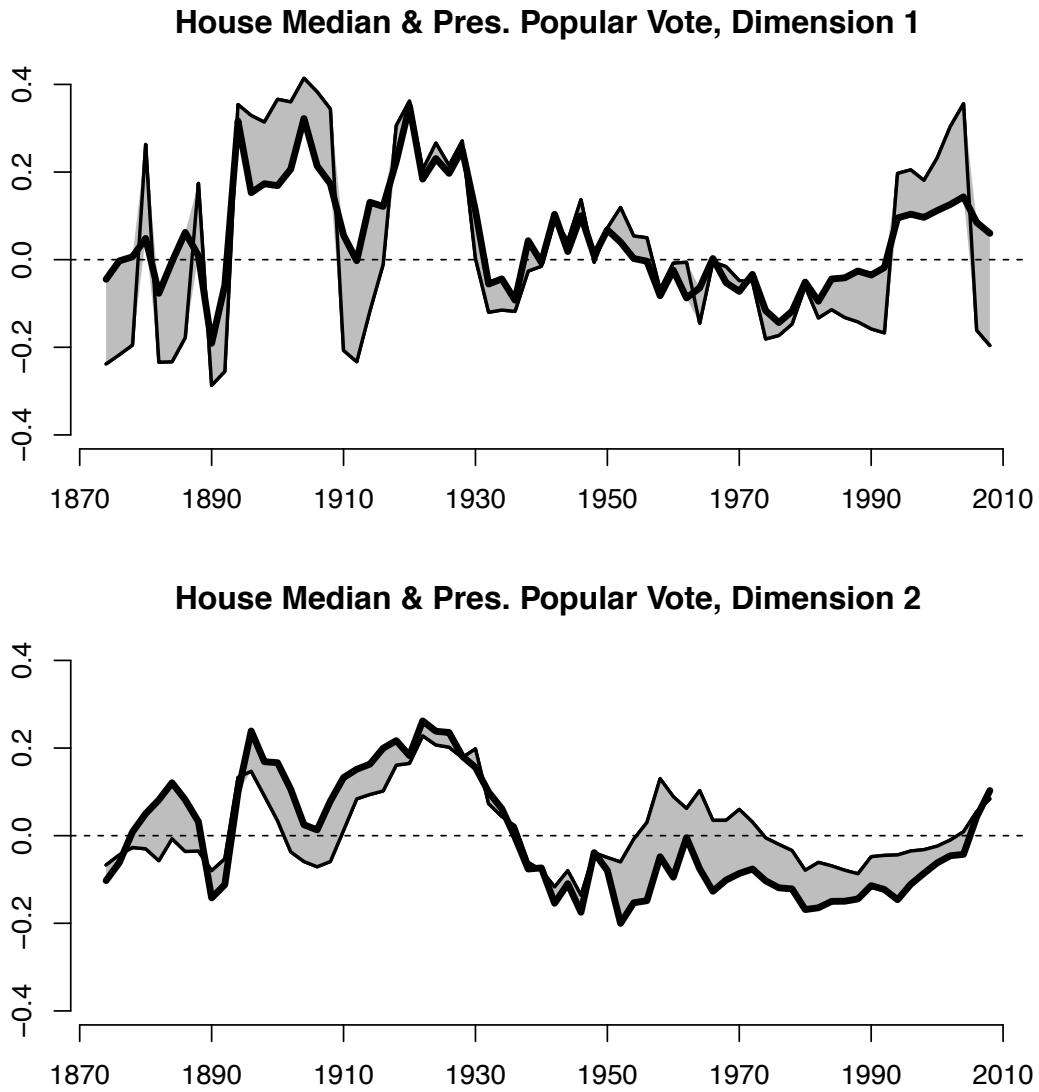
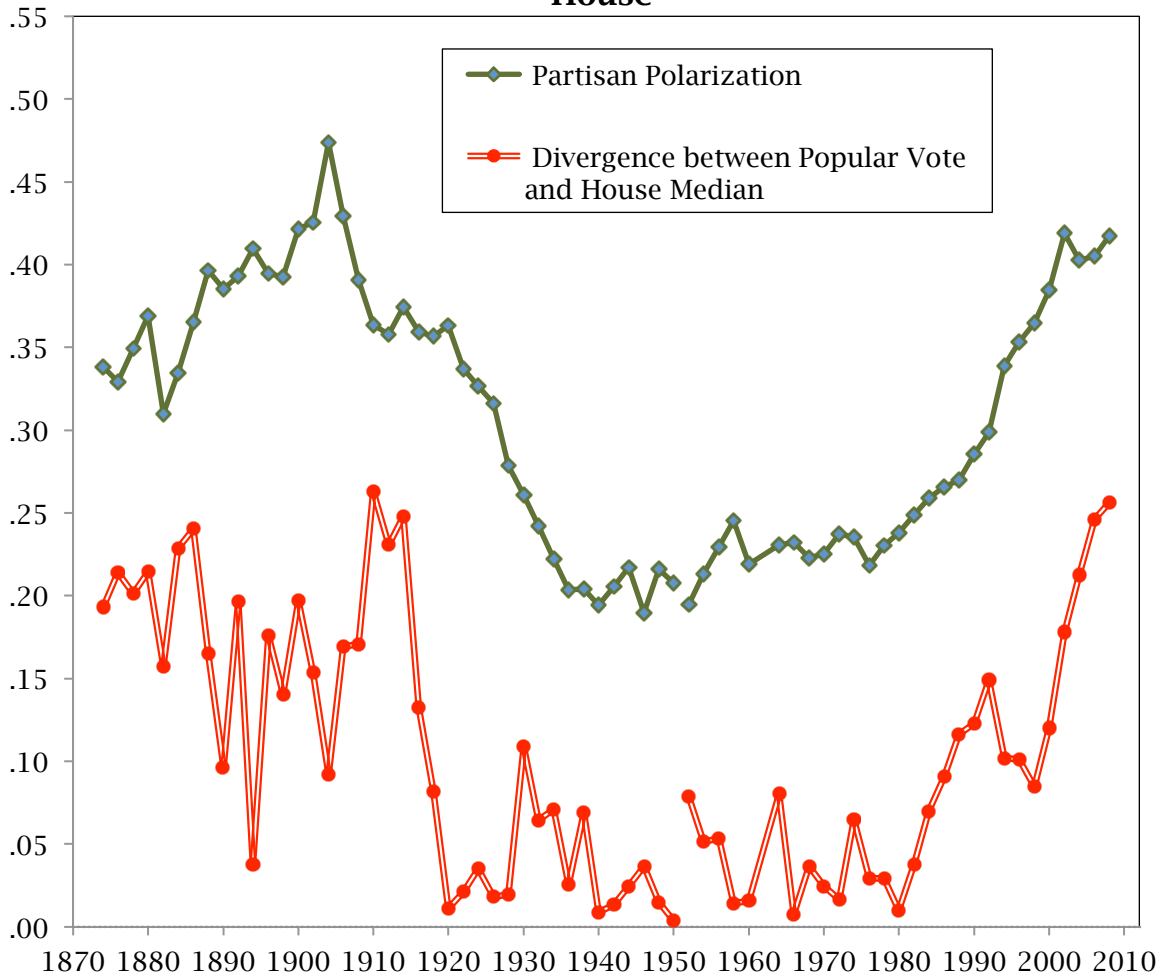


Figure 3: Location of the House Median and National Electorate



Note: The thin line denotes the DW-NOMINATE score of the median legislator in the House, the thick line denotes the estimated “ideal point” of the national electorate in DW-NOMINATE space, and the shaded region denotes the difference between the two series. Positive values reflect conservative positions and negative values reflect liberal positions.

Figure 4: Partisan Polarization and Divergence in the U.S. House



Note: “Partisan polarization” represents the difference in voting behavior between Republican and Democratic House members representing similar districts. “Divergence” represents the absolute difference between the voting behavior of the median House member and the imputed preference of the national presidential electorate.