Institution of Nomination and the Policy Ideology of Primary Electorates

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ABSTRACT

Many hypothesize that the divergence between Democratic and Republican members of Congress is partly attributable to partisan primary elections. Yet most empirical evidence on the influence of primary elections finds small to no effect on member behavior. I argue that existing designs that compare members elected out of nomination systems with more open rules of access to members elected out of more closed systems rest on the crucial and untested assumption that more closed institutions lead to more polarized primary electorates. With survey opinions, turnout validated to voter files, and an IRT model of ideology, I characterize the preferences of Democratic and Republican primary electorates and general electorates in each House district in 2010 and 2012. To the extent that there is a relationship between primary ideology and closed primary institution, it is in the direction opposite that hypothesized. I then show that the primary electorate diverges from the general

electorate in every House district and even from supporters
of the party in the general election in almost every district,
which is consistent with a centrifugal influence of primary
voters. These results suggest that institution of nomination
may not have a large influence on the type of voters who
turn out, and that some other feature of nominating contests
must be implicated in polarized primary voters.

Although primary elections were introduced by reformers around the
turn of the twentieth century to democratize American politics, most
worry today that primaries are part of a disconnect between what
representatives do in Congress and what most citizens would prefer (e.g.,
Fiorina and Abrams, 2009). Democrats in Congress seem to be more
liberal than their districts, Republicans seem to be more conservative
than theirs, and compromise is less common than voters desire. The
theory connecting primary elections to representative divergence from
the general electorate is straightforward. Candidates for office need
to win the votes of those who turn out in the elections for which they
stand. If a candidate need only win a general election to gain a seat
in Congress, the candidate needs to please those citizens who vote
in the general election. If the candidate has to first win a partisan
primary prior to winning a general election, however, the candidate
must please two different voting electorates. Thus, the candidate may
have to appeal to the divergent preferences of the primary electorate
to the detriment of the general electorate when the primary electorate
is filled with citizens of more partisan or extreme preferences than the
general electorate. To the extent that many members of the U.S. House
are elected out of districts safe for one party or the other, it may be that
primary electorates are of highest electoral concern, and thus dominate
many of the choices representatives must make.

Because the arguments connecting primary electorates to representa-
tive divergence from the general electorate are both reasonable and
intuitive, many believe primary elections to be a key component of
the large differences between Democrats and Republicans in the con-
temporary Congress. One of the preeminent scholars on congressional

elections summarizes: "the most common explanation for the failure to observe Downsian convergence [is] the extremism of primary electorates (Jacobson, 2012, p. 1615)."

Despite the straightforward appeal of primaries as the basis of partisan divergence in Congress, an impressive array of empirical evidence comes up with mostly null evidence on the relationship between primaries and representative behavior. These studies often compare the behavior of representatives elected out of more open primary systems, where most or all registrants are eligible to participate, to more closed primary systems, where participation is limited to partisan registrants or in some other way. Studies such as these make the assumption that more open primary institutions, which allow more citizens to participate at the nomination stage, should have more moderate primary electorates and thus nominate more centrist candidates.[1] For example, McGhee *et al.* (2014) measure the behavior of tens of thousands of state legislators over more than a decade of elections and find little relationship between the type of primary out of which representatives are nominated and the ideology of their roll call votes. Hirano *et al.* (2010) analyze more than 16,000 House elections from 1932 to 2006 and find little evidence that members of Congress subject to primary elections vote more extreme than members not subject to primaries, and Bullock and Clinton (2011) find only limited effects of California's blanket primary in the 1990s.

One interpretation of the null results referenced above is that primary elections do not influence member voting behavior. An alternative interpretation is that the assumption that more open primary institutions lead to more centrist primary voters does not hold, and thus existing null results do not refute an influence of primary elections. Although reasonable to think that variation in nominating institution would lead to variation in the divergence between the preferences of primary and general electorates, this has not been empirically established. I argue that if the important influence on member behavior is the preferences of the voters in primary elections, then the institution of nomination is relevant when it materially changes these preferences. Statutory rules

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[1]"[F]ew doubt that opening nomination procedures to previously excluded non-partisans will increase mass participation in the nomination process (Gerber and Morton, 1998, p. 305)" or "[A] more onerous system should produce less moderation (McGhee *et al.*, 2014, p. 339)."

on participation may change the rate of turnout in primary elections or the composition of the primary electorate. These changes, however, may not materially change the distribution of preferences of primary voters. This could be because institution of nomination has marginal influence on turnout or composition, or because regardless of rate of turnout, composition, or institution, the same types of voters are motivated to participate in primary contests.[2]

There are two important implications of the argument that institution of nomination has little influence on the ideology of primary voters. First is that, even if members represent their primary constituencies, variation in institution of nomination is unlikely to have a measurable relationship to member behavior. Second, it suggests that there must be other incentives, separate from rules regulating who may participate in nominations, (a) that influence who makes the effort to participate in primary elections, and (b) that generate the divergence in behavior of Democratic and Republican members of Congress. More broadly, the result has implications for reformers who aim to moderate national politics by changing the rules and institutions of primary elections. If the results I present here generalize to other contexts, liberalizing access to the primary ballot may not broaden or increase the representativeness of the primary electorate.[3]

In this article, I characterize the preferences of Republican and Democratic primary electorates and the general electorate in each House district with an item-response theory (IRT) model of policy ideology. The data source is opinion surveys with turnout validated to voter files. This allows me to compare the policy views of voters who actually turned out in primary and general elections in both closed and less-closed primaries. I then estimate district-level preferences both through simple aggregation and through multi-level regression with post-stratification [MRP] (Gelman and Little, 1997). Looking at the distributions of individual preferences or using either estimator for congressional district preferences, I find no evidence that in 2010 and 2012 closed and semi-closed primary states had more ideological primary voters than states with more open primary systems. I then

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[2]As noted in some of the first scholarship on primary elections, statutes "are not the end but the beginning (Merriam and Overacker, 1928, p. 196)."

