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Authors

Hill, Seth J
Tausanovitch, Chris

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Southern Realignment, party sorting, and the polarization of American primary electorates, 1958-2012*

Seth J. Hill
University of California, San Diego[†]

Chris Tausanovitch
University of California, Los Angeles[‡]

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Abstract: Many scholars have argued that primary elections are an important factor in the polarization of the American Congress. Yet little research measures change in the policy preferences of primary electorates to evaluate the connection directly. We create the first explicit measures of the preferences of primary voters over the last 60 years using a Bayesian item-response theory model. Although the overall distribution of population preferences has changed little, the preferences of primary voters are now much more related to the party of the primary that they attend. We show that liberals are much more likely to turn out in Democratic primaries and conservatives are much more likely to turn out in Republican primaries. We estimate that the divergence of primary from general electorates is six times larger in 2012 than in 1958 owing to this “primary sorting”. This trend began with the emergence of the Southern Republicans. As the Republican party became viable, conservative Southerners switched to Republican primaries leading to a leftward shift in Democratic primary electorates. Nationwide, primary sorting began sometime after it began in the South. We speculate that Southern Realignment played a clarifying role that contributed to subsequent sorting of primary electorates nationwide.

Keywords: political polarization; primary elections; Southern realignment; Bayesian methods.

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[†]Department of Political Science, 9500 Gilman Drive #0521, La Jolla, CA 92093-0521; sjhill@ucsd.edu, <http://www.sethjhill.com>.

[‡]Department of Political Science, P.O. Box 951472, Los Angeles, CA 90065-1472; ctausanovitch@ucla.edu, <http://www.christausanovitch.com>.

1 Introduction

The polarization of the United States Congress since the 1970s is one of the most important phenomena in American politics. Although there are many explanations for that empirical observation, one puzzling aspect of it is that congressional polarization has occurred despite little increase in polarization of the public Fiorina, Abrams, and Pope (See e.g., 2005); Fiorina and Abrams (See e.g., 2008); Fiorina, Abrams, and Pope (See e.g., 2008); Fiorina and Abrams (See e.g., 2012); Hetherington (See e.g., 2009); Hill and Tausanovitch (See e.g., 2015); Levendusky (See e.g., 2009a). Many scholars argue that constituents hold their representatives accountable at the ballot box. If representatives in Congress cater to the interests of their constituents and their constituents have not become more polarized, how can an electoral story explain polarization?

Interest in the root causes of polarization has led to extensive research Han and Brady (See e.g., 2007); Levendusky (See e.g., 2009b); McCarty, Poole, and Rosenthal (See e.g., 2006, 2009); Nivola and Brady (See e.g., 2007); Theriault (See e.g., 2006); Thomsen (See e.g., 2014). One prominent strand of this literature embedded in the tradition of the electoral connection suggests that *primary* elections may be implicated in polarization. Jacobson (2012) argues that polarization partially stems from polarized primary electorates nominating more polarized candidates for office. However, evidence to date on changes in the polarization of primary electorates is limited to recent years (e.g., Jacobson, 2012; McKee and Hayes, 2009) or longer time-series of evidence without direct measures of voter preferences (Brady, Han, and Pope, 2007). We do not know if and how much primary voters have polarized from the 1950s and 1960s era of heterogeneous congressional parties to the present era of more homogeneous parties.

Despite an extensive scholarly literature debating the importance of primary elections, this is the first paper to our knowledge to directly measure the preferences of primary electorates over a long span of time.¹ We show that large changes have occurred in the policy preferences of the Americans who vote in Democratic and Republican primaries over the past 60 years. Our evidence

¹ McKee and Hayes (2009) considers primary elections from 1988 to 2008, finding that the electorate has polarized in the South in terms of self-identified liberalism and conservatism, as well as race. Our time series begins in 1958 and we measure preferences using responses to questions about policy.

shows that what we call party sorting led to more polarized primary electorates.² We find that this change began with the Southern Realignment, which drew the most conservative voters into newly relevant Southern Republican primaries and left behind a less conservative Southern Democratic primary electorate. We find that participants in Southern Republican primaries were conservative from the beginning of that party's viability around 1964. This link between the Southern Realignment and the polarization of primaries helps explain the timing of this change. We speculate that the change in primary electorates in the South contributed to a change in perceptions of the parties, thereby kicking off further polarization of primary electorates in both the South and the North. The timing of the polarization of primary electorates in the North and South is consistent with this account, although our evidence admittedly is circumstantial on this question.

We show that the set of voters who turn out in primary elections has polarized from 1958 to 2012. This finding provides an electoral mechanism translating party sorting into centrifugal pressure on representatives. The polarization of primary electorates is explained more by primary sorting than by changes in what kinds of citizens choose to participate in nominating contests at all. In particular, liberals are now much more likely to participate in Democratic primaries and conservatives are more likely to participate in Republican primaries rather than attending the primary of the other party. This is consistent with recent research showing that primaries with more open rules of participation do not have more moderate primary electorates (Hill, 2015; Norrander and Wendland, 2016; Sides et al., 2014). Instead, party sorting shapes the parties, and changes in primary electorates reflect changes in the composition of the parties regardless of what institutional barriers to participation are relaxed or put in place.

We also find that this trend of sorting into more distinct party primaries appears to have begun in the mid-20th century American South, when the Democratic primary electorate shifted to the left as conservatives became Republicans in greater numbers. This was then followed by broad polarization in primaries across the country. While non-Southern primaries were modestly sorted

²Party sorting in most scholarship is defined as the increasing correspondence between party identification, as measured by survey responses, and ideology. We define a behavioral analog of party sorting called primary sorting that is the increasing correspondence between the party primary that an individual chooses to vote in and their ideology.

from the beginning of our time series, it is only after the decade-long leftward shift of the Democratic primary in the South that sorting in non-Southern primaries began. In the 1960s, Southern Democrats were as conservative as Northern Republicans. By 1980, Southern Democrats had moved substantially to the left as the Southern Republican party grew. Polarization in the non-South proceeded after Southern Democrats led the way.

Although many others have written about the realignment of American Southern politics, and some have noted the temporal connection to polarization, the electoral relationships between these phenomena deserves more attention. In fact, one prominent discussion of polarization (McCarty, Poole, and Rosenthal, 2006, p. 49-51) argues that the Southern realignment cannot account for polarization because congressional polarization is both a Northern and Southern phenomenon. While it is widely appreciated that the Southern Realignment led to a new Republican coalition in the South, it is less clear why this happened when it did, and what role voters played in shaping the new coalition. In addition, many possible coalitions could have formed at this time, and it is not clear why economic conservatism became a feature of Southern Republicanism. For instance, racial conservatives could well have joined with economic moderates, incorporating the existing “conservative coalition” into the Republican Party. Our account can explain why and how Southern Republicans became the party of white economic and racial conservatives.

Our evidence comes from a time-series of comprehensive estimates of American voter ideology using the American National Election Studies (ANES, American National Election Studies, 2014). We draw on estimates of citizen ideology from Hill and Tausanovitch (2015). Although Hill and Tausanovitch (2015) find little polarization in the American population as a whole, we use these same estimates to show that primary electorates have polarized. This provides the longest time-series of individual primary voter preferences to date. Voters with extreme views are more likely to participate in primaries today, and primaries today are more ideologically homogenous than in the past. This realignment is directly related to the larger trend of “party sorting” (Fiorina and Abrams, 2012; Levendusky, 2009b). We note at the outset that we do not attempt to measure the causal effect of primary electorate preferences on legislative behavior, although we provide

circumstantial evidence of such a link. In our account, legislative polarization and the sorting of primary electorates cause each other, making empirical examination of this link challenging.

In sum, we add to existing indirect and anecdotal accounts of changing preferences of primary voters over the last half century with direct evidence of polarization in that group over the period from 1958 to 2012. This polarization corresponds to a time of dramatic changes in party behavior in Congress. Regional patterns are consistent with the role of the Southern realignment in clarifying party positions and leading to two viable parties in the South. Our results suggest that polarized primary elections may have been an important input into the polarization of Congress, and that research should continue on this potential relationship. The findings show that changes in turnout patterns in primary elections may be of secondary importance to the sorting of citizens into more homogeneous party primaries.

2 Argument

The battle over civil rights in the 1960s transformed the American South from a one-party to a two-party system. Presidents Kennedy and Johnson placed the Democratic Party firmly on the side of the civil rights movement and against segregation, culminating in the Civil Rights Act of 1964 and the Voting Rights Act of 1965. This prompted segregationist Senator Strom Thurmond to switch from Democrat to Republican, and coincided with Republican Barry Goldwater's presidential bid in 1964 on a platform that opposed federal intervention in civil rights. Carmines and Stimson (1989) argue that the 1964 presidential election, in particular, was central to the transformation of party politics. Schickler (2016) argues that this transformation was driven by long-brewing changes in the electorate rather than sudden changes among elites. Nonetheless, the important point for our argument is that the reputations of the parties did not change until the 1960s. In 1950, 95% of members of Congress from the South were Democrats. By 1970, this figure was 72% and by 2015, only 28% of Southern members of Congress were Democrats.

Before this transformation, Republican Party nominations were of little relevance to Southern politics because Republicans were thought to have almost no chance of winning the general elec-

tion. In the 1960s, however, as Republicans adopted stances of opposition or ambivalence to civil rights while non-Southern Democrats stood firmly in favor, the Republican Party became a viable option for Southern votes. As it became viable, Republican primaries became relevant for Southern elections. Gerber, Huber, and Washington (2010) show that participating in closed primary elections can have a causal impact on subsequent behavior and party identification, which supports the notion that participation in these Republican primaries had a lasting effect on individual Southern voter behavior.

We show below that conservative Southern whites were the first participants in Southern Republican congressional primaries and that as those voters began to participate in Republican nominations, this pattern established a new sorting of ideology and party of primary in the South. While civil rights was an important catalyst, early participants in Republican primaries were for the most part across-the-board conservatives. We speculate that economic conservatives were the first to jump the Democratic ship because of already-shared preferences with the economically more conservative non-Southern Republican Party. These shared preferences smoothed the path for Southern whites who had a long-standing allegiance to the Democratic Party, but disliked its turnaround on civil rights. Carmines and Stimson (1989, p. 190) allude to this possibility in suggesting that racial conservatism was an adaptation of “generalized conservatism” and not an adaptation of racism or segregation. V.O. Key (1949, p. 385) wrote, “On nonrace matters, southern spokesmen on the national scene, popular impression to the contrary notwithstanding, often disagree among themselves. These differences are often traceable to the fact that the party contains within itself groups of citizens who would, under other circumstances, be divided among two parties.” This division into two parties is exactly what occurred. The first Southern participants in Republican primaries were those who were both racially conservative and economically conservative, establishing that grouping of policy preferences for subsequent Republican nominating contests.