[3]See Hill and Kousser (2015) for further evidence on this point.

show that the primary electorate has divergent preferences from the general electorate in every House district. I make this comparison in each district, which is an improvement over previous comparisons of primary voters to general voters nation or statewide. I also show that primary electorates diverge not only from the general electorate in every district, but also from the party's voters in the general electorate in almost every district (the *party following*, e.g., Geer, 1988). Finally, I consider change in California from 2010 to 2012 when the primary system moved from closed to non-partisan, again finding little evidence of an influence on primary ideology.

This article contributes to our understanding of regulations on the franchise, the importance of who turns out in low salience elections, and representation. I first present the theory of the influence of primary elections, summarize the current mixed evidence on nominating elections, primary electorates, and representative behavior, then summarize the data sources, research design, and results.

1   Primary Elections, Electorates, and Representatives

Why should members of Congress be responsive to primary electorates? I assume that members represent their election constituencies as ambitious office-seeking politicians. Canonical studies of representation have considered the relationship of member behavior to the preferences of general electorates, from Downs (1957) to Miller and Stokes (1963) to dozens subsequent. The logic of representation through election is that candidates who want to win office must win the votes of the electorates for which they stand. Most candidates for Congress today must first win nomination through a primary election, and second win the general election. If the policy preferences of the two electorates diverge, candidates must determine how to present themselves so as to most effectively navigate the electoral process.[4]

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[4]This does depend upon how strategic the primary voters are: in anticipation of a more moderate general electorate, primary voters may demand less ideological behavior from their candidate than they would otherwise prefer so that they have a better chance of winning the general election. See Aranson and Ordeshook (1972) for a formal derivation of this tradeoff and the implications for candidate strategies. Alvarez and Nagler (2002), however, provide evidence that primary voters in California are much more sincere than strategic.

If members are concerned about primary elections, they must make tradeoffs between their primary and general electorates when they cast roll call votes. Averaged across issues, member roll call behavior might be something like $y_i = \alpha x_i + \beta z_i + \epsilon_i$, where y_i is an ideological summary of the member's behavior, x_i is the ideology of the general electorate, z_i is the ideology of the primary electorate, α and β are coefficients that capture the average influence of each of the two electorates on member vote choices, and ϵ_i is an error term that encompasses factors of member voting other than electorate ideology. This highlights not only that measurement of the preferences of primary electorates is important to evaluate their potential influence, but also that the primary electorate should be contrasted to the general electorate.

Of course, x_i and z_i are not exactly observed, either by the analyst or the member. I follow the logic of Fenno (1978) and Arnold (1990) that members work hard to anticipate the preferences of their electorates through constant interaction with constituents and district interests. Through these efforts, along with their aptitude as professional politicians, they gather a sense of the wants of their two electorates. Note that this constant search means that members need not necessarily even be subjected to a competitive primary or general election to be responsive to the interests of the two electorates. If they sufficiently anticipate and respond to those interests, no challenger may want to waste their time.[5] My empirical efforts acknowledge this reality by measuring the preferences of members' primary electorates even in places where incumbents run unopposed. Because primary voters vote for multiple offices, I am able to observe the set of citizens who turn out in primaries in most House districts, and use this as a measure of z_i, even if the member is not challenged.[6]

It is this logic of an electoral penalty for members who vote against their primary electorates that has motivated research to determine how primaries are implicated in partisan differences in roll call voting. One

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[5]In the words of Hirano *et al.* (2010), "Since strategic candidates are likely to adjust their position to minimize electoral threats, whether MCs face primary competition is unlikely to be an accurate measure of the actual underlying primary threat they face (p. 172)."

[6]Of course, many members of the House are unopposed at the general election, as well, and the same logic applies to my measurement and theory about the influence of the general electorate.

challenge is measuring electorate preferences in each primary electorate in each district. Existing research has often used proxy measures rather than direct measures of z_i. Most research on the effects of congressional primaries considers the relationship between the institution out of which the elected representative was nominated and summaries of their roll call votes. The basis for these designs is the assumption that more open primary institutions allow less partisan and more heterogeneous electors to participate in primaries, thus lessening the extremity of the primary electorate and its divergence from the general electorate. If this assumption holds, legislators elected under more open primary systems should feel on average less pressure to diverge from the general electorate than legislators elected under closed primary systems. These studies assume that the institution of nomination v_i influences the preferences of the primary electorate z_i, and estimate reduced form regressions of y_i on v_i instead of on z_i.

For example, McGhee *et al.* (2014) compare thousands of state legislators in the United States from 1992 to 2010 elected out of more and less open primary systems. The authors find no evidence that openness of primary system influences either roll call voting behavior or candidate responses to policy surveys. If anything, they find suggestive evidence that more open primaries lead to *more* divergent roll call voting. Likewise, Hirano *et al.* (2010) consider the relationship between three characteristics of primaries and the partisan voting of elected representatives, none of which show much relationship with party polarization measured by DW-NOMINATE score using methods such as differences-in-differences.[7] Others who analyze variation in institution (Bullock and Clinton, 2011; Gerber and Morton, 1998) or variation in competition (Boatright, 2013; Burden, 2001) find little or no influence of primary elections on representative behavior.

These results are consistent with a literature on the representativeness of *presidential* primary voters. Much of the work on presidential

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[7]DW-NOMINATE is a summary measure of the liberal and conservative preferences of members of Congress based upon their roll call voting behavior (see Carroll *et al.*, 2009; Lewis and Poole, 2004). Hirano *et al.* (2010) also look for an effect of moving from a system without primary elections to one with primary elections. This assumes that the nominating electors prior to the implementation of primary elections, for example party bosses or party caucuses, had preferences divergent from those who participated in the primary election system.

primary voters finds only limited evidence of divergence from general election voters (e.g. Abramowitz, 2008; Geer, 1988; Kaufmann *et al.*, 2003; Norrander, 1989; Ranney and Epstein, 1966; Sides and Vavreck, 2013). These two sets of evidence together have led many to conclude that primary elections may *not* influence the behavior of representatives.[8] The evidence on congressional primaries, however, does rest on the assumption that institution of nomination v_i is a reasonable proxy measure for primary preferences z_i, and it is unclear what to make of presidential primary voters given the sequential and national nature of those contests.[9]

In contrast, at least three papers do find suggestive evidence that preferences of primary voters are related to divergent member behavior. Brady *et al.* (2007) use primary and general election vote shares by congressional district from 1956 to 1998 to argue that primary electorates cause divergence in representative behavior.[10] Butler (2009) and Clinton (2006) use survey data to find an influence of primary voters or partisan subconstituencies on representative voting.[11] Gerber and Lewis (2004), however, do not find an effect of legislator partisan subconstituency on roll call voting when measuring preferences using proposition votes.

2 Research Design

The empirical goals of this article are to test the assumption that institution of nomination is related to the ideology of who votes in primary

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[8]"[T]he polarized state of American politics today reflects the polarized state of the overall American electorate rather than any peculiar characteristics of primary voters (Abramowitz, 2008)."

[9]Recent evidence comparing congressional primary voters to congressional general voters finds primary voters to have more divergent policy views, but again the difference with general election voters is not dramatic (Jacobson, 2012, Table 2).

[10]Multiple pieces of evidence are presented in support of the effect of primary elections. For example, members of Congress whose NOMINATE score is closer to district presidential vote have more challengers and do worse in primaries, all else equal; turnout in primary elections is lower and more stable than turnout in general elections; and primary losses for incumbents, though rare, more often happen to incumbents with moderate voting records in Congress.

[11]The Clinton (2006) party subconstituency is defined as respondents sharing the incumbent's partisanship, though his discussion (p. 398) suggests primary constituencies are part of what motivate this choice.

elections, and to describe and evaluate the relationship between the preferences of primary electorates and general electorates by institution. To address these questions requires concurrent measures of ideology and primary voting across institutions. I use opinion surveys to measure policy preferences and voter files to measure the validated turnout of these same individuals. The voter files mitigate the common problem of over-reporting of turnout. Because the survey policy preferences are likely to be measured with error, I use an item-response theory (IRT) model to collapse responses to multiple issues into one summary value. I then compare the distribution of these values for primary voters who reside in states with closed and not-closed primary institutions.

The data sources are the 2010 and 2012 CCES (Ansolabehere, 2010, 2012), both nationally representative samples of around 55,000 Americans with interviews before and after the 2010 midterm and 2012 presidential elections, stratified by state. The surveys asked standard sets of political questions about attitudes, preferences, and beliefs, and also validated turnout records by matching respondents to voter files. The surveys are large enough to include some validated primary voters in almost every district.[12] The study here thus includes both midterm and presidential year primary voters.

To summarize the policy conservatism (I code ideology in the conservative direction) of each respondent to each of the two surveys, I estimate the grouped IRT model proposed by Lewis (2001) on expressed preferences over a set of policy issues. Each CCES asked respondents how they would vote on a set of roll calls actually considered in the House and Senate, as well as other policy preferences not specific to any roll call vote. I identified 17 questions from each survey that serve as the items in each model, the full list of which are available in Appendix Section B.2. I group respondent ideal points by the intersection of three characteristics: their state of residence, their partisanship (coded three ways, with leaners collapsed as partisans), and their primary turnout. With model estimates, I calculate the expected *a posteriori* ideal point for each respondent, conditional on their responses and group membership (see Lewis, 2001, p. 279), and post-process the ideal points to

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[12]See Appendix Table A1 for counts of the number of primary and general validated voters by state and year. The validation has no coverage of Virginia in 2010.

have mean zero and unit variance in each year. The ideology estimates correlate with partisanship and self-reported ideology, and they are superior predictors of vote choice than self-reported ideology, which I document in Appendix Section B.2.[13]

With individual-level estimates of policy conservatism, I can first compare distributions and summary statistics for primary voters in states with closed and less-closed primary institutions, the classification of which I adopt from McGhee *et al.* (2014). I also consider the question of divergence of primary voters relative to general voters and party supporters in the general electorate by institution. I estimate electorate preferences in two ways. First, I simply aggregate the CCES respondents up to the congressional district using the CCES post-stratification weights.[14] Second, I implement a hierarchical model to ameliorate sampling error. The hierarchical model smooths across geographies, turnout, party, and respondents to provide best estimates for each electorate in each district. This in general shrinks estimates towards the grand mean across individuals and districts, reducing the influence of outlying values in small sample primary electorates. I present full details of the hierarchical model and construction of MRP (Gelman and Little, 1997; Park *et al.*, 2004) district estimates in Appendix A.

For states with open or not-fully-closed primary elections, I am uncertain in which primary each validated primary voter voted. To make estimates somewhat consistent across states, I use respondents' self-reported party of registration to construct estimates. That is, no matter the primary institution in place, Democratic primary electorate estimates are the weighted average of voters validated to have voted in the primary and who report being registered Democrats, and Republican primary electorate estimates are the weighted average of voter validated to have voted in the primary and who report being registered Republican.

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[13]The 2010 estimates correlate with the IRT estimates of Tausanovitch and Warshaw (2013) for 2010 CCES respondents at $r = 0.961$.