Of course, a key part of this story is also the enfranchisement of a new voting population in the South during the 1960s: Southern blacks. These new voters are generally thought to have been

more liberal and may have participated in increasingly liberal Democratic primaries in the South (e.g., Hood, Kidd, and Morris, 2001). That enfranchisement was a crucial part of the partisan realignment (e.g., Black, 1978; Black and Black, 2009; Shafer and Johnston, 2009; Polsby, 2005). In this essay we do not address the new black electorate not because we discount its importance – we believe it to be of central importance – but because our data source is a geographic cluster sample with limited coverage of blacks in the South. All of our argument about polarizing primary electorates in the South signaling a new party brand to non-Southern primary voters applies equally to African-Americans, but we want to be cautious to keep within the data we have.

As Southern white conservatives moved to the Republican Party for both primary and general elections, those who continued to participate in Democratic primaries were the former participants who were least opposed to the economic policies of the national Democratic Party. This sorting of the Southern electorate may have had two effects. First, it might have changed perceptions of what it meant to be a Southern Republican or Southern Democrat. Republicans were now conservatives rather than simply a fringe group and Democrats were liberals rather than the party of the South.³ Those perceptions likely were reinforced by the more active participation of African-Americans in the Democratic Party. Second, the combination of a larger Republican primary electorate (owing to influxes of conservative former Democrats), and a more moderate or liberal Democratic primary electorate (owing to the departures of conservatives and entry of liberal African-Americans) may have generated more polarized members of Congress over time, particularly among Democrats (Jacobson, 2003). As McCarty, Poole, and Rosenthal (2006, Fig. 2.3) show, Southern Democrats in Congress slowly became more liberal over the course of the 1960s and 1970s. This change is consistent with a more liberal primary electorate in the South nominating more liberal Democrats for office.⁴

In part owing to the direct effect of more liberal primary electorates and party identifiers, and

³ This is consistent with Erikson, Wright, and McIver (1993, p. 17-20), who find little correlation between ideology and partisanship across states, averaging over the 1976-1988 period.

⁴ We assume that primary voters are at least partially expressive in their behavior. Fully strategic primary voters might have nominated the best candidate for the general election, even if they had more extreme preferences (e.g., Aranson and Ordeshook, 1972; Coleman, 1971). We also note that causality might have operated in the opposite direction, from Congress to the composition of primary electorates.

in part owing to the indirect effect of more liberal politicians, we hypothesize that primary election polarization solidified the moderate-to-liberal reputation of the Democratic Party. This clarified that the Republican Party was a better fit for conservative voters and that the Democratic party was a better fit for liberals (consistent with the argument in Levendusky, 2009a), both inside and out of the South. Primary sorting nationwide reinforced the more liberal shift in the Democratic Party that was initiated by the Southern realignment, and allowed Republicans to begin a slow migration to the right.⁵ As conservatives became Republicans and liberals became Democrats, in both the South and the non-South, primary electorates across the country became more polarized.

Note that this argument could help explain how primary polarization could be an important component of congressional polarization, while at the same time empirical studies find little influence of the incidence (e.g., Hirano et al., 2010) or openness (e.g., McGhee et al., 2014) of primaries. We argue that it is not the presence of a primary or the rules governing participation in the nominating process that matter, but the actual composition of the electorate. Rules may have little effect on polarization of the nominating electorates. Hirano et al. (2010) show that the introduction of primary elections, a much more open process than previous nominating procedures, had little effect on congressional polarization. Likewise, Bullock and Clinton (2011) and McCarty, Poole, and Rosenthal (2006) show that more open nominating contests are not related to Congressional polarization.⁶

To highlight the growing relevance of Southern Republican primaries, we plot in Figure 1 the incidence of contested Republican House primaries in Southern states from 1954 to 2006 using data from Hirano et al. (2010). The plot shows the rising incidence of contested Republican primaries in the South. Importantly, this ever greater contestation happens *before* Republicans begin winning many of the general election contests in this region in the late 1980s and early 1990s. By 1980, the proportion of Southern House districts holding a Republican primary more than doubles from about 10% in 1954 to 20%. More than 30% of these districts saw Republican primary voting

⁵ This rightward move was not without consequences, however, particularly the loss of the moderate Republican foothold in the northeast (Reiter and Stonecash, 2011).

⁶ In addition, Bullock and Clinton (2011), McGhee et al. (2014) show that open primaries are not related to polarization in state legislatures.

in 1982. This pattern is consistent with our argument of increasingly relevant Republican primary elections serving to change the brands of the parties in the South.

In the remainder of the essay, we show that the patterns we have just described are borne out when we look to over-time measures of the policy preferences of primary voters. In particular, primary electorates polarize over time, and this polarization appears to be explained more by sorting of ideology to party primary than by changes in participation. The Southern Democratic primary shifted to the left prior to the broader divergence of the two parties that occurred in both the South and the non-South.

3 Design

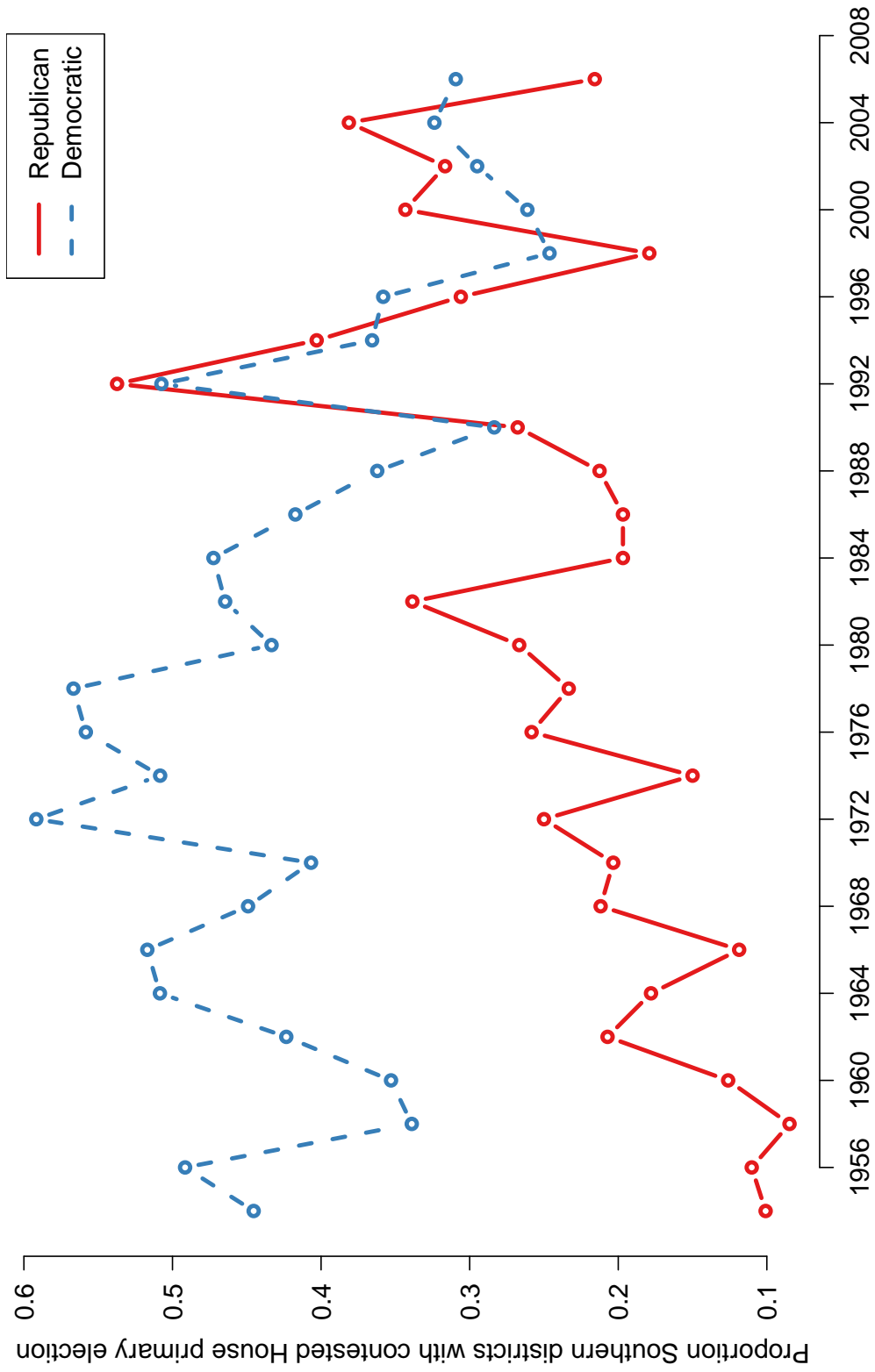
A direct measure of polarization amongst the voting public requires estimates of the views of individual voters. The public opinion survey provides an opportunity to gather such estimates, but we need to choose which public opinion questions to consider and how to summarize them. These choices are complicated further by the fact that very few public opinion polls ask the same questions over long stretches of time, making time-series comparisons of views challenging.

The method of Hill and Tausanovitch (2015) solves the problem of changing sets of survey questions over time with a holistic measure of ideology, inspired by Poole and Rosenthal’s (2000) NOMINATE. The measure draws on the 1956 through 2012 ANES (American National Election Studies, 2014). Rather than select a subset of years and policy questions, Hill and Tausanovitch (2015) use 86 questions that were each asked in multiple years of the survey and summarize the responses with a multinomial item-response theory (IRT) model. The IRT model uses the observed responses to the policy questions to summarize each respondent’s ideological position through a multinomial link, i.e.,

$$Pr(y_{ij} = k) = \frac{\exp(\beta_{jk}x_i - \alpha_{jk})}{\sum_{l=1}^{K_j} \exp(\beta_{jl}x_i - \alpha_{jl})}, \quad (1)$$

where y_{ij} is the response of respondent i to question j , β_{jk} and α_{jk} are the discrimination and difficulty parameters for response option k to item j , and x_i is respondent i ’s unobserved policy ideology. This model assumes that policy responses are structured by a latent ideological dimen-

Figure 1: Increasing incidence of Southern Republican primaries



Note: Y-axis measure denominator is number of House districts in Southern states in each election year. Numerator is number of those districts with at least one vote cast for a candidate of that party in a primary election for the U.S. House per the data of Hirano et al. (2010). Southern states defined as below per ANES definition.

sion and that responses to the same question in different years are comparable. These assumptions allow over-time comparisons of distributions of respondent preferences.⁷ Hill and Tausanovitch (2015) use a Bayesian approach, making it possible to make correct inferences about quantities other than the estimates themselves, for example, the distances and variances that correspond to common definitions of polarization.⁸

We use these estimates (the x_i of each primary voter) to summarize the policy preferences of primary voters and electorates over time. The set of voters who turned out in primary elections is determined by answers to questions on primary participation from various years of the ANES, with wording varying by year.⁹ Surveys in some years ask about participation in congressional primary elections, other years about participation in presidential primary elections, and we identified questions to measure primary participation of one kind or the other in 12 surveys from 1958 to 2012.¹⁰ To determine the party primary in which the voter participated, we use either the voter's report or infer party from the presidential primary candidate voted for (2008 and 2012).