[14]Formally, if y_i is the conservatism for respondent i, then my estimate of the conservatism for electorate e in congressional district c is $\sum_{i \in e,c} w_i^{-1} \times \sum_{i \in e,c} y_i w_i$, where w_i is the survey weight for respondent i and $i \in e, c$ evaluates to the set of respondents i validated to have voted in primary or general election e and residing in district c.

Clearly this choice induces measurement error in the district estimates, though not the individual estimates.[15]

3   Institution of Nomination and Primary Voter Policy Ideology

In this section, I present results testing for a relationship between institution of nomination and the ideology of primary voters. I first plot the individual distributions of conservatism in each class of institution, finding little evidence of difference. I then calculate differences of means and variances for individual- and district-level distributions of conservatism. Statistical tests also find no evidence of difference.

In Figure 1, I construct histograms of conservatism using the IRT policy ideology scores for each respondent validated to have voted in congressional primary elections in the 2010 and 2012 CCES.[16] I plot separate distributions for respondents who reside in states with closed primary systems (states classified as "closed" or "semi-closed" by McGhee *et al.*, 2014) and respondents who reside in remaining states. One implication of closed primary states leading to more ideological primary voters is more variance in the distributions in closed states than in non-closed states.

Figure 1 presents little difference by institution of nomination. For 2010 (frames in first column), shape, spread, mean, and standard deviation are very close to equivalent between the two types of institution.[17] Likewise for 2012, there is little difference in the distributions of ideology for voters in closed and non-closed states.

As a statistical test for these differences, I present in Table 1 differences of means and variances for both years at the individual level in rows 1 and 2. For each year, I calculate the difference in the mean and variance of conservatism between closed and not-closed states along with 95% confidence intervals constructed from a nonparametric bootstrap.[18]

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[15]In the two surveys, 18.8% (2010) and 19.7% (2012) of validated congressional primary voters reported being registered Decline-To-State or third party.

[16]Histograms are weighted with CCES post-stratification weights.

[17]Note that the identifying restriction for the Lewis (2001) IRT model is mean zero and variance one for one of the groups in the estimation, so there is no requirement the distribution across groups be unimodal or normal.

[18]I use the bootstrap percentile method, which resamples from the data at random 1,000 times, and on each resample calculates the difference of means and difference
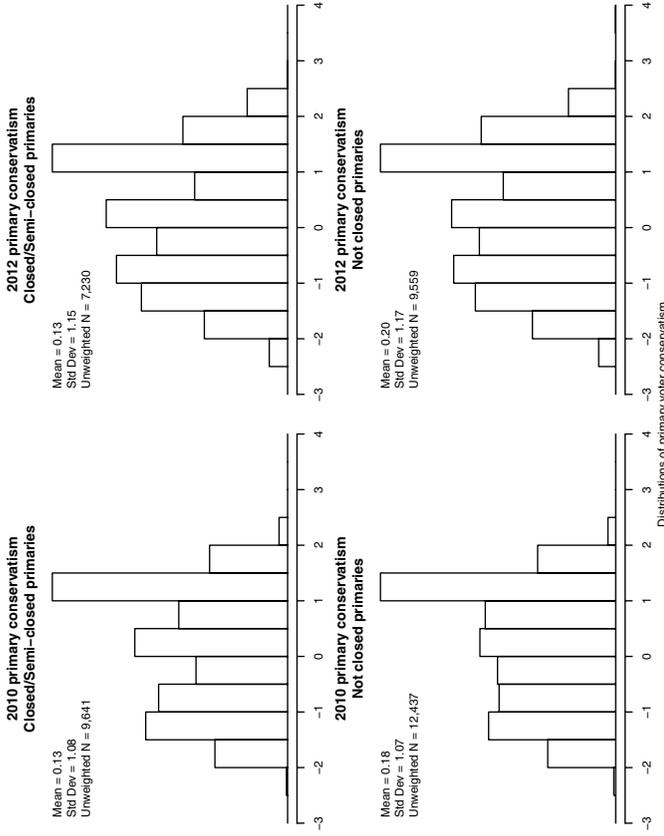
Figure 1: **Primary voter ideology by year and type of primary institution.**

Note: Each frame is the distribution of conservatism for voters validated to have voted in the congressional primary in that year. Distributions are separated by states where both party primaries are classified as "closed" or "semi-closed" by McGhee *et al.* (2014) and the remainder. Alaska is excluded due to mixed primary type across parties. Distributions represent all validated primary voters, even those who report a non-Democrat/non-Republican party of registration. The figure shows little difference in conservatism for primary voters participating in states with closed versus open primaries.

Table 1: Ideology of validated voters, closed versus not-closed primary institution.

Year	Aggregation	Estimator	Difference of means	Difference of variances
2010	Individual	Raw	−0.04 [−0.09, −0.00]	+0.03 [−0.01, +0.07]
2012	Individual	Raw	−0.08 [−0.13, −0.03]	−0.06 [−0.12, +0.00]
2010	Congressional district	Raw	−0.19 [−0.25, −0.13]	+0.02 [−0.01, +0.05]
2012	Congressional district	Raw	−0.09 [−0.15, −0.02]	−0.01 [−0.04, +0.02]
2010	Congressional district	MRP	−0.15 [−0.20, −0.09]	+0.00 [−0.02, +0.03]
2012	Congressional district	MRP	−0.04 [−0.09, +0.01]	−0.01 [−0.03, +0.01]

Note: Cells present the difference of mean ideology and difference of variance of ideology in states with closed minus states with not-closed institutions of nomination, separately by year, level of aggregation, and estimator. Confidence intervals derived from 1,000 nonparametric bootstrap samples. The results show little difference in means or variance of voter ideology by institution of nomination.

While the confidence intervals on differences of means are statistically significant, the magnitudes are small, and the more relevant differences of variances have confidence intervals of small magnitude that cross zero. The largest difference in variance within a confidence interval is −0.12 for 2012, and this is a difference in the direction opposite that assumed (−0.12 means closed primary states had smaller variance).

Along with differences in the individual distributions, I aggregate preferences up to congressional districts by party of registration for each year, with both MRP and raw estimates. In rows 3–6, I again find statistically significant but materially small differences in means, and differences of variances that are small with confidence intervals that always cross zero.

In sum, these observations suggest that in 2010 and 2012, institution of nomination would be a poor proxy for the policy ideology of the voters who participated in primary elections. Both at the individual and the district level, I find no relationship between the statutory rules for which individuals may participate in primary elections and the conservatism of the individuals validated to have voted in those elections.

This result is very interesting. It either means that the citizens who want to participate in primary elections do so regardless of institutions in place, that institution of nomination is seriously confounded with ideological features of the states, or that different regulations on the

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of variances. Confidence intervals extend from the 2.5th to the 97.5th percentile of the bootstrap statistics.

franchise influence the composition of voters who participate but not their preferences. I turn next to further interrogate whether primary elections produce different electoral signals for candidates for office with respect to voter conservatism.

4   Comparison of General and Primary Voters

In the previous section, I showed that variation in institution of nomination is not related to variation in the ideology of primary voters or electorates. In this section, I evaluate whether primary voters actually do diverge in their preferences from general election voters, and whether the level of divergence varies by the institution under which access to the primary ballot is regulated. I find that primary electorates are less centrist than general electorates in every House district, and as before little relationship to institution of nomination.

I plot in Figure 2 the conservatism of each partisan primary electorate in each congressional district (y-axis) against the conservatism of the general electorate in that same district (x-axis). Each district is represented by a text code, and I compare the general electorate to the primary electorate of the party of the member who represents that district. The dashed lines in each plot are 45° lines; points falling on that line would indicate that the district primary electorate has the same conservatism as the district general electorate. Figure 2(a) uses the MRP estimates of primary and general electorate conservatism and Figure 2(b), the raw survey aggregates. I make the plots separately for Democrats and Republicans, by election year, and by institution of nomination. Each plot also includes a loess smooth through the points to highlight the trend.

The first thing to note from Figure 2 is that not a single district in either party, election year, or type of primary has a primary electorate more centrist than the general electorate with the MRP estimates; all points in the top Democratic plots fall below the 45° line (primary electorate more liberal than general electorate), and all points in the bottom Republican plots fall above the 45° line (primary electorate more conservative than general electorate). In the lower frames using the raw survey aggregates estimator, a few districts fall above the 45° line, but the pattern is of consistent divergence between primary and general
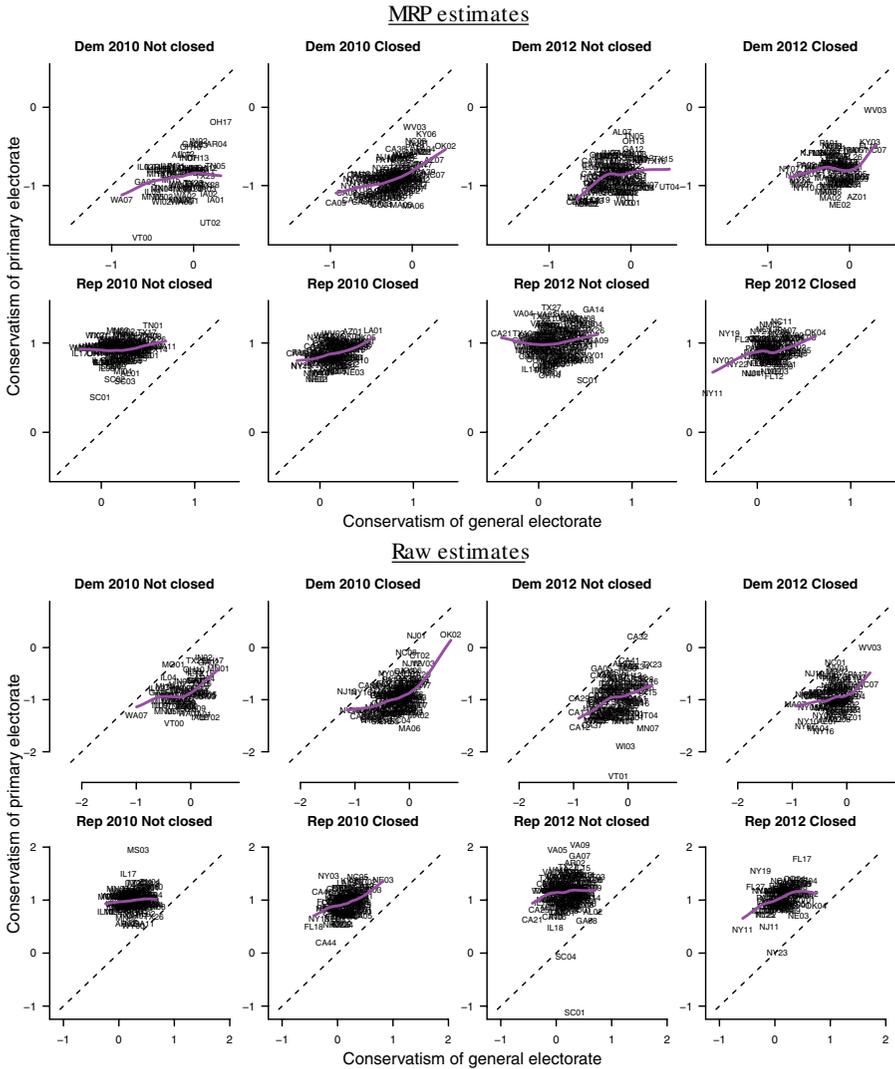
Figure 2: Ideology of primary and general electorates, closed versus not closed primary institution.