This design is a test of the implications of a larger argument. In short, we hypothesize that more extreme primary electorates encourage the election of more extreme legislators, and that more extreme legislators in turn cause primary sorting, which narrows the primary electorate and makes it even more extreme. This is a continuing cycle that was initiated by the fall of the Solid South. Two major obstacles arise in attempting a direct test of this theory. First, it is very difficult to infer causality in such a simultaneous relationship. Second, only aggregate data are available for this long time period, so we cannot connect individual legislators to the preferences of primary electorates in their own districts. What we can test is if the national polarization of primary

⁷ Hill and Tausanovitch (2015) show in an Appendix that when these responses are assumed to be comparable for only short lengths of time, the results are similar.

⁸ The model itself is similar to Poole and Rosenthal's (2000) W-NOMINATE or Clinton, Jackman, and Rivers's (2004) IDEAL. An important difference is that the multinomial link function allows the model to use all of the response categories to inform the respondents' latent ideology, which is valuable for many of the survey questions that have more than two responses. "Don't know" responses are set as missing values.

⁹ For example, "We find that a lot of people don't pay much attention to primary elections. Do you remember whether or not you voted in the primary election for congressman this year?" (1958) or "Your state held a primary election on (DATE). Did you vote in that election, or were you unable to do so?" (1980).

¹⁰ Turnout in congressional primaries was asked in 1958, 1964, 1966 and 1978, with questions about presidential primaries in other years. Primary participation was not asked of half of the 1972 sample and 172 cases of the 1992 sample who were given the form 2 questionnaire in those years. We limit analysis to form 1 respondents.

electorates is correlated with aggregate legislative polarization, and if that relationship varies at the level of region (South versus non-South). We show that the specific pattern of polarization of primary electorates matches this part of the dynamic theory well.

A caveat to our analysis is that it is largely based on self-reported primary election turnout.¹¹ Past work has shown that overreporting of turnout can be consequential for substantive research conclusions (Vavreck, 2007). We leverage one year from roughly the middle of our time series in which we have both validated and self-reported primary turnout in order to test for relevant biases and we find that our substantive conclusions are unchanged (see Appendix Section A).

4 Results

In this section, we show that American primary electorates have polarized over the 1958-2012 period, moving from electorates quite similar to general electorates early on to distinct groups by the end. We note the contrast of this to general electorates, and then explore the mechanism underlying this polarization, finding that sorting of ideology to party primary appears to be a larger factor than changes in patterns of turnout by ideology.

In Appendix Figure A2, we present the distribution of estimated ideologies for the full population for each year in which the ANES asks respondents about primary election turnout, a subset of the years presented in Hill and Tausanovitch (2015). Little evidence exists of polarization of the overall distribution of ideology during this period. While small changes in variance are observed, they are of little substantive importance and not statistically significant. This figure establishes that the distribution of ideology in the public as a whole has not become more polarized over this segment of time.

In contrast to the public as a whole, we find notable polarization of party primary electorates over the same period. The top frame of Figure 2 shows the divergence of party primary ideology by year. The y-axis measures the distance between the median ideology of primary voters for each party in each year from the median ideology of general election voters in that year, along with

¹¹ The records from 1978 are validated to administrative records with party of primary the party of registration for the validated voter, question numbers V781411 and V781401.

posterior 95% credible intervals. The dashed horizontal line represents zero, which would indicate that the primary median is the same as the general median. The squares and circles indicate the medians of the Republican and Democratic primary electorates, respectively.

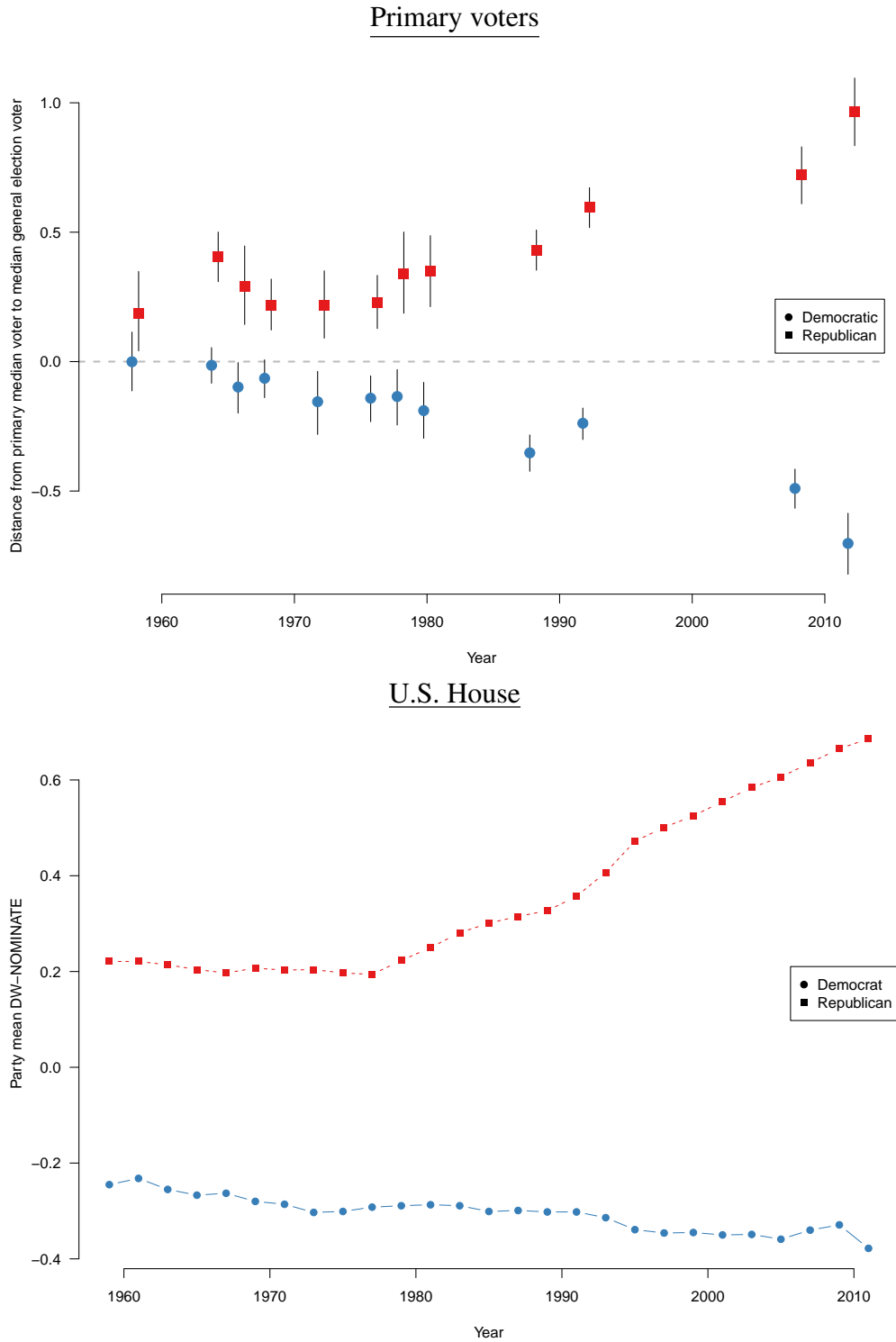
Primary electorates polarized during this period and the trends in polarization among primary electorates looks very similar to the pattern of polarization in Congress. The bottom frame of Figure 2 juxtaposes the two trends, with polarization in Congress measured by DW-NOMINATE scores, the standard in the literature. While this juxtaposition does not establish a causal connection, it provides a baseline of plausibility for the claim that polarizing primary electorates are an input into the polarization of Congress.

In the 1950s, the median Democratic primary voter was indistinguishable from the median voter in the public as a whole and, in fact, the credible intervals of Democratic and Republican medians overlap. The posterior median has Republican primary electorates more conservative than the general median even in 1958, but by less than one-quarter of a standard deviation. By 1980, the Democrats were one-quarter of a standard deviation to the left of the median general voter and the Republicans were one-third of a standard deviation to the right. The overall distance grew from 1980 onward. In 2012, the two party primary electorates were notably more distinct, with the median Republican primary voter almost a full standard deviation more conservative than the median general election voter, and the median Democratic primary voter more than half a standard deviation more liberal.¹²

Why did the median ideology of Democratic and Republican primary electorates diverge over this period? Part of the story is a change in the relationship between ideology and turnout. From 1958 to about 1980, the rate of participation in primary elections was fairly constant across the distribution of ideologies. Centrists were no less likely to participate in nominating contests than those in the tails. Beginning in 1988 in our series, the rate of participation in primaries began to increase for individuals in the tails of the distribution relative to those in the center. Figure 3 shows the voter turnout rate in primary elections for each decile of estimated ideology in that year;

¹² In Appendix Section C, we explore whether sorting among primary voters is greater than sorting among partisan identifiers, finding some evidence in support of greater sorting of primary voters.

Figure 2: Polarization in primary electorates and the U.S. House



Note: In the top panel, each point represents the distance from the median voter in that party's primary electorate to the median voter in the general electorate in that year. The bottom panel shows the trend in average DW-NOMINATE score for each party in the U.S. House by congress (from <http://www.voteview.com>).