Note: Each frame plots the ideology of the primary electorate for that member's party in the district on the ideology of the general electorate in that district. Member party, election year, and state institution of nomination by McGhee *et al.* (2014) indicated in each title. Lines are loess smooths.

electorates. Although there are many House districts dominated by voters from one party, the general electorates in even the safest districts are not as ideological as the primary electorates in most districts around the nation. Looking at variation by institution of nomination, there is suggestive evidence of a stronger relationship between general electorate and primary electorate conservatism in states with closed institutions.

Also of note is the relatively modest relationship between general electorate conservatism and primary electorate conservatism, especially for districts represented by Republicans in Congress. Comparing loess smooths to the angle of the 45° line shows that the relationship is not just an intercept shift down, but rather that the conservatism of primary voters is only modestly related to the conservatism of general election voters. While the most liberal general electorates have some of the most liberal Democratic primary electorates (e.g., in 2010 Democrats Barbara Lee [CA-09] in Oakland and Jim McDermott [WA-07] in Seattle), primary electorate conservatism increases only moderately in relation to general electorate conservatism for Democrats. For Republicans, the relationship between primary and general election conservatism is even more attenuated.

4.1   Primary Voters and Party Voters

Previous research (e.g., Geer, 1988) evaluates the divergence of primary voters by comparing primary voters to general election supporters of that party. I show in Figure 3 a similar pattern to that in Figure 2, with primary voters notably divergent even from the party's voters in the general election. I calculate the conservatism of the validated general election voters who report voting for that party's House candidate and compare that conservatism to the conservatism of validated primary voters from that House candidate's party. Plots are partitioned as before by party, year, institution of nomination, and MRP versus raw estimator of electorate conservatism. Here, we find a closer relationship to primary preferences — not surprising because this is the subset of the general electorate who preferred the candidate of that primary — but continued divergence in the preferences of primary voters. Although the clouds are closer to the 45° line, and in some cases I estimate primary electorates more centrist than party voters, the overall story remains

MRP estimates

Raw estimates
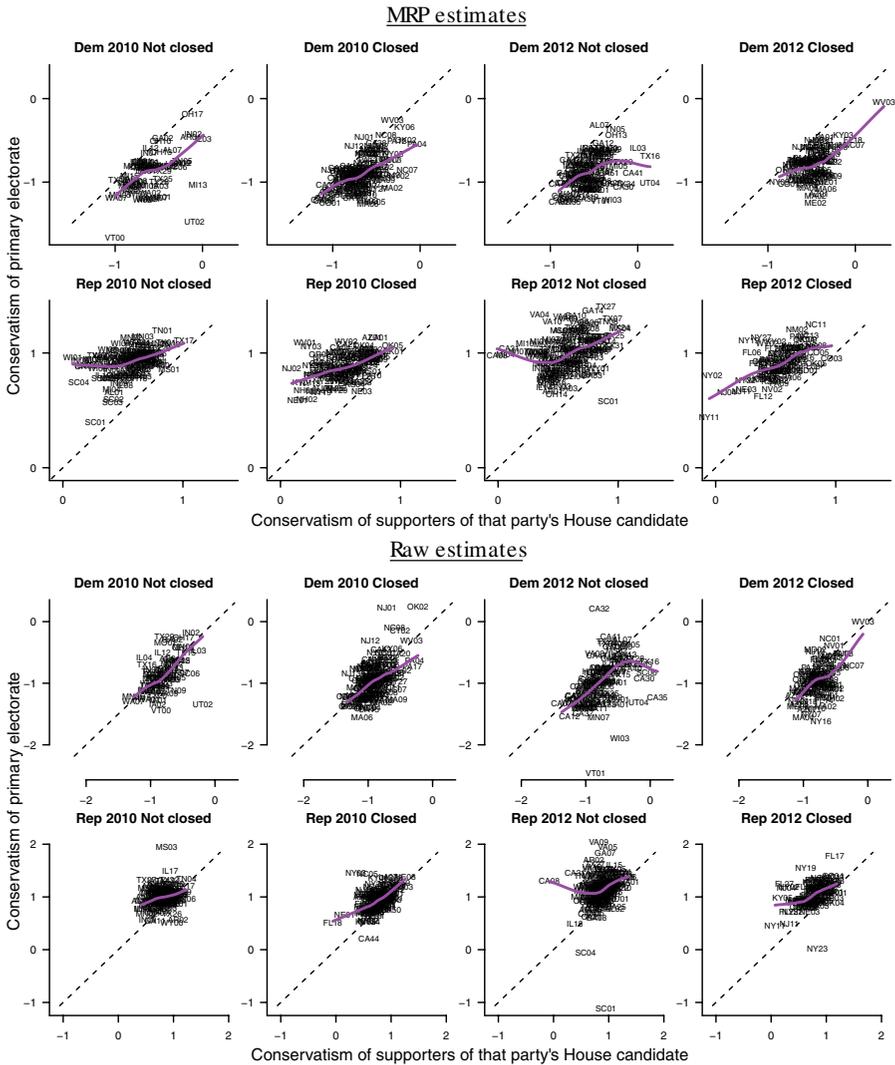
Figure 3: Ideology of primary and party voters, closed versus not closed primary institution.

Note: Each frame plots the ideology of the primary electorate for that member's party in the district on the ideology of the general election voters who voted for that party's candidate in that district. Member party, election year, and state institution of nomination by McGhee *et al.* (2014) indicated in each title. Lines are loess smooths.

divergent primary electorates. These results contrast existing findings on presidential primary voters.

With respect to variation by institution of nomination, there appears to be a stronger relationship between primary conservatism and party voter conservatism in states with closed primary systems, at least for Republicans, but the difference is not dramatic. Institution of nomination does not seem to be strongly related to the ideology of primary electorates, general electorates, or party voters.

As a statistical test of the relationship of institution of nomination to partisan primary ideology in each congressional district, I present OLS regressions in Table 2. The dependent variable is the conservatism of the primary electorate, with separate specifications for Democratic primaries (limited to districts represented by Democrats) and Republican primaries (limited to districts represented by Republicans). The coefficient of interest is the effect of a closed primary institution, with the assumption in the literature being a negative coefficient for Democrats (primary more liberal in closed), and a positive coefficient for Republicans (primary more conservative in closed). I present models where the indicator for closed primary is also interacted with the preferences of general electorates and party voters in the general electorate to account for potential spurious correlation between the types of places with closed institutions and the types of voters who reside in those places.[19]

When controlling for the ideology of the general electorate or party general electorate voters, the direct effect of a closed primary is in the wrong direction for both parties and for both estimators, MRP and raw. For Democrats, a closed primary is associated with a more *conservative* primary electorate all else equal. For Republicans, a closed primary is associated with a more *liberal* primary electorate all else equal, a relationship that is statistically significant at $p < 0.05$ in three of four specifications. The evidence is contrary to the presumed effects of more accessible primary elections, where broader participation should lead to more centrist primary voters. I also find consistent though not always statistically significant evidence that the correspondence between primary ideology and general ideology is stronger in places with closed primary systems (interaction terms). This is again inconsistent with

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[19]Excluding states using the top-two primary system, Washington in 2010 and 2012 and California in 2012, yields similar results.

Table 2: Tests of relationship of primary institution to electorate ideology.

	MRP estimates				Raw survey estimates			
	Dem	Dem	Rep	Rep	Dem	Dem	Rep	Rep
(Intercept)	-0.83^*	-0.65^*	0.95^*	0.79^*	-0.87^*	-0.51^*	1.05^*	0.77^*
	(0.02)	(0.04)	(0.01)	(0.03)	(0.03)	(0.07)	(0.02)	(0.07)
Closed primary	0.05^*	0.12^*	-0.09^*	-0.09^*	0.03	0.18	-0.12^*	-0.16
	(0.03)	(0.05)	(0.02)	(0.04)	(0.04)	(0.10)	(0.03)	(0.10)
Ideology general electorate	0.28^*		0.09^*		0.38^*		0.09	
	(0.06)		(0.05)		(0.08)		(0.07)	
General electorate*Closed	0.09		0.17^*		0.06		0.29^*	
	(0.09)		(0.07)		(0.11)		(0.11)	
House Democrat voters		0.42^*				0.56^*		
		(0.06)				(0.08)		
House Dem voters*Closed		0.13				0.17		
		(0.09)				(0.12)		
House Republican voters				0.30^*				0.37^*
				(0.04)				(0.08)
House Rep voters*Closed				0.06				0.14
				(0.07)				(0.12)
N	378	378	453	453	378	378	453	453
R^2	0.14	0.27	0.10	0.23	0.14	0.22	0.07	0.13
adj. R^2	0.13	0.26	0.10	0.22	0.13	0.22	0.06	0.13
Resid. SD	0.20	0.18	0.14	0.13	0.30	0.29	0.26	0.25

Standard errors in parentheses

*Significance at $p < 0.05$.

Note: OLS regression coefficients with standard errors in parentheses. Dependent variable is ideology of the primary electorate for party of member representing that district.

the presumed effect of closed primaries, which are thought to lessen the connection between primary voters and general voters. The magnitude, also, is small relative to differences between the parties.

In sum, I find consistent support for the argument that primary and general electorates diverge in their policy ideology. I also present evidence that primary ideology is less centrist than the ideology of the party's voters in the general election. Yet this measured divergence appears mostly unrelated to the system of nomination. If there is a relationship with institution, it is in the opposite direction of what is usually assumed, with closed primaries having more centrist primary electorates more closely aligned with general electorates. While I cannot attribute this as a causal relationship, it does support the argument that previous findings of little influence of primary institutions on roll call behavior is not necessarily evidence that primaries don't matter.

4.2 Changing Institutions: California 2010–2012

One aspect of my analysis that merits consideration is the cross-sectional nature of the comparison. I observe variation on institution of nomination across states within these two years, thus leaving open the possibility that some other feature of the states that is correlated with institution of nomination is masking an effect.[20] One state did change its primary system in this time period. California moved from a semi-closed system in 2010 to a non-partisan top-two system in 2012. Due to its size, the CCES records include thousands of validated California primary voters from each election.

Figure 4 evaluates whether there are notable differences in the conservatism of those who turned out in California in 2010 under a semi-closed party primary compared to 2012 under a non-partisan top-two primary. The distributions look roughly similar, and their statistics of spread are off by one twentieth of a standard deviation. Because the IRT models from 2010 and 2012 are constructed from different survey observations, the estimated conservatism is only comparable by assumption of similar meanings of the latent variable. To more specifically benchmark the change in spread between the two years, I

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[20]Of course, analysis of over time change in institutions must also assume that the change in institution is not confounded with some other ideological feature of the state in time.
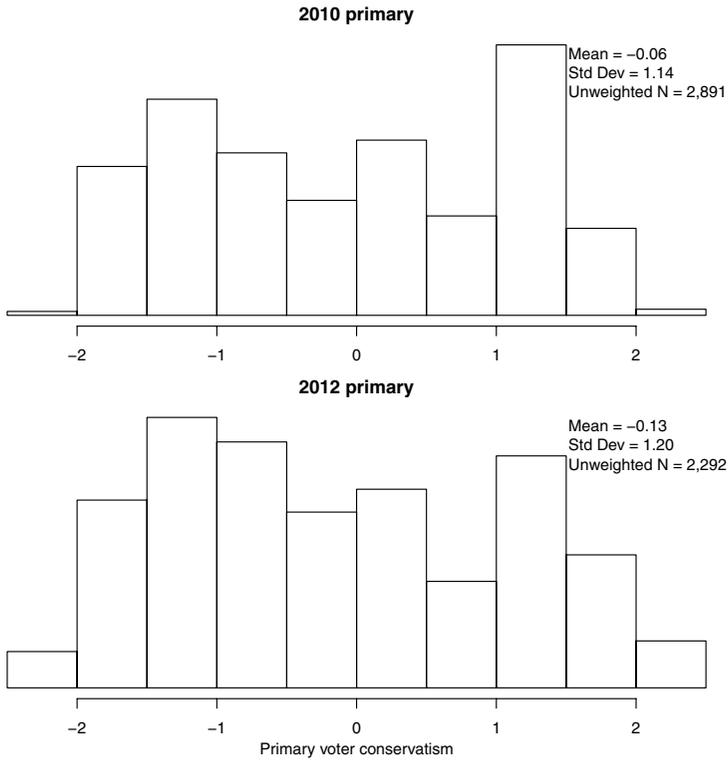
2010 primary