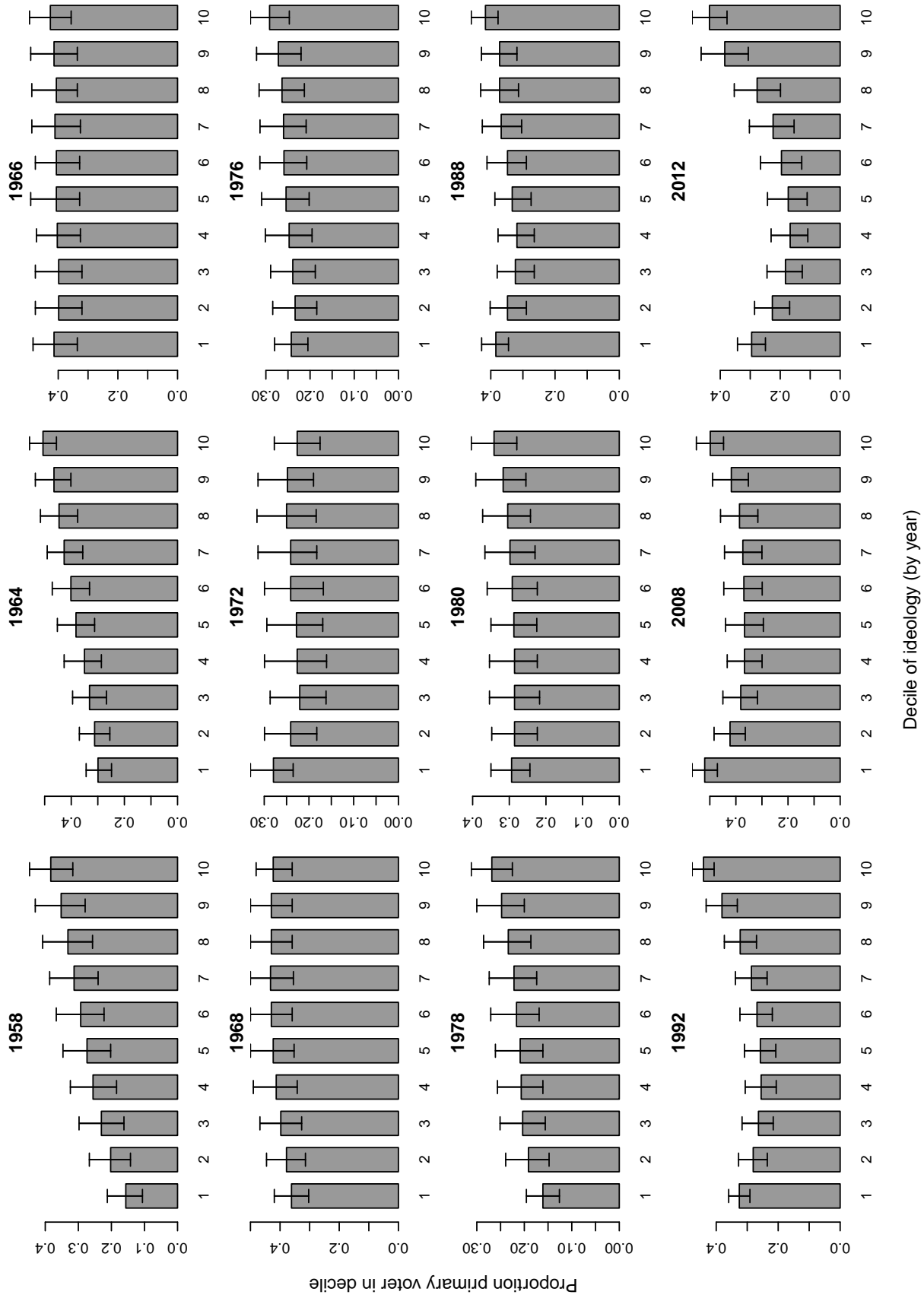
“1” indicates the 0-10% decile, or the most liberal 10% of the population in that year, and “10” indicates the 90-100% decile, or the most conservative 10% in that year, with deciles 2 through 9 moving from liberal to conservative. The y-axis is the turnout rate among voters in that decile. We allow the y-axis to vary across years to focus on the within-year variation in turnout; turnout varies across years owing to national factors such as eligibility, secular trends and presidential versus midterm election years.

For most of the sample period, the turnout rate was either unrelated to ideology (a flat distribution) or rose towards the conservative side. In 1958, for instance, there was a marked difference between turnout rates of the most liberal decile, about 15%, and the turnout rate of the highest decile, about 35%, with a smooth upward trend. Similar relationships materialized in 1964 and 1978. In contrast, virtually no relationship between ideology and turnout is observed in 1966, 1968, 1972, 1976, or 1980. The bars are for the most part statistically indistinguishable even in 1988, with a slight U-shape, a hint of what was to come. From 1992 onward, respondents in the outlying deciles were more likely to vote in primary elections. That was especially true in 2012.

Although Figure 3 documents a change in the relationship between ideology and turnout, that trend is not sufficient to explain the polarization by party primary in Figure 2. In addition to change in the turnout-ideology relationship, ideology and the party primary that voters choose to attend have sorted into closer alignment. This result is presented in Figure 4, which breaks turnout down by decile for each party primary (the sum of the two party bars in each decile in Figure 4 equals the height of the bar in Figure 3). Blue bars on the left represent the proportion of individuals in that decile who voted in a Democratic primary in that year, and red bars to the right represent the proportion of individuals in that decile who voted in a Republican primary in that year.

In 1958, the voter turnout rate increased with conservatism in *both* party primaries, Democrat and Republican. In fact, for the first 20 or so years of this period, only a limited relationship existed between ideology and the choice of party primary. Substantial numbers of conservatives voted in Democratic primaries and substantial numbers of liberals voted in Republican primaries, even as late as 1980. Until 1978, conservatives were more likely to vote in Democratic primaries

Figure 3: Rate of primary turnout by decile of ideology, 1958-2012



Note: Each bar height represents the proportion of voters within that year's decile of ideology (1=most liberal 10%=most conservative 10% in that year) who voted in a primary election in that year. Error bars extend to 95 percent credible intervals.

than in Republican primaries. In the mid 1970s through 1980, liberals became less likely to participate in Republican primaries and conservatives became less likely to participate in Democratic primaries, and by 1988 few voters turned out in Republican primaries in the bottom three most liberal deciles. Modest numbers of conservatives continued to vote in Democratic primaries through 2008. In 2012, Democratic primaries exhibited a mirror image of the pattern that had characterized Republican primaries since 1988 forward, with citizens in the four most conservative deciles of ideology participating in Democratic primaries at a rate approaching zero.

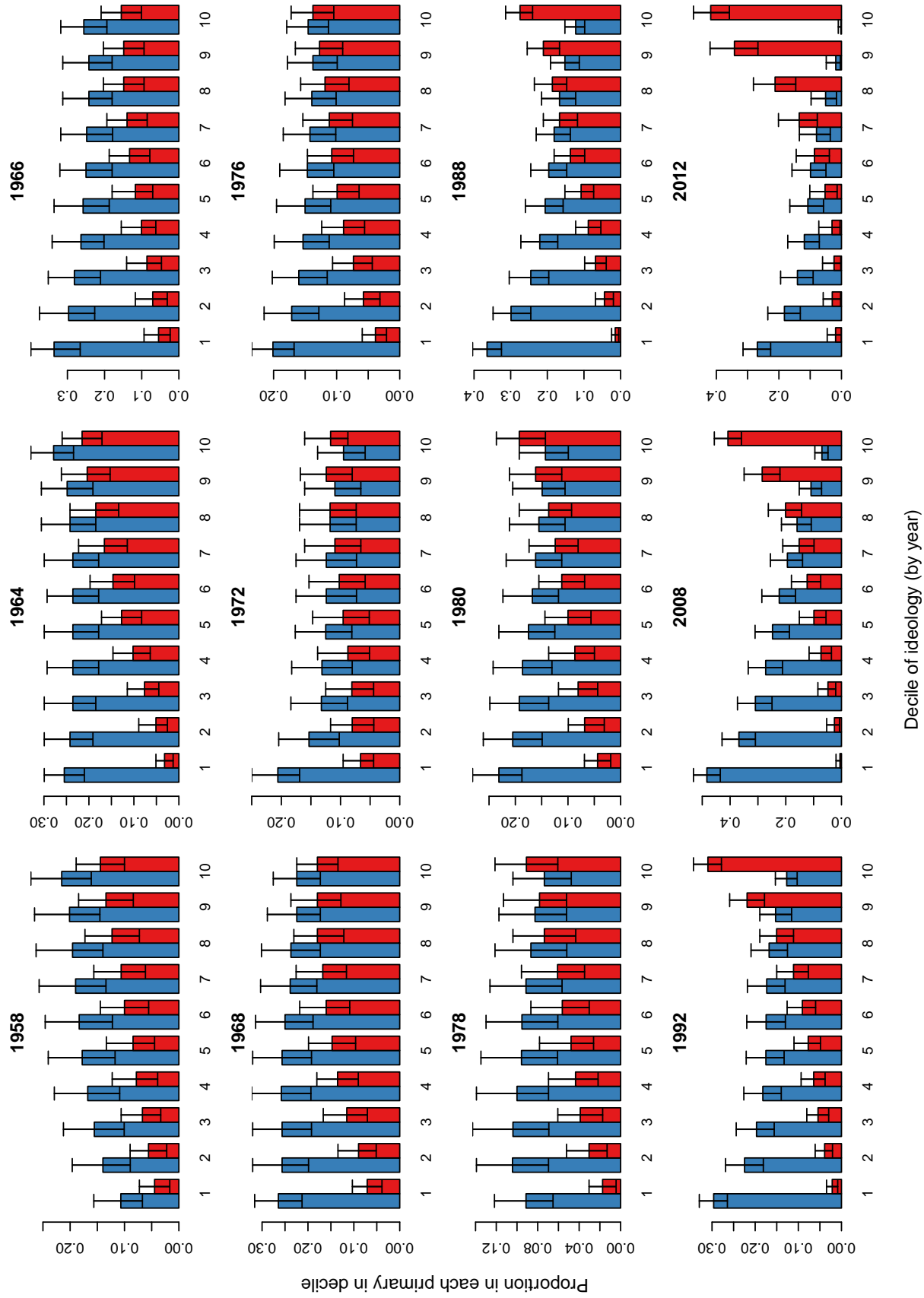
Figure 4 presents a central contribution of this essay. It resolves the apparent contradiction that primary electorates have become more polarized but the electorate as a whole has not. In the 1950s and 1960s, a weak relationship existed between ideology and primary participation, particularly in Democratic primaries. While turnout in Republican primaries was somewhat more skewed ideologically, a strong contingent of liberals participated in Republican primaries and large numbers of conservatives participated in Democratic primaries. Over the course of the latter third of the 20th century, however, conservatives sorted into the Republican primary, liberals sorted into the Democratic primary, and centrists began turning out at somewhat lower rates in primary elections than individuals in the tails.

4.1 Evaluating the importance of each mechanism

To benchmark how much of the polarization of primary electorates from 1958 to 2012 is explained by primary sorting versus changes in rates of primary participation by ideology, we simulate two counterfactual states of primary participation in 2012. First, to measure the effect of sorting only (i.e., excluding the influence of changes in rates of turnout by ideology), we apply the observed rate of primary participation by decile of ideology in 1958 to 2012 respondents. Second, to measure the effect of turnout only (i.e., excluding the influence of primary sorting), we apply the observed rate of sorting into each party primary in each ideological decile observed from 1958 to the primary voters in 2012, given their 2012 ideology.

For example, consider all citizens in the first, most liberal decile of ideology. Polarization of primary electorates could occur because citizens in this decile are more likely to participate in

Figure 4: Rate of turnout by party primary and decile of ideology, 1958-2012



Note: Each bar height represents the proportion of voters within that year's decile of ideology (1=most liberal 10%, 10=most conservative 10% in that year) who voted in a Democratic (left bars) or Republican (right bars) primary election in that year. Error bars extend to 95 percent credible intervals.

Democratic primaries and less likely to participate in Republican primaries in 2012 than in 1958 (sorting). Or, polarization could occur because citizens in that decile are more likely to vote in either primary in 2012 than in 1958 relative to citizens in the moderate deciles (turnout). Both trends may be at play to different degrees. Our simulations evaluate the relative contribution of each mechanism to the overall polarization observed.

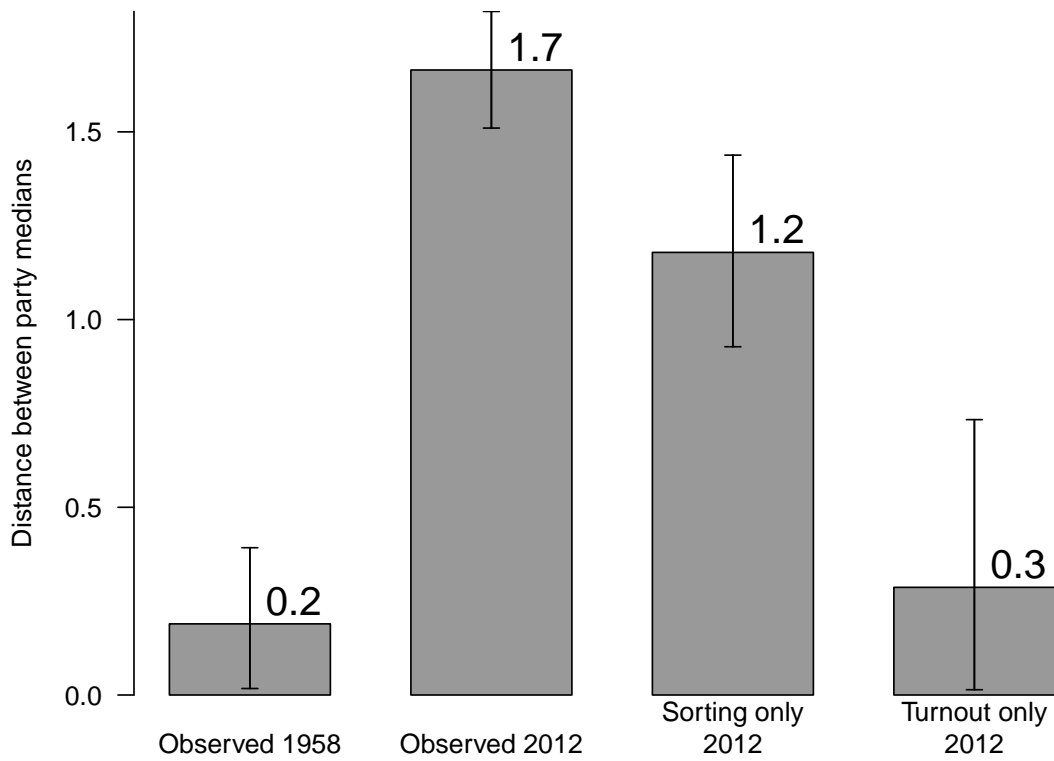
Figure 5 presents the change in polarization from 1958 to 2012, along with results of simulated polarization to measure the influence of the sorting and turnout mechanisms. We use a standard measure of polarization, the distance between the median Democratic primary voter and the median Republican primary voter. Recall that the ideal points of all respondents to surveys over the whole time series from 1956 to 2012 are normalized to mean zero and unit variance (Hill and Tausanovitch, 2015), so the height of the first bar indicates that the median Democratic and Republican primary voters in 1958 were one-fifth (0.2) of a standard deviation apart. In 2012, the two median voters were 1.7 standard deviations apart, a more than eight-fold increase in polarization.

The third bar represents our estimate of polarization in 2012 with sorting only. That is, this is the polarization if 2012 respondents had sorted into party primary by their ideologies as we observe in 2012, but if rate of primary turnout in each ideological decile were at its 1958 value. This simulates the effect of sorting alone on change in polarization during this period.¹³ Our median estimate is that the distance between the two party primary medians in 2012 with only primary sorting would have been 1.2 units, a bit more than one standard deviation but 42% less polarization than we actually observe in 2012. Nonetheless, this estimate is six times greater than the polarization observed in 1958, suggesting that primary sorting has polarized the ideology of primary electorates to a substantial degree.

The fourth bar represents polarization in 2012 with change in turnout only. That is, this is polarization if 2012 respondents had not sorted into party primaries by ideology more than in 1958,

¹³ To estimate, we calculate the rate of primary participation by (across-year) ideology decile from 1958, then sample primary voters at random from 2012 respondents given their ideology decile and the 1958 rate of primary participation and assign them to a party primary based on their 2012 party identification. We apply this sampling strategy at each posterior iteration, calculate the party medians, and present the posterior median and credible interval of the distance between medians in the figure, which captures both uncertainty in respondent ideology and sampling variability in simulated turnout.

Figure 5: Counterfactual polarization with only primary sorting or only change in turnout



Note: The first two bars represent observed polarization in 1958 and 2012, as measured by the distance between median Democratic and Republican primary voters. The third and fourth bars are simulated polarization in 2012 with sorting only and with changes to turnout only. The figure shows that most polarization is due to primary sorting. Bars extend to 95 percent posterior credible intervals.

but if primary turnout rates in each ideology decile were as observed in 2012. This simulates the effect of change in who turns out in primary elections – i.e., where in the distribution of ideology primary voters come from – alone on change in polarization.¹⁴ We find that change in turnout is a smaller contributor to the change in polarization than primary sorting, with a posterior median estimate of the distance between the party medians of 0.3 units, one-third of a standard deviation. Even so, this level of polarization is 1.5 times that of the observed polarization in 1958, suggesting that change in who turns out in primary elections has increased the polarization of primary electorates by 50%.

In sum, our simulations suggest that polarization of primary electorates in 2012 is about six times greater than in 1958 owing to the sorting of primary voters into party primaries by ideology, and about 50% greater owing to changes in who participates in primary elections.

5 Sorting of primary electorates in the American South

To this point we have analyzed the entire country as a whole. There is reason to believe, however, that the dynamics of primary turnout differed substantially in the South, as we document above (see also, e.g., Key, 1949). Figure 6 replicates Figure 2 with separate panels for the South and non-South.¹⁵ In order to draw attention to the pattern we wish to highlight, we have superimposed best fit lines for each party in each region for the periods ending in 1980 and starting in 1988.

In 1958, Democratic primary voters in the South were ideologically conservative relative to the median voter in the nationwide general electorate (as indicated by the posterior median and credible interval greater than zero). Estimates are uncertain for the median Republican primary voters because of the very small number of election participants. The credible interval is very wide

¹⁴ To estimate, we calculate the rate of participation in each party primary in each (across-year) decile of ideology in 1958, then sample a counterfactual party primary for each 2012 respondent given their ideology decile and the 1958 rate of participation in each primary. We then used observed 2012 primary turnout to describe the primary voters. We sample party primary at each posterior iteration, calculate the party medians, and present the posterior median and credible interval of the distance between medians in the figure.

¹⁵ Following the coding in the ANES, the set of states coded as “South” here are Alabama, Arkansas, Delaware, Washington, D.C., Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia. We choose a broad definition of the South in order to err on the conservative side in our results. If we have included states that rightfully belong in another region, our findings will be weaker as a result.