Mean = −0.06
Std Dev = 1.14
Unweighted N = 2,891

-2   −1   0   1   2

2012 primary

Mean = −0.13
Std Dev = 1.20
Unweighted N = 2,292

-2   −1   0   1   2

Primary voter conservatism

Figure 4: Ideology of primary voters in California, 2010 and 2012.

Note: California moved from a semi-closed party primary in 2010 to a non-partisan top-two primary in 2012.

calculate the ratio of the standard deviation of California primary voter ideology in each year to the standard deviation of primary voters from all states with closed or semi-closed primaries. This ratio asks how much more or less variable California primary voters are in their ideology relative to primary voters in states with closed systems, while allowing for changes in the nature of contests from 2010 to 2012 and changes in the inputs to the IRT model from 2010 to 2012. The ratio of standard deviations between California and other closed primary states in 2010 is 1.05, and the same ratio of California to the closed primary states in 2012 is also 1.05. Neither graphically nor with this statistical test did

the change in institution change primary voter ideology in California from 2010 to 2012.

In sum, the comparison of voters in California from 2010 to 2012 across a change of nominating institution corresponds to little change in the ideology of primary voters. Institution of nomination does not seem to be a driving factor in the set of preferences of the voters who turn out in primary elections.

5   Discussion

I began this article presenting the quandary of theoretical reasons why primary elections should polarize members of Congress coinciding with empirical evidence that is mixed and often null. I argued that one reason that current designs find limited effects may be that variation in institution of nomination does not correspond to much variation in the preferences of primary electorates. I find evidence consistent with this argument: My measures of the conservatism of the primary electorate from each district are unrelated to the type of nominating institution under which the primary is held. While the institution of nomination is unrelated, I do find that primary voters and primary electorates are less centrist than general voters and general electorates around the nation, and are also consistently less centrist than party voters in the general electorate. These two results together suggest that primary electorates remain a candidate for a polarizing influence on Congress.

These results confirm some stylized facts that to date have lacked strong evidence. First, that the preferences of congressional primary electorates do diverge importantly from the preferences of congressional general electorates district by district. Second, that the primary electorate diverges from the voters who support that party at the general election. My results also present a new stylized fact to keep in mind as we explore the relationship of voters to their representatives and the influence of primary elections. I find little cross-sectional relationship between the institution of nomination and the ideology of primary voters in 2010 and 2012. This holds when analyzing all primary voters as individuals, or when analyzing aggregated electorate preferences. This finding should be replicated in other years and with other methods,

but it does suggest some caution to assuming that institutions generate the individual voter behavior that they are designed to create. That said, given the level of elite conflict and polarization in the two years of this study, if we should ever expect to find polarization in primary ideology, it might be in the present time. That I do not suggests even more strongly that institution may not be an important influence on primary composition.

These results add to lines of inquiry on primary elections. First, with respect to debates about open versus closed primary institutions, my results here suggest the importance of focus on the sets of voters who actually turn out in each primary election, not just the institution in place. The findings do not necessarily contradict the results of institutional analysis that find no effect of primaries. Instead, what may matter is not so much the institution that is in place, but the set of voters who show up at primary elections in each district. While the institution may be important in setting the stage for who turns out, it may not have large influence on the preferences of the voters who participate.

Second, with respect to questions on the representativeness of primary voters, my results suggest that primary voters are more divergent from even the party's supporters at the general election than has previous research. Three features of my analysis are distinct from most previous comparisons. First, I examine congressional primary voters in each district, rather than presidential or congressional voters nationwide. Second, I use validated as opposed to self-reported primary turnout. And third, I use a scaled measure of ideology across multiple items, which may be a more accurate measure of preferences subject to less measurement error than individual survey responses. Future work could more carefully consider the most accurate way to measure the distinctiveness of primary voters.

Finally, these results suggest that incentives beyond the range of primary institutions currently in place generate the set of voters who turn out in primary elections. More empirical and theoretical work should consider the act of turnout in nominating elections, and the influence of these choices on candidate and incumbent behavior. For example, does the same subset of the citizenry vote in primary elections regardless of institution of nomination? How much is the composition

of this subset due to individual characteristics versus entrepreneurial candidates constructing their own primary coalitions? What motivates some citizens to participate in primary elections and others to stay home? Because nomination contests generate the candidates who eventually run in general elections and who win seats in Congress, these questions are of crucial importance to the functioning of American representation.

More broadly, these results suggest the importance of considering both institutions and individuals in evaluating large questions such as the effect of primary elections on representation and polarization. While primary elections as an institution may be the experimental "treatment" in such research questions, this treatment operates through mediators importantly including the behavior of individuals. Members of Congress do not necessarily respond to institutions per se, but rather to the signal received from their constituents as filtered through those institutions. The potential of primary elections to influence member behavior likely depends upon the set of citizens who decide to participate.

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