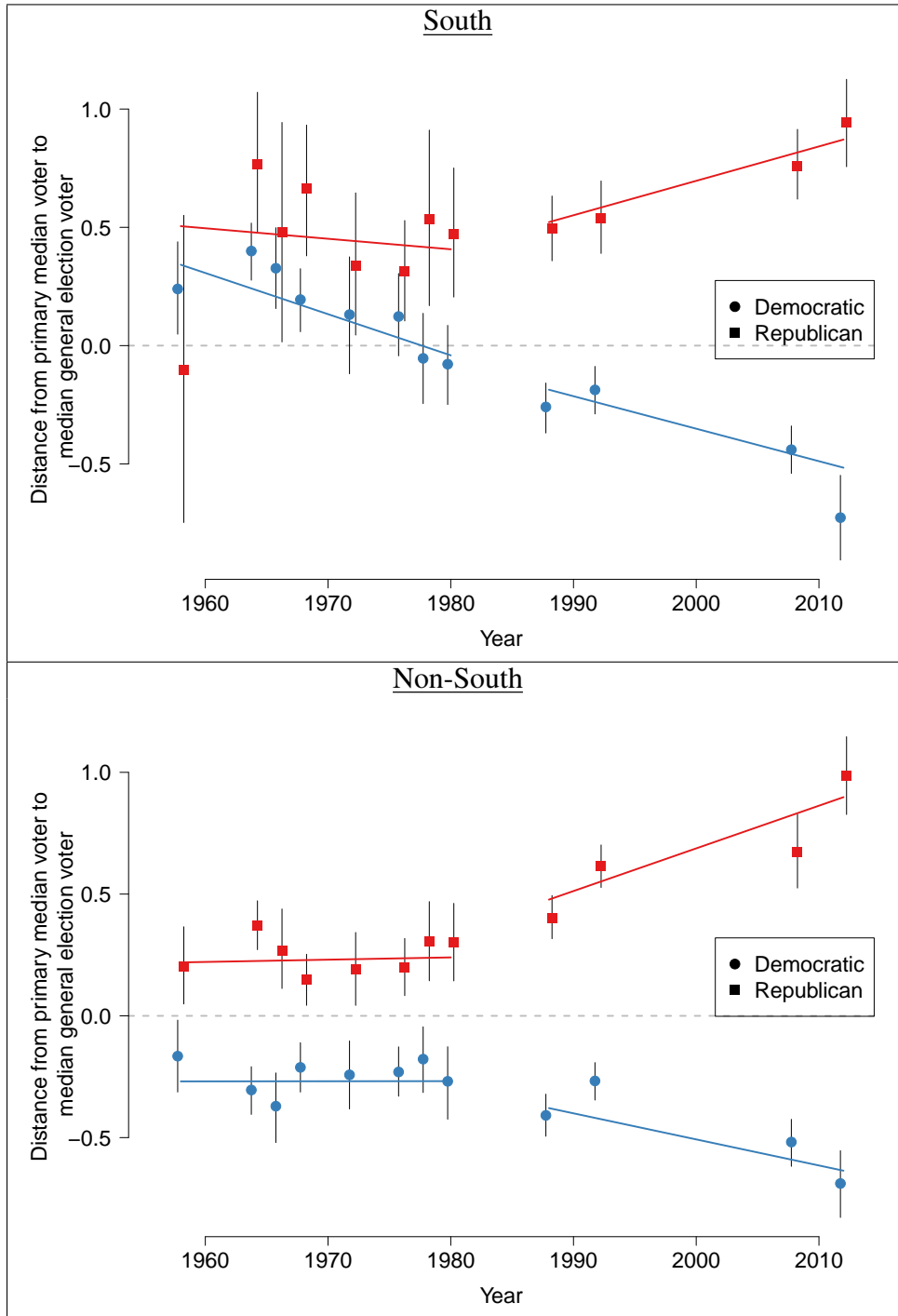
as a result. Following passage of the Civil Rights Act of 1964 and the party switch of Senator Thurmond, in 1964 enough Southerners voted in Republican primaries to estimate their median ideology with better precision. During the 1960s, Republican primary electorates in the South were slightly more conservative than Democratic primary electorates, suggesting that conservatives were the first to defect from the Democratic Party. Over the course of the 1960s and 1970s, those participating in Democratic primaries in the South became more liberal, while Republican Southern primary voters remained conservative. Not until 1978, however, were the medians of the two primary electorates statistically distinct. By 1980, the Republicans were the party of the right, and the Democrats claimed the center-left. Beginning in 1988, voters in Democratic primaries in the South were similar ideologically to voters participating in Democratic primaries in the rest of the country.¹⁶ The point estimates are consistent with a pattern such that the first set of Republican primary participants in the South were the most conservative, and then second-wave Republican primary voters were more moderate, before the feedback of sorting began to accelerate polarization.

In the rest of the country (bottom frame), Democratic and Republican primary electorates were distinct even in 1958. Republican primary voters were more conservative and Democratic primary voters more liberal. This alignment was relatively stable through the 1980s, although the difference was much smaller than it would later become. Beginning in 1988 and 1992, the median ideology in the two electorates begins to diverge, mirroring the divergence starting in the South a decade earlier. By 1988, across the country, primary electorates represented two distinct ideological coalitions, one liberal and one conservative, with divergence continuing in 2008 and 2012.

The best fit lines in Figure 6 highlight differences in the trends by region and party. In the non-South, no change in polarization can be discerned between 1958 and 1980. The slope of the lines for both parties is zero to the third decimal place, and precisely estimated. In the South, the ideology of Republican primary voters also was stable before 1980. As we show below, the main change for Southern Republican primaries was in participation, which grew from negligible to

¹⁶ In Appendix Section C, we explore whether sorting among primary voters is greater than sorting among partisan identifiers, by region.

Figure 6: Polarization in primary electorate ideology by region, 1958-2012



Note: Each point represents the distance from the median voter in that party's primary electorate to the median voter in the general electorate in that year. The top panel shows estimates for states in the South (Alabama, Arkansas, Delaware, D.C., Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia) and the bottom the remainder. The lines are posterior mean linear trends in year relating ideal points of primary voters relative to general election voters in each year, with separate estimates by party, region, and prior and subsequent to 1987.

substantial. However, Democratic primaries polarized at a rate equal to 0.017 standard deviations per year, a rate that is substantively large and statistically significant. Starting at some point in the 1980s, polarization spilled over to Southern Republicans and went national, with both party primaries moving away from the middle in both regions. Republican primaries polarized about as rapidly in both regions after 1988, as Democratic primaries did in the South from 1958 to 1980. And in both regions, Democratic primaries polarized at about the same rate as the early polarization that took place only in the South. The beginning of polarization among Democrats in the non-South is reflected in the difference between the slopes of the respective best fit lines before and after 1988. The difference in these slopes is -0.01 with a 95% credible interval of [-0.017, -0.005]. In the non-South, Democratic primaries went from stable in their ideology to polarizing starting at some point in the 1980s.

We next evaluate the nature of the divergence in primary election medians. Figure 7 replicates Figure 4, showing turnout by party for each decile of the liberal-conservative scale, for the South and non-South. Note that deciles are defined for the entire country, not by region, so the x-axis is comparable across the two frames. Here we see that turnout in Republican primaries in the South was negligible in 1958, and remained small for a decade. Throughout the 1960s, conservatives in the South were more likely to turn out in Democratic primaries than were liberals. However, as more Southerners began to participate in Republican primaries during the 1960s and 1970s, these new participants overwhelmingly came from the conservative part of the ideological distribution. Although 1976 and 1978 appear to be exceptions, perhaps owing to the election of President Jimmy Carter, a Democrat from Georgia, by 1980 there is a clear tendency for participation in Republican primaries to increase with voter conservatism in the South. Democratic primaries remained ideologically heterogeneous. Between 1992 and 2008, Democratic primaries increasingly became populated by more liberal voters and fewer conservatives, with conservatives increasingly likely to participate in the Republican nomination.

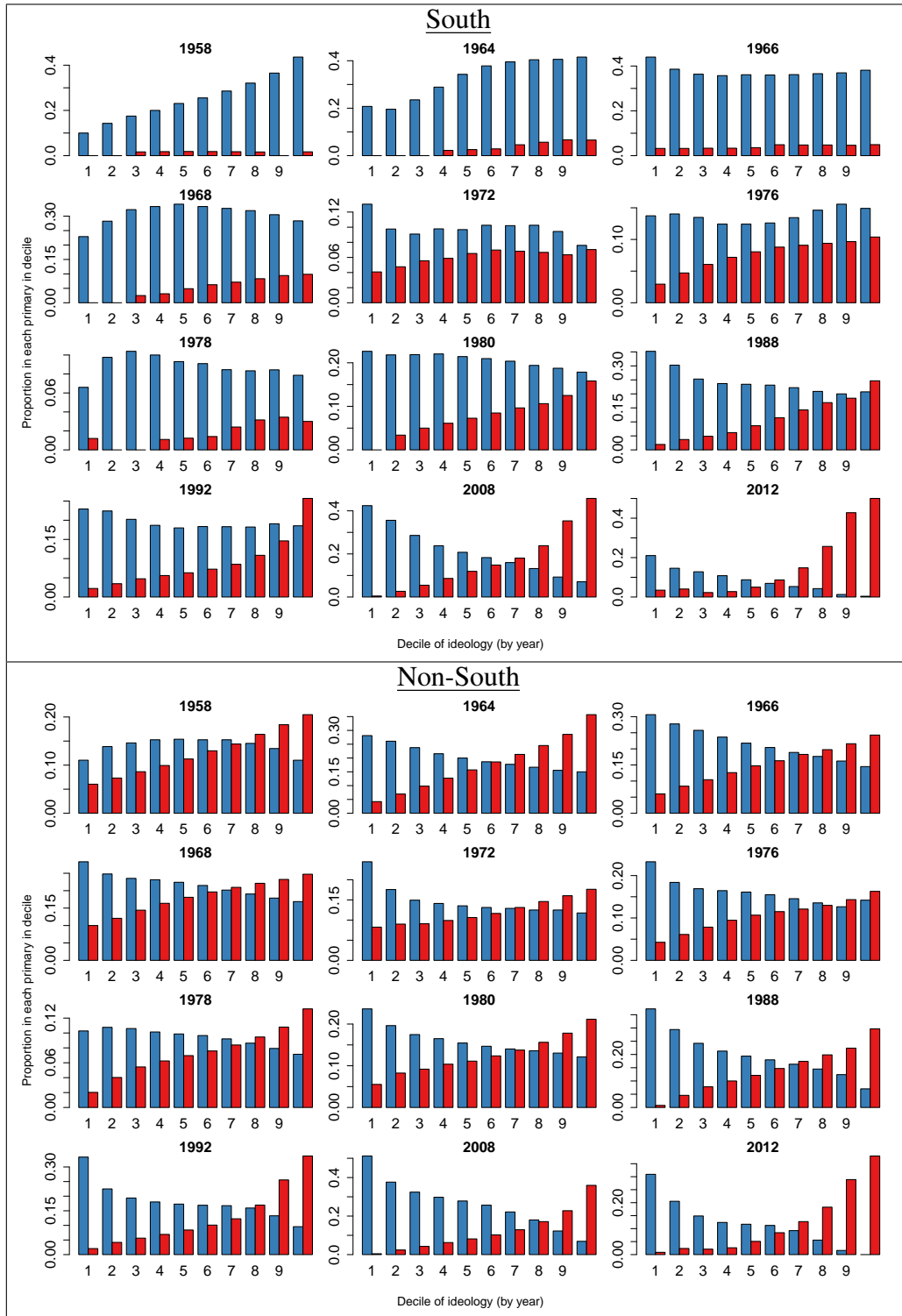
In the non-South (lower frame), the Democratic primary electorate was skewed left already in 1964, and the Republican electorate skewed right as early as 1958. This pattern continued, albeit

with some year-to-year fluctuations. Slowly, the diversity of each party eroded, with 1988 being a notable first case of the modern system, with few conservatives voting in Democratic primaries and few liberals voting in Republican primaries.

Over the full sample period, realignment in the South seems to have led to a viable and far more conservative Republican Party as defined by participation in nominating elections. Following this trend in the South, conservatives in the non-South sorted more thoroughly into the Republican Party, and liberals sorted more thoroughly into the Democratic Party. This evidence is consistent with existing research on the party sorting caused by the Southern realignment (Carmines and Stimson, 1980), as well as the notion that clearer party platforms assisted voters in sorting into the “correct” party (Levendusky, 2010, 2009a). Once a Republican primary emerged in the South that was dominated by conservatives, a clear incentive emerged for conservative candidates to run in Republican primaries. As conservative voters and candidates moved from Democratic primaries to Republican primaries in the South, the remaining Democratic coalition was more liberal. As the Democratic and Republican parties became more homogenous, they sent clearer signals to voters in the rest of the country. This sequence of realignment and then primary sorting explains why voters in the non-South, who already were somewhat sorted before the changes in the South, became further sorted and more distinct following the Southern realignment.

In summary, our evidence has revealed two trends in the ideologies of primary electorates that differ by region. These are encapsulated in Table 1. From the late 1950s to the late 1980s, the Southern Democratic primary polarized. Republican voters were conservative from the beginning, but initially few in number. As more Southern conservatives began voting in Republican primaries, the Democratic primary became more liberal. During this period the North was modestly polarized, but with no obvious trend in time. Beginning in the late 1980s, however, the polarization that began in the South became a national phenomenon. This is consistent with the argument we have suggested that the Southern realignment initiated party sorting and a viable Republican party in the South, leaving behind a more liberal Southern Democratic Party, thus leading in turn to a more conservative national Republican party and more liberal Democratic party nationwide.

Figure 7: Rate of turnout by party primary and decile of ideology and region, 1958-2012



Note: Each bar height represents the proportion of voters within that year's decile of ideology (1=most liberal 10%, 10=most conservative 10% in that year) who voted in a Democratic (left bars) or Republican (right bars) primary election in that year. The top panel shows estimates for states in the South (Alabama, Arkansas, Delaware, D.C., Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia) and the bottom the remainder.

Table 1: Summary of evidence on Southern and non-Southern primary polarization

	South	Non-South
1958 to 1988	Polarizing, Republicans quite conservative	Not polarizing, Republicans modestly conservative
1988 to 2012	Both parties polarizing	Both parties polarizing

Note: Table presents a summary of our empirical evidence on time patterns of polarization by region.

6 Conclusion

We have shown that primary electorates have sorted by political party over the last half century and that this sorting mirrors the dramatic changes that have taken place in national politics. The set of people who turn out to vote in Republican primaries are now more conservative than before, and the set of people who turn out to vote in Democratic primaries are more liberal. That change occurred because of (a) an increase in the correspondence between non-centrist views and the likelihood of participating in any primary, and (b) an increase in the correspondence between policy views and attendance of the primary of the party that matches those ideological views. The latter factor appears to be the driving mechanism.

Our contribution brings direct evidence to a longstanding anecdotal claim. We establish new empirical patterns of the polarization of primary voters and regional variation in the incidence of this polarization. These patterns are directly relevant to the literature on primary elections, polarization, partisanship and the Southern realignment. Finally, we have explored the mechanism underlying the overall polarization of primary election voters and suggest new paths for empirical research looking to the consequences and magnitudes of the sorting of primary electorates and the relationship to congressional behavior.

A notable contribution is showing that party sorting in the South took a form that amplified the voices of across-the-board conservatives in the new Republican primaries. As the Solid South eroded and the Republican Party became a viable political entity, Southern conservatives led the

way in voting in Republican primaries. We show that the Democratic primary electorate became more liberal owing to this conservative exodus. We argue that the change could have clarified the parties' brands, leading to party sorting throughout the country, as in the argument of Levendusky (2009a). Consistent with this claim, we show that the ideological sorting occurred first and more dramatically in Southern Democratic primary elections, and was then followed in the non-South.

One important feature of Figure 4 is that liberals have eschewed Republican primaries since the 1950s, and that they have rapidly abandoned it altogether since the 1980s. In contrast, conservatives almost matched liberals in Democratic primaries in the middle of the century, and maintained a substantial presence through 1992. In 2008, their numbers had dwindled, but only in 2012 did they approach the near absence of liberals from Republican primaries seen since 1980. That trend could help explain what has been to date an asymmetry in polarization, where congressional Republicans have moved right faster than liberals have moved left (Voteview Blog, 2015; Poole and Rosenthal, 2000).

However, if polarized primaries go along with congressional polarization, then the changes in Democratic primary electorates evident in 2008 and 2012 may foreshadow further moves to the left by the Democratic Party. One manifestation of this trend might be the success of Bernie Sanders, a self-identified socialist and previously a fringe figure in the Democratic Party, in the 2016 Democratic presidential primary. Already there has been substantial enthusiasm for a presidential run by Elizabeth Warren, the most liberal member of the Senate according to DW-NOMINATE.¹⁷ Asymmetric polarization may soon become symmetric if the trends of 2008 and 2012 Democratic primaries continue going forward.

Regarding the literature on primary elections and polarization, much of the work has focused on the institutional arrangement of nominating contests and the assumption that more open rules change who participates in primary elections. The decomposition of the polarization of primary electorates in Figure 5 suggests that shifts in which citizens turn out in primary elections has affected the composition of primaries less than shifts in the party with which voters identify and,

¹⁷ See http://www.voteview.com/Weekly_Constant_Space_DW-NOMINATE_Scores.htm. Accessed February 22, 2016.

consequently, which primary they choose. The literature argues that primaries “don’t matter” because more open participation rules do not appear to affect outcomes. Our evidence suggests that more open participation rules are not very important to the composition of primary electorates relative to the effect of the sorting of party identification.

The causal connection between polarized primaries and congressional polarization remains unresolved in our design, but the results here suggest that that relationship merits further investigation. The data we use are aggregated up to the level of regions and so are not well suited for identifying changes in the behavior of individual legislators. Future work could attempt to characterize features of primary electorates at the district level and relate them to changes in the behavior of their congressional representatives. Our evidence suggests that important changes have taken place in the ideologies of the voters who participate in nominating contests, and that more work is needed to understand the influence of those changes on congressional election outcomes and behavior in the legislature.

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Appendix

A Validated versus self-reported primary turnout

One concern with our analysis is that our measure of participation in primary elections is self-reported in all cases by one. It is well known that citizens overreport turnout. As a result, our findings may be influenced by respondents who claim to have voted in one of the party primaries but actually did not do so. To evaluate whether this measurement problem affects our conclusions, we use the 1980 version of the ANES, which both asked for self-reports of primary turnout and validated the primary turnout of most respondents using administrative records. We show that patterns of turnout by ideology decile are highly similar regardless of which measure we use.

The sample for this study are the 1,608 respondents to the 1980 ANES for whom Hill and Tausanovitch (2015) estimated ideology. We exclude the 595 cases wherein a registration record was not found, as well as the 224 respondents who resided in states without presidential primaries in 1980.

Among those who self-reported a primary election vote, resided in states holding presidential primaries, and were matched to voter files, 70.8% had validated records of primary turnout. In contrast, 5.8% of those who said they did not vote actually did vote according to the administrative records. Not surprisingly, primary voting is overreported.

Conditional on turning out, few respondents report voting in a different primary than the one reported in the administrative records. Among those who report turning out and have a validated record of voting, only 1.3% of those who claimed to have voted in the Democratic presidential primary were validated as having voted in the Republican primary, while 4.6% of those who claimed to have voted in the Republican presidential primary were validated to have voted in the Democratic primary.

Our measures of the ideology of the primary electorate are very similar results regardless of whether we use validated turnout or self-reports. The median ideology for self-reported Democratic and Republican primary voters in 1980 are -0.17 [-0.29, -0.05] and 0.35 [0.20, 0.49], 95% credible intervals in brackets. The same values for validated Democratic and Republican primary voters in 1980 are -0.17 [-0.31, -0.03] and 0.34 [0.16, 0.53]. In Figure A1, we plot the posterior median rate of turnout in each decile of ideology measured with the administrative records (y-axis) against the same rate measured with self-reports (x-axis). The figure shows that turnout is overreported, but that this overreporting is linear. In other words, each decile of ideology has a roughly equal tendency towards overreporting.

The evidence suggests that inferences about primary ideology and polarization are not affected by the use of self-reported turnout, at least in the case of 1980.

B Population level distribution of ideology over time

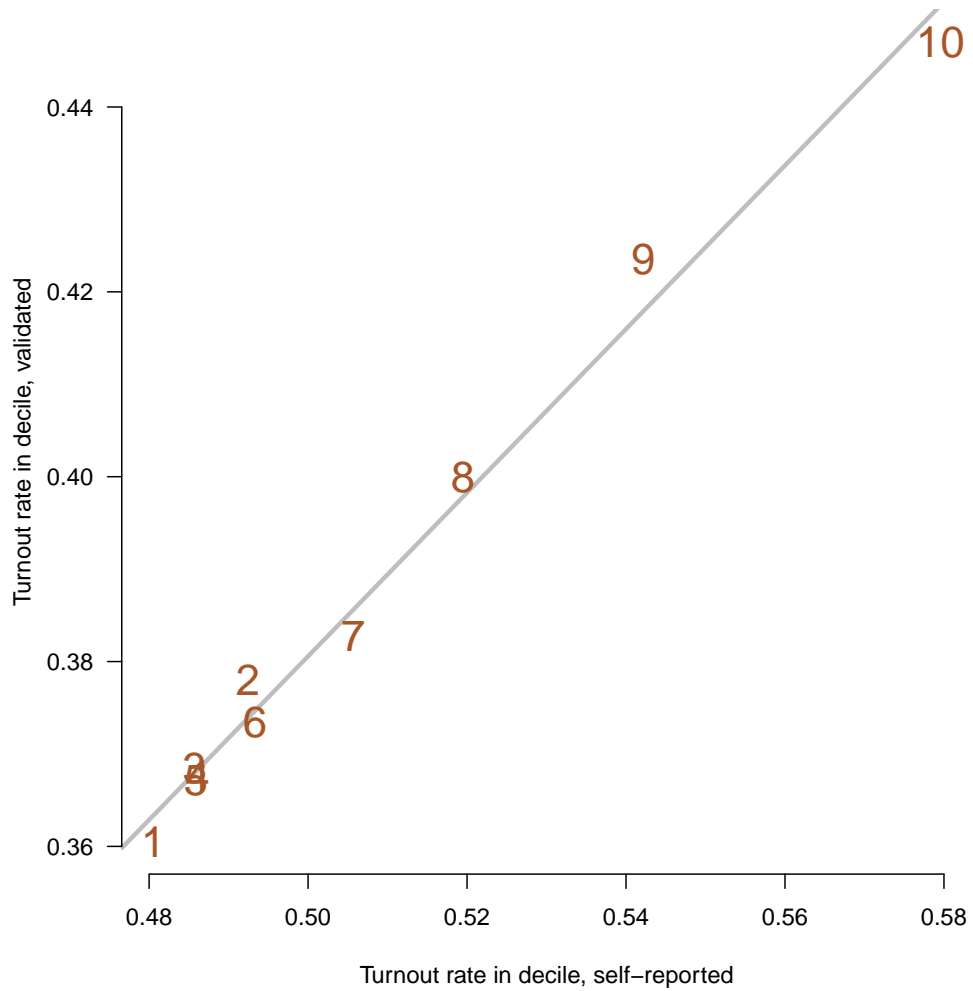
The total height of each bar corresponds to the number of all respondents who had an ideology score in that bin (ideology varies from liberal in the negative direction to conservative in the positive direction, with mean zero and unit variance across all years). The grey portion of each bar represents the proportion of respondents at each ideological position who did not vote in any primary. The red portion of each bar represents those who turned out in a Republican primary, and the blue portion those who voted in a Democratic primary. Readers may be surprised to see that the red and blue portions of the distributions are often centered close to one another, particularly in the early years of the ANES. In these early years, the major parties had not yet sorted effectively

by policy ideology. Over the second half of the 20th century, voters became more aware of the policy stances of the respective parties, and have demonstrated a slow but consistent tendency to join the party that better matches their policy positions (Levendusky, 2009*b*).

C Sorting of primary voters versus partisanship

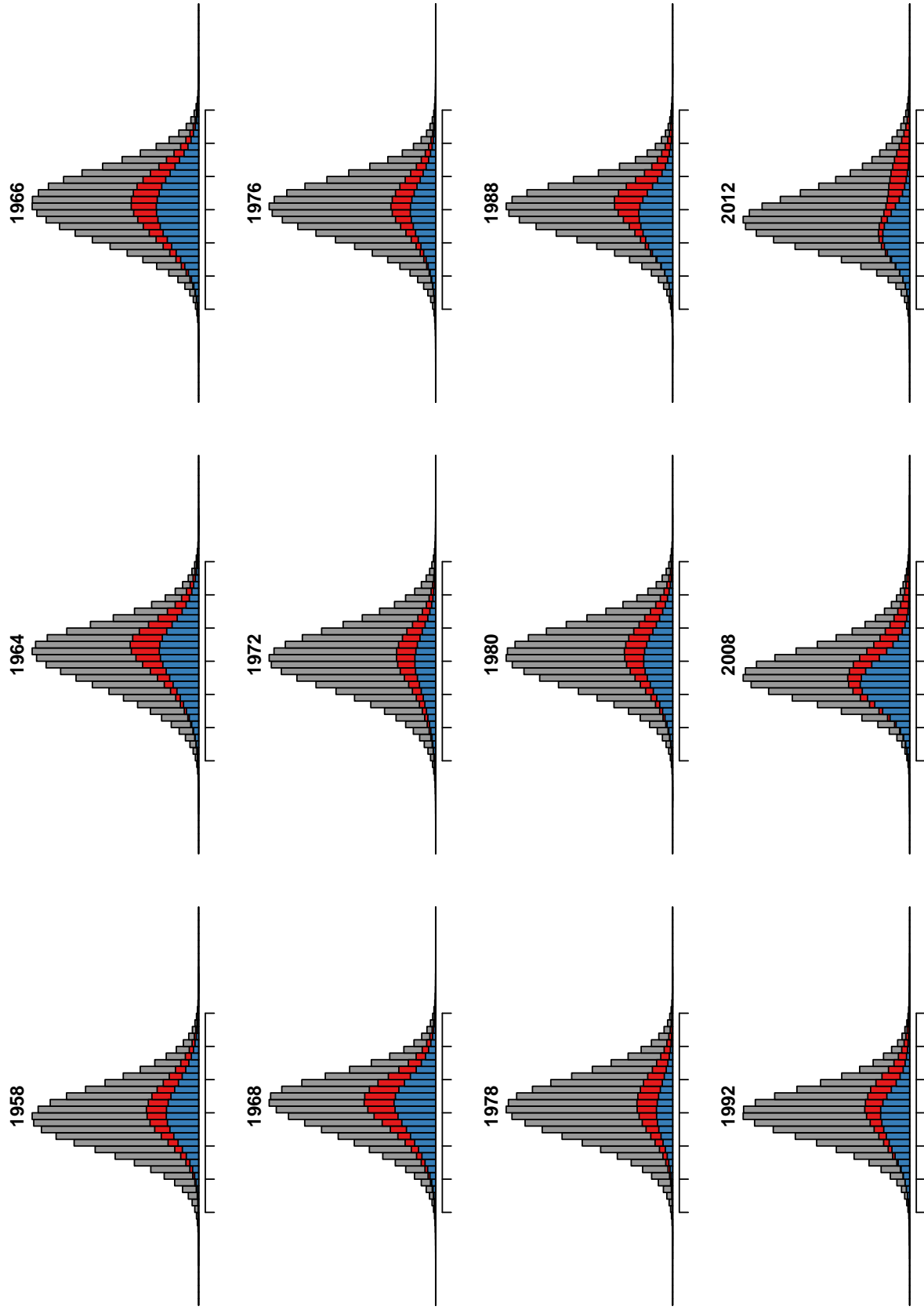
In Figure A3, we compare party sorting among primary voters (as in Figure 6 above) to sorting among partisan identifiers (including leaners) regardless of turnout, by region. In general, the two groups show similar levels of sorting, with primary voters more conservative in both parties historically, but with primary voters becoming more extreme than identifiers in the latest two elections. These differences are small, but the general conclusion is that primary voters are sorting to a greater extent, relative to their 1958 disposition, than party identifiers, in both regions. Particularly in the South relative to 1958 alignment, primary medians have moved more than identifier medians. The fact that primary sorting is even greater than party sorting suggests that party sorting occurred to a greater degree among primary voters. Previous work has not shown that party sorting affected the composition of primaries, or that primary sorting differed by region.

Figure A1: Rates of turnout by decile of ideology 1980



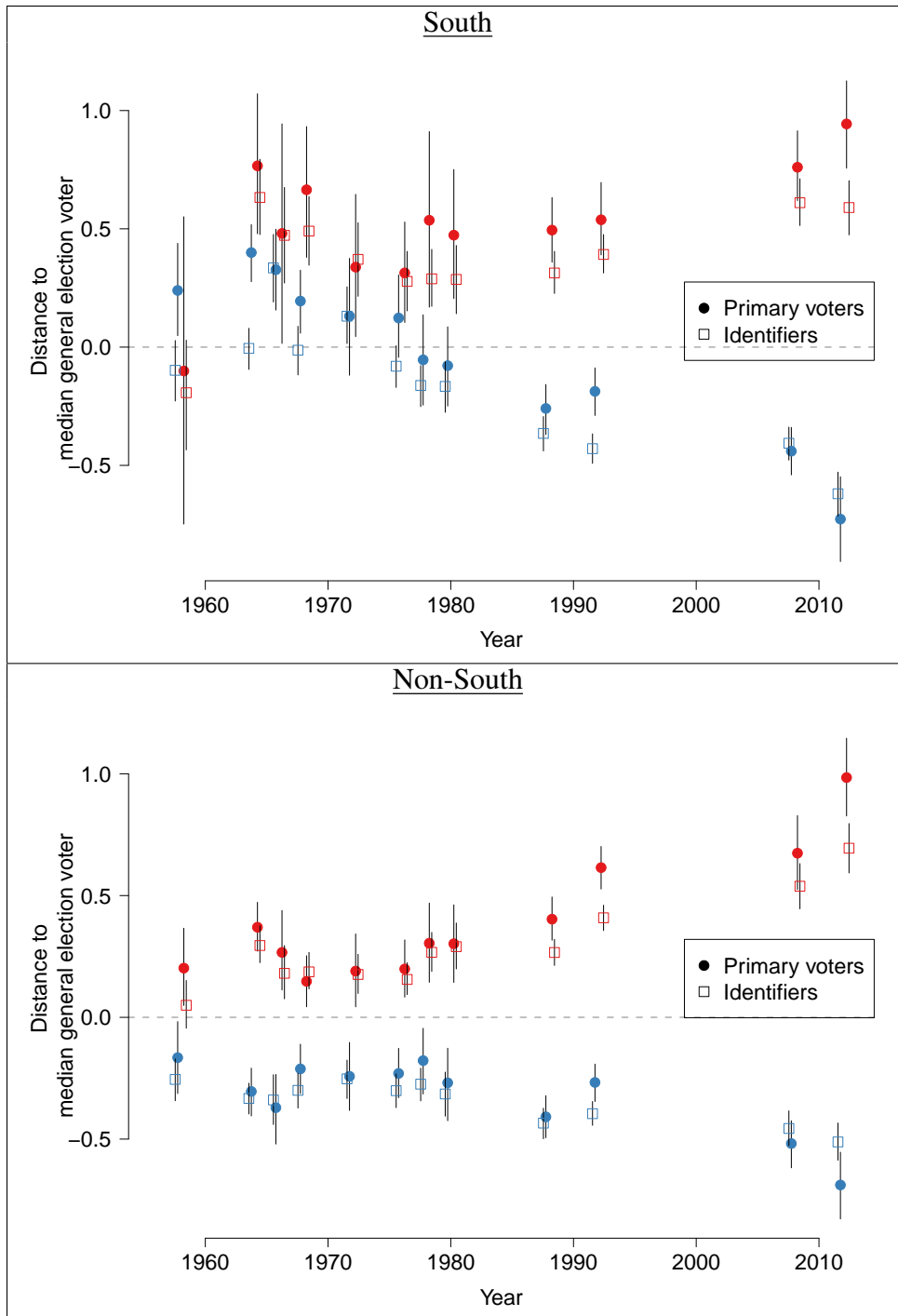
Note: Each point is the rate of primary turnout among that decile of ideology (1=most liberal 10%, 10=most conservative 10% in that year) in 1980, with location on the x-axis self-reported and location on the y-axis validated. Limited to cases matched to voter files.

Figure A2: Ideology of Americans and primary voters, 1958-2012



Note: The full histogram represents the policy ideology for all respondents in that year from the American National Election Studies. The interior bar heights represent the distributions of ideology among voters in Democratic (blue) and Republican (red) primaries in that year. Years limited to ANES surveys with primary turnout records.

Figure A3: Polarization in primary electorate versus partisanship by region, 1958-2012



Note: Each point represents the distance from the median voter in that party's primary electorate (closed circles) or among that party's partisan identifiers in the population (open squares) to the median voter in the general electorate in that year.